Wayne County Community College District

2015 – 2016 CATALOG

ONE COLLEGE DISTRICT:
FIVE CAMPUSES • UNIVERSITY CENTER • DISTANCE LEARNING

Downriver Campus

Downtown Campus

District Office

Eastern Campus

Mary Ellen Stempfle University Center

Northwest campus

Western Campus

www.wcccd.edu

PREFACE

The Wayne County Community College District (WCCCD) is a multi-campus community college that provides educational resources to the residents of Wayne County and to those of many other communities. The District has five campuses and one course site, the University Center located throughout Wayne County. Each campus is located near a major freeway. WCCCD serves 32 cities and townships. The District has more than 100 programs leading to either an associate degree or certificate in various disciplines.

From its beginning in 1967, WCCCD has viewed education as one of the most important factors for achieving success in today's dynamic and technologically driven work environment.

The District provides a step-by-step approach to a career path by providing students with the ability to reach their career potential through an "open door" policy and affordable tuition. Because WCCCD is committed to "Make Education First," every student has the chance to fulfill his or her educational goals.

This catalog is for informational use only and does not constitute a contract. Wayne County Community College District reserves the right to add or delete, without notice, any course offering or information contained in this catalog.

Note: The District reserves the right to assign instructional staff other than those listed in the "Academic Schedule of Classes" and to eliminate, cancel, phase out or reduce courses and programs for financial, curricular or programmatic reasons.

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WAYNE COUNTY COMMUNITY COLLEGE DISTRICT

INTRODUCTION

ACCREDITATION

The Wayne County Community College District (WCCCD) is accredited by the Higher Learning Commission of the North Central Association of Colleges and Schools, 230 South LaSalle Street, Suite 7-500, Chicago, Illinois 60604; 312-263-0456, 1-800-621-7440, (fax at) 312-263-7462 or www.ncahlc.org. Information regarding the status of an institution is available at ext.11, or by email at status@ncahlc.org; complaints can be directed to ext. 198, or by email at complaints@ncahlc.org. In addition, specific program accreditation or approval has been granted by the following agencies:

- The Surgical Technology and Surgical Assisting programs are accredited by the Commission on Accreditation of Allied Health Education programs (www.caahep.org) upon the recommendation of the Accreditation Review Council on Education in Surgical Technology and Surgical Assisting.

  Commission on Accreditation of
  Allied Health Education Programs
  1361 Park Street
  Clearwater, FL 33756
  (727) 210-2350
  www.caahep.org

- Commission on Dental Accreditation (CODA)
  American Dental Association
  211 E. Chicago Ave.
  Chicago, IL 60611-2678
  (312) 440-2500 Fax: (312) 440-7461
  www.ada.org

- American Veterinary Medical Association
  1931 North Meacham Road, Suite 100
  Schaumburg, IL 60173-4360
  (800) 248-2862 Fax: (847) 925-1329
  www.avma.org

- American Society of Health Systems Pharmacist
  7272 Wisconsin Ave.
  Bethesda, MD 20814
  (301) 657-3000
  www.ashp.org

- Committee on Accreditation of Educational Programs for the Emergency Medical Services Professions
  8301 Lakeview Parkway Suite 111-312
  Rowlett, TX 75088
  (214) 703-8445 Fax: (214) 703-8992
  http://www.coaemsp.org/

- Department of Licensing and Regulatory Affairs (LARA)
  P.O. Box 30004
  Lansing, MI 48909
  (517) 373-1820

- Michigan Commission on Law Enforcement Standards (MCOLES)
  106 W. Allegan, Suite 600
  Lansing, MI 48909
  (517) 322-1417 Fax: (517) 322-5611

- Michigan Correctional Officer's Training Council
  7150 Harris Drive
  Lansing, MI 48913 Fax: (517) 334-6573

- Michigan Department of Community Health
  EMS and Trauma Systems Section
  Capitol View Building, 6th Floor
  201 Townsend Street
  Lansing, MI 48913
  (517) 241-3024 Fax: (517) 241-9458
  www.michigan.gov/mdch

- Michigan Department of Corrections
  206 E. Michigan Ave.
  Grandview Plaza
  P.O. Box 30003
  Lansing, MI 48909
  (517) 335-1426

- National Automotive Technicians Education Foundation
  101 Blue Seal Drive, Suite 101
  Leesburg, VA 20175
  (703) 669-6650

- The WCCCD Nursing Program has full approval from: Department of Licensing and Regulatory Affairs Bureau of Health Care Services Michigan Board of Nursing
  Ottawa Building
  611 West Ottawa Street
  P.O. Box 30670
  Lansing, MI 48909
  (517) 335-0918 Fax: (517) 241-1431
  bhcsinfo@michigan.gov

- The WCCCD Certified Nursing Assistant Course has full approval from: Department of Licensing and Regulatory Affairs Bureau of Health Care Services Michigan Board of Nursing
  Ottawa Building
  611 West Ottawa Street
  P.O. Box 30670
  Lansing, MI 48909
  (517) 335-0918 Fax: (517) 241-1431
  bhcsinfo@michigan.gov

- State of Michigan Department of Consumer and Industry Services Division of Federal Support Services
  P.O. Box 30193
  Lansing, MI 48909
  (517) 335-0918 Fax: (517) 373-2179

- Michigan Firefighter Training Council
  Bureau of Fire Services/OFFT
  525 W. Allegan St.
  Lansing, MI 48933
  (517) 241-8847 Fax: (517) 322-4061

VISION STATEMENT

Wayne County Community College District's vision is to be recognized as an institution that has achieved national and international recognition for enduring excellence as a comprehensive multi-campus community college district. WCCCD will focus on continuous self-evaluation and improvement, preparation of a highly skilled workforce in support of the Wayne County economy; student academic and career success; and leadership in strengthening the open door philosophy of educational opportunity.

MISSION STATEMENT

Wayne County Community College District is a multi-campus community college whose mission is to empower individuals, businesses, and communities to achieve their goals through excellent and accessible services, culturally diverse experiences, and globally competitive higher education and career advancement programs.

VALUES STATEMENT

- Supporting Excellence In Teaching and Learning
- Honoring Diversity
- Serving The Common Good
- Being Accountable
- Operating With Integrity

GENERAL EDUCATION

The foundation of the College's degree programs is in general education and is described by the "Philosophy of General Education," a broad statement of the knowledge, skills, and attitudes that students are expected to achieve and that have always been a part of the College's programs of study. The "Philosophy of General Education" was adopted in principle by the college's faculty at the Faculty Organization Day, held in March 1997 and re-affirmed by the Board of Trustees on November 24, 2009.

It reflects the curricula describing the academic group requirements listed under the catalog descriptions of specific degrees. It also reflects the faculty's belief that the values of general education are infused throughout the curricula and are often defined in practice by the discipline in which instruction and learning take place.

PHILOSOPHY OF GENERAL EDUCATION

At Wayne County Community College District, we believe that learning leads to a better life. Our general education curriculum equips students with the tools needed to build such a life, and to serve family, community, and society. We provide a range of required and elective courses designed to satisfy four possible student purposes:

- Transfer to four-year degree programs;
- Prepare for a two-year career program;
- Gain personal, social or professional enrichment; and
- Prepare for Certificate programs

The student who pursues an Associate Degree will study English, humanities, the social sciences, the natural sciences, and/or mathematics. Upon successful completion of the curriculum, the student will be able to:

- Read, write, and speak effectively
- Understand and appreciate the role of culture and the arts in both society and personal life
- Know the principles and be able to apply the methods of science
- Have mathematical and technological skills (especially computer skills) sufficient for personal and career need
- Know the principles and methods of the social sciences, and understand the basic social, political, and economic issues of the contemporary world
- Understand and appreciate both our common humanity and the diversity of cultures — historically, around the globe, and within contemporary America
- Be able to identify, define, and think critically about the issues that arise in daily life, both personally and professionally
- Have the skills needed to work ethically and effectively with others
- Become a lifelong learner.

WAYNE COUNTY COMMUNITY COLLEGE DISTRICT'S 2015-2020 STRATEGIC GOALS

The District has established the strategic goals listed below for District-Wide development and improvement as outlined in the 2015-2020 strategic plan. The theme of this strategic plan focuses on bold future pathways that lead to operational excellence and promote student success and completion.

Goal #1 - ADVANCEMENT OF THE OPEN DOOR OF EDUCATIONAL OPPORTUNITY

Expand its Open Door model by focusing on student access, diversity, equity, multicultural experiences, campus inclusiveness, and community engagement.

Goal #2 - EXPANSION OF COMMUNITY ENGAGEMENT

Serve as an active educational resource for problem-solving and economic development efforts at the community and state levels, and will enhance its engagement in national and international educational initiatives.

Goal #3 - ADVANCEMENT OF INSTRUCTIONAL INNOVATION

Advance curricular, co-curricular, and teaching/learning innovations in response to the dynamic needs of a diverse student body and changes in community and workforce educational needs.

Goal #4 - STRENGTHENING OF PROCESSES TO SUPPORT EFFECTIVE STUDENT LEARNING

Strengthen the assessment of student learning outcomes by increasing faculty and staff participation in (1) ongoing assessment of student learning outcomes at the course, program, discipline, and District levels, (2) analysis of student learning outcomes data, and (3) bringing about improvements in curricula, teaching and learning, and institutional practices based on the assessment data.

Goal #5 - DEVELOPMENT OF INSTITUTIONAL RESOURCES

Increase its capacity to meet changing student, business, and community educational needs through the advancement and sustainability of its human, financial, physical, and technological resources.

Goal #6 - ENHANCEMENT OF DISTRICT-WIDE CONTINUOUS SELF-EVALUATION AND SELF-IMPROVEMENT

Continue to enhance the measurement of its effectiveness in serving students, regional employers, and communities, and will increase the use of measurement data to inform decisions on continuous institutional improvement.

Goal #7 - ADVANCEMENT OF OPERATIONAL AND MANAGEMENT EXCELLENCE

Advance the process of continuously improving operational systems in all divisions and campuses of the district.

A BRIEF HISTORY OF WAYNE COUNTY COMMUNITY COLLEGE DISTRICT

WCCCD has completed more than 45 years of uninterrupted operation committed to the development and delivery of comprehensive educational services. Those living and working in the 32 cities and townships served by the District throughout the southeast Michigan region have enjoyed the benefits of high quality instructional programs, continuing education offerings, and community-based services.

The story of Wayne County Community College District is one of continuing growth and innovation in providing educational training and leadership for the metropolitan region. The District was established in 1967 by the Legislature of the State of Michigan and its initial seven-member Board of Trustees was elected the following year. In 1984, the number of trustees increased to nine (9).

The first operating budget was based on a $1,000,000 grant from the State of Michigan, as well as, a $300,000 stipend from New Detroit, Inc. and anticipated student tuition payments at that time. The new institution had no buildings or facilities of its own, but with the cooperation of local school boards, faith-based organizations and non-profits, classrooms were made available throughout the County of Wayne.

In the summer of 1969, the Board of Trustees directed staff to plan and begin operations for the first fall semester. Instructors were hired, curricula designed and the "College without Walls" opened its doors with an overwhelming response by community members.

In 1997, Wayne County Community College's institutional name was changed to "Wayne County Community College District", and the District's CEO position title was changed from President to "Chancellor".

Presently, the multi-campus community college District's five state-of-the-art campuses and University Center are located in industrial, suburban and metropolitan areas where a major share of Michigan's technical and skilled occupations are located. Because of the diversity of its service areas, WCCCD places a strong emphasis on occupational and career programs and traditional college and university transfer programs.

THE STUDENT BODY

The Wayne County Community College District practices an "open door" admission policy, and provides an educational experience to students who desire the opportunity. The District has a rich and diverse student population; approximately 70% are women and more than 50% are members of minority groups. While some 90% are Michigan residents, citizens from more than 30 countries are also enrolled in programs of study at the District. Nearly 70% of all WCCCD students attend part-time.

The student body is reflective of the diverse constituency served by the District. Approximately 70% of the student body receives financial aid or participates in work-study programs. Each semester, more than 300 veteran students also take advantage of the G.I. Bill.

Each year, the District graduates more than 1,000 students. While a majority of students are enrolled in two-year transfer programs, the District has expanded career/technical course offerings to meet the demands of new and emerging technologies. Currently one-third of the College's enrollment is in career occupations. Many will continue their education at four-year institutions, while others focus on terminal degrees and professional certificates allowing entry into rewarding careers.

ALUMNI

Since its founding, graduates of the District have had a profound impact on the professional, political and economic development in Wayne County, the State of Michigan, the nation and world.

Our alumni hold positions as teachers, dentists, doctors, lawyers, entrepreneurs, journalists, nurses, corporate business professionals, law enforcement officers, administrators, elected officials and a variety of other positions in professional and technical areas. The District has graduated more than 31,000 students, and approximately 551,000 have furthered their careers or enriched their lives through continuing education programs offerings.

ENROLLMENT MANAGEMENT, STUDENT SERVICES AND ACADEMIC POLICIES

ADMISSIONS

Admission Procedures for New Students

Admission to Wayne County Community College District is "open door" and automatic for those who are 18 or older. Admission to specific programs is not automatic. New students are required to complete an Application for Admission and complete an online orientation. Students are encouraged to apply for admission online at www.wcccd.edu. Those who have attended other post-secondary institutions should have all previous academic credentials (transcripts) forwarded to the District Records Office.

After completing an application and the COMPASS assessment, students will meet with an academic advisor to discuss their educational goals and select appropriate courses. Upon registration for any academic class students will automatically be provided with a WCCCD student e-mail account. Students can access their email by logging into their Web-Gate account at https://webgate.wcccd.edu and clicking on View Your WCCCD email Address under Main Menu. All official college communication to students will come through WCCCD student e-mail accounts. WCCCD students will be responsible for communications sent to this address. It is the student's responsibility to frequently check both their email and Web-Gate accounts for important announcements and updates.

For those under 18 years of age, the possession of a high school diploma or approval of a parent or guardian is required to accompany the Application for Admission. Persons under age 16 must re-apply and be approved for each semester for which they intend to enroll regardless of previous enrollments. Applications for persons under the age of 16 are submitted to the District Office of Student Services, 801 W. Fort St., Detroit, MI 48226. These classes may be available at no cost to the high school student who qualifies under the State School Aid Act, PA.148, Section 216. Students should contact their high school principal or academic advisor.

Transfer Students

Students transferring to Wayne County Community College District from other colleges or universities who wish to have credit transferred to their WCCCD record should request the previous institution to forward official copies of their transcripts to the District Records Office. Generally, credit earned from regionally accredited institutions and from all publicly supported junior and community colleges is acceptable if earned with a grade of "C" or better and is appropriate to the student's program of study. Transfer students are also encouraged to apply online at www.wcccd.edu. Students who have a bachelor's or graduate degree are not required to take a placement test to enroll.

Former Students (Returning)

A returning student is an individual who has not attended the District for the last two years. All students in this category must complete an application for re-admission. All students re-admitted to the District after missing four or more regular semesters or two years will be responsible for the curricula and regulations published in the current catalog and other official publications which are in effect at the time of their re-admission.

Program Admission

Certain programs at the District have prerequisite courses and other criteria required for admission. In addition to meeting the official admissions/registration requirements, students are required to apply for official program admission to their program of study. Students must complete an official Program Admission Form that may be obtained from the Student Services Office, the Office of Admissions and Records or from the Campus Academic Officer. Program admission is required for technical degrees and certificate programs.

PLEASE NOTE: All students re-admitted to the District after missing two years will be responsible for the curricula and regulations published in the current Catalog and other official publications which are in effect at the time of their re-admission. In certain cases, dates of program admission may take precedence over dates of college admission for purpose of meeting program requirements for graduation.

International Students

Wayne County Community College District encourages applicants for admission from qualified persons around the world and values the diversity that international students bring to campus. A vibrant international student population translates to a stronger multicultural experience for all students.

The District is authorized under Federal law to enroll non-immigrant alien students on the "F-1" student visa. Wayne County Community College District follows requirements set forth by the United States Department of Homeland Security. Each requirement must be satisfied before admission as an International Student is considered. International applicants should visit the website for application deadlines and a list of credentials needed for a complete application to be considered at: www.wcccd.edu/ students/inter_admission.htm

Senior Citizens

Citizens who are residents of the district and 60 years of age or older may enroll in academic classes at Wayne County Community College District tuition-free. Senior Citizen Tuition Waivers will be granted on a seat-availability basis in regularly scheduled academic classes. Continuing Education classes or classes leading to Continuing Education Certificates are not included in this tuition waiver. Although student activity fees shall be waived for senior citizens, they are responsible for all other fees such as the cost of books and class supplies. Senior citizen students are expected to adhere to the same academic standards, rules and regulations that are in place for other students. Proof of age and residency is required at the time of registration.

Native American Students

Free tuition is available to eligible Native American students. Students, however, are responsible for all fees, books and class supplies. Students claiming this exemption must present appropriate documentation at the time of enrollment. For more information visit the Office of Admissions and Records at your campus.

Michigan Community College Virtual Learning Collaborative

The Michigan Community College Association, with support from the Michigan Virtual University, created a Michigan Community College Virtual Learning Collaborative (MCCVLC) among Michigan's community colleges. Wayne County Community College District is a member of the MCCVLC. The MCCVLC is designed to allow current Michigan community college students to take courses from other member colleges while still receiving support services and maintaining their academic record at the designated home college. For further information please visit vcampus.mccvlc.org/.

Student Assessment

All first-time students with intent to pursue a degree or certificate must be assessed for skills in reading, writing, and mathematics prior to registering for classes. Students may be exempt from placement testing and orientation for up to 9 credit hours for personal interest. The assessment used is COMPASS and the process takes approximately two hours to complete. If a student has attended another college or university they may be exempt from assessment testing. All Dual/Concurrent Enrollment students registering for Math or English courses must take the COMPASS Assessment test. Official transcripts must be submitted proving that certain courses in English, writing and mathematics have been completed.

The results of your assessment testing do not affect your admission to WCCCD. Students who meet the "open door" admission requirements are automatically admitted to the college. However, the results of your assessment testing will be used by the District to assure that you are placed in courses appropriate for your skill level, particularly in English and mathematics.

To arrange for the COMPASS assessment, contact the Student Services Office at the campus of your choice. Please plan to stay at least two hours for your testing session. It is suggested that you prepare for assessment prior to your test day. The Student Services Office can provide you with sample test questions and practice tests to help you prepare. Please bring a photo ID when testing. Students are encouraged to call the campus to confirm the testing schedule.

Assessment Requirements and Institutional Priorities

WCCCD is committed to creating a holistic learner-centered environment in which students, faculty, and administrators collaborate to improve student learning. To that end, WCCCD focuses on (1) assessing the degree to which students achieve their stated goals and learning outcomes for courses, programs, and disciplines and (2) sharing assessment results among students, faculty members, and administrators to inform decisions regarding the improvement of student learning, teaching, curricula, and institutional practices.

English as a Second Language Testing (ESL)

Once admitted to Wayne County Community College District, students with limited English proficiency will be assessed using the COMPASS Test. This service is limited only to students who have applied and been accepted by the College. Results from the Compass Test will be used by District staff to assist students with placement in courses that are appropriate to the student's skill level.

Program Testing

The Office of Career Planning and Placement administers a number of assessment services for students, faculty, advisors and staff.

Academic Advisement and Guidance Services

Each campus is staffed with advisors and support staff who provide advising services as an integral part of the instructional process. As well, advisors are available in many locations. In assisting students to achieve their academic greatest potential, our advisors and other staff are committed to an effective entry-exit college experience. Services provided include:

- Educational guidance
- Academic advising
- College transfer information
- Scholarship information
- Personal/social/career advising

Jointly, advisement staff and the student may develop a plan which gives a student the opportunity to gain competencies in:

- Program selection
- Goal setting
- Career focus
- Stress management
- Time management

Financial Aid

Students must complete the **Free Application for Federal Student Aid (FAFSA)**, online at www.fafsa.gov, each academic year to be considered for any type of Financial Aid.

Financial Aid is available to those who qualify. Students are encouraged to apply as early as January 1st of each calendar year.

To receive Federal Student Aid funds, a student must be qualified to study at the postsecondary level. A student meets this requirement if they have a high school diploma; completed secondary level homeschooling in accordance with State laws; or a General Education Development (GED) certificate. Please visit the financial aid web site at www.wcccd.edu for additional information on eligibility.

All official College communications will be delivered via WCCCD email account. Notices and updates will also be sent via Web-Gate. Students are required to review email and Web-Gate messages on a regular basis. Review Web-Gate messages at http://webgate.wcccd.edu> Financial Aid> Financial Aid Status for Messages in Web-Gate.

Student financial aid funds are made available only for the purposes directly related to Wayne County Community College District's educational expenses. The use of these funds for any other purposes may jeopardize your eligibility to continue to receive these benefits.

The District Financial Aid Office has the right to review, adjust or cancel the financial aid award at any time due to notification from the U.S. Department of Education, a change in the student's FAFSA, financial, marital or academic status, or because of adjustments (changes) in federal or state regulations, funding or computational errors. Students may accept any number of awards or other financial assistance from public or private sources or both. However, the total assistance may not exceed the cost of attendance.

Information is also available on the following websites:

- Wayne County Community College District: www.wcccd.edu
- The State of Michigan: Student Financial Aid: www.michigan.gov/mistudentaid
- The U.S. Department of Education: www.studentaid.ed.gov

The types of financial assistance include the following:

- Federal Pell Grant
- Teacher Education Assistance for College and Higher Education Grant (TEACH)
- Federal Supplemental Educational Opportunity Grant (SEOG)
- Federal Work Study
- Federal Direct Student Loan
- Iraq and Afghanistan Service Grant

The terms and conditions for each type of financial assistance are available online by clicking on the Financial Aid tab on the District's website at www.wcccd.edu. **A student may decline all or any portion of a financial aid award by notifying the District Financial Aid Office in writing.**

Financial Aid Satisfactory Academic Progress Policy

In order to receive Federal Financial Aid, regulations require that all students make continued progress in their educational program. This requirement is called Satisfactory Academic Progress and will be monitored by the District Financial Aid Office. In accordance with Federal Regulations the District Financial Aid Office's policy will be to evaluate Satisfactory Academic Progress each academic year for students enrolled in programs longer than one year in length and at the end of each semester for all students in programs one year or less in length. Please see the financial aid website at www.wcccd.edu for a more comprehensive review of this policy.

At each evaluation, a student's progress will be measured on the following elements:

Qualitative Requirement

Cumulative GPA Requirement:
In order to continue to receive financial aid, a student must maintain a cumulative GPA of at least 2.0.

Quantitative Requirements

Maximum Timeframe:
Students must complete an undergraduate or eligible certificate program of study within 150% of the published credit hours required to complete the program. If the program requires 60 credit hours for completion, the maximum timeframe is 90. If the program requires 44 credit hours, the maximum time frame is 66 credit hours.

Pace of Progression:
Students should successfully complete at least 67% of the credit hours attempted. If a student earns 67% of all credit hours attempted, the student should complete the program within the maximum time frame. The pace that a student completes their program is calculated by dividing the cumulative hours the student successfully completed by the cumulative hours they attempted.

Additionally, transfer credit hours from another school, as well as repeated and developmental classes, are counted as credit hours attempted and completed. Withdrawal grades and incomplete grades are counted as credit hours attempted. Students seeking a second Associates Degree or certificate who are not meeting the quantitative standard, and want to be considered for financial aid eligibility, will need to submit a Satisfactory Academic Progress (SAP) appeal.

Appeal Process
Students who have been disqualified for financial aid are ineligible to receive financial aid and will not receive aid for the following, or future semesters. Students that were impacted by significant circumstances that caused them to be unable to meet satisfactory academic progress standards which resulted in their disqualification have the option of submitting a SAP Appeal for review by the SAP Committee for consideration for approval and reinstatement of aid eligibility. The SAP Committee considers the student's written appeal, supporting documentation, and federal regulations when making their determination. Please see the financial aid web site at www.wcccd.edu for additional information on filing an appeal as well as accessing the online form.

If the appeal is approved, the student may be granted probation for one semester. Some students may be required to follow an academic plan to ensure program progression. That plan will be reviewed after each semester. Financial aid eligibility is terminated for students who did not satisfy their probationary term or fulfill their academic plan.

All SAP decisions are sent to students' WCCCD email accounts and posted to Web-Gate.

Regaining Eligibility

Students who lose their financial aid eligibility because they fail to meet satisfactory academic progress will regain eligibility when it is determined that they are again meeting both the qualitative and quantitative standards. They are responsible for the payment of tuition and fees until financial aid eligibility is regained. When satisfactory academic progress standards are met, eligibility is regained for subsequent terms of enrollment.

Developmental Courses

Repeated and developmental courses are added into credits attempted and are used in the calculation of attempted credits verses completed credits. Up to 30 credits of combined developmental and ESL courses can be funded with federal student aid.

Pell Grant Lifetime Eligibility

The Higher Education Opportunity Act limits the period of time a student may receive a Pell Grant to 12 FULL-TIME semesters or the equivalent. This provision applies to all Federal Pell Grant eligible students effective with the 2012-13 award year. The calculation of the duration of a student's eligibility will include all years of the student's receipt of Federal Pell Grant funding.

150% Direct Subsidized Loan Limits

The Higher Education Act limits the period of time a student may receive Direct Subsidized Loans. Effective July 1, 2013, first time Direct Loan borrowers and students with no outstanding balance on a FFEL or Direct Loan are subject to a maximum eligibility period for subsidized loans of 150% of the published length of their academic program. For more information please visit: http://www.wcccd.edu/dept/FinancialAid_loans.htm

Financial Aid for Repeated Courses

The Financial Aid Office is required by the U.S. Department of Education to monitor and adjust a student's enrollment level for Title IV aid if, or when, they repeat course work for credit that they have already earned. Students can retake and receive federal aid if they previously failed a course, but can only receive financial aid twice for a course that has been passed. A passing grade is defined for this purpose as D or better. Please note that the repeat course policy for financial aid is separate from institutional academic policies regarding repeat courses. The financial aid policy allows a student to receive financial aid under the following situations:

- To repeat any failed course until a passing grade is received
- To repeat one time any course in which a passing grade was previously received

Please Note: Regardless of the outcome, courses are not eligible to be covered by financial aid after a 2nd attempt has been made in a course that has, at any time, previously earned a passing grade.

Veteran Affairs

The Veteran Affairs office is located in the District Admissions and Records Office, 801 W. Fort, Detroit, MI 48226 or www.wcccd.edu.

The main purpose of Veteran Affairs is to certify enrollment of those veterans and dependents that are using their educational benefits. The staff is a liaison between the Department of Veterans Affairs and Wayne County Community College District. The staff assists the veteran in filling out forms, explaining the various degree programs the District has to offer and directing the student to the various academic departments for advising and ongoing support services.

The Department of Veteran Affairs requires that all recipients of veteran educational benefits make progress toward their stated academic degree. Therefore, all veterans receiving benefits must maintain an accumulated grade point average (GPA) of 2.0 to remain eligible for Veterans Administration benefits. A veteran who allows his or her accumulated GPA to fall below 2.0 will be placed on probation. A veteran will be allowed two semesters to bring his or her accumulated GPA to 2.0 or higher. If the veteran fails to do so, the Department of Veterans Affairs will be notified of his or her unsatisfactory progress.

A signed statement acknowledging these requirements will be required from each veteran student at the beginning of each enrollment period.

Registration

There are specific registration procedures for new students, former students and for students who are currently enrolled. A detailed description of the enrollment and registration procedures is published in the Schedule of Classes which is available at www.wcccd.edu and at all WCCCD locations prior to each registration period.

Residency

Students residing within the District service area at the time of registration will be charged resident tuition rates. The District is defined as all of Wayne County with the exception of the following cities and townships: Dearborn, part of Dearborn Heights, Garden City, Highland Park, Livonia, Northville, Plymouth and part of Canton Township. Residency can be verified by voter registration card, driver's license, tax or rent receipts, or state identification card.

Residency is established at time of registration. Wayne County Community College District reserves the right to make final decisions on residency eligibility.

Special Residency

Children of deceased, 100% disabled, or missing Michigan veterans, between the ages of 16 and 22 and who are state resident for 12 months, per the State of Michigan statutes, may receive free tuition and fees for 36 months at State-supported colleges.

Change of Name or Address

A student who changes his or her name or address at any time after registration must immediately report such a change to the Office of Admissions and complete a change of data form. A veteran who changes address after certification must also report such a change to the District Student Services Division.

Deferred Tuition Plan

A minimum payment of 65% of all tuition and fees must be paid at the time of registration.

Outstanding Balances

Outstanding balances that are not paid in full on or before the published due date will be placed on Financial Hold and charged a default fee*. All student accounts remaining delinquent at the end of the semester (please refer to the District calendar for specific date) will be charged an additional semester delinquency fee*. All refunds will be applied to the student's account. Students who cancel or withdraw from classes after all refund periods have ended will be charged prior to receiving a refund.

Refer to the current Academic Schedule for fees.

Payment by Check

Personal checks must be drawn on a bank in Michigan and must have a preprinted name and account number on them. If the writer of the check is a person other than the student, the student must present the writer's ID. The student must have adequate picture identification and endorse the check. Any one of the following identification is accepted: driver's license, military service ID, employment picture ID card, state picture ID card or passport.

Payment of Tuition and Fees

All tuition, fees and deposits are due at the time of registration. Students that choose the deferred tuition payment plan must pay a minimum of 65% of total tuition and fee(s) for the current term. Payments may be made by money order, check, debit card, Visa, MasterCard, Discover Card, American Express or ATM debit card.

Refer to the current Academic Schedule for fees.

Wayne County Community District reserves the right to cancel the registration of any student who does not make required tuition and fees payment within the specified timeframe.

Cashless Registration Process

The District does not accept cash. Students may opt to pay by money order, check, debit card, Visa, MasterCard, Discover, American Express. Online payment is also available. The District bookstores provide money orders for a nominal fee. It is recommended that the student review the cost of tuition and fees in the schedule of classes or online before registering. Where applicable, please remember to consider the fees for student activities, labs, admissions and registration when calculating tuition costs.

NOTE: All returning students who have an outstanding balance must pay 100% of their outstanding balance.

Returned Check Policy

Students are liable for all amounts pertaining to any bank rejected checks, which includes but is not necessarily limited to the following:

- **The amount of the rejected check**
- **A District service fee* for NSF (bad check) processing**
- **A deferred fee***
- **Charges assessed by the external check guarantee company utilized by the district.**

Refer to the current Academic Schedule for fees.

ALL CHECKS WRITTEN TO THE DISTRICT ARE VERIFIED BY AN EXTERNAL CHECK GUARANTEE AGENCY. ALL RETURNED CHECKS ARE SUBJECT TO THE AGENCY'S COLLECTION FEES.

STOP PAYMENT OF CHECK DOES NOT INITIATE CANCELLATION OF CLASSES. YOU MUST OFFICIALLY WITHDRAW FROM YOUR CLASSES BY COMPLETING AN ADD/DROP FORM.

Important Registration Information

You are officially registered when the registration staff enters your classes into the registration system or once you click the "submit" button for those registering online. ***You are responsible for all tuition and fees incurred including the non-refundable registration fee.*** You must pay at least 65% of your tuition and fees at the time of registration. You must officially withdraw from your class (es) within the refund period to be eligible for any refund. The unpaid balance of tuition and fees is still due when you drop a course after the refund period ends. Therefore, ***any course dropped after the 50% refund period must be paid for in FULL.***

Disclaimer

The schedule of classes is for information only and does not constitute a contract. The District reserves the right to change, modify or alter without notice all fees, charges, tuition, expenses and costs of any kind and further reserves the right to add or delete, without notice, any course offering or information contained in the schedule.

WCCCD reserves the right to assign instructional staff and to eliminate, cancel, phase out or reduce course sizes and/or programs for financial, curricular or programmatic reasons.

Auditing Classes

Students desiring to audit courses for no credit must indicate "audit" on the Registration Form for the appropriate classes prior to registering. Students auditing courses pay regular tuition and fees. Credit is not given for an audited course, nor may a change to credit status be made after the student has registered to audit a course. Students who desire to change from credit status to audit status in a course must do so before the class begins. The course is included on the official transcript as an audit and denoted by the letter V Auditing a course can only be done during walk-in registration. Students must complete a registration form in order to audit a course.

Repeating Courses

Students may not repeat for credit any course for which they have earned a "C" or better. Exceptions may be made in special circumstances at the discretion of the Vice-Chancellor or his/her designee. Students have an opportunity to repeat completed courses (for no additional credit) in which they would like to improve their grade point average three times after the initial enrollment. If a class is repeated, each grade received will remain on the transcript, but the highest grade awarded will be used in calculating the grade point average.

Adding or Dropping Classes

Students may add or drop classes through the registration period. Please consult the current Schedule of Classes for applicable add/drop dates. Students desiring to add/drop classes may do so online through Web-Gate or complete and process the appropriate form in the office of records/registration at the campus of their choice. Classes dropped after the refund period will be reflected as a "W" grade on the student transcript.

Withdrawing from Classes

Officially withdrawing from classes may entitle students to full or partial refunds. For more information, refer to the current Academic Schedule book.

Refunds

Classes cancelled by the District will result in a 100% refund. The District reserves the right to cancel classes. The District will attempt to notify students whose classes are cancelled. Students substituting another course must process a drop/add form as soon as possible without additional charge for the added class. If students do not wish to substitute another course, a refund is automatic and there is no need to process a drop/add form. The refund will be returned to the student approximately 3-5 weeks after the first day of the semester. **There is no refund for health reasons.** Classes dropped by the student after the refund deadlines will result in **"no refund."**

Tuition, student activity fees, technology fee, and all course designated fees are refundable within the deadline requirements. However, registration, drop/add and deferred fees are not refundable unless the District cancels one or all of a student's classes.

Military Refund Policy

A student belonging to the Armed Forces or the Michigan National Guard who is called to active duty will be allowed to withdraw from classes without penalty and receive a 100% refund of the student's tuition and fees provided the student has not completed the course(s) for which the student is seeking a refund.

Career Planning and Placement

The Career Planning and Placement Office offer students and graduates an opportunity to explore employment opportunities in conjunction with their educational and personal goals. Professional staff is available at each campus to provide a variety of employment related services.

Students and graduates may explore career options using such resources as the Michigan Occupational Information System (MOIS), a statewide information system which provides detailed occupational information and related education and training data. Students and graduates receive assistance in preparing resumes, cover-letters, and improving their interviewing skills through the use of employability development software programs located at Campus Career Planning and Placement Offices. Referrals are made to testing and counseling services where students can receive assistance in identifying interests, aptitudes, and abilities; relating to career choices. As a member of the Community College District Employment Network, each campus has access to a computerized job sharing, job posting, and record keeping system. WCCCD subscribes to a leading recruitment website, College Central Network. Through this site, students can view jobs posted locally and nationally, and also post, update and forward their resume.

Student Activities

The Office of Student Activities coordinates a variety of programs and services intended to enhance the educational purpose and philosophy of the District. Formal education is only one facet of

a student's total educational experience while attending Wayne County Community College District. With this in mind, participation in student activities encourages and challenges students to get involved in other facets of the District community by planning or participating in student organizations and activities. The educational opportunities, development of leadership, social and interpersonal skills, personal satisfaction and enjoyment gained from participating in student activities will make the personal investment well worth the effort.

Each campus has recreational, social, and family student activities. This may include guest speakers and special events. The District's Phi Theta Kappa International Honor Society recognizes students who have achieved academic excellence. Student activities at WCCCD are student driven. For information about specific student organizations and activities, contact the administrative office at the WCCCD location of your choice.

It is the students' responsibility to provide individual liability, health and accident insurance coverage. The District accepts no responsibility for insurance coverage for participation in any student activity.

Student Executive Council

The Student Executive Council is a governing body of students who represent the interests of the student body. As the official "student voice" the Wayne County Community College District Student Executive Council is the liaison between the student population, faculty, and administration to promote the rights, education, and general welfare of all students at the college. The Student Executive Council consists of five students each appointed by a Campus President to serve a term of one academic year.

Academic Honesty

The expectation at Wayne County Community College District is that the principles of truth and honesty will be practiced in all academic matters. Therefore, acts of academic dishonesty, including such activities as plagiarism or cheating, are regarded by the District as very serious offenses. In the event that cheating, plagiarism or other forms of academic dishonesty on the part of students are discovered, each incident will be handled on an individual basis as deemed appropriate by the instructor.

Care should be taken that students' rights are not violated and that punitive measures are instituted only in cases where documentation of offenses exists. A description of all such incidents should be reported to the Campus Academic Officer where a file of such occurrences is maintained. The Campus Academic Officer may institute action against a student according to procedures of due process outlined in Student Rights and Responsibilities in the *Student Handbook.*

Class Attendance

Students are expected to attend all class sessions. When absence from class is unavoidable, it is the student's responsibility to make arrangements for make-up work, and to determine if announcements relevant to the course were missed during the absence. Make-up work is permitted at the instructor's discretion. Excessive absence may result in failure.

Students may not bring children to class or leave them unattended at the campus.

PLEASE NOTE: Class attendance can only be monitored and verified by the instructor.

Final Examinations

Final examinations are held regularly at the end of each semester or session. Students are required to take the final examination at the time and place scheduled in order to receive credit for the course, unless otherwise indicated by the instructor.

Grading System

The following is the grading system used at Wayne County Community College District. All courses in which the student enrolls and earns grades are recorded on the official transcript. Grade points are used to measure a student's academic achievement for the total number of credit hours attempted. Final course grades are accessible online by the third business day following the end of the semester through Web-Gate.

Grade	Points	Description
A	4.0	Excellent
B	3.0	Above Average
C	2.0	Average
D	1.0	Below Average
E	0.0	Failure to complete course requirements satisfactorily

Transcript Codes	Description
CR	Credit by Examination
CFE	Credit for Experience
AP	Advanced Placement (Articulation)
I*	Incomplete: The awarding of an incomplete grade is at the discretion of the instructor provided the student has been attending the class, is passing and has an unforeseen emergency, which occurs after the last day to drop classes.
NG	No grade issued by instructor.
V	Audit: Students visiting or auditing a course must declare this option when registering. Veteran and financial aid students are not eligible to audit
W**	Withdrawal: Withdrawal by the student during the first half of the semester.
XW	Walk-away status: Attended at least 1 class during the first third of the semester and failed to withdraw during the remaining two-thirds of the semester.

Note *District policy requires all students who earn an incomplete "I" grade to complete that course by the end of two consecutive terms after the term in which the "I" grade was given. The student is charged with the responsibility of completing the course requirements through the instructor who issued the "I" grade. In the event the student is unable to contact the instructor, the student must immediately contact the appropriate Campus Academic Officer. Failure to complete the course requirements within the two-consecutive-term time limit shall result in a grade of "E" replacing the "I" grade. Students should not register a second time for a course in which they have an outstanding "I" grade. An "Incomplete" grade is given only when an unforeseen emergency prevents the student from completing the work in a course and is given at the discretion of the instructor.

Note **While NEITHER GRADES XW, W ARE CALCULATED AS PART OF THE OFFICIAL GRADE POINT AVERAGE, they are counted in determining satisfactory progress for students receiving financial aid and continuing eligibility.

Grade Point Average (GPA)

The grade point average is calculated by multiplying the grade points by credit hours attempted. The cumulative grade point average is the total number of grade points earned divided by the total number of credit hours attempted. Attempted credit hours include "E" grades, even though grade points are not earned. THE HIGHEST GRADE IS USED TO CALCULATE GRADE POINTS FOR ANY REPEATED CLASS.

Example:

English	C = 2 x 3 credits	= 6 grade points
Biology	B = 3 x 4 credits	= 12 grade points
Psychology	E = 0 x 3 credits	= 0 grade points
Political Science	A = 4 x 3 credits	= 12 grade points
	13 credits (divided into)	

Equation = (total number of grade points earned) divided by (total number of credit hours attempted).

30 grade points/13 credit hours attempted

Equals **2.31 GPA**

Standards of Academic Progress

The Board of Trustees of Wayne County Community College District hereby authorizes the Chancellor to develop and promulgate standards for admission to and satisfactory progress in academic programs which vary from the general admissions and progress standards now in force. The Chancellor shall ensure that any such standards are appropriately published and communicated to students affected. In addition, the administration shall clarify to students that the General Standards for Admission and Satisfactory Progress already in force shall be applicable to all students unless separate standards have been promulgated for specific academic programs.

It is hereby policy that requirements for graduation include a cumulative GPA of 2.0 or higher. No degree will be granted to any student who has less than a 2.0 cumulative GPA.

The District maintains that all students should make continued progress toward an educational goal. In an effort to assist students, the following standards of academic progress have been established:

- Good Standing: A student maintaining a 2.0 or above cumulative GPA
- Total credits utilized in computing the cumulative GPA will not include:
  - Credit for classes which have been repeated. The lower grade will not be used in determining the GPA
  - Classes with a grade of CR, CRE or V and withdrawals (W, XW)
- Probationary Status: A student who has a cumulative GPA below 2.0 is placed on probationary status. A student is notified of probationary status on the semester grade report. When a student is placed on probation, the following steps must be followed:
- The student will be assigned an academic advisor for prescriptive assessments and the determination of the appropriate courses to pursue in the future. Note: It will be the student's responsibility to contact the advisor to schedule an appointment
- A probationary student may not elect more than nine (9) credit hours for the fall/spring semesters; six (6) credit hours in the summer unless that student has the written authorization of the advisor.
- The student must schedule regular meetings with an academic advisor during the academic probationary period.
- Continued Probationary Status: A student is placed on continued probationary status when the student's GPA for a semester is 2.0 but the cumulative GPA remains below 2.0.
- Exclusion: If a student maintains a cumulative GPA of less than 2.0 for three consecutive semesters, the student may be excluded from future enrollment at the District for one semester. Re-entry is not automatic. A student may apply for re-entry through a campus Office of Admissions.

Appeal of Grades

A student who believes that a grade has been awarded unfairly or incorrectly should first contact the instructor who awarded the grade to discuss the issue and attempt to resolve the dispute. If the matter is not resolved to the student's satisfaction, the student may appeal the grade to the campus Chief Academic Officer at the location where the course was taken.

The student will be advised of the appeal process, which includes a written statement from the student and the instructor's written response. Grade appeals must be filed within 90 days of the conclusion of the semester or session during which the student was enrolled in the course where the challenged practice occurred.

Student Complaints

Students who have a complaint concerning a course, an instructor or other staff should discuss the problem with the instructor or staff person first. If the student is still dissatisfied after this discussion, student should complete a formal, written inquiry/complaint form, available in the Student Services office at the campus of choice. Refer to the Student Code of Conduct in the WCCCD Student Handbook.

Credit for Pre-College Learning

Wayne County Community College District recognizes that many of our students come to us with a wealth of learning which was achieved through experiences outside a college classroom. The District sponsors several programs which are directed toward helping students convert those learning experiences into college credit that may be applied toward a certificate or degree. These include the Articulation Program, Credit by Examination, the College Level Examination Program (CLEP), Credit for Experiential Learning and Credit for Specialized Experience. Contact the Campus Admissions Office.

Articulation Programs

High Schools

High School articulation agreements are cooperatively planned and operated by the District and several secondary schools. Students who graduate from a participating school's career and technical preparation program may be eligible to receive college credit for competencies successfully completed in high school.

Colleges/Universities

The purpose of college/university articulation agreements is to allow students to complete an associate degree program, or in some cases, a certificate program, and transfer to a related bachelor's degree program with minimum loss of credit and duplication of coursework. An articulation agreement will describe the courses to be taken at Wayne County Community College District in order to complete the associate degree at Wayne County Community College District and successful matriculate into a four year college or university program of study.

Credit by Examination

Upon the recommendation of the Chief Academic Officer, credit may be earned for some courses in the current catalog through special examination. Credit earned in this manner will satisfy degree and certificate requirements. An academic officer can provide students with the direction and the forms necessary to apply for credit by examination.

College Level Examination Program (CLEP)

The CLEP test is based on the premise that individuals acquire knowledge informally throughout their lives. The test allows them to convert this knowledge into college credit. This opportunity may be particularly useful to the occupational career student, adult student, and the student who did not graduate from high school but who has acquired some special expertise.

There are two types of CLEP tests available: the **General Examinations**, which measure knowledge in basic liberal arts areas (English composition, humanities, mathematics, and social science/history), and the **Subject Examinations**, which measure achievement in 37 specific college courses. When prior college credit has been earned on a formal basis in the subject area, no CLEP credit will be allowed. Credit is granted for tests with scores which rank at the 50th percentile or higher based on sophomore norms presented in tables of percentile ranks provided by the College Entrance Examination Board, which developed and standardized the CLEP test.

A maximum of one year of credit (30) credit hours may be allowed for pre-college learning. This credit will apply toward WCCCD degrees and certificates. Most examinations are given once each month and may be taken by WCCCD students at the Counseling and Testing Bureau of Wayne State University. Descriptive brochures and applications are available at Wayne State University, 5050 Cass Avenue, Detroit, Michigan 48202.

Credit for Experiential Learning

If you wish to receive credit for learning you have achieved through experience but do not wish to use the College Level Examination Program (CLEP) or Credit by Examination, you may take advantage of our experiential learning program. To do this, you prepare a portfolio which includes the following information:

1. Courses for which you want to receive credit
2. Learning goals that you have achieved
3. Documentation of the achievement of the learning goals

This portfolio is then reviewed by faculty to determine if credit may be awarded. Several things about experiential learning are important to understand as students consider using this opportunity to earn credit. First, credit is granted for learning achieved from experience, not for the experience itself. In developing the portfolio, students will need to demonstrate that their experiences have helped them gain both theoretical and practical knowledge at the same level as they would have achieved by taking the course. Second, the process of developing a successful portfolio is as time consuming as taking a course. Therefore, we recommend that students consider this option only if they wish to receive credit for a group of courses. Credit for a single course is earned more efficiently through credit by examination or the CLEP program.

The fee for this service is an amount equal to half the normal tuition for the courses in addition to a fee* for processing. The Campus Chief Academic Officer can provide students with the directions and the forms necessary to receive credit for experiential learning.

Credit for Specialized Experience

Wayne County Community College District will grant four credit hours of credit, without fee payment, for the Fire Academy, Police Academy, Emergency Medical Training, military service, conscientious objector, Peace Corps, or Volunteers in Service to America (VISTA) service and experience, subject to the following stipulations:

1. Credit will be granted only for one of these training or service experiences.
2. Credit for military service will be granted only for active duty service of one year or more.
3. Credit for Fire and Police Academy experience will be granted only after completion of academy training, and one year of active duty with a public fire protection or law enforcement agency.
4. Credit for Peace Corps and VISTA experience will be granted only after completion of the appropriate tour of duty.
5. Credit for conscientious objector service will be granted only for those objectors who rendered service to the community as a result of their legally determined conscientious objector status.
6. This credit will not satisfy any part of the 15 credits at WCCCD required for graduation.
7. This credit is general elective credit and does not apply toward the fulfillment of any general education requirement for a degree.
8. This credit will be recorded on the student's academic record, without grade, as follows:

COE 999 . . . . . .4 credits
Conscientious Objector Service
EMS 999 . . . . . .4 credits
Emergency Medical Training
FAE 999. . . . . 4 credits
Fire Academy Experience
MSE 999 . . . . . 4 credits
Military Service Experience
PAE 999. . . . . 4 credits
Police Academy Experience
PCE 999 . . . . . 4 credits
Peace Corps Experience
VSE 999. . . . . 4 credits
VISTA Experience

9. To obtain this credit, students must meet the following criteria:
   a. Be currently registered or have earned credit for at least one WCCCD credited course
   b. Present official certificates to the Registrar attesting to the Fire Academy training (diploma or other official verification); military service (DD 214 preferred); or Peace Corps, VISTA, Police Academy, or Emergency Medical Training experience. Contact 313-496-2862 for further information.

Transfer College Information

Planning for Transfer

Many students attending WCCCD are beginning a journey toward a bachelor's degree program, taking their freshman and sophomore requirements here while planning to transfer to a senior college or university. Many students will choose to obtain an associate degree prior to transfer to their chosen senior institution.

Getting an associate degree is encouraged because it equips students with a marketable degree should interruptions occur in completing a bachelor's degree.

Some tips that will ensure that you make an easy transition from the community college to the university setting include:

- Begin planning early – meet with a WCCCD advisor to explore senior colleges and universities.
- Once you have selected a transfer institution, make contact with an advisor at that school as well.
- Make certain you understand the freshman and sophomore level requirements of your chosen university.
- If you are uncertain about where to attend upon completing your program at WCCCD, explore college web sites, write for information about programs you are interested in, and/or plan a trip to one or more colleges to become familiar with their environment, faculty and programs.
- WCCCD hosts "College Night" programs where representatives from senior colleges and universities will be on-site to speak with students. Plan to attend one of these events.

Transfer Support

The Office of Student Services on each campus can provide information about which WCCCD courses will transfer to universities in the area. It is the student's responsibility to consult an academic advisor to plan a program of study based on the specific university and appropriate academic major. Academic advisors can help students select the right courses for transferring to a four-year institution or college.

Petition for Change of Program Requirements

When a student is preparing to register for the final semester of his or her program or degree and unable to complete the requirements because a course (1) has not been offered recently at any campus, and (2) is not offered for the upcoming semester or has been cancelled due to lack of enrollment, the student may petition the District to have the required course changed and a related course substituted. No course will be changed without the substitution of another course.

Petitions for a change of program requirements must be submitted within the first two weeks of the enrollment period for the semester in which the change is to apply, except in the case of cancelled classes. Students should go to the Campus Chief Academic Officer to initiate a petition to change program requirements. Some program requirements are absolute. Nothing in this policy shall be construed to create an obligation on the part of the District to change any program requirements.

Campus Dean's Honor List

Students completing 12 or more credits during the fall or spring semesters with a minimum grade point average of 3.5 are eligible to be recognized on the Dean's Honor List at their home campus by the President of their respective campus.

Graduation with Honors

Students who complete degree requirements with exceptionally high scholastic averages are eligible to receive degrees with honors. Those who have earned the following grade point averages are eligible to be graduated:

- 3.75 – 4.00 summa cum laude
- 3.50 – 3.74 magna cum laude
- 3.25 – 3.49 cum laude

In computing the grade point average, all courses taken (with the exception of developmental educational courses) at Wayne County Community College District are considered.

Graduation

Students must adhere to the following graduation requirements:

1. Be officially admitted to the program or declare their major within the first 12 credit hours of coursework at the District.

Prior to the semester in which the students intend to graduate, they must:

2. Obtain and complete an application for graduation.
3. Submit the completed form to the appropriate advisor or program director for review.
4. Complete exit counseling at www.nslds.ed.gov (only for student loan recipients)

Students are expected to follow the program outlined in the catalog in effect at the time of admission to the college. After an enrollment break of two or more years, students must follow the program requirements of the catalog at the time of re-enrollment.

Michigan Transfer Agreement (MTA)

The Michigan Transfer Agreement (MTA) is designed to facilitate transfer from one institution to another. One guiding principle of the agreement is to promote transparency among institutions to ensure accurate transfer information for students. The Michigan Transfer Agreement replaces the MACRAO Transfer Agreement. Students first enrolled Fall 2014 (or later) will not be eligible and should pursue the Michigan Transfer Agreement (MTA) instead. Wayne County Community College District is a member of the Michigan Association of College Registrars and Admission Officers (MACRAO).

The MTA transfer student agreement ensures that a student who completes the MTA Common Core courses at a participating two-year college will have satisfied general education requirements at the participating four-year college. The MTA Common Core of general courses includes the following:

- English Composition (6 credit hours).
- Natural Science/Mathematics (8 credit hours). (Courses must be taken from a minimum of two subject areas. At least one science course must include a laboratory.)
- Social Science (8 credit hours). (Courses must be taken from a minimum of two academic disciplines.)
- Humanities (8 credit hours). *(Courses must be taken from a minimum of two academic disciplines.)*

The inclusion of specific courses within a given category is determined by WCCCD. In general, technical, vocational, development and enrichment courses will not be included in the MTA Common Core. Special circumstances may allow for select vocational course acceptance if agreed to by a participating four-year college.

It is important for students wishing to take advantage of this agreement to work closely with an advisor at any WCCCD campus to insure that the courses they select fulfill the WCCCD general education requirements and are eligible for the MTA agreement.

- WCCCD, upon student request, will evaluate a student's transcript for completion of the MTA Transfer Agreement. A "MTA Transfer Agreement Satisfied" endorsement will be placed on the student's transcript if the MTA Common Core has been fulfilled.
- The four-year college will determine the transferability, equivalency, and applicability of the MTA Common Core courses in meeting additional baccalaureate requirements. No additional General Education Common Core courses will be required by the four-year college of any student who completes the associate of arts (A.A.) or associate of science (A.S.) degree. *According to the requirements of the MTA agreement.
- Participating four-year colleges may require, of all students, additional graduation requirements beyond the 30 credit hours (45 quarter hours) satisfied by the MTA Common Core (i.e., competency, foreign languages, physical education, religion). Transfer students who complete the MTA Common Core will be expected to fulfill all graduation requirements.
- In order to benefit from the MTA Transfer Agreement, a student must be eligible for admission to a four-year college. The attainment of an A.A. or A.S. degree is desirable for most prospective transfer students. Individual objectives and circumstances are best considered by allowing each student flexibility to determine the time of transfer.

PLANNING GUIDE • MICHIGAN TRANSFER AGREEMENT (MTA)

NOTE: Students enrolled prior to Fall 2014 may complete the MACRAO Endorsement; students first enrolled Fall 2014 (or later) will not be eligible and should pursue the Michigan Transfer Agreement (MTA) instead. Eligible students will have until Fall 2019 to complete the MACRAO Endorsement. Colleges and universities that currently accept MACRAO Endorsements will continue to do so regardless of date of completion. STUDENTS ARE STRONGLY ENCOURAGED TO WORK WITH INTENDED TRANSFER INSTITUTIONS TO DETERMINE WHICH ENDORSEMENT AND WHICH COURSEWORK WILL BEST FULFILL THEIR ACADEMIC PLANS.

A minimum of 30 credits is required to complete the MTA. At least one (1) course must be taken at Wayne County Community College District. Coursework transferred from other institutions that does not have a direct WCCCD equivalent may be eligible to satisfy MTA, dependent on evaluation.

Designated MTA courses: EACH course must be completed with a minimum grade of "C".

ENGLISH COMPOSITION

ENG 119	3 CR	English Composition I
or ENG 134	3 CR	Technical Communications

☐ MTA English

COMMUNICATION

ENG 120	3 CR	English II
or SPH 101	3 CR	Fundamentals of Speech
or BUS 240	3 CR	Business Communications

☐ MTA Communication

MATHEMATICS

One of the following: MAT 135, 155, 156, 171, 172, 271, 272, 273.

☐ MTA Math

NATURAL SCIENCE

Two of the following, each from a different subject area: ANT 153, AST 101, BIO: (151, 155+, 165+, 175+, 240+, 250+, 252, 295+), CHM: (105+, 136+, 145+, 155+, 250, 255+), DT 130, GEL 210+, PHY:(115+, 235+, 245+, 265+, 275+). At least one must be a laboratory science. *Note: + designates a science course with a laboratory.*

☐ MTA Natural Science

☐ MTA Natural Science

SOCIAL SCIENCE

Two of the following, each from a different subject area: AAS, ANT, ECO, HIS, MWS, PS, PSY, SOC.

☐ MTA Social Science

☐ MTA Social Science

HUMANITIES

Two of the following, each from a different subject area: AAS 253, ARA, CHN, ENG: (212, 228, 231, 232, 233, 234, 240, 250, 252, 260, 261, 266, 280, 285, 290, 292), FRE, GRM, HUM, JPN, MUS, MWS 102, PHL, SPA, SPH.

☐ MTA Humanities

☐ MTA Humanities

ADDITIONAL COURSEWORK

If necessary, additional designated MTA courses (from above lists) to total or exceed 30 credit hours.

☐ MTA Additional Course (if needed)

☐ MTA Additional Course (if needed)

Many Michigan four-year colleges and universities are part of the Michigan Transfer Agreement. The Agreement requires completion of 30 credit hours of coursework in general education areas. If a student has successfully completed the appropriate coursework, that student's transcript will be marked "MTA Satisfied". Participating four year colleges and universities will accept that as a completion of 30 credits toward their general education requirements. Students who plan to transfer should contact their intended transfer institution. The MTA requires that colleges list coursework which is applicable.

ACADEMIC SUPPORT AND DEGREE REQUIREMENTS

PLANNING YOUR PROGRAM OF STUDY

The most important thing to do to ensure your success at WCCCD is to carefully plan your progress through your program of study, whether that is several specific courses or an entire certificate or degree. This plan should include consideration of family or job commitments, as well as the College's requirements and course offerings.

Student services staff are available on all campuses Monday through Friday, both day and evening, to help you in planning your program of study. In addition, faculty members, campus academic staff and student services staff are available to assist you in making sound academic decisions in your program of study.

These individuals are valuable resources and you should consult them any time you have a question. Students are encouraged to meet with an advisor each semester prior to registering.

CLASS SCHEDULING

The District strives to meet the scheduling needs of all students, whether they choose to study full-time, part-time, or less than part-time. Since earning a degree requires at least 60 academic credits, the length of time it takes to complete a degree depends on the number of credits a student successfully completes each semester.

Most WCCCD courses are three academic credits and require three hours of class time per week. Some courses require more academic credits and longer hours for laboratory and/or practicum assignments. Generally, classes are in session 15 weeks for the fall and spring terms, and 12 or 7.5 weeks for summer terms. Fast-Track and other academic sessions may vary in duration. Courses are also offered through Distance Learning. Refer to the current Schedule of Classes for specific and up-to-date information on the time, day and campus location of offered courses or at www.wcccd.edu. This catalog suggests a sequence of courses you should follow to earn your degree if you are a full-time student. However, since many students are employed or have family responsibilities and other commitments, part-time study is available for the majority of programs. Contact the advising office at the campus of your choice for advice on selecting courses for part-time study.

FULL-TIME STUDY

Full-time study is 12 or more academic credit hours. To be successful, students are required to spend additional time each week (outside of class) in study and preparation.

PART-TIME STUDY

Part-time study is defined as 6-11 credit hours of study. Less than six (6) credit hours is not considered part-time. To be successful, students are required to spend additional time each week (outside of class) in study and preparation.

ACADEMIC SUPPORT SERVICES

Students are encouraged to meet regularly with their student services staff or advisors when entering WCCCD and throughout their stay at the District for assistance in educational planning and self-development. Advisors and other staff are available to assist students with educational, vocational and personal concerns. Individual and group experiences are available through a variety of District resources for students who wish to increase their effectiveness as learners and to improve their social skills.

LEARNING CENTERS

The District provides supportive services through its Learning Centers located at each campus. The centers provide academic skill building for individuals and groups. Each Learning Center houses a wide range of equipment and materials to address various levels of learning difficulties. Students can access learning assistance technologies to support academic success.

SERVICES FOR STUDENTS WITH SPECIAL NEEDS

The ACCESS program provides students access to all District occupational, technical, and vocational programs. Students who are economically underserved, disabled, or limited English speaking are provided academic assistance, supportive services, and personal and career advisement. Each student is given the opportunity to realize his/her maximum potential which is achieved by formal and informal assessments.

Additionally, other specialized services are available based on academic or special needs of the student. Students who are eligible for supportive services are:

- Students with an academic or economic need
- Students whose native language is other than English
- Students who self-disclose either a physical and/or cognitive disability must present written verification from a qualified physician, psychologist, psychiatrist or therapist. Documentation submitted for students with special needs is confidential and used solely for the purpose of assisting students in identifying and securing appropriate accommodations and service to enhance student's success at WCCCD.

Each campus offers services to students with special needs. Contact the Learning Center at the campus of your choice for more information.

- Downriver: 734-946-3500
- Downtown: 313-496-2758
- Eastern: 313-922-3311
- Northwest: 313-943-4000
- Western: 734-699-7008

DEVELOPMENTAL EDUCATION

Developmental education coursework is designed to build upon existing skills in order to facilitate student success in the core curriculum at Wayne County Community College District. Developmental education courses are offered in writing, reading and mathematics for students needing review in these areas. The courses emphasize individual attention, personalized teaching, and learning in small support groups. Each course carries full college credit at WCCCD. Developmental education courses are not transferable to four-year institutions for academic credit. The Developmental Education courses that are offered are as follows:

- ENG 111 Introduction to Reading Skills
- ENG 112 Career and Technical Reading I
- ENG 113 Career and Technical Reading II
- ENG 114 Career and Technical Writing I
- ENG 115 Career and Technical Writing II
- MAT 100 Basic Mathematics
- MAT 105 Pre-Algebra
- MAT 112 Elementary Algebra
- MAT 113 Intermediate Algebra

LEARNING RESOURCE CENTERS

Learning Resource Centers (LRC) are located at all campuses. Services in each of our Learning Resource Centers include: computers and photocopiers/printers, course reserves, inter-library loan, reference services, virtual chat reference help, access to an Online Public Access Catalog (OPAC), and circulation services for students, faculty, and staff. Students, faculty, and staff have access to library resources in electronic and hardcopy formats that were selected to support study, research and recreational reading. The general and reference collections are arranged by Library of Congress call numbers. The LRC's also maintain a collection of scholarly journals, newspapers, and popular magazines. Other resources include multi-media equipment, instructional videos, collection of e-books and access to the Library databases.

WCCCD is a member of the Detroit Area Library Network (DALNET), a multitype library and information network servicing the seven counties in the Southeast Michigan/Detroit Metropolitan area. The current DALNET members, along with WCCCD, are:

- Adam Cardinal Maida Alumni Library
- Arab American National Museum
- Beaumont Hospitals
- Botsford General Hospital
- Concordia University Ann Arbor
- Detroit Institute of Arts Library
- Detroit Medical Center
- Detroit Public Library
- John D. Dingell VA Medical Center
- Macomb Community College Library
- Marygrove College Library
- Mount Clemens Regional Medical Centers Library
- Oakland Community College Library
- Oakland County Law Library
- Rochester College
- The Henry Ford Benson Ford Research Center
- University of Detroit Mercy
- Walsh College Library
- Wayne State University

DALNET provides links to the information gateway, which include: access to DALNET member library catalogs, Digital Projects, access to health information links, reciprocal borrowing agreements, access to research links, and DALNET news. DALNET also provides WCCCD libraries with access to a fully integrated library management system that is used to automate and manage library operations.

The WCCCD LRC web pages provide current information about the Learning Resource Centers. The web pages provide access to the library catalog; articles and databases including WCCCD licensed full text article databases; internet search links to search engines, internet guides, and links to online help with APA and MLA style; frequently asked questions; and library services for faculty, students, staff and community. WCCCD students, faculty and staff can search these resources from any college network-connected PC or remotely from home or any off campus location. WCCCD instructors may schedule Bibliographic Instruction Sessions, class assignments and instruction in the use of equipment with campus LRC Coordinators for their classes.

Students must have the WCCCD Student One Card (which is also the library card) to use printing machines and access other LRC resources and services. Community members may purchase a cash card for printing in the LRC's.

Contact Information for the LRC's are as follows:

Downriver LRC		
John Dingell Library		734-374-3228
Downtown LRC		
Arthur Cartwright Library		313-496-2358
Eastern LRC		
Joseph Young, Jr. Library		313-579-6911
Northwest LRC		
John Conyers, Jr. Library		313-943-4080
Western LRC		
William D. Ford Library		734-699-7008 ext. 5561

CONTINUING EDUCATION

The School of Continuing Education provides the District with quality services that foster personal enrichment and professional development for individuals and the community to upgrade skills thereby increasing competitiveness. Courses and workshops are offered to assist professionals in maintaining the mandatory continuing education requirements for certification and licensure. Programs are offered to enrich the intellectual, physical, and emotional aspects of an individual regardless of age. The District is committed to the design and delivery of innovative programs and courses that address the diverse needs of business and the community and contribute to the economic development of Wayne County. District goals are achieved through the successful delivery of non-credit programs for special target populations.

The School of Continuing Education and Workforce Development offers diversified, short-term skills training programs designed to provide individuals with the skills necessary for employment, skills upgrade, career advancement, certification/re-certification, and licensure. Some of the occupational-based programs include:

- Advanced computer technology
- Customer service training
- Advanced manufacturing
- Innovative training solutions
- Leadership development
- Measurable training results
- Performance improvement
- Safety and health training

Persons enrolling in Personal Enrichment and Leisure programs offered through the School of Continuing Education are able to enjoy a variety of programs intended for their personal growth and development, and/or the attainment of personal goals, i.e.: fitness and yoga courses, computer training, photography, gardening, cooking, music and dance.

The School of Continuing Education also provides children and youth with the opportunity to enroll in programs designed to assist them with the extra motivation necessary to do well in school, while creating a foundation for continuous life-skills building. Parents may enroll children in courses to strengthen academic and test-taking skills, nurture interests in dance, music, science, mathematics and art, discover new recreational skills or enhance existing ones.

Community members and organizations enrolled in Continuing Education courses that offer special guest lectures, seminars and workshops to address a specific need or topics of interest. Certain programs provide the flexibility of distance learning; allowing program participation online.

MARY ELLEN STEMPFLE UNIVERSITY CENTER - CENTER FOR DISTANCE LEARNING

The District's distance learning offerings are designed to provide students with greater access to the District's programs and are available to all students. Distance learning opportunities are available through online courses, ITV course offerings and Live-Interactive online courses.

Online Courses: These courses enable students to earn course credit through Internet connections. Students must have access to a computer with an Internet connection and relevant computer peripherals. A majority of online course work occurs in a virtual environment that is accessible 24 hours a day, seven days a week. Most online courses are 100% online. However, some courses require periodic face-to-face sessions.

Interactive Television (ITV): ITV courses are offered in specially-equipped classrooms which are linked by two-way audio/two-way video conferencing technology to other campuses. This initiative links the campuses such as Downtown, Downriver, Eastern, Northwest, Western and the Mary Ellen Stempfle University Center together, allowing students to participate in the same course simultaneously. This technology allows students and faculty to interact between the campuses and allows them to see and hear each other live. ITV makes it possible for students to participate in courses that were limited to them due to travel restrictions or low enrollments.

Live-Interactive Online (LIO): This technology allows students to access their course from any location with access to the Internet. Students need a computer with an Internet connection and relevant computer peripherals. An instructor sends text, graphics, and audio to students' computers simultaneously for interactive learning experiences. Whether working from home, work, or on-campus, all of the LIO students have the ability to ask "live" questions of the instructor and fellow students.

For more information concerning any of the District's distance learning opportunities, please contact distancelearning@wcccd.edu.

CATALOG-IN-FORCE

Each student's catalog-in-force for degree or certificate requirements is the College Catalog which is in effect when a student first enrolls in credit courses at Wayne County Community College District.

A student, who has been away from the College for four (4) or more regular semesters, or the last two (2) years, must complete an application for re-admission. Students will follow the Catalog-in-force requirements (degree or certificate program requirements) effective the term the student re-enrolls in credit courses.

For programs that have selective admission, a student's catalog- in-force requirements (degree or certificate program requirements) are those that are in effect the term a student is accepted into the program and enrolls in program courses.

In addition, the District reserves the right to change course offerings and academic requirements as deemed necessary.

DEGREE REQUIREMENTS

Requirements for All Degrees

Candidates applying for an associate degree at Wayne County Community College District must meet the following basic requirements:

- Complete at least 60 credit hours
- A minimum of 15 credits of program requirements at WCCCD
- PS 101 American Government (3 credits)
- Have a minimum grade point average of 2.0 upon completion.

REQUIREMENTS FOR SPECIFIC DEGREES

Associate of Arts (A.A.) Degree

The associate of arts (A.A.) degree is designed for students who plan to transfer to a four-year college or university and for those who plan to earn a professional degree. Programs leading to the A.A. degree are designed for students who plan to major in such areas as English, Humanities, or Social Sciences and for students who are preparing for professional programs in areas such as law, journalism, business administration, teaching and computer information systems.

In order to receive the A.A. degree, students must:

1. Complete the "Requirements for All Degrees" as listed in each program
2. Complete the following academic group requirements:

General Education Courses:

English 119 and ENG 120. . . . . 6 credits
PS 101 - American Government. . . . 3 credits
Humanities . . . . . 9 credits
Natural Science*. . . . . 8 credits
**Natural Science course must include a laboratory*
Social Science . . . . . 9 credits

Note: Students must complete a minimum of three (3) courses from the following areas of concentration:

- Anthropology
- Economics
- English
- History
- Mathematics
- Philosophy
- Political Science
- Psychology
- Sociology
- Speech

Total General Education Credits: . . . 35 credits
+
Electives . . . . . 25 credits
Associate of Arts Degree Program Total: . . . . . 60 credits

Associate of Science (A.S.) Degree:

This degree is designed for students who plan to transfer to a four-year college or university with a major in the natural or physical sciences including chemistry, mathematics, biology and physics. Courses leading to an A.S. degree are designed for students enrolled in pre-professional studies for such areas as medicine, dentistry, engineering, dietetics, and environmental and natural resources.

In order to receive the A.S. degree, students must:

1. Complete the "Requirements for All Degrees" as listed in each program
2. Complete the following academic group requirements:

English 119 and ENG 120. . . . . 6 credits
PS 101 - American Government. . . . 3 credits
Humanities . . . . . 9 credits
Natural Sciences. . . . . 20 credits
Social Science . . . . . 9 credits

Total General Education Credits: . . . 47 credits
+
Electives . . . . . 13 credits
Associate of Science Degree Program Total: . . . . . 60 credits

Note: Humanities, Natural Sciences and Social Science courses must be taken in more than one discipline.

Associate of Applied Science (A.A.S.) Degree:

This degree is designed to prepare students for immediate employment in specialized areas such as mechanical and engineering technologies, health, business and office technologies and human services.

The A.A.S. degree is usually considered for vocational technological and occupational fields leading directly to employment in such areas as nursing, criminal justice, aviation mechanics, child care, gerontology, mental health, addiction studies, drafting or computer technology. However, many WCCCD students with the A.A.S. degree transfer to four-year colleges to continue their education while working.

In order to receive the A.A.S. degree, students must:

1. Complete the "Requirements for All Degrees" as listed in each program
2. Refer to the specific A.A.S. degree program for the required program credits
3. Adhere to the program course requirements for the specific A.A.S. degree desired

Associate of General Studies (A.G.S.) Degree:

This degree program helps students who plan to study a variety of areas without committing themselves to a specific field as they prepare for employment or additional academic work. In order to receive the A.G.S. degree, students must:

1. Complete the "Requirements for All Degrees" as listed in each program
2. Complete the following academic group requirements:

ENG 119 . . . . . 3 credits
Elective: *any English course above* ENG 119 . . . . . 3 credits
Humanities . . . . . 3 credits
Mathematics . . . . . 3 credits
*Natural Science. . . . . 3 credits
**ANT 153, DT 130 OR any course from AST, BIO, GEL, CHM, PHY*
PS 101 - American Government. . . . 3 credits

Total General Education Credits: . . . 18 credits
+
Electives . . . . . 42 credits
Associate of General Studies Degree Program Total. . . . . 60 credits

Additional Associate Degrees:

A student who has received an associate degree from WCCCD may obtain an additional associate degree in another area. However, students should seek academic advising before pursuing an additional associate's degree. This provision is subject to the following stipulations:

- For each additional associate degree, a minimum of 15 semester credit hours must be completed at WCCCD. These credit hours may not repeat previously earned credit.
- All academic group requirements for the associate of arts or associate of science degree may be met by credit previously earned, or by credit additionally earned, or both.
- All courses required by any specific program must be completed.
- An associate of arts degree may be earned following an associate of science degree or vice versa. However, no additional degree will be granted in the same program in which the first degree was earned.
- An additional degree must be within a specific program if the first degree was not.
- Students must complete their last semester at WCCCD.
- Students may not receive a certificate and an associate degree in the same career program within the same semester.

Certificate Requirements (CERT)

The certificate programs are designed for students who are seeking job-entry skills and for those who wish to improve their performance on their present job or who wish to qualify for advancement. In order to receive a certificate, students must have a minimum grade point average of 2.0 in the program upon completion. The specific course requirements are listed in the academic program section of this Catalog. Refer to the table of contents for page listings of certificate programs. In addition, contact the Workforce Development Department at the District for information on specialized certificate training programs offered throughout the academic year.

- Short-Term Certificate:
  minimum 10 credits, maximum 29 credits*
- One-Year Certificate:
  minimum 30 credits, maximum 35 credits*

Courses that Satisfy the Academic Group Requirements

The courses listed below may be used to satisfy the English, Humanities, Social Sciences, and Natural Sciences academic group requirements for the following degree programs:

- Associate of Arts
- Associate of Applied Science
- Associate of Science
- Associate of General Studies

Refer to the "Specific Degree Requirements" and the special requirements of your chosen program listed in this catalog to be sure that you select the correct courses.

NOTE: *Elective courses may be selected from the list of courses below in addition to the courses listed in the Course Description section of this catalog.*

I. Courses that satisfy English requirements:

Options:

ENG 119	English I *(required for all degrees plus one other English (ENG) course.)*
ENG 120	English II (required for the A.A., A.S. and other degree's.)
ENG 134	Technical Communications
ENG 260	Introduction to African-American Literature
ENG 261	African-American Literature in the Twentieth Century
ENG 270	Professional and Technical Report Writing
ENG 280	Creative Writing

II. Courses that satisfy the humanities requirements:

Options:

AAS 253	African-Caribbean Literature
ARA 101	Introduction to Arabic I
ARA 102	Introduction to Arabic II
ART 101	Drawing I
ART 102	Drawing II
ART 103	Drawing III
ART 111	Design I
ART 112	Design II
ART 115	Basic Drawing for Animation
ART 121	Painting I
ART 122	Painting II
ART 123	Painting III
ART 131	Ceramics I
ART 132	Ceramics II
ART 151	Sculpture I
ART 152	Sculpture II
ART 171	Printmaking I
ART 172	Printmaking II
ART 173	Printmaking III
ART 174	Printmaking IV
CHN 101	Introduction to Chinese
DAN 101	Modern Dance I
DAN 102	Modern Dance II
DAN 103	Modern Dance III
DAN 111	Ballet I
DAN 115	African-American Dance
DAN 211	Choreography and Performance I
ENG 212	Women in Literature
ENG 228	Introduction to Folklore and Mythology
ENG 231	Introduction to Poetry
ENG 232	Introduction to the Novel
ENG 233	Introduction to Drama
ENG 234	The English Bible as Literature
ENG 240	Introduction to Shakespeare
ENG 250	American Literature, 1800-Present
ENG 252	English Literature Across the Centuries
ENG 260	Introduction to African-American Literature
ENG 261	African-American Literature in the Twentieth Century
ENG 266	African-Caribbean Literature
ENG 280	Creative Writing
ENG 285	Children's Literature
ENG 290	Spanish American Literature
ENG 292	Latina Literature-The Past Decade
FRE 101	Elementary French I
FRE 102	Elementary French II
FRE 201	Intermediate French I
FRE 202	Intermediate French II
GRM 101	Elementary German I
GRM 102	Elementary German II
GRM 201	Intermediate German I
GRM 202	Intermediate German II
HUM 101	Introduction to the Visual Arts
HUM 102	Introduction to the Performing Arts
HUM 103	The Art of Humanities
HUM 126	Foundations of African-American Art
HUM 141	Introduction to the Theatre
HUM 211	Music Appreciation
HUM 221	Art Appreciation
HUM 222	Art History
HUM 231	Introduction to Film
JPN 101	Elementary Japanese I
JPN 102	Elementary Japanese II
MUS 100	Introduction to the Fundamentals of Music
MUS 101	Fundamentals of Music I

II. Courses that satisfy the humanities requirements (cont.)

MUS 102	Fundamentals of Music II
MUS 121	History of Jazz I
MWS 102	Muslim World Civilization
PHL 101	Comparative Religions I
PHL 102	Comparative Religions II
PHL 201	Introduction to Philosophy
PHL 211	Introduction to Logic
PHL 221	Ethics
SPA 101	Elementary Spanish I
SPA 102	Elementary Spanish II
SPA 201	Intermediate Spanish I
SPA 202	Intermediate Spanish II
SPH 101	Fundamentals of Speech
SPH 105	Improving the Speaking Voice
SPH 111	Interpretative Reading
SPH 131	Introduction to Radio, Television and Mass Communications
SPH 161	Play Production

III. Courses that satisfy the natural sciences requirements:

For the A.A. degree and the A.S. degree:

- At least one (1) of the natural sciences must be a laboratory course.
- Mathematics courses numbered 155 or above may be used to meet the non-laboratory natural science requirement.

Options:

Note: *+ designates a science course with a laboratory*

Natural Sciences:

ANT 153	Introduction to Physical Anthropology
AST 101	Astronomy I: New Solar System
BIO 125+	Biology for Non-Science Majors
BIO 151	Human Ecology
BIO 155+	Introductory Biology
BIO 165+	Botany
BIO 175+	Zoology
BIO 240+	Human Anatomy and Physiology I
BIO 250+	Human Anatomy and Physiology II
BIO 252	Pathophysiology
BIO 295+	Microbiology
CHM 105+	Introductory Chemistry
CHM 136+	General Chemistry I
CHM 145+	General Chemistry II
CHM 155+	Survey of Organic and Biochemistry
CHM 250	Organic Chemistry I
CHM 252	Organic Chemistry II
CHM 255+	Organic Chemistry Lab
DT 130	Fundamentals of Nutrition
GEL 210+	Physical Geology Lecture
PHY 115+	Fundamentals of Physics
PHY 235+	General Physics I
PHY 245+	General Physics II
PHY 265+	Physics for Scientists and Engineers I
PHY 275+	Physics for Scientists and Engineers II

Mathematics:

MAT 155	College Algebra
MAT 156	Trigonometry
MAT 171	Analytic Geometry and Calculus I
MAT 172	Analytic Geometry and Calculus II
MAT 271	Analytic Geometry and Calculus III
MAT 272	Linear Algebra
MAT 273	Differential Equations

IV. Courses that satisfy the social sciences requirements:

1. At least two courses must be selected from the following academic areas:
   - Anthropology (ANT)
   - Economics (ECO)
   - Geography (GEG 202)
   - History (HIS)
   - Political Science (PS)
   - Psychology (PSY)
   - Sociology (SOC)
2. Courses that satisfy the social sciences requirements below must be taken from more than one academic area.

Options:

AAS 131	American Government and the African-American Struggle
AAS 140	The Psychology of the African-American Experience
ANT 152	Introduction to General Anthropology
ANT 154	Introduction to Cultural Anthropology
ANT 201	Urban Life and Culture
ANT 210	Anthropology of Sex and Culture
ECO 101	Principles of Economics I
ECO 102	Principles of Economics II
ECO 232	Consumer Economics
ECO 272	Money and Banking
HIS 151	World Civilization I: Prehistory to 1650
HIS 152	World Civilization II: 1650 to Present
HIS 220	History of Michigan
HIS 230	Patterns of American Life: A Cultural History of 17th to 19th Century America
HIS 249	History of the United States I: 1607-1865
HIS 250	History of the United States II: 1865-Present
MWS 101	Muslim World Ideologies and Culture
MWS 103	Muslim World Historical Survey
MWS 106	Muslim World International Relations
MWS 107	Muslim World Contemporary Issues
PS 101	American Government
PS 104	Introduction to Political Science
PS 160	International Politics
PS 275	Public Administration Internship
PSY 101	Introductory Psychology
PSY 202	Human Sexuality
PSY 220	Child Growth and Development
PSY 225	Child Growth and Development with a Practicum
PSY 230	Psychology of Adjustment
PSY 235	Psychology of Adjustment with a Practicum
PSY 250	Psychology of Personality
PSY 260	Social Psychology
SOC 100	Introduction to Sociology
SOC 103	Social Problems
SOC 120	Death and Dying
SOC 225	Sociology of Work
SOC 230	Ethnic Minorities
SOC 245	Marriage and Family
SOC 250	Juvenile Delinquency

DEGREE AND CERTIFICATE PROGRAMS

Wayne County Community College District offers the following degree and certificate programs:

1. Accounting AAS
2. Accounting CERT
3. Addiction Studies CERT
4. Alternative Fuels Technology CERT
5. American Sign Language SCERT
6. Anesthesia Technology AAS
7. Associate of Arts AA
8. Associate of General Studies AGS
9. Associate of Science AS
10. Auto Body Technology AAS
11. Auto Body Technology CERT
12. Automotive Service Technology (NATEF) Accredited AAS
13. Automotive Service Technology (NATEF) Accredited CERT
14. Aviation Mechanics: Airframe AAS
15. Aviation Mechanics: Airframe CERT
16. Aviation Mechanics: Powerplant AAS
17. Aviation Mechanics: Powerplant CERT
18. Bio-Medical Equipment Repair Technology AAS
19. Bookkeeping SCERT
20. Business Administration AA
21. Business Administration AAS
22. Computer Information Systems (CIS) AAS
23. CIS: Business Analytics CERT
24. CIS: Computer Support Specialist SCERT
25. CIS: Database Administrator SCERT
26. CIS: Network Administrator CERT
27. CIS: Video Game Design and Animation CERT
28. CIS: Website Developer CERT
29. Computer Numerical Control AAS
30. Computer Numerical Control: Programming and Operation SCERT
31. Craft Brewing CERT
32. Craft Brewing SCERT
33. Criminal Justice: Corrections AAS
34. Criminal Justice: Law Enforcement AAS
35. Criminal Justice: Public/Private Security CERT
36. Dental Assisting CERT
37. Dental Hygiene AS
38. Digital Media Production AAS
39. Digital Media Production CERT
40. Digital Photography Technology CERT
41. Early Childhood Education: AAS
42. Early Childhood Education: Childcare Training: CDA SCERT
43. Electrical Electronics Engineering Technology (EEE) AAS
44. Electrical Electronics Engineering Technology (EEE) CERT
45. EEE: Computer Technology AAS
46. EEE: Programmable Logic Controllers CERT
47. Emergency Medical Technology AAS
48. Emergency Medical Technology CERT
49. Emergency Room Multi-Skill Healthcare Technology AAS
50. Emergency Room Multi-Skill Healthcare Technology CERT
51. Entrepreneurship CERT
52. Facility Maintenance AAS
53. Facility Maintenance CERT
54. Fire Protection Technology: Fire Administration AAS
55. Fire Protection Technology: Fire Suppression AAS
56. Fire Protection Technology CERT
57. Foodservice Systems Management AAS
58. Foodservice Systems Management CERT
59. Gerontology CERT
60. Global Supply Chain Management CERT
61. Graphic Design Technology CERT
62. Heating Ventilation, Air Conditioning (HVAC) AAS
63. Heating Ventilation, Air Conditioning (HVAC): 3rd Class Refrigeration SCERT
64. Heating Ventilation, Air Conditioning (HVAC): Geothermal Technology CERT
65. Heating Ventilation, Air Conditioning (HVAC): High Pressure Steam CERT
66. Heating Ventilation, Air Conditioning (HVAC): Sheet Metal Design and Fabrication CERT
67. Hemodialysis Patient Care Specialist CERT
68. Home Health Care Aide SCERT
69. Homeland Security CERT
70. Hotel and Restaurant Management CERT
71. Industrial Computer Graphics Technology AAS
72. Industrial Computer Graphics Technology CERT
73. International Business AAS
74. Library Technology CERT
75. Light Rail Technology: Electromechanical AAS
76. Light Rail Technology: Railroad Rules and Safety SCERT
77. Light Rail Technology: Signaling and Communications AAS
78. Manufacturing Technology CERT
79. Manufacturing Technology SCERT
80. Mechatronics Technology CERT
81. Medical Administrative Specialist AAS
82. Medical Administrative Specialist CERT
83. Medical Office Specialist SCERT
84. Mental Health CERT
85. Nursing AAS
86. Nursing Assistant Training SCERT
87. Office Information Systems: E-Business AAS
88. Office Information Systems: E-Business SCERT
89. Office Information Systems: Office Specialist AAS
90. Office Information Systems: Office Specialist CERT
91. Paralegal Technology AAS
92. Patient Care Technology SCERT
93. Pharmacy Technology AAS
94. Pharmacy Technology CERT
95. Phlebotomy Technician SCERT
96. Pre-Engineering AS
97. Pre-Mortuary Science AAS
98. Pre-Physician Assistant AAS
99. Pre-Social Work AA
100. Product Development Prototyping AAS
101. Product Development Prototyping: Introduction to Rapid Prototyping SCERT
102. Product Development Prototyping: Advanced Rapid Prototyping SCERT
103. Project Management CERT
104. Renewable Energy SCERT
105. Surgical Technology AAS
106. Surgical Technology: Accelerated Alternate Delivery (ADD) SCERT
107. Surgical Technology: Central Service Technician SCERT
108. Surgical Technology: Surgical First Assistant CERT
109. Sustainable Environmental Design (SED): Sustainable Building and Sites CERT
110. Sustainable Technology Specialist: Alternative Fuels SCERT
111. Sustainable Technology Specialist: Geothermal Energy SCERT
112. Sustainable Technology Specialist: Renewable Energy SCERT
113. Sustainable Technology Specialist: Sustainable Buildings and Sites SCERT
114. Sustainable Technology Specialist: Water Environmental Technology SCERT
115. Teacher Education: Elementary Education AA
116. Veterinary Technology AAS
117. Water and Environmental Technology CERT
118. Welding Technology AAS
119. Welding Technology: General - Level 1 CERT
120. Welding Technology: Advanced - Level 2 SCERT
121. Welding Technology: Specialized - Level 3 SCERT
122. Welding Technology: Artistic Welding CERT

DEGREE PROGRAMS

ACCOUNTING

• College Certificate: (ACC-CERT)
Associate of Applied Science Degree: (ACC-AAS)

Visit this link for additional program information.
http://www.wcccd.edu/dept/acct/acct.html

About the Program

The Accounting Associate of Applied Science degree and College Certificate programs prepare students presently employed in the accounting field and for those seeking advancement or those seeking a position in the field immediately upon graduation. Areas where a student may find employment include but are not limited to, auditing, payroll, cost, budget and tax. In addition to the course work in Accounting, the student will complete courses in various other business disciplines and the liberal arts.

This program offers:

- Associate of Applied Science: **67** credit hours
- College Certificate: **34** credit hours

Program Goals

- To provide students with a background in the accounting field, an advanced foundation of accounting principles and concepts for entry-level positions with accounting tax services firms, CPA firms and other small businesses. Certificate is designed for rapid entry into the workforce while maximizing transfer credit into the Associate of Applied Science Degree in Accounting
- To prepare students to successfully pass the National Certified Bookkeeping Exam and Individual Income Taxation Enrolled Agent Exam

Program Outcomes

- Demonstrate use of technology, software and integrated computerized accounting software to perform basic accounting and bookkeeping tasks
- Demonstrate proficiency in preparing and processing payroll records and reports in compliance with state and federal requirements
- Competently prepare and analyze financial statements in accordance with generally accepted accounting principles
- Recognize and interpret the fundamentals of Individual Income Taxation (according to Enrolled Agent Exam objectives)
- Apply the Internal Revenue Code as it relates to individual, partnership, and corporation income taxes
- Identify and explain concepts of financial accounting in accordance with the National Certified Bookkeeping Exam objectives
- Balance and reconcile financial information and fundamentals of Individual Income Taxation according to the Enrolled Agent Exam objectives
- Accurately prepare professional financial statements and other reporting documents with a 70% or higher proficiency rate
- Articulate, apply and practice ethical parameters of the profession to include federal and state regulatory guidelines for generally accepted accounting principles

College Certificate Goals

- To provide students, with a foundation in principles and concepts related to the accounting field
- Designed for rapid entry into the workforce while maximizing transfer credit into the Associate of Applied Science Degree in Accounting

College Certificate Outcomes

- Students will be able to demonstrate use of technology, software and integrated computerized accounting software to perform basic accounting and bookkeeping tasks
- Demonstrate competency in the preparation of financial statements, payroll reports, tax returns and other related financial documents

Admission Requirements

Students are required to do the following:

- Fulfill all WCCCD admission requirements
- Fulfill course placement requirements based on COMPASS assessment
- Complete WCCCD Program Application and submit to the Campus Academic Officer

Accounting: College Certificate Recommended Sequence of Courses

CR. No.	COURSE TITLE	CREDITS
SEMESTER 1		
ACC 110	Principles of Accounting I	.4
BUS 150	Introduction to Business	.3
BUS 225	Computer Applications in Business	.3
ENG 119	English I	.3
MAT 155	College Algebra	.4
SEMESTER TOTAL		**.17**
SEMESTER 2		
ACC 111	Principles of Accounting II	.4
ACC 105	Income Tax Accounting	.3
ACC 112	Computerized Accounting	.3
BL 201	Business Law I	.4
BUS 240	Business Communications	.3
	—OR—	
BUS 221	Business Statistics	.3
SEMESTER TOTAL		**.17**
CERTIFICATE TOTAL		**.34**

Note: Certificate total hours may not include prerequisites.

Accounting: Associate of Applied Science Recommended Sequence of Courses

CR. No.	COURSE TITLE	CREDITS
SEMESTER 1		
ENG 119	English I	.3
SPH 101	Fundamentals Speech	.3
	—OR—	
SPH 105	Improving the Speaking Voice	.3
BUS 150	Introduction to Business	.3
BUS 225	Computer Applications in Business	.3
ACC 110	Principles of Accounting I	.4
SEMESTER TOTAL		**.16**
SEMESTER 2		
ENG 120	English II	.3
MAT 155	College Algebra	.4
PS 101	American Government	.3
ACC 111	Principles of Accounting II	.4
SEMESTER TOTAL		**.14**
SEMESTER 3		
Elective:	Other	6*
ACC 112	Computerized Accounting Software	.3
ACC 105	Income Tax Accounting	.3
SEMESTER TOTAL		**.12**
SEMESTER 4		
ECO 101	Principles of Economics I	.3
BL 201	Business Law I	.4
MGT 205	Management Principles	.3
ACC 210	Intermediate Accounting I	.3
SEMESTER TOTAL		**.13**
SEMESTER 5		
ECO 102	Principles of Economics II	.3
MKT 200	Principles of Marketing	.3
BUS 221	Business Statistics	.3
	—OR—	
BUS 240	Business Communications	.3
ACC 211	Intermediate Accounting II	.3
SEMESTER TOTAL		**.12**
PROGRAM TOTAL		**.67**

Note: Program total hours may not include prerequisites.

*Electives may include:

- Any course offered except ACC 100
- No courses numbered below ENG 119
- No courses numbered below MAT 155
- BUS 228 Internet Webpage Design strongly recommended

ADDICTION STUDIES

• College Certificate: (ADD-CERT)

Visit this link for additional program information.
http://www.wcccd.edu/dept/Addstud/Addstud.html

About the Program

The Addiction Studies College Certificate program prepares graduates to work as entry level professionals in centers and facilities serving persons who are dependent upon addictive substances. Helping individuals, families and communities with challenges of addiction in interpersonal, familial and community problems is the focus of the addiction studies program. This certificate seeks to prepare students to tackle the problems of addiction by teaching them the knowledge and necessary skills to understand and address these issues.

College Certificate Goals

- To prepare students for State of Michigan Certification as a Certified Addictions paraprofessional
- To prepare students to work for organizations and agencies as paraprofessionals to deliver quality helping services to those in need of assistance and support while improving the social functioning and wellbeing of clients
- To enhance career opportunities and advancement in the Behavioral Sciences industry

College Certificate Outcomes

- Meet the educational requirements to become certified by taking the Michigan Certification Board for Addiction Professionals (MCBAP) examination and passing with at least 85% and/or the State of Michigan Social Services Technician examination
- Implement themes of the Social Work Mission while assisting clients
- Navigate through the National Association of Social Workers (NASW) Code of Ethics, while employing the most appropriate ethics
- Learn about various substance abuse, social programs, services, activities, agencies, organizations and institutions that will be useful in advocating and providing services to clients

Admission Requirements

Students are required to do the following:

- Fulfill all WCCCD admission requirements
- Fulfill course placement requirements based on COMPASS test
- Complete WCCCD Program Application and submit to the Campus Academic Officer

Addiction Studies: College Certificate Recommended Sequence of Courses

CR. No.	COURSE TITLE	CREDITS
SEMESTER 1		
ADD 110	Introduction to Addictions	.3
ENG 119	English I	.3
HUS 105	Group Expression for Self Growth I	.3
PSY 101	Introductory Psychology	.3
SEMESTER TOTAL		**.12**
SEMESTER 2		
ADD 112	Addictions and Criminal Justice	.3
ADD 130	Assessment, Diagnosis and Treatment of Addictions	.3
HUS 135	Professionalism in Human Services	.3
SEMESTER TOTAL		**.9**
SEMESTER 3		
HUS 120	Group and Social Process I	.3
ADD 103	Co-Occurring Disorders	.3
SW 105	Field Instruction I	.4
SEMESTER TOTAL		**.10**
CERTIFICATE TOTAL		**.31**

Note: Certificate totals may not include prerequisite work.

ALTERNATIVE FUELS TECHNOLOGY

• College Certificate: (CERT-AFT)

About the Program

The Alternative Fuel College Certificate prepares students for careers utilizing alternative energy and fuel cell technology. Students will be taught and prepared to work on gas-electric hybrids, hydrogen, compressed natural gas, bio-diesel, propane, methanol, ethanol and even garbage-powered vehicles and other power units. Students will learn preventive maintenance, safety procedures, refueling procedures, troubleshooting, and problem solving techniques related to a wide range of technologies to insure a solid career with a multitude of possibilities in this new emerging industry. Additionally, students will be instructed on the fundamental principles in the production, processing, storage, distribution and utilization of energy. This program addresses the need for the development of alternative sources of energy and conventional fossil fuels.

College Certificate Goals

- To prepare students for careers utilizing the development of and reliance on alternative energy and fuel cells and repair of automotive alternative fuel vehicles
- To teach and prepare students as a precursor for a declared four-year baccalaureate degree

College Certificate Outcomes

- Demonstrate basic electrical, mechanical, and chemical, mathematics, science and computer skills knowledge to identify solutions for alternative energy
- Apply critical thinking and analytical skills to determine where and when alternative energy and fuel cells are appropriate and effective for repair
- Select and use appropriate tools and equipment to perform repairs according to industry standards
- Identify the types of automotive alternative fuels available
- Identify, diagnose, and repair malfunctions of light duty diesel engines, electric vehicles, fuel cells and hybrid electric vehicles
- Identify and understand the properties of natural gas, propane, and hydrogen and their use as a fuel for internal combustion engines or fuel cells
- Describe and demonstrate safe work habits and protocol for quality and safety procedures with alternatively fueled vehicles

Admission Requirements

Students are required to complete the following:

- Fulfill all WCCCD admission requirements.
- Declare intent to enter the Alternative Fuels Technology Program on the WCCCD Application for Admission or change intent at the Admissions office
- Fulfill course placement requirements based on COMPASS assessment results
- Complete a WCCCD program admission application during the semester they are enrolled in AUT 117, and then submit the application to the Campus Academic and Student Services Officer

Continued on next page.

Alternative Fuels Technology continued

Alternative Fuels Technology:
College Certificate
Recommended Sequence of Courses

CR. No.	COURSE TITLE	CREDITS
SEMESTER 1		
AUT 114	Electrical/Electronic Systems I	.3
AUT 115	Electrical/Electronic Systems II	.3
SEMESTER TOTAL		**.6**
SEMESTER 2		
AUT 116	Electrical/Electronic Systems III	.3
AUT 117	Electrical/Electronic Systems IV	.3
SEMESTER TOTAL		**.6**
SEMESTER 3		
AUT 150	Introduction to Alternative Fuels	.4
AUT 152	Introduction to Electric and Fuel Cells	4
AUT 154	Introduction to Hybrid Fuel Technology	.4
SEMESTER TOTAL		**.12**
SEMESTER 4		
AUT 151	Light Duty Diesel Engines	.4
AUT 153	Introduction to Gaseous Fuels	.4
AUT 155	Introduction to Hydrogen Applications and Safety	.4
SEMESTER TOTAL		**.12**
CERTIFICATE TOTAL		**.36**

Note: Certificate totals may not include prerequisite work.

AMERICAN SIGN LANGUAGE

• Short-Term Certificate: (SCERT-ASL)

About the Program

The American Sign Language Short-Term Certificate at Wayne County Community College District provides language training and cultural enrichment for people who wish to learn American Sign Language and the uniqueness of deaf culture. This program is a complement to other degrees and is particularly useful for parents of deaf children and students pursuing careers such as allied health, nursing, early childhood education and teaching, where clients may be deaf.

Certificate Goals

- To teach students the style and semantic concepts of ASL to allow for effective communication with deaf persons in informal settings, human services, health care and other corporate or non-profit sectors
- Enhance the credentials of current ASL professionals for advanced employment opportunities that assign value to skills in ASL and knowledge of the deaf culture
- To prepare students to enter an interpreter training program and successfully pass the ASL certification exam, sponsored by the national licensing association, with a proficiency score of 70% or higher

Certificate Outcomes

- Students will be able to describe the structures of ASL to include phonology, morphology syntax and semantics at a 75% proficiency level or higher
- Apply basic language skills to produce American Sign Language in a variety of ways in order to communicate effectively with deaf adults and children who depend on visual presentations of English for communication
- Demonstrate the appropriate use of classifiers through directionality, word signs, noun placement and non-manual signs with a 75% proficiency level or higher
- Exhibit an awareness, support and respect for ASL as the visual language of the deaf community

Admission Requirements

Students are required to do the following:

- Fulfill all WCCCD admission requirements
- Possess a high school diploma or GED
- Fulfill course placement requirements based on the COMPASS assessment.
- Complete WCCCD Program Application and submit to the Campus Academic Officer
- Declare intent to enter the American Sign Language program and indicate intent on the Application for Admission form.

American Sign Language: Short-Term Certificate
Recommended Sequence of Courses

CR. No.	COURSE TITLE	CREDITS
SEMESTER 1		
ASL 101	American Sign Language I	.3
ASL 102	Structure of American Sign Language	.3
ASL 103	Visual Gestural Communication	.3
SEMESTER TOTAL		**.9**
SEMESTER 2		
ASL 105	Orientation to Deafness	.3
ASL 107	Introduction to the American Deaf Culture	.4
ASL 201	American Sign Language II	.4
SEMESTER TOTAL		**.11**
CERTIFICATE TOTAL		**.20**

Note: Certificate total hours may not include prerequisites.

ANESTHESIA TECHNOLOGY

Associates of Applied Science Degree: (AT-AAS)

About the Program

The Anesthesia Technology Associate of Applied Science degree program is a six semester program that will prepare students to enter the allied health profession specifically focused on fundamental and advanced clinical procedures. The Anesthesia Technologists is proficient in the acquisition, preparation, and application of various types of equipment required for the delivery of anesthesia care.

Program Goals

- To prepare the student with the knowledge and technical skills to effectively perform as a team member of the anesthesia care unit under the direct supervision of a doctor or registered nurse
- To prepare the anesthesia technology student to proficiently maintain and service equipment by cleaning, sterilizing, assembling, calibrating, testing, troubleshooting, requisitioning and recording of inspections and maintenance. The student will use critical thinking skills to become an intricate member of the anesthesia care team
- To prepare the student to successfully pass the National Certifying Examination for Anesthesia Technologist

Program Outcomes

- Students will be able to demonstrate and apply technical competency as it applies to the Anesthesia Technology profession
- Exhibit proficiency in successfully completing the National Certification Examination for Anesthesia Technologists
- Demonstrate expertise in the application of sterile and aseptic technique

Continued on next page.

Anesthesia Technology continued

- Model a self-sufficient Anesthesia Technologist who displays positive values, integrity and professionalism
- Recognize and verbalize indications for anesthesia intervention and the associated risks and benefits
- Anticipate the needs of the anesthesia provider to assist with the delivery of patient care
- Demonstrate the ability to maintain and update all relevant anesthesia equipment and troubleshoot as necessary
- Maximize patient safety by facilitating a safe environment

Admission Requirements

Students are required to do the following:

- Fulfill all WCCCD admission requirements
- Be 18 years of age or older and have a high school diploma or GED
- Fulfill course placement requirements based on the COMPASS assessment
- Declare intent to enroll in the Anesthesia Technology program by submitting an Allied Health Department application and submit to Health Sciences Department
- Must complete criminal background check, physical exam, Hepatitis B (HBV) shots, and drug test
- Submit official transcripts from previous institutions
- Valid State Picture I.D.
- Meet with the Program Designee to review and complete paperwork

Based upon Michigan Law

Students applying for admission to the Anesthesia Technology Program will be subject to a criminal background check, the results of which could preclude an applicant from admission to Wayne County Community College District's Anesthesia Technology Program on the basis of any of the following: A felony conviction, or conviction for an attempt or conspiracy to commit a felony within the past 15 years. Any misdemeanor conviction involving abuse, neglect, assault, battery or criminal sexual conduct within the past 10 years. Any misdemeanor conviction involving fraud or theft.

Anesthesia Technology:
Associate of Applied Science (A.A.S.)
Recommended Sequence of Courses

CR. No.	COURSE TITLE	CREDITS
SEMESTER 1		
ALH 110	Medical Terminology	.3
ANE 100	Introduction to Anesthesia Technology	.3
BIO 155	Introductory Biology	.4
ALH 230	Medical Ethics	.3
SEMESTER TOTAL		**.13**
SEMESTER 2		
ANE 105	Basic and Advanced Principles of Anesthesia Technology	.3
BIO 240	Human Anatomy and Physiology I	.4
ENG 119	English I	.3
SEMESTER TOTAL		**.10**
SEMESTER 3		
ANE 110	Anesthesia Technology Instrumentation	.4
CHM 105	Introduction to Chemistry	.4
BIO 250	Human Anatomy and Physiology II	.4
SEMESTER TOTAL		**.12**
SEMESTER 4		
ANE 200	Anesthesia Technology Clinical I	.4
ENG 120	English II	.3
ANE 205	Anesthesia Technology Pharmacology	.3
PSY 101	Introduction to Psychology	.3
SEMESTER TOTAL		**.13**
SEMESTER 5		
PS 101	American Government	.3
ALH 115	Medical Computers	.3
ANE 210	Anesthesia Technology Clinical II	.6
SEMESTER TOTAL		**.12**
SEMESTER 6		
ANE 220	Anesthesia Technology Seminar and Certification Preparation	.4
ANE 225	Anesthesia Technology Clinical III	.6
SEMESTER TOTAL		**.10**
A.A.S. PROGRAM TOTAL		**.70**

Note: Program total hours may not include prerequisites.

ASSOCIATE OF ARTS - A.A.

Associate of Arts Degree: (AA)

About the Program

The District offers a two-year course of study leading to the Associate of Arts degree. This degree is designed for students who plan to complete their first two years of college at Wayne County Community College District and transfer to a baccalaureate degree granting institution. Programs leading to the A.A. degree are designed for students who plan to major in such areas as performing arts, English, humanities or the social sciences. It is also for students who are preparing for professional programs in areas such as law, journalism, business administration, teaching and computer information systems.

Program Goals

- To provide a general foundation for associate of arts studies as the precursor to a declared four-year degree

Program Outcomes

- To successfully complete the Associate of Arts program with a "C" average or higher as a foundation to transfer to a four-year baccalaureate institution

Degree Requirements

- The Associate of Arts degree consists of a minimum of sixty (60) semester hours of credit, of which fifteen (15) must be earned at WCCCD
- Thirty-five (35) credit hours are used to satisfy the general education and academic group requirements
- Twenty-five (25) credit hours are needed to satisfy the elective requirements.
- Consult a transfer coordinator at the campus for course requirement advising

Continued on next page.

Associate of Arts continued

Students are required to complete:
A total of twenty-five (25) elective credit hours, including a minimum of three (3) courses in one of the following areas of concentration:

- Humanities
- English
- Speech
- Social Science
- African-American Studies
- Anthropology
- Economics
- Sociology
- Life and Physical Science
- Mathematics
- Human and Community Development
- Philosophy
- Psychology

Associate of Arts (A.A.) Degree:
General Education Course Requirements:

AMERICAN GOVERNMENT **3**
PS 101 American Government 3

ENGLISH **6**
ENG 119 English I 3
ENG 120 English II 3

HUMANITIES **9**

- Consult a counselor for other course options
- Courses must be taken in more than one of the following academic disciplines:
  - Dance
  - English {200 level courses only}
  - French
  - Humanities courses
  - Music
  - Philosophy
  - Languages
  - Speech
  - HIS 151, HIS 152, HIS 249, HIS 250
  - MWS 102 Muslim World Civilization

NATURAL SCIENCE **8**

- Courses must be taken in more than one of the following academic disciplines:
  - ANT 153 Introduction to Physical Anthropology
  - Biology
  - Chemistry
  - Mathematics courses numbered 155 or above
  - Physics
- Consult a counselor for other course options

SOCIAL SCIENCE **9**

- Courses must be taken in more than one academic discipline.
- At least two (2) courses or six (6) credit hours must be from the following academic disciplines:
  - Anthropology
  - Economics
  - History
  - Geography
  - Political Science
  - Psychology
  - Sociology
- One course may be taken from the following academic disciplines:
  - African-American Studies
  - Muslim World Studies

GENERAL EDUCATION TOTAL 35
ELECTIVES 25
A.A. PROGRAM TOTAL 60
Note: Total hours may not include prerequisites.

ASSOCIATE OF GENERAL STUDIES - A.G.S.

Associate of General Studies Degree: (AGS)

About the Program
The Associate of General Studies degree program helps students who plan to study a variety of areas without committing themselves to a specific field as they prepare for employment or additional academic work.

Program Goals

- To provide a general foundation of liberal arts studies as the precursor for a declared four year baccalaureate degree

Program Outcomes

- To successfully complete the Associate of General Studies degree program of study with a "C" average or higher as a foundation to transfer to a four-year baccalaureate institution

Degree Requirements

- The Associate of General Studies degree consists of a minimum of sixty (60) credit hours, of which fifteen (15) must be earned at WCCCD
- Complete the "Requirements for All Degrees"
- Complete all academic group requirements
- The Transfer General Studies College Certificate degree consists of twenty-six (26) credit hours of credit, of which all must be earned at WCCCD
- Must complete at least twenty-six (26) credit hours with an overall GPA of 2.5

Associate of General Studies (A.G.S.) Degree:

AMERICAN GOVERNMENT **3**
PS 101 American Government 3

ENGLISH **6**
ENG 119 English I 3
Elective: any English course above ENG 119 . .3

HUMANITIES **3**
Select one three (3) credit course from the following:

- Dance
- French
- Music
- Languages
- English
- Humanities
- Philosophy
- Speech

MATHEMATICS **3**

NATURAL SCIENCE **3**
Any three (3) credit course from the following:

- Astronomy
- Biology
- Chemistry
- Geology
- Physics
- ANT 153 Introduction to Physical Anthropology
- DT 130 Fundamentals of Nutrition

GENERAL EDUCATION TOTAL 18
ELECTIVES 42
A.G.S. PROGRAM TOTAL 60
Note: Program total hours may not include prerequisites.

ASSOCIATE OF SCIENCE - A.S.

Associate of Science Degree: (AS)

About the Program

The District offers a two-year course of study leading to the Associate of Science (A.S.) degree. This degree is designed for students who plan to complete their first two years of college at Wayne County Community College District and transfer to a baccalaureate degree granting institution. Students pursuing this degree plan to transfer and major in the natural or physical sciences including chemistry, mathematics, biology and physics. Courses leading to an A.S. degree are designed for students enrolled in pre-professional studies for such areas as medicine, dentistry, engineering, dietetics and environmental and natural resources.

Program Goals

- To provide a general foundation for associate of science studies as the precursor to a declared four-year degree

Program Outcomes

- To successfully complete the Associate of Science program of study with a "C" average or higher as a foundation to transfer to a four-year baccalaureate institution

Degree Requirements

- The Associate of Science degree consists of a minimum of sixty (60) credit hours, of which fifteen (15) must be earned at WCCCD
- Complete the "Requirements for All Degrees"
- Complete all academic group requirements
- Consult a transfer coordinator at the campus for course requirement advising

Associate of Science (A.S.) Degree: General Education Course Requirements:

AMERICAN GOVERNMENT **3**

PS 101 American Government 3

ENGLISH **6**

ENG 119 English I 3
ENG 120 English II 3

HUMANITIES **9**

- Consult a counselor for other course options
- Courses must be taken in more than one of the following academic disciplines:
  - Arabic
  - Chinese
  - Dance
  - English {200 level courses only}
  - French
  - Humanities courses
  - Music
  - Philosophy
  - Languages
  - Speech
  - HIS 151, HIS 152, HIS 249, HIS 250
  - MWS 102 Muslim World Civilization

NATURAL SCIENCE **20**

- Courses must be taken in more than one of the following academic disciplines:
  - ANT 153 Introduction to Physical Anthropology
  - Biology
  - Chemistry
  - Mathematics courses numbered 155 or above
  - Physics
- Consult a counselor for other course options

SOCIAL SCIENCE **9**

Courses must be taken in more than one academic discipline.

At least two (2) courses or six (6) credit hours must be from the following academic disciplines:

- Anthropology
- Economics
- Geography
- History
- Political Science
- Psychology
- Sociology

One course may be taken from the following academic disciplines:

- African-American Studies
- Muslim World Studies

GENERAL EDUCATION TOTAL 47
ELECTIVES 13
A.S. PROGRAM TOTAL 60

Note: Program total hours may not include prerequisites.

AUTO BODY TECHNOLOGY

- College Certificate: (ABT-CERT)

Associates of Applied Science Degree: (ABT-AAS)

About the Program

The Auto Body Technology Associate of Applied Science degree is designed to provide students with in-depth instruction in the field of Automotive Body Paint and Repair. The Auto Body Technology Program is designed to develop qualified technicians who can diagnose, repair and service the body and finish work of automobiles. The program provides opportunities for students to develop their skills and competencies for positions such as Automotive Painter, Auto Body Paint and Repair Technician, Collision Repair Technician, Glazier (glass repair specialist), as well as self-employment in the Auto Body and Auto Collision repair field. The program prepares students for Automotive Service Excellence (ASE) and State of Michigan certifications in Damage Repair and Refinishing, and Damage Analysis and Estimating.

This program offers:

- Associates of Applied Science: **62** credit hours
- College Certificate: **36** credit hours

College Certificate Goals

- To prepare students for employment in the auto body paint and repair technology industry through applied knowledge of automotive paint, refinishing and repair equipment
- To teach students the basic principles of auto body technology safety as it applies to tools and equipment operations
- To prepare students for individual credentialing by recognized skill standards established by the Automotive Service Excellence (ASE)

Continued on next page.

Auto Body Technology continued

College Certificate Outcomes

- Students will be able to develop a competency in the use of appropriate tools and equipment to provide painting and basic repair services according to industry standards in a safe manner
- Students will be able to demonstrate basic math and English competency as required in the auto body field especially as it relates to Damage Analysis/Estimating/Customer Service
- Students will be able to work independently and professionally as a member of an automotive body technology team
- Students will be able to obtain individual credentialing through the National Institute for Automotive Service Excellence (ASE)

Program Goals

- To prepare students for employment in the auto body paint and repair technology industry through applied knowledge of automotive paint, refinishing and repair equipment
- To teach students the basic principles of auto body technology safety as it applies to tools and equipment operations
- To provide basic welding skills used in the auto body repair industry
- To prepare students for individual credentialing by recognized skill standards established by the National Institute for Automotive Service Excellence (ASE)

Program Outcomes

- Students will be able to develop a competency in the use of appropriate tools and equipment to provide painting and basic repair services according to industry standards in a safe manner
- Students will be able to demonstrate basic Math, Science and English competency as required in the auto body field especially as it relates to Damage Analysis/Estimating /Customer Service
- Students will be able to demonstrate commonly utilized welding practices in the Auto Body Repair field
- Students will be able to work independently and professionally as a member of an automotive body technology team
- Students will be able to obtain individual credentialing through the National Institute for Automotive Service Excellence (ASE)

Admission Requirements

Students are required to do the following:

- Fulfill all WCCCD admission requirements
- Fulfill course placement requirements based on COMPASS assessment
- Complete WCCCD Program Application and submit to the Campus President Campus Academic Officer

Auto Body Technology: College Certificate Recommended Sequence of Courses

CR. No.	COURSE TITLE	CREDITS
SEMESTER 1		
ABT 101	Intro to Auto Body Technology	4
ABT 103	Auto Body Work Environment and Safety	4
ABT 131	Introduction to Electrical/ Mechanical Repair	2
CIS 110	Intro to Computer Info Systems	4
SEMESTER TOTAL		**14**
SEMESTER 2		
ABT 105	Damage Analysis and Repair Estimating	4
ABT 141	Surface Preparation and Fillers	4
ENG 119	English 1	3
MAT 105	Pre-Algebra	3
	—-OR—-	
MAT 111	Pre-College Mathematics	3
SEMESTER TOTAL		**14**
SEMESTER 3		
ABT 201	Basic Automotive Finishes	4
ABT 203	Advanced Finishes/Custom Paint	4
SEMESTER TOTAL		**8**
CERTIFICATE TOTAL		**36**

Note: Certificate totals may not include prerequisites.

Auto Body Technology: Associate of Applied Science Recommended Sequence of Courses

CR. No.	COURSE TITLE	CREDITS
SEMESTER 1		
ABT 101	Intro to Auto Body Technology	4
ABT 103	Auto Body Work Environmental and Safety	4
ABT 131	Introduction to Electrical/ Mechanical Repair	2
CIS 110	Intro to Computer Info Systems	4
SEMESTER TOTAL		**14**
SEMESTER 2		
ABT 105	Damage Analysis and Repair Estimate	4
ABT 141	Surface Preparation and Fillers	4
MAT 105	Pre-Algebra	3
	—-OR—-	
MAT 111	Pre-College Mathematics	3
ENG 119	English I	3
SEMESTER TOTAL		**14**
SEMESTER 3		
ABT 201	Basic Auto Finishes	4
ABT 203	Advanced Finishes/Custom Paint	4
SEMESTER TOTAL		**8**
SEMESTER 4		
WLT 101	Arc - O2 /Acetylene Welding	5
Elective:	Humanities	3
PS 101	American Government	3
ENG 120	English II	3
SEMESTER TOTAL		**14**
SEMESTER 5		
SPH 101	Fundamentals of Speech	3
Elective:	Natural Science with Lab	4
WLT 105	MIG/Flux-Core/Plasma Welding	5
SEMESTER TOTAL		**12**
A.A.S. PROGRAM TOTAL		**62**

Note: Program totals may not include prerequisites.

AUTOMOTIVE SERVICE TECHNOLOGY (NATEF)

• College Certificate: (AST-CERT)
Associate of Applied Science Degree: (AST-AAS)

Visit this link for additional program information.
http://www.wcccd.edu/dept/AutoSvTech/AutoSvTech.html

About the Program

The Automotive Service Technology Associate of Applied Science degree and College Certificate programs are designed to develop qualified technicians to diagnose, repair and service modern automobiles. The programs provide opportunities for the student to develop their skills and competencies for entry-level positions such as automotive technician, service manager, parts manager, product test technician and self-employment. The programs prepare students for Automotive Service Excellence (ASE) and State of Michigan certifications for any of the eight (8) automotive areas or "Master" certification.

The instruction, curriculum, facilities and equipment for this program have been evaluated by the National Automotive Technicians Education Foundation (NATEF) and the District received accreditation from the National Institute for Automotive Service Excellence (ASE) in the following areas:

- Automatic Transmission and Transaxle (SCERT-AUTO)
- Brakes (SCERT-BRKS)
- Electrical/Electronic Systems (SCERT-EES)
- Engine Performance (SCERT-EP)
- Engine Repair (SCERT-E/REP)
- Heating and Air Conditioning (SCERT-HAC)
- Manual Drive Train and Axle (SCERT-MDTRN)
- Suspension and Steering (SCERT-SUSP)

This program offers:

- Associate of Applied Science: **61** credit hours
- College Certificate: **30** credit hours
- Short-Term Certificate: **12-24** credit hours

Program Goals

- To prepare students for employment in the auto service industry through applied knowledge of automotive technology machinery, software and its applications.
- To teach students the basic principles of automotive technology safety as it applies to tool and equipment operations
- To prepare students for individual credentialing by recognized skill standards established by the National Automotive Technicians Education Foundation (NATEF)
- To prepare students for individual credentialing by recognized skill standards established by the State of Michigan certifications of any of the eight (8) automotive areas and/or "Master" certification

Program Outcomes

- Students will be able to demonstrate basic math and use of appropriate tools and equipment to perform maintenance and basic repair services according to industry standards in a safe manner
- Diagnose and perform basic mechanical and electrical repairs using appropriate tools and equipment according to industry standards in a safe manner
- Work independently and professionally as a member of an automotive service technology team
- Students will be able to obtain individual credentialing through the National Institute for Automotive Service Excellence (ASE) with a cut score or better proficiency rate established by the industry association
- Students will be able to obtain individual credentialing in any of the eight (8) automotive areas and/or "Master" certification by the State of Michigan with a 70% or better proficiency rate

College Certificate Goals

- To provide a basic foundation of the automotive service industry through applied knowledge of machinery, software and its applications.
- To prepare students for individual credentialing by recognized skill standards established by the National Automotive Technicians Education Foundation (NATEF)
- To prepare students for individual credentialing by recognized skill standards established by the State of Michigan certifications of any of the eight (8) automotive areas and/or "Master" certification.

College Certificate Outcomes

- Students will be able to demonstrate basic math and use of appropriate tools and equipment to perform basic maintenance and repair services
- To teach students the basic principles of automotive technology safety as it applies to tool and equipment operations
- Work independently and professionally as a member of an automotive service technology team

Admission Requirements

Students are required to do the following:

- Fulfill all WCCCD admission requirements
- Declare intent to enter the Automotive Service Technology Program on the WCCCD Application for Admissions or change intent at the admissions office
- Fulfill course placement requirements based on COMPASS assessment
- Complete WCCCD Program Application during the semester they are enrolled in AUT 114 - Electrical/Electronics Systems I course, and then submit the application to the Campus Academic and Student Services Officers

Automotive Service Technology: College Certificate
Recommended Sequence of Courses

REQUIRED CAREER COURSES:

AUT 114	Electrical/Electronic Systems I	.3
AUT 115	Electrical/Electronic Systems II	.3
AUT 116	Electrical/Electronic Systems III	.3
AUT 117	Electrical/Electronic Systems IV	.3

Select 18 credits from the following:

AUT 118	Engine Performance I	.3
AUT 119	Engine Performance II	.3
AUT 200	Engine Performance III	.3
AUT 201	Engine Performance IV	.3
AUT 120	Brakes I	.3
AUT 203	Brakes II	.3
AUT 121	Suspension and Steering I	.3
AUT 204	Suspension and Steering II	.2
AUT 122	Automatic Transmission and Transaxle I	.4
AUT 206	Automatic Transmission and Transaxle II	.3
AUT 124	Engine Repair I	.4
AUT 207	Engine Repair II	.3
AUT 125	Heating and Air Conditioning I	.3
AUT 208	Heating and Air Conditioning II	.2
AUT 126	Manual Drive Train and Axles I	.3
AUT 209	Manual Drive Train and Axles II	.2
CERTIFICATE TOTAL		**.30**

Note: Certificate totals may not include prerequisites.

Automotive Service Technology: Associate of Applied Science Recommended Sequence of Courses

CR. No.	COURSE TITLE	CREDITS
SEMESTER 1		
AUT 114	Electrical/Electronics I	.3
AUT 115	Electrical/Electronics II	.3
ENG 119	English I	.3
MAT 113	Intermediate Algebra	.3
ELECTIVE: Humanities *(any course)*		.3
SEMESTER TOTAL		**.15**
SEMESTER 2		
AUT 116	Electrical/Electronics III	.3
AUT 117	Electrical/Electronics IV	.3
PS 101	American Government	.3
ENG 120	English II	.3
Elective: Natural Science with Lab		.4
SEMESTER TOTAL		**.16**
SEMESTER 3		
BUS 240	Business Communications	.3
SPH 101	Fundamentals of Speech	.3
Elective: Social Science *(any course)*		.3

Any 6 credits from the list below:

AUT 118	Engine Performance I	.3
AUT 119	Engine Performance II	.3
AUT 200	Engine Performance III	.3
AUT 201	Engine Performance IV	.3
AUT 120	Brakes I	.3
AUT 203	Brakes II	.3
AUT 121	Suspension and Steering I	.3
AUT 204	Suspension and Steering II	.2
AUT 122	Automatic Transmission and Transaxle I	.4
AUT 206	Automatic Transmission and Transaxle II	.3
AUT 124	Engine Repair I	.4
AUT 207	Engine Repair II	.3
AUT 125	Heating and Air Conditioning I	.3
AUT 208	Heating and Air Conditioning II	.2
AUT 126	Manual Drive Train and Axles I	.3
AUT 209	Manual Drive Train and Axles II	.2
SEMESTER TOTAL		**.15**

SEMESTER 4		
ELECTIVES:		.6

Any 9 credits from the list below:

AUT 118	Engine Performance I	.3
AUT 119	Engine Performance II	.3
AUT 200	Engine Performance III	.3
AUT 201	Engine Performance IV	.3
AUT 120	Brakes I	.3
AUT 203	Brakes II	.3
AUT 121	Suspension and Steering I	.3
AUT 204	Suspension and Steering II	.2
AUT 122	Automatic Transmission and Transaxle I	.4
AUT 206	Automatic Transmission and Transaxle II	.3
AUT 124	Engine Repair I	.4
AUT 207	Engine Repair II	.3
AUT 125	Heating and Air Conditioning I	.3
AUT 208	Heating and Air Conditioning II	.2
AUT 126	Manual Drive Train and Axles I	.3
AUT 209	Manual Drive Train and Axles II	.2
SEMESTER TOTAL		**.15**
AUT: A.A.S. PROGRAM TOTAL		**.61**

Note: Program total hours may not include prerequisites. Refer to course descriptions for prerequisite information.

AVIATION MECHANICS: AIRFRAME

• College Certificate: (AMAF-CERT)
Associate of Applied Science Degree: (AMAF-AAS)

Visit this link for additional program information.
http://www.wcccd.edu/dept/Aviation/Aviation.html

About the Program

The Aviation Mechanics Associate of Applied Science and College Certificate degree program offer two options: Airframe and Powerplant. Courses are conducted in partnership with the Michigan Institute of Aviation Technology (MIAT). Successful completers will be granted credit toward the Associate of Applied Science degree.

The program is designed to prepare students for entry into a variety of occupations, which require competence in the two basic areas of airframe and powerplant technology. Students completing the college certificate or the Associate of Applied Science Degree program will be qualified to obtain a Federal Aviation Administration (FAA) Certificate to be licensed as an airframe or powerplant technician. Students seeking career advancement in the field or transfer to a four-year institution should elect the Association of Applied Science Degree. Students who wish to prepare only for the FAA license should select the Certificate.

This program offers:

- Associate of Applied Science: Mechanics Airframe: **97** credit hours
- College Certificate: Airframe Aviation Technician: **48** credit hours

Airframe Certificate Goals

- To teach and prepare students for individual certificate credentialing by the Federal Aviation Administration (FAA) to be licensed as an airframe technician
- To teach students the basic principles of aviation mechanical safety as it applies to airframe and/or powerplant repair

Airframe Certificate Outcomes

- Students will be able to demonstrate an applied understanding of the basic principles to analyze, troubleshoot and repair servicing systems of the airframe

Airframe Program Goals

- To teach and prepare students for individual certificate credentialing by the Federal Aviation Administration (FAA) to be licensed as an airframe technician
- To teach students the basic principles of aviation mechanical safety as it applies to airframe repair

Airframe Program Outcomes

- Students will demonstrate an understanding of and proficiency in the basic principles to analyze, troubleshoot and repair servicing all systems of the airframe to include; nonmetallic, sheet metal, wood, fabric and finishing coverings, aircraft welding, communication and navigation systems, electrical, hydraulics, pneumatic lines and fittings systems, landing gear systems, position and warning systems, instrument, cabin atmosphere control systems, fuel, ice, rain control and fire protection systems
- Demonstrate proficiency in performing aircraft weight and balance, major and minor repairs and alterations, cleaning and corrosion control and ground operations
- Demonstrate an applied understanding of basic math concepts and use of appropriate tools and equipment to perform maintenance and repair services in accordance with the federal aviation industry standards and guidelines
- Demonstrate proficiency in completing airframe maintenance forms and records

Continued on next page.

Aviation Mechanics: Airframe continued

- To prepare students for individual credentialing by the Federal Aviation Administration (FAA) general airframe written, oral and practical exams with a 70% or better proficiency rate and attain a mechanics certificate with airframe ratings

Admission Requirements

Students are required to do the following:

- Fulfill all WCCCD admission requirements
- Fulfill course placement requirements based on COMPASS assessment
- Complete WCCCD Program Application and submit to the Campus Academic Officer

Aviation Mechanics (Airframe): College Certificate

Recommended Course Sequence

Note: Courses from the following are required to achieve a Federal Aviation Administration (FAA) Certificate in Aviation Mechanics Airframe:

Airframe Section

AFM 201 Basic Sheet Metal 8
AFM 202 Non-Metallic Structures and Finishes 8
AFM 203 Airframe Electrical 8
AFM 204 Aircraft Navigation and Communications 8
AFM 205 Assembly and Rigging and Aircraft Systems 8
AFM 206 Landing Gear Systems and Airframe Inspections 8
AVIATION AIRFRAME CERTIFICATE TOTAL 48

Aviation Mechanics (Airframe): Associate of Applied Science Degree

Recommended Sequence of Courses

GENERAL EDUCATION COURSES

ENG 119 English I 3
ENG 120 English II 3
PS 101 American Government 3
Natural Science with Lab 4
GENERAL EDUCATION TOTAL 13

OCCUPATIONAL SUPPORT COURSES

MAT 155 College Algebra 4
OCCUPATIONAL SUPPORT TOTAL 4

AIRFRAME OCCUPATIONAL SPECIFIC COURSE

(Courses from the following required to achieve a Federal Aviation Administration (FAA):

Air Science Section

ATP 101 Introduction to Aviation I 8
ATP 102 Introduction to Aviation II 8
ATP 103 Basic Electricity 8
ATP 104 Materials, Fuel, Fire and Corrosion 8
AIR SCIENCE SECTION TOTAL 32

Airframe Section

AFM 201 Basic Sheet Metal 8
AFM 202 Non-Metallic Structures and Finishes 8
AFM 203 Airframe Electrical 8
AFM 204 Aircraft Navigation and Communications 8
AFM 205 Assembly and Rigging and Aircraft Systems 8
AFM 206 Landing Gear Systems and Airframe Inspections 8
AIRFRAME SECTION TOTAL 48
AIRFRAME A.A.S. PROGRAM TOTAL 97

Note: Program totals may not include prerequisites.

AVIATION MECHANICS: POWERPLANT

• College Certificate: (AMP-CERT)
Associate of Applied Science Degree: (AMP-AAS)

About the Program

The Aviation Mechanics Associate of Applied Science and College Certificate degree program offers two options: Airframe and Powerplant. Courses are conducted in partnership with the Michigan Institute of Aviation Technology (MIAT). Successful completers will be granted credit toward the Associate of Applied Science degree.

The program is designed to prepare students for entry into a variety of occupations, which require competence in the two basic areas of airframe and powerplant technology. Students completing the college certificate or the Associate of Applied Science Degree program will be qualified to obtain a Federal Aviation Administration (FAA) Certificate to be licensed as an airframe or powerplant technician. Students seeking career advancement in the field or transfer to a four-year institution should elect the Association of Applied Science Degree. Students who wish to prepare only for the FAA license should select the Certificate.

This program offers:

- Associate of Applied Science: Mechanical Powerplant **97** credit hours
- College Certificate: Powerplant Aviation Technician **48** credit hours

Powerplant Program Goals

- To teach and prepare students for individual credentialing by the Federal Aviation Administration (FAA) to be licensed as a powerplant technician
- To teach students the basic principles of aviation mechanical safety as it applies to airframe and powerplant repair

Powerplant Program Outcomes

- Students will demonstrate proficiency in analyzing, troubleshooting and repair servicing all systems of the powerplant to include; reciprocating and turbine engines, auxiliary power units, instruments, fire protection systems, electrical systems, cleaning and lubrication systems, fuel metering and fuel systems, ignition, starting and systems, cooling induction systems, exhaust and reverser systems and propeller and unducted fans
- Demonstrate proficiency in performing aircraft weight and balance, major and minor repairs and alterations, cleaning and corrosion control and ground operations
- Demonstrate advanced math concepts and use of appropriate tools and equipment to perform powerplant maintenance and repair services in accordance with the federal aviation industry standards and guidelines
- Identify, describe and proficiently complete powerplant maintenance forms and records
- To prepare students for individual credentialing by the Federal Aviation Administration (FAA) General Powerplant written, oral and practical exams with a 70% or better proficiency rate and attain a mechanics certificate with powerplant ratings

Powerplant Certificate Goals

- To teach and prepare students for individual certificate credentialing by the Federal Aviation Administration (FAA) to be licensed as an airframe technician
- To teach students the basic principles of aviation mechanical safety as it applies to airframe and/or powerplant repair

Continued on next page.

Aviation Mechanics: Powerplant continued

Powerplant Certificate Outcomes

- Students will be able to demonstrate an applied understanding of the basic principles to analyze, troubleshoot and repair servicing systems of the powerplant

Admission Requirements

Students are required to do the following:

- Fulfill all WCCCD admission requirements
- Fulfill course placement requirements based on COMPASS assessment
- Complete WCCCD Program Application and submit to the Campus Academic Officer

Aviation Mechanics (Powerplant): College Certificate

Recommended Course Sequence

Note: Courses from the following are required to achieve a Federal Aviation Administration (FAA) Certificate in Aviation Mechanics Powerplant:

Powerplant Section

PPM 201 Reciprocating Engine Operation . .8
PPM 202 Reciprocating Engine Systems 8
PPM 203 Reciprocating Engine Overhaul and Troubleshooting 8
PPM 204 Propellers and Turbine Engine Operation 8
PPM 205 Turbine Engine Designs, Accessories and Instruments 8
PPM 206 Turbine Engine Overhaul and Troubleshooting 8
AVIATION POWERPLANT CERTIFICATE TOTAL 48

Aviation Mechanics (Powerplant): Associate of Applied Science

Recommended Sequence of Courses

GENERAL EDUCATION COURSES

ENG 119 English I 3
ENG 120 English II 3
PS 101 American Government 3
Elective: Natural Science with Lab 4
GENERAL EDUCATION TOTAL 13

OCCUPATIONAL SUPPORT COURSES

MAT 155 College Algebra 4
OCCUPATIONAL SUPPORT TOTAL 4

POWERPLANT OCCUPATIONAL SPECIFIC COURSES

Courses from the following required to achieve a Federal Aviation Administration (FAA):

Air Science Section

ATP 101 Introduction to Aviation I 8
ATP 102 Introduction to Aviation II 8
ATP 103 Basic Electricity 8
ATP 104 Materials, Fuel, Fire and Corrosion 8
AIR SCIENCE SECTION TOTAL 32

Powerplant Section

PPM 201 Reciprocating Engine Operation . .8
PPM 202 Reciprocating Engine Systems 8
PPM 203 Reciprocating Engine Overhaul and Troubleshooting 8
PPM 204 Propellers and Turbine Engine Operation 8
PPM 205 Turbine Engine Designs, Accessories and Instruments 8
PPM 206 Turbine Engine Overhaul and Troubleshooting 8
POWERPLANT SECTION TOTAL 48
POWERPLANT A.A.S. PROGRAM TOTAL 97

Note: Program total hours may not include prerequisites.

BIO-MEDICAL EQUIPMENT REPAIR TECHNOLOGY

Associate of Applied Science Degree: (BET-AAS)

About the Program

The Associate of Applied Science program in Bio-Medical Equipment Repair is designed to provide students with in-depth knowledge of high technology equipment used in hospitals, clinics and in the offices of medical doctors. Health care facilities today depend heavily on technology todiagnose, monitor and treat diseases. The equipment and technology utilized are intended to improve the quality of healthcare. The medical community must rely on the skills of Bio-Medical Equipment Repair Technicians to maintain their equipment. The students in the program will benefit by gaining skills to make themselves competitive in the employment market as trends continue to require more technological training in the healthcare field. Their tasks include functional and safety inspections, preventive maintenance, calibration, troubleshooting, equipment repair, and the training of hospital personnel in the safe and proper use of the equipment.

Program Goals

- The Bio-Medical Equipment Repair Technology program will provide the skills and training necessary for students to understand and preserve medical electronic equipment to prepare students to initiate functional and safety inspections, preventive maintenance, calibration, troubleshooting, equipment repair, and the training of hospital personnel in the safe and proper use of Bio-Medical equipment
- Prepare students to successfully pass the ICC Certification exam for the Bio-Medical Equipment Technician (BMET) with a proficiency of 70% or higher

Program Outcomes

- Demonstrate knowledge of techniques, skills, and modern tools used within Bio-Medical Equipment industry
- Apply creativity in the design of systems, components, and processes appropriate to program objectives
- Function effectively as part of a team and communicate effectively with clients
- Identify, analyze, troubleshoot and repair hardware and software problems of bio-medical equipment
- Recognize the need for lifelong learning and upgraded certifications in the field
- Understand professional, ethical, and social responsibilities of working in the health care field
- Repair, maintain, install, upgrade, layout and modify electrical/electronics of bio-medical equipment

Admission Requirements

Students are required to do the following:

- Fulfill all WCCCD admission requirements.
- Students must declare intent to enter the Bio-Medical Equipment Repair Technology program and complete WCCCD Program Application and submit to the Campus Chief Academic Officer
- Fulfill course placement requirements based on COMPASS assessment
- Obtain an Educational Development Plan (Plan of Work), outlining the student's plan for program completion
- Complete the following courses at WCCCD or obtain equivalent transfer credit for the following courses: MAT 113, BIO 155, CIS 110, and BUS 225. Courses must be completed with a "C" or better for program admission

Continued on next page.

Bio-Medical Equipment Repair Technology continued

Bio-Medical Equipment Repair Technology:
Associate of Applied Science
Recommended Sequence of Classes

CR. No.	COURSE TITLE	CREDITS
SEMESTER 1		
EE 101	Circuit Analysis I	.4
EE 107	Math for E/E I	.4
CT 203	Digital Logic I	.4
SEMESTER TOTAL		**.12**
SEMESTER 2		
EE 102	Circuit Analysis II	.4
EE 111	Solid State Fundamentals	.3
EE 115	Math for E/E II	.4
CT 205	Introduction to Microprocessors	.4
SEMESTER TOTAL		**.15**
SEMESTER 3		
BIO 240	Anatomy and Physiology I	.4
CT 209	Computer Repair I – CompTIA A+	.4
EE 205	Linear Integrated Circuits	.2
SEMESTER TOTAL		**.10**
SEMESTER 4		
BET 110	Bio-Medical Instrumentation and Safety I	.3
ENG 119	English I	.3
CT 211	Computer Networking I	.4
SEMESTER TOTAL		**.10**
SEMESTER 5		
ENG 134	Technical Communication	.3
BET 210	Bio-Medical Instrumentation and Safety II	.3
BET 240	Bio-Medical Equipment Repair Technology Practicum I	.3
SEMESTER TOTAL		**.9**
SEMESTER 6		
PS 101	American Government	.3
BET 250	Bio-Medical Equipment Repair Technology Practicum II	.3
SEMESTER TOTAL		**.6**
A.A.S. PROGRAM TOTAL		**.62**

Note: Program total hours may not include prerequisites.

BOOKKEEPING

• Short-Term Certificate: (SCERT-BOK)

About the Program

The Bookkeeping Short-Term Certificate is designed to provide students with in-depth instruction in the field of Accounting with a concentration in Bookkeeping. The program covers the foundational knowledge and skills needed to help process a company's business transactions. The curriculum focuses on the role of accounting in business and management. Students will encounter real-world scenarios where they will use accounting information resources and systems, and present conclusions based on accounting and business data. Additionally, students will use ledgers, journals, and worksheets to complete formal, informal, and quantitative accounting tasks.

Students successfully completing this short-term certificate in Bookkeeping may sit for one of two national Bookkeeper certification exams. Certification is not required, however holding a national certification may increase employment opportunities.

1. The National Association of Certified Professional Bookkeepers: administers the Uniform Bookkeeper Certification Exam.
2. The American Institute of Professional Bookkeepers: administers the Certified Bookkeepers Exam. Candidates for this certification must document at least two years of full-time work experience as a condition for meeting certification requirements.

This program offers:

- College Certificate: **20** credit hours

Certificate Goals

- To learn the skills necessary for employment in the field of accounting in an entry-level position such as Bookkeeper, Accounting Associate or similar position and title
- To teach students to comprehend, apply and integrate the basic principles of accounting
- To prepare students to use accounting and business terminology as well as effective communication skills

Certificate Outcomes

- Perform all phases of the accounting cycle using manual and computerized systems
- Create and communicate written accounting reports for internal and/or external constituents
- Perform specialized accounting functions such as cost, tax and payroll accounting
- Demonstrate accounting skill and knowledge
- Operate software to record, store and analyze accounting data and generate reports
- Check figures, postings and documents for correct entry and mathematical accuracy

Admission Requirements

Students are required to do the following:

- Fulfill all WCCCD admission requirements
- Fulfill course placement requirements based on COMPASS assessment
- Complete WCCCD Program Application and submit to the Campus Academic Officer

Bookkeeping: College Certificate
Recommended Sequence of Classes

CR. No.	COURSE TITLE	CREDITS
SEMESTER 1		
ACC 110	Principles of Accounting I	.4
BUS 150	Introduction to Business	.3
MGT 205	Management Principles	.3
SEMESTER TOTAL		**.10**
SEMESTER 2		
ACC 111	Principles of Accounting II	.4
ACC 112	Computerized Accounting	.3
BUS 240	Business Communication	.3
SEMESTER TOTAL		**.10**
CERTIFICATE TOTAL		**.20**

Note: Certificate totals may not include prerequisites.

BUSINESS ADMINISTRATION

Associate of Arts Degree: (BAD-AA)
Associate of Applied Science Degree: (BAD-AAS)

About the Program

The Business Administration Associate of Arts and Associate of Applied Science degree programs are suitable for students presently employed in business and industry and seeking advancement, those seeking such a position immediately upon graduation and those anticipating transfer to a four-year institution. The student will complete a core liberal arts and business courses. Those anticipating transfer should coordinate their studies with the transfer policies of the institutions to which they intend to transfer. In some instances, these students may find it more advantageous to pursue a more general associate degree.

This program offers:

- Associate of Arts Degree: **62** credit hours
- Associate of Applied Science: **61** credit hours

Program Goals

- To teach and provide a general foundation of the field of business administration as a precursor for a declared four-year degree.

Program Outcomes

- Students will be able to employ effective oral, written and presentational techniques consistent with the business and management environment
- Demonstrate and apply ethical values, global awareness and technological skills to identified problems and issues making appropriate decisions related to business problems
- Assess, identify and apply critical thinking skills to formulate viable solutions to business problems by using basic accounting, business and financial concepts
- Proficiently articulate and communicate business information and data utilizing word processing, spreadsheet applications, slide presentations and database software

Admission Requirements

Students are required to do the following:

- Fulfill all WCCCD admission requirements
- Fulfill course placement requirements based on COMPASS assessment
- Complete WCCCD Program Application and submit to the Campus Academic Officer

Business Administration: Associate of Arts Recommended Sequence of Courses

CR. No.	COURSE TITLE	CREDITS
SEMESTER 1		
ACC 110	Principles of Accounting I	.4
BUS 150	Introduction to Business	.3
BUS 225	Computer Applications In Business	.3
ENG 119	English I	.3
SPH 101	Fundamentals of Speech	
	—-OR—-	
SPH 105	Improving Your Speaking Voice	.3
SEMESTER TOTAL		**.16**
SEMESTER 2		
ACC 111	Principles of Accounting II	.4
ENG 120	English II	.3
MAT 155	College Algebra	.4
MGT 205	Principles of Management	.3
PS 101	American Government	.3
SEMESTER TOTAL		**.17**
SEMESTER 3		
ECO 101	Principles of Economics I	.3
BUS 228	Internet Web Page Design	.3
MKT 200	Principles of Marketing	.3
BUS 221	Business Statistics	
	—-OR—-	
BUS 240	Business Communications	.3
Elective:	Humanities	.3
SEMESTER TOTAL		**.15**
SEMESTER 4		
BL 201	Business Law I	.4
ECO 102	Principles of Economics II	.3
Elective:	Natural Science w/Laboratory	.4
Elective:	Humanities	.3
SEMESTER TOTAL		**.14**
A.A. PROGRAM TOTAL		**.62**

Note: Program total hours may not include prerequisites.

Business Administration: Associate of Applied Science Recommended Sequence of Courses

CR. No.	COURSE TITLE	CREDITS
SEMESTER 1		
ACC 110	Principles of Accounting I	.4
BUS 150	Introduction to Business	.3
BUS 225	Computer Applications In Business	.3
ENG 119	English I	.3
SPH 101	Fundamentals of Speech	
	—-OR—-	
SPH 105	Improving Your Speaking Voice	.3
SEMESTER TOTAL		**.16**
SEMESTER 2		
ENG 120	English II	.3
MAT 155	College Algebra	.4
PS 101	American Governments	.3
ACC 111	Principles of Accounting II	.4
MGT 205	Principles of Management	.3
SEMESTER TOTAL		**.17**
SEMESTER 3		
ECO 101	Principles of Economics I	.3
Elective:	BUS/ACC	.3
BUS 228	Internet Web Page Design	.3
MKT 200	Principles of Marketing	.3
BL 201	Business Law I	.4
SEMESTER TOTAL		**.16**
SEMESTER 4		
ECO 102	Principles of Economics II	.3
BUS 221	Business Statistics	
	—OR—	
BUS 240	Business Communications	.3
BUS 210	Supervision	.3
BUS 215	Interpersonal Communications in Business	.3
SEMESTER TOTAL		**.12**
A.A.S. PROGRAM TOTAL		**.61**

Note: Program total hours may not include prerequisites.

COMPUTER INFORMATION SYSTEMS

Associate of Applied Science Degree: (AAS-CIS)

About the Program

The Computer Information Systems Associate of Applied Science degree program is designed to provide a solid foundation in the fundamental skills that are generally required to analyze system requirements and design solutions, or to support and manage the application of technology resources. The degree includes core courses of information systems fundamentals, and allows for the selection of courses in specialized areas of concentration to complete the degree option requirements.

Program concentrations are designed to meet the educational needs of most segments of the IT field in a client-server environment and microprocessor platform along with web and server applications. The training blends general education courses with the required IT skills for programmer/analyst in government, insurance, manufacturing, service, sales, utilities and banking. Additional education and job experience leads to work in systems analysis and project management.

This program offers:

- Associate of Applied Science Degree: **60** credit hours

Certificates Offered:

1. Business Analytics (CERT-BAN): **33** credit hours
2. Computer Support Specialist (SCERT-CSS): **29** credit hours
3. Database Administrator (SCERT-DBA): **29** credit hours
4. Network Administrator (CIS-NTWK-ADM-CERT): **30** credit hours
5. Video Game Design and Animation (CERT-VGDA): **34** credit hours
6. Website Developer (CERT-CMW): **30** credit hours

Program Goals

- Teach students foundation skills and to apply that knowledge to meet the needs of the computer information systems field
- Provide general education coursework with technical competence required in IT skills for programmers and analysts and other aspects of the profession

Program Outcomes

- Apply knowledge of computing and mathematics appropriate to the discipline
- Analyze a problem, identify and define the computing requirements appropriate to its solution
- Demonstrate applied knowledge to design, implement, and evaluate a computer-based system, process, component or program to meet desired needs
- Exhibit an applied understanding of processes that support the delivery and management of information systems within a specific application environment
- Effectively use written, oral, verbal and interpersonal communication skills while operating as a member of a diverse team of individual support interacting with a broad range of audiences
- Demonstrate an understanding of professional, ethical, legal, security and social issues and responsibilities related to the profession

Admission Requirements

To be admitted into the CIS program students must:

- Fulfill all WCCCD admission requirements.
- Declare program intent on the WCCCD admission application or change program intent at the campus admission office

Continued on next page.

Computer Information Systems continued

- Fulfill course placement requirements based on COMPASS assessment
- Obtain an Educational Development Plan of Work, outlining the student's plan for program completion from an academic advisor

Computer Information Systems: AAS
Associate of Applied Science
Recommended Sequence of Courses

CR. No.	COURSE TITLE	CREDITS
SEMESTER 1		
CIS 110	Introduction to Computer Information Systems	4
ENG 119	English I	3
CIS 112	Structured Design	3
BUS 225	Computer Applications in Business	3
SEMESTER TOTAL		**13**
SEMESTER 2		
CIS 203	Visual Basic Programming Language	3
Elective:	Humanities	3
CIS 241	Internet Foundations	4
Elective:	English	3
SEMESTER TOTAL		**13**
SEMESTER 3		
CIS 207	Java Programming Language	4
MAT 113	Intermediate Algebra	3
Elective:	CIS	3
PS 101	American Government	3
SEMESTER TOTAL		**13**
SEMESTER 4		
CIS 209	C Programming Language	4
SPH 101	Fundamentals of Speech	3
CIS 210	Introduction to UNIX Operating Systems	3
Elective:	Social Science	3
SEMESTER TOTAL		**13**
SEMESTER 5		
CIS 212	LINUX	4
Elective:	Natural Science w/Lab	4
SEMESTER TOTAL		**8**
CIS A.A.S. PROGRAM TOTAL		**60**

Note: Program total hours may not include prerequisites.

COMPUTER INFORMATION SYSTEMS: BUSINESS ANALYTICS

- College Certificate: (CERT-BAN)

About the Program

This Computer Information Systems Business Analytics College Certificate is designed to provide students with in-depth instruction and prepares students for entry-level. Business Analytics positions requiring knowledge, setup and usage of business intelligence and data analysis solutions. Business Analytics is expanding in businesses, government agencies and not-for-profit organizations, enabling professionals to make better decisions utilizing appropriate data and information. Students will have the ability to structure data and prepare reports in a way that is meaningful to business decision makers. Course work will include database concepts, data modeling, SQL, data analysis, data mining tools, mathematical and statistical techniques, project management and systems analysis. Emphasis is placed on strong communication skills necessary to interact with key users and understand their requirements.

This program offers:

- College Certificate: **33** credit hours

Certificate Goals

- The goal of the program is to prepare data specialists who understand the fundaments of business analytics, are able to effectively analyze data in the digital realm, and apply digital analytics to pricing and marketing campaigns. Program participants will be prepared to successfully take the industry recognized Certified Data Science Associate Certification.

Certificate Outcomes

- Understand how and why digital analytics is an essential component of any successful business strategy
- Be able to develop a framework for quantifying the returns on social media and digital marketing
- Understand and be able to demonstrate the uses of cross-platform and cross-device effects in digital attribution analyses
- Integrate data from the mobile landscape and use key metrics in the development of a mobile marketing/social media strategy
- Demonstrate how to extract business intelligence from social listening tools

Admission Requirements

Students are required to do the following:

- Fulfill all WCCCD admission requirements
- Fulfill course placement requirements based on COMPASS assessment
- Complete WCCCD Program Application and submit to the Campus Academic Officer

Business Analytics: College Certificate
Recommended Sequence of Classes

CR. No.	COURSE TITLE	CREDITS
SEMESTER 1		
CIS 110	Introduction to Computer Information Systems	4
CIS 112	Structured Design	3
BUS 161	Introduction to Big Data and Business Analytics	3
MAT 113	Intermediate Algebra	3
SEMESTER TOTAL		**13**
SEMESTER 2		
BUS 241	Business Analytics Software and Programming	4
CIS 120	Introduction to Database Concepts	3
CIS 207	Java Programming Language	4
SEMESTER TOTAL		**11**

Continued on next page.

CIS: Business Analytics continued

SEMESTER 3

MAT 131 Descriptive Statistics 3
BUS 261 Business Applications of Big Data 3
CIS 260 System Analysis and Design 3
SEMESTER TOTAL 9
CIS: BUSINESS ANALYTICS CERTIFICATE TOTAL 33
Note: Certificate totals may not include prerequisites.

COMPUTER INFORMATION SYSTEMS: COMPUTER SUPPORT SPECIALIST

• Short-Term Certificate: (SCERT-CSS)

Visit this link for additional program information.
http://www.wcccd.edu/dept/CIS_CompSupp/CIS_CompSupp.html

About the Program

The Computer Information Systems Computer Support Specialist Short-Term Certificate program is designed to provide a solid foundation in the fundamental skills that are generally required to analyze system requirements and design solutions, and or support and manage the application of technology resources. Degree concentrations include core courses of information systems fundamentals, database systems, networking, web systems and software development.

Description: Computer Support Specialists provide technical assistance, support, and advice to users. These troubleshooters diagnose problems and provide technical support for hardware, software, and IT systems.

A person in this occupation applies computer software and technology to business related matters. Typical support specialist tasks include analyzing and solving business problems by creating a computerized system using microcomputer application software (e.g. word processor, spreadsheets, databases, presentation, web development, etc.) to write a custom program or integrate multiple software applications. Students are also prepared to interface with users and functions as an integral part of an IT support team.

This program offers:

- Short-Term Certificate: **29** credit hours

Certificate Goals

• Provide basic foundation and practical experience in computer systems concepts with an emphasis in microcomputer applications

Certificate Outcomes

• Demonstrate ability to manage workgroup resources to include file shares, print shares and physical connections
• Proficiently install, configure and support industry required applications
• Proficiently use integrated software packages to analyze and support business problems related to the IT infrastructure

Admission Requirements

Students are admitted to the program each semester. Students must have program approval, a completed application, and other required information submitted by the due date. If there are openings after the application deadline, any remaining openings will be filled on a "first-come" basis. To be admitted into the CIS program students must:

• Fulfill all WCCCD admission requirements.
• Complete WCCCD Program Application and submit to the Campus Academic Officer
• Declare program intent on the WCCCD admission application or change program intent at the campus admission office.
• Fulfill course placement requirements based on COMPASS assessment
• Obtain an Educational Development Plan of Work, outlining the student's plan for program completion from an academic advisor

Computer Support Specialist: Short-Term Certificate Recommended Sequence of Courses

CR. No.	COURSE TITLE	CREDITS
SEMESTER 1		
CIS 210	Introduction to UNIX Operating Systems	.3
CIS 240	Networking Essentials	.3
CT 210	Comp TIA A+	.6
CT 211	Computer Networking I	.4
SEMESTER TOTAL		**.16**
SEMESTER 2		
CIS 212	LINUX	.4
CIS 245	Wireless Networking	.3
CIS 249	Computer Support I	.3
CIS 248	Computer Support II	.3
SEMESTER TOTAL		**.13**
CIS: COMPUTER SUPPORT SPECIALIST CERTIFICATE TOTAL		**. . .29**

Note: Certificate total hours may not include prerequisites.

COMPUTER INFORMATION SYSTEMS: DATABASE ADMINISTRATOR

• Short-Term Certificate: (SCERT-DBA)

About the Program

The Computer Information Systems: Database Administrator Short-Term Certificate program is designed to give students a thorough technical foundation to design and implement the infrastructure for business solutions using database tools. Database Administrators use software to store and organize business data of all kinds and works in nearly all industries. The student completing this program can sit for Oracle Certification exams. This program focuses on administrative tasks and building database applications using programming skills such as data collection, query techniques and database creation. Database administrators typically perform tasks such as identify user needs to create and administer databases, coordinate changes to computer databases, test and implement the database applying knowledge of database management systems, coordinate and implement security measures to safeguard computer databases, ensure that the database operates efficiently and without error, make and test modifications to the database structure, maintain the database and update user permissions, merge old databases into new ones, and backup and restore data to prevent data loss.

This program offers:

- Short-Term Certificate: **29** credit hours

Certificate Goals

- To prepare students to gain employment in the computer information systems field as a database administrator or technician
- To prepare students to sit for individual certification by recognized industry experts for Oracle Database Administrator

Certificate Outcomes

- Be knowledgeable of database management system architecture and environment, with emphasis on database processing, physical representation, modeling, and database implementation
- Identify network components
- Understand Oracle Database Administrator functions as well as using RMAN, SQL, and Flashback technology
- Analyze database management problems using elements and components of database software
- Demonstrate a working knowledge of computer information systems, fundamental computer concepts, database structures, and programming techniques
- Develop database structures to store, retrieve and update data
- Develop programs using structured design and logic tools
- Design software that integrates web sites and databases including client and server-side scripting
- Plan, coordinate and implement security measures to safeguard information in computer files against accidental or unauthorized damage, modification or disclosure

Admission Requirements

Students are required to do the following:

- Fulfill all WCCCD admission requirements
- Fulfill course placement requirements based on COMPASS assessment
- Complete WCCCD Program Application and submit to the Campus Academic Officer

Database Administrator: College Certificate Recommended Sequence of Classes

CR. No.	COURSE TITLE	CREDITS
SEMESTER 1		
BUS 225	Computer Application in Business	3
CIS 112	Structured Design	3
CIS 120	Introduction to Database Concepts	3
SEMESTER TOTAL		**9**
SEMESTER 2		
CIS 203	Visual Basic Programming Language	3
CIS 210	Introduction to Unix Operating Systems	3
CIS 246	Oracle Database Administrator I	4
SEMESTER TOTAL		**10**
SEMESTER 3		
CIS 240	Networking Essentials	3
CIS 247	Oracle Database Administrator II	4
OIS 254	Microsoft Access Specialist	3
SEMESTER TOTAL		**10**
CIS: DATABASE ADMINISTRATOR CERTIFICATE TOTAL		**29**

Note: Certificate total hours may not include prerequisites.

COMPUTER INFORMATION SYSTEMS: NETWORK ADMINISTRATOR

• College Certificate: (CIS-NTWK-ADM-CERT)

Visit this link for additional program information.
http://www.wcccd.edu/dept/CIS_Network/CIS_network.html

About the Program

The Computer Information Systems Network Administrator College Certificate is designed to provide a solid foundation in the fundamental skills that are generally required to analyze system requirements and design solutions or, to support and manage the application of technology resources.

The Network Administrator concentration prepares students as network systems administrators who can design, install, and support an organization's LAN (local-area network), network segment, Internet, or intranet system. Network systems administrators provide day-to-day on-site administrative support for software users in a variety of work environments, including professional offices, small businesses, government, and large corporations. They maintain network hardware and software, analyze problems, and monitor the network to ensure its availability to system users. These professionals gather data to identify customer needs and then use that information to identify, interpret, and evaluate system and network requirements. Network systems administrators also plan, coordinate, and implement network security measures.

The goal of the Network Administrator is to provide day-to-day on-site administrative support for software users in a variety of work environments.

This program offers:

- College Certificate: **30** credit hours

Continued on next page.

CIS: Network Administrator continued

College Certificate Goals

- Teach students foundation skills and to apply that knowledge to meet the needs of the computer information systems field
- Provide general education coursework with technical competence required in IT skills for programmers and analysts and other aspects of the profession

College Certificate Outcomes

Students will be able to demonstrate:

- Proficiency and applied knowledge required for use of Windows client operating systems in a network environment
- Proficiency and applied knowledge in various Windows server services implemented in a network environment
- Proficiency and applied knowledge in working with common network devices such as hubs, switches, routers, firewalls, and network cabling
- Proficiency in managing resources including folders, files and printers in a network environment
- Proficiency in creating and managing user accounts, groups and permissions in a domain environment
- Effective use of written, oral, verbal and interpersonal communication skills operating as a member of a diverse support team interacting with a broad range of audiences.
- Exhibit understanding of professional, ethical, legal, security and social issues and responsibilities related to the profession

Admission Requirements

Students are admitted to the program each semester. Students must have the program approval, a completed application, and other required information submitted by the due date. If there are openings after the application deadline, any remaining openings will be filled on a "first-come" basis. To be admitted into the CIS program students must:

- Fulfill all WCCCD admission requirements
- Declare program intent on the WCCCD admission application or change program intent at the campus admission office
- Fulfill course placement requirements based on COMPASS assessment
- Obtain an Educational Development Plan of Work, outlining the student's plan for program completion from an academic advisor
- Complete WCCCD Program Application and submit to the Campus Academic Officer

Computer Network Administrator: College Certificate
Recommended Sequence of Courses

CR. No.	COURSE TITLE	CREDITS
SEMESTER 1		
CIS 110	Introduction to Computer Information Systems	.4
CT 211	Computer Networking I	.4
SEMESTER TOTAL		**.8**
SEMESTER 2		
CIS 210	Introduction to UNIX Operating Systems	.3
CIS 240	Networking Essentials	.3
CT 210	Computer Repair II - CompTIA A+	.6
SEMESTER TOTAL		**.12**
SEMESTER 3		
CIS 237	Cisco CCNA	.7
CIS 243	Network Security Fundamentals	.3
SEMESTER TOTAL		**.10**
CIS: NETWORK ADMINISTRATOR CERTIFICATE TOTAL		**.30**

Note: Certificate total hours may not include prerequisites.

COMPUTER INFORMATION SYSTEMS: VIDEO GAME DESIGN AND ANIMATION

- College Certificate: (CERT-VGDA)

Visit this link for additional program information.
http://www.wcccd.edu/dept/VideoGameDesign/VideoGameDesign.html

About the Program

The Computer Information Systems Video Game Design and Animation College Certificate is designed to provide a solid foundation in the fundamental skills that are generally required meet the needs of the video game design, animation and programming field.

Description: Creation and design of video games and the animation included within.

This program offers:

- College Certificate: **34** credit hours

College Certificate Goals

- To provide students with a basic foundation for video game design, animation and programming field

College Certificate Outcomes

- Students will be able to produce quality work in a video game design and animation environment
- Effectively use written, oral, verbal and interpersonal communication skills when operating as a member of a diverse support team interacting with a broad range of audiences
- Demonstrate an applied understanding of processes that support the design, animation and production environment

Admission Requirements

Students are admitted to the program each semester. Students must have the program's approval, a completed application, and other required information submitted by the due date.

If there are openings after the application deadline, any remaining openings will be filled on a "first-come" basis. To be admitted into the CIS program students must:

- Fulfill all WCCCD admission requirements
- Declare program intent on the WCCCD admission application or change program intent at the campus admission office
- Fulfill course placement requirements based on COMPASS assessment
- Obtain an Educational Development Plan of Work, outlining the student's plan for program completion from an academic advisor
- Complete WCCCD Program Application and submit to the Campus Academic Officer

Prerequisite Work

Prior to beginning the Video Game Design and Animation concentration of the Computer Information Systems program, students must have computer competencies which include the ability to key text at a minimum rate of 35 words per minute. These necessary skills can be obtained from your life experiences or by taking any of the following courses: Keyboarding, Keyboarding Fundamentals and Intermediate Keyboarding.

Continued on next page.

CIS: Video Game Design and Animation continued

Video Game Design and Animation College Certificate
Recommended Sequence of Courses

CR. No.	COURSE TITLE	CREDITS
SEMESTER 1		
CIS 110	Introduction to Computer Information Systems	.4
VGD 268	Computer Games Foundations	.3
ART 115	Basic Drawing for Animation	.3
DMP 101	Story Elements for a Digital Environment	.3
SEMESTER TOTAL		**.13**
SEMESTER 2		
CIS 266	Introduction to Graphic Design	.3
VGD 269	Introduction to 3D Graphics and Animation	.4
SEMESTER TOTAL		**.7**
SEMESTER 3		
VGD 270	3D Character Development and Animation	.4
VGD 271	Introduction to 3D Design	.4
VGD 272	Texturing Fundamentals	.4
VGD 999	Computer Game Project	.2
SEMESTER TOTAL		**.14**
CIS: VGD CERTIFICATE TOTAL		**.34**

Note: Certificate total hours may not include prerequisites.

COMPUTER INFORMATION SYSTEMS: WEBSITE DEVELOPER

• College Certificate: (CERT-CMW)

Visit this link for additional program information.
http://www.wcccd.edu/dept/CIS_web/CIS_web.html

About the Program

The Computer Information Systems Website Developer College Certificate program is designed to prepare students for employment in the area of web design. Students will learn web design, XHTML coding, image editing, validation, CSS, GUI editors, server-side and client-side languages.

Description: Web developers are responsible for day-to-day site creation, design and all technical aspects of a web site.

This program offers:

- College Certificate: **30** credit hours

College Certificate Goals

- Students will be able to demonstrate competencies in the development and deployment of website design

College Certificate Outcomes

- Demonstrate ability to code the features necessary for Web site development and deployment
- Demonstrate ability to solve problems related to the program content
- Develop proficiencies in modifying a website

Admission Requirements

Students are admitted to the program each semester. Students must have the program's approval, a completed application, and other required information submitted by the due date.

If there are openings after the application deadline, any remaining openings will be filled on a "first-come" basis. To be admitted into the CIS program students must:

- Fulfill all WCCCD admission requirements
- Declare program intent on the WCCCD admission application or change program intent at the campus admission office
- Fulfill course placement requirements based on COMPASS assessment
- Obtain an Educational Development Plan of Work, outlining the student's plan for program completion from an academic advisor
- Complete WCCCD Program Application and submit to the Campus Academic Officer

Prerequisite Work

Prior to beginning the program, students must have computer competencies which include the ability to key text at a minimum rate of 35 words per minute. These necessary skills can be obtained from your life experiences or by taking any of the following courses: Keyboarding, Keyboarding Fundamentals and Intermediate Keyboarding.

Website Developer: College Certificate
Recommended Sequence of Courses

CR. No.	COURSE TITLE	CREDITS
SEMESTER 1		
CIS 110	Introduction to Computer Information Systems	.4
CIS 112	Structured Design	.3
CIS 241	Internet Foundations	.4
SEMESTER TOTAL		**.11**
SEMESTER 2		
BUS 228	Internet Web Page Design	.3
CIS 266	Introduction to Graphic Design	.3
CIS 213	Web Design Methodology and Technology	.3
SEMESTER TOTAL		**.9**
SEMESTER 3		
CIS 258	JavaScript/PERL	.4
CIS 250	E-commerce Strategies and Practices	.3
CIS 267	Understanding and Developing Multimedia	.3
SEMESTER TOTAL		**.10**
CIS: WEBSITE DEVELOPER CERTIFICATE TOTAL		**.30**

Note: Certificate total hours may not include prerequisites.

COMPUTER NUMERICAL CONTROL

Associate of Applied Science Degree: (CNC-AAS)

- CNC Programming and Operation Short-Term Certificate: (CNC-SCERT)

About the Program

The Computer Numerical Control Associates of Applied Science degree program prepares students to be successful in a highly technical field with the foundation and skill-set to make them a valued asset in an ever-changing industry. Students will be exposed to topics that include, but are not limited to, basic and advanced programming, machine controls, machine set-up, and program structure to manufacture parts to blueprint standards for fit and tolerances as dictated by modern Geometric Dimensioning & Tolerancing (GD&T) standards. Students will be required to complete hands-on projects in a state-of-the-art lab environment.

This Program Offers:

- Associate of Applied Science Degree: **60** credit hours
- CNC Programming and Operation Short-Term Certificate: **24** credit hours

Program Goals

- To prepare students for employment in highly-skilled manufacturing environments
- To instruct students on how to apply critical thinking and analytical problem solving as a CNC operator and/or programmer
- To prepare the student to successfully take the National Institute of Metalworking Skills (NIMS) certification exams (4 exams that can be taken at different intervals as the student moves through the program)
- To emphasize the importance accuracy and attention to detail
- To expose students to resources such as online forums and networking
- To teach students to adhere to safety standards and procedures to not endanger themselves or others

Program Outcomes

- Accurately interpret blueprint drawings and apply information to product development
- Demonstrate basic knowledge of manufacturing processes
- Utilize the CAD application within MasterCam for both 2D and 3D drawing development
- Write and apply 2D and 3D programs
- Demonstrate ability to start-up and set-up CNC machines
- Utilize machine controls on various CNC equipment
- Set-up machines to execute programs
- Demonstrate ability to load programs and/or use Intuitive Programming proficiently
- Demonstrate knowledge of safety standards as they apply to all manufacturing environments
- Demonstrate ability to measure and gage parts accurately
- Demonstrate knowledge of and ability to apply Reinshaw Probing
- Demonstrate and apply proficient use of point-to-point measuring equipment as well as surface scanning
- Demonstrate an understanding of hard part machining

Certificate Goals

- To instruct students on how to apply critical thinking and analytical problem solving as a CNC operator and/or programmer
- To prepare the student to successfully take the National Institute of Metalworking Skills (NIMS) certification exams
- To teach students to adhere to safety standards and procedures to not endanger themselves or others

Certificate Outcomes

- Accurately interpret blueprint drawings and apply information to product development
- Demonstrate basic knowledge of manufacturing processes
- Utilize the CAD application within MasterCam for both 2D and 3D drawing development
- Write and apply 2D and 3D programs
- Demonstrate ability to start-up and set-up CNC machines

Admission Requirements

Students are required to do the following:

- Fulfill all WCCCD admission requirements
- Fulfill course placement requirements based on COMPASS test
- Students must be 18 years of age and possess a high school diploma or GED
- Declare intent to enter the Computer Numerical Control Program
- Students must complete WCCCD Program Application and submit to the Campus President/CAO

Computer Numerical Control: Associate of Applied Science Degree Recommended Sequence of Courses

CR. No.	COURSE TITLE	CREDITS
SEMESTER 1		
CNC 111	Introduction to Computer Numerical Control	3
CNC 122	CNC Machine Controls	3
MAN 101	Manufacturing Processes I	3
MAN 105	Basic Metrology	3
SEMESTER TOTAL		**12**
SEMESTER 2		
CNC 230	CNC Design I	3
CNC 231	CNC Programming and Machining I	3
MAN 115	Manufacturing Processes II	3
MAN 205	Advanced Metrology	3
SEMESTER TOTAL		**12**
SEMESTER 3		
Elective	Humanities	3
ENG 119	English I	3
MAT 113	Intermediate Algebra	3
PS 101	American Government	3
SEMESTER TOTAL		**12**
SEMESTER 4		
Elective	Natural or Social Science	3
ENG 134	Technical Communications	3
CNC 234	CNC Design II	3
CNC 235	CNC Programming and Machining II	3
SEMESTER TOTAL		**12**
SEMESTER 5		
CNC 240	CNC Programming and Machining III	3
CNC 245	CNC Intuitive Programming	3
MAN 220	Fixture Design and Construction	3
MAN 225	Introduction to Hard Machining	3
SEMESTER TOTAL		**12**
PROGRAM TOTAL		**60**

Note: Program total hours may not include prerequisites.

CNC Programming and Operation: Short-Term Certificate Recommended Sequence of Classes

CR. No.	COURSE TITLE	CREDITS
SEMESTER 1		
CNC 111	Introduction to Computer Numerical Control	3
CNC 122	CNC Machine Controls	3
MAN 101	Manufacturing Processes I	3
MAN 105	Basic Metrology	3
SEMESTER TOTAL		**12**
SEMESTER 2		
CNC 230	CNC Design I	3
CNC 231	CNC Programming and Machining I	3
MAN 115	Manufacturing Processes II	3
MAT 113	Intermediate Algebra	3
SEMESTER TOTAL		**12**
CERTIFICATE TOTAL		**24**

Note: Certificate total hours may not include prerequisites.

CRAFT BREWING

- Craft Brewing College Certificate (BRW-CERT)
- Advanced Craft Brewing Short-Term Certificate (BRW-SCERT)

About the Program

The Craft Brewing Certificate Program prepares individuals for careers in the growing beer brewing industry. Classroom instruction and laboratory work serve to educate the student in aspects of the craft brewing industry are included in the certificate program. Coursework will cover brewing, fermentation, safety and sanitation, operations, agriculture, marketing, management, equipment for production and bottling, packaging as well as specifics of craft beer microbiology. Courses will be taught in a setting designed to mirror operations in both large and small brewing operations. Graduates of the program will be prepared to sit for certification exams offered by the Institute of Brewing and Distilling (IBD) and qualify for employment in local and national brewing establishments.

This Program Offers:

- Craft Brewing Certificate: **35** credit hours
- Advanced Craft Brewing Short-Term Certificate: **27** credit hours

Certificate Goals

- Awareness and practical application of all aspects of the craft beer brewing industry
- Prepare students for Institute of Brewing and Distilling (IBD) Certification Exams

Certificate Outcomes

- Students will be prepared to take mid-level advanced positions in the craft brewing industry and pass IBD certification exams
- Students will be able to identify, in detail, the brewing process and correctly articulate the safety and sanitation needs of brewing
- Students will be able to indicate the microbiological challenges of the brewing process
- Students will be able to indicate the heat transfer and fluid challenges of the brewing process
- Students will be able to demonstrate the bottling aspects of the brewing process
- Students will be able to indicate the agricultural opportunities and recipe creation strategies in the brewing process

Admission Requirements

Students are required to do the following:

- Fulfill all WCCCD admission requirements
- Fulfill course placement requirements based on COMPASS test
- Declare intent to enter the Craft Brewing Program
- Students must complete WCCCD Program Application and submit to the Campus President/CAO

Craft Brewing: College Certificate Recommended Sequence of Courses

CR. No.	COURSE TITLE	CREDITS
SEMESTER 1		
BRW 101	Introduction to Craft Beer Brewing	.3
BL 201	Business Law	.4
MAT 113	Intermediate Algebra (or higher)	.3
ENG 119	College English I	.3
SEMESTER TOTAL		**.13**
SEMESTER 2		
BRW 110	Beverage Technology and Calculations	.3
BRW 200	Brewing Science (w/Lab)	.4
BRW 210	Raw Materials, Soil and Malting	.3
ENG 134	Technical Communications	.3
SEMESTER TOTAL		**.13**
SEMESTER 3		
BRW 220	Brewing Systems, Materials, Safety and Sanitization	.4
BRW 240	Recipe Formulation (w/Lab)	.4
BRW 260	Brewing Internship I	.1
SEMESTER TOTAL		**.9**
CERTIFICATE TOTAL		**.35**

Note: Certificate total hours may not include prerequisites.

Advanced Craft Brewing: Short-Term Certificate Recommended Sequence of Courses

CR. No.	COURSE TITLE	CREDITS
SEMESTER 1		
BRW 230	Heat Transfer and Fluid Flow	.3
BRW 245	Batch Recipe Formulation (w/Lab)	.4
ENG 120	College English II	.3
ENT 100	Introduction to Entrepreneurship	.3
SEMESTER TOTAL		**.13**
SEMESTER 2		
BUS 240	Business Communications	.3
BRW 250	Advanced Craft Brewing (w/Lab)	.4
BRW 265	Brewing Internship II	.5
BRW 270	Capstone and Certification	.2
SEMESTER TOTAL		**.14**
CERTIFICATE TOTAL		**.27**

Note: Certificate total hours may not include prerequisites.

CRIMINAL JUSTICE: LAW ENFORCEMENT ADMINISTRATION AND CORRECTIONS

- College Certificate (CJPPS-CERT)

Associate of Applied Science Degree(s):
Law Enforcement Administration (CJLE-AAS)
Corrections(CCJ-AAS)

About the Program

The Criminal Justice Law Enforcement Administration and Corrections Associate of Applied Science degree programs are designed to provide the academic and professional training necessary for careers in Law Enforcement. The Law Enforcement Administration option is designed to prepare students for entry or advancement in the criminal justice system. The Corrections option prepares students for employment in correctional institutions or fields related to probation and parole.

This program offers:

- Associate of Applied Science Degree(s):
1. Law Enforcement Administration: **61** credit hours
2. Corrections: **61** credit hours

- College Certificate: Criminal Justice: Public Private Security: **31** credit hours

Program Goals

- To teach students the principles of community law enforcement and corrections vocation
- To instruct students on how to apply critical thinking and analytical problem solving in the law enforcement profession

Program Outcomes

- Students will be able to apply academic knowledge to a field of training program's designed to assimilate into a policing competency

Continued on next page.

Criminal Justice: continued

- Demonstrate critical thinking, decision-making and problem solving as it applies to the vocation
- Utilize effective verbal and written communication with the public, staff and administration by documenting activities, maintaining databases and effective performance
- Exhibit knowledge of and apply ethical values, cultural awareness and technological skills when making decisions related to the vocation

College Certificate Goals

- To prepare students interested in entering the field of public/private security for high quality corporate security jobs in law enforcement, retail, education, management, design and business
- To prepare students for jobs in the Transportation Security Administration (TSA) of the Department of Homeland Security

College Certificate Outcomes

- Explain basic security functions, crime causation theories and the relationship between security and policing
- Distinguish between the different categories of crime
- Develop an investigative strategy and prepare and present findings
- Identify threats to information security, develop policies and procedures to help detour incidents
- Demonstrate an understanding of cybercrime
- Evaluate potential threats and conduct information security assessments

Admission Requirements

Students are required to do the following:

- Fulfill all WCCCD admission requirements
- Declare intent to enter the Criminal Justice Program on the WCCCD Application for Admission or change intent at the Admission Office
- Fulfill all course placement requirements based on COMPASS assessment
- Obtain an Educational Development Plan (Plan of Work), outlining the student's plan for program completion
- Complete WCCCD Program Application and submit to the Campus Academic Officer

Criminal Justice: Corrections
Associate of Applied Science
Recommended Sequence of Courses

CR. No.	COURSE TITLE	CREDITS
SEMESTER 1		
CJS 100	Introduction to Criminal Justice	.3
ENG 119	English I	.3
PS 101	American Government	.3
	—-OR—-	
AAS 131	American Government and the African American Struggle	.4
HUS 105	Group Expression for Self-Growth I	.3
Elective:	Natural Science w/Lab	.4
SEMESTER TOTAL		**.16-17**
SEMESTER 2		
ENG 120	English II	.3
COR 100	Introduction to Corrections	.3
COR 101	Introduction to Juvenile Justice	.3
COR 105	Introduction to Correctional Counseling	.3
Elective:	Humanities	.3
SEMESTER TOTAL		**.15**
SEMESTER 3		
AAS 237	Illegal Drug Traffic and the African-American Community	.3
COR 110	Introduction to Deviant Behavior	.3
COR 200	Social Science for Correctional Personnel	.3
COR 205	Institution Corrections Personnel	.3
Elective:	Humanities	.3
SEMESTER TOTAL		**.15**
SEMESTER 4		
COR 210	Correctional Institutions and Facilities	.3
COR 215	Correctional Field Work	.3
COR 218	Race Relations for Correctional Personnel	.3
COR 255	Legal Issues in Corrections	.3
EMT 105	Medical First Responder	.3
SEMESTER TOTAL		**.15**
CRIMINAL JUSTICE: CORRECTIONS A.A.S. PROGRAM TOTAL		**.61-62**

Note: Program total hours may not include prerequisites.

Criminal Justice: Law Enforcement Admin.
Associate of Applied Science
Recommended Sequence of Courses

CR. No.	COURSE TITLE	CREDITS
SEMESTER 1		
CJS 100	Introduction to Criminal Justice	.3
ENG 119	English I	.3
PS 101	American Government	.3
	—-OR—-	
AAS 131	American Government and the African American Struggle	.4
HUS 105	Group Expression for Self-Growth I	.3
Elective:	Natural Science w/Lab	.4
SEMESTER TOTAL		**.16-17**
SEMESTER 2		
LEA 201	Introduction to Law Enforcement	.3
ENG 120	English II	.3
AAS 237	Illegal Drug Traffic and the African- American Community	.3
LEA 210	Highway and Traffic Control	.3
Elective:	Humanities	.3
SEMESTER TOTAL		**.15**
SEMESTER 3		
LEA 230	Fundamentals of Criminal Investigation	.3
LEA 231	Criminal Law and Justice I	.3
LEA 250	Social Problems in Law Enforcement	.3
EMT 105	Medical First Responder	.3
Elective:	Humanities	.3
SEMESTER TOTAL		**.15**
SEMESTER 4		
LEA 225	Law Enforcement Administration: Seminar I	.2
LEA 226	Law Enforcement Administration: Practicum	.4
LEA 232	Criminal Law and Justice II	.3
LEA 235	Race Relations for Law Enforcement	.3
LEA 253	Law Enforcement Administration: Seminar II	.3
SEMESTER TOTAL		**.15**
CRIMINAL JUSTICE: LAW ENFORCEMENT PROGRAM TOTAL		**.61-62**

Note: Program total hours may not include prerequisites.

Criminal Justice: Public/Private Security
(CJPPS-CERT) College Certificate
Recommended Sequence of Courses

CR. No.	COURSE TITLE	CREDITS
SEMESTER 1		
CJS 100	Introduction to Criminal Justice	.3
SEC 100	Introduction to Security	.3
CIS 110	Introduction to Computer Information Systems	.4
HLS 100	Introduction to Homeland Security	.3
SEMESTER TOTAL		**.13**
SEMESTER 2		
SEC 103	Legal Guidelines for Security	.3
SEC 204	Physical Security	.3
SEC 205	Asset Protection and Incident Response	.3
LEA 230	Criminal Investigation*	.3
SEMESTER TOTAL		**.12**
SEMESTER 3		
SEC 207	Security Administration	.3
SEC 208	Security Capstone Course	.3
SEMESTER TOTAL		**.6**
CERTIFICATE TOTAL		**.31**

Note: Certificate total hours may not include prerequisites.
**Existing course must be taken at WCCCD*

DENTAL ASSISTING

• College Certificate: (DEA-CERT)

Visit this link for additional program information.
http://www.wcccd.edu/dept/DentAsst/DentAsst.html

About the Program

The Dental Assisting College Certificate program provides students with the necessary training to perform the duties of a dental assistant, including assisting the dentist (chair side), providing patient education, performing laboratory procedures, exposing and processing x-rays and performing office management tasks such as billing and scheduling appointments.

In addition, the dental assistant who becomes licensed can provide expanded functions as delegated by Michigan law. Instruction runs concurrently with the laboratory instruction throughout the program. Students gain clinical experience in clinical facilities and dental offices. Aptitudes that will be helpful to students are an ability to pay attention to detail, follow instructions, work quickly and independently, be responsible for personal and office organization, and interact well with people.

Upon completion of the program, students are eligible to take the Dental Assisting National Board Examination to become a Certified Dental Assistant (CDA). In addition, they are eligible to take the State of Michigan's Registered Dental Assistant Examination to become a licensed Registered Dental Assistant (RDA).

The program in Dental Assisting is accredited by the Commission on Dental Accreditation. The Commission is a specialized accrediting body recognized by the Commission on Recognition of Post-Secondary Accreditation and the United States Department of Education.

College Certificate Goals

- To teach and prepare students as dental assistants to competently perform a variety of dental assisting tasks in a variety of community and health care settings

College Certificate Outcomes

- Students will be able to detail, plan and demonstrate competency in performing comprehensive and routine dental laboratory procedures, assist in managing medical emergencies and perform expanded functions legal in the State of Michigan
- Perform clinical and support treatments to include collecting diagnostics and data
- Manage proper infection control and hazard management protocol
- Take proficient diagnostic radiographs related to exposure, processing, mounting and evaluation
- Carry out routine dental office procedures to include computer data entry, scheduling, and records management
- Understand regulations governing the legal and ethical boundaries of the profession as they apply to American Dental Assistants Association (ADAA) code of ethics and Health Insurance Portability and Accountability Act (HIPAA) guidelines while modeling professional behaviors, ethics and appearance
- Provide patient oral health instructions

Admission Requirements

The program begins each Fall semester and part-time students are accepted on a space availability basis. Student must have the program's approval, a completed application, and other required information submitted by the due date. If there are openings after the application deadline, any remaining openings will be filled on a first come basis to qualified applicants.

Students must complete the following:

- Fulfill all WCCCD admission requirements.
- Possess a high school diploma or GED
- Request official high school and/or college transcripts to be sent to the Dental Assisting Program office
- Must be 18 years of age or older
- Declare intent to enter the Dental Assisting Program on the WCCCD Application for Admission form or change intent at the Admission's Office
- Declare intent to enter the Dental Assistant Program by submitting an Allied Health Application
- Demonstrate reading comprehension via the COMPASS assessment with a score of 78 or Freshman English 119
- Demonstrate reading comprehension at Freshman English levels via the COMPASS assessment. Based on the results of the test Prerequisite courses may be required
- Documentation of current immunizations or immunity for tetanus, MMR and Varicella
- Receive the Hepatitis B vaccination or declare intent to receive or decline the vaccination
- Must test negative on a TB test
- Show proof of enrolling in an applicable CPR (for the healthcare provider) course
- Obtain a Criminal Background Check (through the program)
- Meet with the Dental Assisting Program Director
- The admitted student must purchase the required uniform and student kit by the first week of classes
- Program approval is required for credits for "Prior Experience and Required Knowledge".
- Complete WCCCD Program Application and submit to the Campus Academic Officer

After acceptance in the program and before classes begin, you will need to provide the following:

- Documentation of current medical examination
- Complete CPR training for the Health Care Provider (A CPR course is offered by the College)
- Documentation of dental examination and completed treatment

Before participating in any clinical course:

- The admitted student must purchase the required uniform and student kit by the first week of classes

Dental Assisting: College Certificate Recommended Sequence of Courses

CR. No.	COURSE TITLE	CREDITS
SEMESTER 1		
DA 104	Dental Materials	5
DA 106	Applied Sciences and Medical Emergencies	4
DA 110	Clinical Dental Assisting	4
DA 115	Infection Control and Preventive Dentistry	2
DA 120	Dental Specialties	2
DEN 200	Dental Radiology Theory	2
DEN 201	Dental Radiology Lab	2
SEMESTER TOTAL		**21**
SEMESTER 2		
DA 117	Clinical Practice I	5
DA 126	General Anatomy,Pharmacology and Oral Pathology	3
DA 127	Dental Office Management	2
DA 129	Legal, Ethical and Communication Issues	2
DA 203	Expanded Functions for the Registered Dental Assistant	3
DA 204	Expanded Functions for the Registered Dental Assistant Clinical Lab	4
SEMESTER TOTAL		**19**
SEMESTER 3		
DA 125	Clinical Practice II	8
SEMESTER TOTAL		**8**
CERTIFICATE TOTAL		**48**

Note: Certificate total hours may not include prerequisites.
*** This number may be less. Graduates of high school vocational-technical dental assisting programs and on-the-job trained dental assistants are eligible for advanced credit hours through the Prior Experience and Required Knowledge program (PERK). Contact the program office for additional information.*

DENTAL HYGIENE

Associate of Science Degree: (DEH-AS)

- Dental: Local Anesthesia Certification: (SCERT-DLA)

About the Program

The Dental Hygiene Associate of Science degree program at Wayne County Community College District is a prominent career for individuals interested in working as an important part of the dental healthcare team. The dental hygienist learns specialized clinical skills to provide direct patient care, and may be responsible for community distribution of information related to the prevention of oral diseases and the maintenance of oral health. The demand for dental services will continue to grow due to the success of preventive dentistry in reducing the incidence of oral diseases. Dentists will need to employ more dental hygienists to meet the increased demand for dental services.

Dental Hygienists are important members of the dental health care team. Their primary duties include the following: oral prophylaxis, such as scaling, root planning and polishing, recording medical/dental history, diagnostic data collection, dental charting, oral cancer screening, oral examinations, treatment planning; expose, develop and interpret dental radiographs, apply fluoride, and dental sealants, teach patients proper oral hygiene techniques, counsel patients about plaque control, develop individualized at home oral hygiene programs, counsel patients on the importance of good nutrition for maintaining optimal oral health and perform other clinical dental hygiene services. The Dental Hygiene program is designed to prepare students to become competent oral health clinicians and educators. Admission to the program is limited and competitive. Upon completion of this program, students are eligible to take the National Dental Hygiene and Northeast Regional Board Examination. The Michigan Board of Dentistry may deny dental hygiene licensure to an applicant who has been convicted of a crime or is addicted to drugs or alcohol.

This program offers:

- Associate of Science Degree: **83** credit hours
- Local Anesthesia Certification: **22** credit hours

Program Goals

- The Dental Hygiene Graduate will be competent with respect to "Competencies For The Dental Hygiene Graduate"
- Maintain a contemporary program curriculum that reflects relevant and current evidence based dental hygiene practice
- Prepare students to successfully pass State and National licensing examinations that qualifies the graduate for licensure
- Maintain expert dental hygiene faculty and staff with relevant work experience, educational methodology and lifelong learning experiences
- Maintain admissions policies to ensure qualified students
- Maintain an active Advisory Committee.
- Satisfy patients with the quality of student dental hygiene care
- Maintain a quality assurance program for patient care

Program Outcomes

- The dental hygiene graduate must be able to discern and manage ethical issues of dental hygiene practice in a rapidly changing environment
- The dental hygiene graduate must be able to acquire and synthesize information in a critical, scientific and effective manner in order to provide dental hygiene care to promote patient health and wellness
- The dental hygiene graduate must be concerned with improving the knowledge, skills and values of the profession
- The dental hygiene graduate must be able to provide planned educational services using appropriate interpersonal communication skills and educational strategies to promote optimum health
- The dental hygiene graduate must be able to initiate and assume responsibility for health promotion and disease prevention activities for diverse populations
- The dental hygiene graduate must be able to provide accurate consistent and complete documentation systematically collect, analyze and accurately record baseline date on the general oral and psychological health status using methods consistent with medicolegal principles
- The dental hygiene graduate must be able to discuss the conditions of the oral cavity, actual and potential problems, etiological and contributing factors and recommended and alternative treatments available
- This involves collaborating with the patient and or other health professionals to formulate a comprehensive dental hygiene care plan that is patient centered and based on current scientific evidence
- The dental hygiene graduate must be able to provide patient centered care that is culturally appropriate and based on current standards of practice and specialized treatment that includes preventive and therapeutic procedures to promote and maintain oral health and assist the patient in achieving oral health goals
- The dental hygiene graduate must be able to evaluate the effectiveness of planned clinical and educational services and modify as necessary

Admission Requirements

Admission is competitive and based on previous academic performance, test scores, criminal background check letters of recommendation, an interview and fulfillment of ALL admission requirements. Deadline for application to the program is June 1st and admission is granted prior to the Fall semester. Additional admission information is in the DHY Student Information Booklet. Students may request a copy by contacting the Dental Hygiene Program office. Once a student has been admitted there will be additional required information that the student must submit to the dental hygiene program office.

Students must complete the following:

- Fulfill all WCCCD admission requirements
- Possess a high school diploma or GED
- Declare intent to enter the Dental Hygiene program by submitting an Allied Health Application
- Demonstrate Reading and Vocabulary comprehension at Freshman English level via the California Achievement Test (CAT) assessment before acceptance and before clinical participation students must show:
  - Documentation of current immunizations or immunity for tetanus, MMR and Varicella
- Receive the Hepatitis B vaccination or declare intent to receive or decline the vaccination
- Must test negative on a TB test
- Complete CPR training (A CPR course is offered by the College)
- Obtain a Criminal Background Check
- Documentation of a standardized dental and health examination
- Complete WCCCD Program Application and submit to the Campus Academic Officer

Degree Requirements

- Students must complete all course work with a grade of "C" or better to meet graduation requirements

Continued on next page.

Dental Hygiene continued

Dental Hygiene: Associate of Science Degree Recommended Sequence of Courses

CR. No.	COURSE TITLE	CREDITS
PREREQUISITE COURSES		
ENG 119	English I	.3
ENG 120	English II	.3
BIO 155	Introductory Biology	.4
BIO 240	Human Anatomy and Physiology I	.4
BIO 250	Human Anatomy and Physiology II	.4
BIO 295	Microbiology	.4
CHM 105	Introductory Chemistry	.4
CHM 155	Survey of Organic and Biochemistry	.4
DEN 100	Professional Development	.3
PHL 201	Introduction to Philosophy	.3
SPH 101	Fundamentals of Speech	.3
PSY 101	Introductory Psychology	.3
SOC 100	Introduction to Sociology	.3
PS 101	American Government	.3
HUM	Humanities Elective	.3
PREREQUISITES TOTAL		**.51**
SEMESTER 1		
DHY 101	Fundamentals of Dental Hygiene	.3
DHY 110	Oral Anatomy and Physiology	.3
DHY 120	Clinical Techniques	.3
DEN 112	Medical and Dental Emergencies	.2
DT 130	Fundamentals of Nutrition	.3
SEMESTER TOTAL		**.14**
SEMESTER 2		
DHY 111	Oral Histology and Embryology	.3
DHY 129	Clinical Dental Hygiene I: Lecture	.2
DHY 130	Clinical Dental Hygiene I: Lab	.3
DHY 221	Dental Biomaterials	.3
DEN 200	Dental Radiology Theory	.2
DEN 201	Dental Radiology Lab	.2
SEMESTER TOTAL		**.15**
SEMESTER 3		
DHY 131	Clinical Dental Hygiene II: Lecture	.2
DHY 132	Clinical Dental Hygiene II: Lab	.3
DHY 211	Pharmacology	.3
DHY 213	Periodontology	.2
DHY 227	Radiology II	.1
SEMESTER TOTAL		**.11**
SEMESTER 4		
DHY 121	Oral Pathology	.3
DHY 209	Clinical Dental Hygiene III: Lecture	.2
DHY 210	Clinical Dental Hygiene III: Lab	.5
DHY 214	Local Anesthesia and Pain Management	.3
DHY 223	Dental Health Education	.3
SEMESTER TOTAL		**.16**
SEMESTER 5		
DHY 231	Community Dentistry	.4
DHY 219	Clinical Dental Hygiene IV: Lecture	.2
DHY 220	Clinical Dental Hygiene IV: Lab	.5
DHY 225	Management of Special Patients	.3
SEMESTER TOTAL		**.14**
SEMESTER 6		
DHY 226	Advanced Periodontology	.1
DHY 229	Clinical Dental Hygiene V: Lecture	.2
DHY 230	Clinical Dental Hygiene V: Lab	.5
DHY 233	Dental Hygiene Seminar	.2
ALH 230	Medical Ethics	.3
SEMESTER TOTAL		**.13**
A.S. PROGRAM TOTAL		**.83**

Note: Program total hours may not include prerequisites.

Dental Hygiene: Local Anesthesia Certification Recommended Sequence of Courses

CR. No.	COURSE TITLE	CREDITS
SEMESTER 1		
DHY 101	Fundamentals of Dental Hygiene	.3
DHY120	Clinical Technique	.3
SEMESTER TOTAL		**.6**
SEMESTER 2		
DHY 129	Clinical DHY 1 Lecture	.2
DHY130	Clinical DHY 1 Lab	.3
SEMESTER TOTAL		**.5**
SEMESTER 3		
DHY 131	Clinical DHY II Lecture	.2
DHY 132	Clinical DHY II Lab	.3
DHY 211	Pharmacology	.3
SEMESTER TOTAL		**.8**
SEMESTER 4		
DHY 214	Local Anesthesia and Pain Control	.3
SEMESTER TOTAL		**.3**
CERTIFICATION TOTAL		**.22**

Note: Certification total hours may not include prerequisites.

DIGITAL MEDIA PRODUCTION

• College Certificate: (CERT-FTC)
Associate of Applied Science Degree: (AAS-FTC)

Visit this link for additional program information.
http://www.wcccd.edu/dept/DigitalMediaProd/DigitalMediaProd.html

About the Program

The Digital Media Production Associate of Applied Science degree and College Certificate program will provide students with a broad survey of the digital production tools. The students will gain a theoretical grasp of the implications of digital mass communications through various digital media production courses and hands-on experience in digital video and sound production, web design layout and design. The program may be pursued as a full-time or part-time study.

This program offers:

- Associate of Applied Science: **61** credit hours
- College Certificate: **33** credit hours

Program Goals

- To teach and provide students with a foundation in the field of Digital Media Productions as a precursor for a declared four-year degree
- To produce students that can work with and visualize the direction of digital media

Program Outcomes

- Students will be able to effectively use industry-standard motion media editing software applications in digital video production e.g. preproduction, production and post-production
- Analyze the relationship of aesthetics, content, user needs and/or interactivity of projects for implementing digital media

Continued on next page.

Digital Media Production continued

- Apply knowledge of story structure to synthesize a design, incorporate storyboards and flow chart techniques using good design principles and contemporary digital technology for motion media projects
- Create a production plan and schedule that meets client needs, appropriately utilizes resources and operates timely and efficiently within budget constraints
- Demonstrate an understanding of legal regulations, industry ethics, production schedules and budgets to effectively function as a contributing member of the production team
- Use listening and knowledge of technical terms/industry jargon to effectively communicate both verbally and in writing with clients, colleagues and other industry professionals

College Certificate Goals

- To provide student's a basic foundation in digital media production
- Provide a foundation for students to develop competency in developing media projects utilizing digital media technology

College Certificate Outcomes

- Students will be able to create art and design projects utilizing digital media technology software
- Demonstrate competency in developing media projects that incorporate web design and development, computer graphics and digital video
- Demonstrate proficiency in editing, streaming media, web animation, motion graphics, and dimensional animation

Admission Requirements

The student is required to do the following:

- Declare intent to enter the Digital Media Production program on the WCCCD Admission Application or change intent at the Admissions Office
- Obtain an Education Development Plan (Plan of Work) outlining the student's plan for program completion from an academic advisor
- Complete 23 required credits and 7 electives credits from the Digital Media program electives list
- Fulfill all WCCCD admission requirements
- Fulfill course placement requirements based on COMPASS assessment
- Complete WCCCD Program Application and submit to the Campus Academic Officer

Prerequisite Work

- Prior to beginning the Major Requirements students are required to test at the level or complete English 119 and be computer literate or complete OIS 101

Digital Media Production: College Certificate Recommended Sequence of Courses:

CR. No.	COURSE TITLE	CREDITS
SEMESTER 1		
BUS 228	Internet Web Page Design for Business Applications	3
DMP 101	Story Elements for a Digital Environment	3
PRM 101	Project Management	3
SPH 105	Improving the Speaking Voice	3
SEMESTER TOTAL		**12**
SEMESTER 2		
CIS 266	Introduction to Graphic Design	3
DMP 102	Digital Video Production 1	3
DMP 111	Television Programming	3
	----OR----	
RTV 101	Writing for Radio/TV	3
DMP 114	Writing for the Media	3
	----OR----	
RTV 102	Advanced Writing for Radio/TV	3
SEMESTER TOTAL		**12**
SEMESTER 3		
CIS 267	Understanding and Developing Multimedia	3
DMP 103	Digital Video Production II	3
DMP 107	Digital to Audio Production II	3
SEMESTER TOTAL		**9**
CERTIFICATE TOTAL		**33**

Note: Certificate total hours may not include prerequisites.

Digital Media Production: Associate of Applied Science (A.A.S.) Recommended Sequence of Courses:

CR. No.	COURSE TITLE	CREDITS
SEMESTER 1		
ART 101	Drawing I	3
DMP 101	Story Elements for a Digital Environment	3
ENG 119	English I	3
HUM 101	Introduction to Visual Arts	3
SEMESTER TOTAL		**12**
SEMESTER 2		
CIS 110	Introduction to Computer Information Systems	4
DMP 102	Digital Video Production I	3
ENG 120	English II	3
PRM 101	Project Management	3
SEMESTER TOTAL		**13**
SEMESTER 3		
BUS 228	Internet Web Page Design for Business Applications	3
CIS 266	Introduction to Graphic Design	3
DMP 103	Digital Video Production II	3
SPH 105	Improving the Speaking Voice	3
SEMESTER TOTAL		**12**
SEMESTER 4		
CIS 267	Understanding and Developing Multimedia	3
DMP 104	Digital Audio Production and Broadcasting	3
DMP 111	Television Programming	3
	----OR----	
RTV 101	Writing for Radio/TV	3
DMP 114	Writing for Media	3
	----OR----	
RTV 102	Advanced Writing for Radio/TV	3
SEMESTER TOTAL		**12**
SEMESTER 5		
DMP 105	Media Programming	3
DMP 107	Digital Audio Production II	3
HUM 231	Introduction to Film	3
PS 101	American Government	3
SEMESTER TOTAL		**12**
A.A.S. PROGRAM TOTAL		**61**

Note: Program total hours may not include prerequisites.

DIGITAL PHOTOGRAPHY TECHNOLOGY

• College Certificate: (CERT-DPT))

About the Program

The Digital Photography Technology College Certificate program is designed to provide students with in-depth instruction in the field of Digital Photography. Students will gain a theoretical grasp of the implications of digital photography through various digital photography courses, hands-on experience with cameras and lighting, and digital post production of images. This certificate in Digital Photography Technology will prepare students to enter a number of professional photography fields, such as portrait and commercial studios, and in computer-based processing labs. Emphasis is placed on digital photography and computer-based media imaging.

College Certificate Goals

- To prepare students to become photographic entrepreneurs and business owners in the vast and varied industry of photography
- To teach students the skills that will make them knowledgeable, competent, and competitive when seeking employment in the industry
- To teach the fundamentals of commercial photography (studio, architectural, etc.)

College Certificate Outcomes

- Students will be able to perform all of the fundamental and advanced camera techniques used in digital photography
- Students will be able to produce digital images at a quality level equal to professional photographers
- Students will have the skills to establish a business of their own in photography or be employed by a professional photo organization
- Students will understand the role of photography in advertising and commercial publicity
- Students will understand typical personnel structures and commissioning methods of advertising agencies, design groups and public relations organizations
- Students will understand the relationship of copy and image in advertising
- Students will understand the aspects of the equipment and props, including lighting, used in commercial photography

Admission Requirements

Students are required to do the following:

- Fulfill all WCCCD admission requirements
- Fulfill course placement requirements based on COMPASS assessment
- Complete WCCCD Program Application and submit to the Campus Academic Officer

Digital Photography Technology: College Certificate

Recommended Sequence of Courses

CR. No.	COURSE TITLE	CREDITS
SEMESTER 1		
DPT 110	Digital Photography I	3
DPT 112	Product Development, Framing and Matting	3
ENT 100	Introduction to Entrepreneurship	3
MKT 200	Introduction to Marketing	3
SEMESTER TOTAL		**12**
SEMESTER 2		
DPT 115	Digital Photo Imaging I	3
DPT 119	Photographic Lighting	3
DPT 205	Digital Photography II	3
DPT 210	Studio Photography	3
DPT 219	Commercial Photography	3
SEMESTER TOTAL		**15**
SEMESTER 3		
DPT 220	Architectural/Environmental Photography	3
DPT 235	Photojournalism	3
DPT 255	Capstone Portfolio Project	3
SEMESTER TOTAL		**9**
CERTIFICATE TOTAL		**36**

Note: Certificate total hours may not include prerequisites.

EARLY CHILDHOOD EDUCATION: CHILD DEVELOPMENT ASSOCIATE (CDA)

• Short-Term Certificate: (CCT-SCERT)
Associate of Applied Science Degree: (CCT-AAS)

Visit this link for additional program information.
http://www.wcccd.edu/dept/CCTrain/CCTrain.html

About the Program

The Early Childhood Education Program offers a Short-Term Certificate as a Child Development Associate (CDA) and an Associate of Applied Science degree in Early Childhood Education. The program at Wayne County Community College District prepares students to work as child care administrators and to be teachers and caregivers in an early childhood settings. The CDA Training program is designed for the childcare worker wishing to become a Child Development Associate (CDA). The CDA credential is independently awarded by the National Council for Professional Recognition to those demonstrating competence in their work with children in early education and childcare programs. Formal training is required for this credential.

Child Development Associate (CDA) - focuses on child development methods and strategies to motivate learning in the five developmental areas. Graduates become responsible for the care and education of children up to five years old by creating and maintaining a safe and healthy learning environment, guiding behavior, planning curricula, implementing learning activities, and working cooperatively with staff and parents.

** Selected WCCCD courses will transfer to some colleges and universities to meet requirements for an Elementary Education Certification — Early Childhood Endorsement. (See a counselor or academic advisor for more information)*

This program offers:

- Associate of Applied Science: 71 credit hours
- Short-Term Certificate: 28+ credit hours

Early Childhood Education (CDA) Program Goals

- To prepare students individual credentialing towards the State of Michigan's Early Childhood Education Permit
- To provide students with a foundation in child development theory to examine program philosophy goals, classroom design, teacher/child interaction, curriculum planning and implementation, assessment of the young child, involvement of the family/community as well as issues of diversity
- To teach students methods of formulating lesson plans that foster children's personal social, physical, cognitive and creative development
- To teach students elements of designing and assessing a learning environment using teaching strategies based upon child development and learning theory

Early Childhood Education (CDA) Program Outcomes

- Students will be able to successfully pass the State of Michigan's Early Childhood Education Permit exam with a passing score of 70% or higher
- Demonstrate knowledge of child development theory and its application to Early Care and Education by identifying key developmental theorists and recognizing children's developmental stages
- Demonstrate competence in facilitating the development of an individual child's stages of progression that promote physical, cognitive and/or socio-emotional development
- Understand, articulate and practice the regulations governing legal and ethical boundaries of the profession

Continued on next page.

Early Childhood Education (CDA) continued

Early Childhood Education (CDA) College Certificate Goals

- To prepare students individual credentialing towards the State of Michigan's Early Childhood Education Permit

Early Childhood Education (CDA) College Certificate Outcomes

- Demonstrate, establish and maintain a safe and healthy learning environment
- Understand, articulate and practice the regulations governing legal and ethical boundaries of the profession

Admission Requirements

To be admitted into the program a student must:

- Fulfill all WCCCD admission requirements.
- Declare program intent on the WCCCD admission application or change program intent at the campus Admission Office.
- Fulfill course placement requirements based on COMPASS assessment
- Submit a Program application to the Campus Academic Officer before the ninth week of the fall or spring semesters

Early Childhood Education (CDA): Short-Term Certificate
Recommended Sequence of Courses

CR. No.	COURSE TITLE	CREDITS
SEMESTER 1		
EMT 101	First Aid	2+
PSY 101	Introductory Psychology	3
HUS 105	Group Expression for Self-Growth I	3
CCT 101	Introduction to Early Childhood Education	3
CCT 120	Building Family and Community Relationships Parent-Child Teacher Relationship	3
SEMESTER TOTAL		**14+**
SEMESTER 2		
CCT 104	Methods and Techniques in Child Care: Infant and Toddler Development	4
CCT 210	Special Populations	3
CCT 111	Child Assessment Techniques	3
CCT 211	CDA Assessment Preparation	1
PSY 220	Child Growth and Development	3
SEMESTER TOTAL		**14**
CERTIFICATE TOTAL		**28+**

Note: Certificate total hours may not include prerequisites.

+:Waived upon program entrance; Completed in Life skills and/or verified on transcript.

Early Childhood Education (CDA) Associate of Applied Science
Recommended Sequence of Courses

CR. No.	COURSE TITLE	CREDITS
PREREQUISITE COURSES		
BUS 225	Computer Applications in Business	3
CCT 101	Introduction to Early Childhood Care	3
EMT 101	First Aid	2
ENG 119	English I	3
HUS 135	Professionalism in Human Services	3
PSY 101	Introductory Psychology	3
PREREQUISITES TOTAL		**17**
GENERAL EDUCATION		
ENG 120	English II	3
PS 101	American Government	3
SPH 105	Improving the Speaking Voice	3
SOC 230	Ethnic Minorities	3
Elective:	Natural Science w/Lab	4
GENERAL EDUCATION TOTAL		**16**
CAREER COURSES		
ENG 285	Children's Literature	3+
	—AND—	
CCT 106	Methods and Techniques in Child Care: Preschool Child Development	4+
CCT 257	Infant and Toddler Literature	3+
	—AND—	
CCT 104	Methods and Techniques in Child Care: Infants and Toddler Development	4+
CCT 111	Child Assessment Techniques	3
CCT 120	Parent – Child – Teacher Relationships	3
CCT 157	Child Care Practicum I	4
CCT 210	Special Population	3
CCT 227	Child Care Practicum II	4
CCT 230	Program Management and Supervision	3
CCT 260	Portfolio-Methods and Techniques	1
PSY 220	Child Growth and Development	3
CAREER COURSE TOTAL		**38**
EARLY CHILDHOOD EDUCATION A.A.S. PROGRAM TOTAL		**71**

Note: Program total hours may not include prerequisites.

+ The following courses must be taken together
Students who enroll in CCT 104 must enroll in CCT 257.
Students who enroll in CCT 106 must enroll in ENG 285.

ELECTRICAL ELECTRONICS ENGINEERING TECHNOLOGY

• College Certificate: (CERT-EEET)
Associate of Applied Science Degree: (EEET-AAS)

Visit this link for additional program information.
http://www.wcccd.edu/dept/EEEngTech/EEEngTech.html

About the Program

The Electrical Electronics Engineering Technology Associate of Applied Science and College Certificate degree program prepares students for a wide range of job opportunities in the installation and maintenance of electronic equipment in manufacturing, research, development, medicine and communications.

The Electrical Electronics Engineering Technology program prepares students for various International Society of Certified Technician (ISCET) certification exams.

This program offers:

- Associate of Applied Science: Electrical Electronics Technology: **67** credit hours
- College Certificate: Electrical Electronics Engineering Technology: **32** credit hours

Concentrations in Electrical Electronics Engineering Technology:

- Associate of Applied Science Degree:
- Computer Technology (AAS-EECT): **65** credit hours
- College Certificate: Programmable Logic Controllers (CERT-PLC) : **34** credit hours

Program Goals

- Provide students with educational experiences in the areas of electrical and electronics installation and maintenance.

Continued on next page.

Electrical Electronics Engineering Technology continued

- Prepare students to successfully pass the International Society of Certified Technician (ISCET) certification exam
- To provide transferability to four-year universities offering BS in electrical electronics, engineering technology and vocational teaching certificates

Program Outcomes

- Students will be able to successfully pass the International Society of Certified Technician (ISCET) certification exam with a passing score of 70% or better
- Reading and interpreting electrical drawings, electronic schematics and building and machinery blueprints
- Repair, maintain, install, upgrade, lay out and modify industrial electrical/electronic equipment and manufacturing control systems
- Identify, troubleshoot and repair hardware and software problems
- Effectively communicate through verbal, and written and documentation in a team environment
- Students with prior electrical electronics license, training and experience may be qualified to waive certain classes
- Electrical Electronics Engineering Programs are approved by the FAA (Federal Aviation Administration)

College Certificate Goals

- Students will be able to successfully pass the International Society of Certified Technician (ISCET) certification exam with a passing score of 70% or better
- To provide students a foundation in electrical and electronics installation and maintenance

College Certificate Outcomes

- Prepare students to successfully pass the International Society of Certified Technician (ISCET) certification exams with a passing score of 70% or better
- Proficiently perform installations, repairs and maintenance
- Communicate effectively through verbal, written and drawing documentation in a team environment

Admission Requirements

- Individuals interested in the Electrical Electronics Engineering Technology program are required to fulfill the following requirements:
- Fulfill all WCCCD admission requirements
- Declare intent to enter this program on the WCCCD Application for Admission or change intent at the Admissions Office
- Fulfill course placement requirements based on COMPASS assessment
- Students must complete WCCCD Program Application and submit to the Campus Academic Officer during the semester they are enrolled in EE 101 Circuit Analysis I – 4 credit hours
- Students with prior electrical electronic licenses, training and experience may be qualified to waive certain classes

Electrical Electronics Engineering Technology: College Certificate
Recommended Sequence of Courses

CR. No.	COURSE TITLE	CREDITS
SEMESTER 1		
CT 203	Digital Logic I	.4
EE 101	Circuit Analysis I	.4
EE 105	Electronics Fabrication and Design	.2
EE 107	Mathematics for Electrical/ Electronics I	.4
ENG 119	English I	.3
SEMESTER TOTAL		**.17**
SEMESTER 2		
CT 205	Introduction to Microprocessors	.4
EE 102	Circuit Analysis II	.4
EE 111	Solid State Fundamentals	.3
EE 115	Mathematics for Electrical/ Electronics II	.4
SEMESTER TOTAL		**.15**
EEE TECHNOLOGY CERTIFICATE TOTAL		**.32**

Note: Certificate total hours may not include prerequisites.

Electrical Electronics Engineering Technology: Associate of Applied Science Degree
Recommended Sequence of Courses

CR. No.	COURSE TITLE	CREDITS
SEMESTER 1		
CT 203	Digital Logic I	.4
EE 101	Circuit Analysis I	.4
EE 105	Electronics Fabrication and Design	.2
EE 107	Mathematics for Electrical/ Electronics I	.4
ENG 119	English I	.3
SEMESTER TOTAL		**.17**
SEMESTER 2		
CT 205	Introduction to Microprocessors	.4
EE 102	Circuit Analysis II	.4
EE 111	Solid State Fundamentals	.3
EE 115	Mathematics for Electrical/ Electronics II	.4
SEMESTER TOTAL		**.15**
SEMESTER 3		
EE 205	Linear Integrated Circuits	.2
Elective:	Natural Science	.3
MCT 203	Mechatronics II	.3
TCM 200	Introduction to Telecommunications	.3
TCM 203	Communications I	.3
MCT 208	Programmable Logics Controllers	.3
SEMESTER TOTAL		**.17**
SEMESTER 4		
Elective:	Electronics	.5
Elective:	Humanities	.3
ENG 120	English	.3
PHY 235	General Physics I	.4
PS 101	American Government	.3
SEMESTER TOTAL		**.18**
EEE TECHNOLOGY A.A.S. PROGRAM TOTAL		**.67**

Note: Program total hours may not include prerequisites.

ELECTRICAL ELECTRONICS ENGINEERING TECHNOLOGY: COMPUTER TECHNOLOGY

Associate of Applied Science Degree: (AAS-EECT)

About the Program

The Electrical Electronics Engineering Technology, Computer Technology, Associate of Applied Science degree program prepares students for several IT industry careers by providing in-depth exposure to computer hardware and operating systems. Students learn the functionality of hardware and software components as well as suggested best practices in maintenance and safety issues. Through hands on activities and labs, students learn how to assemble and configure a computer, install operating systems and software, and troubleshoot hardware and software problems. This program helps students prepare for the CompTIA's A+ certification, Microsoft Certified System Engineer, and Microsoft Certified Systems Administrators exams.

This program offers:

- Associate of Applied Science: **65** credit hours

Program Goals

- To assure that students are provided educational experiences in the areas of electrical and electronic computer technology
- To teach students the functionality of computer hardware and software components maintenance and safety
- To produce students who can critically think and troubleshoot hardware and software problems
- To prepare students to successfully pass the CompTIA's A+ certification, Microsoft Certified System Engineer, and Microsoft Certified Systems Administrators exams

Program Outcomes

- Students will be able to successfully pass the CompTIA's A+ certification, Microsoft Certified System Engineer, and Microsoft Certified Systems Administrators exams
- Identify, describe and explain the steps and procedures for setting up and managing a Windows Server Active Directory Environment including identification of the policies and procedures associated with implementation
- Identify, troubleshoot and repair hardware and software problems

Admission Requirements

Individuals interested in the Computer Technology program are required to fulfill the following requirements:

- Fulfill all WCCCD admission requirements.
- Declare intent to enter this program on the WCCCD Application for Admission or change intent at the Admissions Office
- Fulfill course placement requirements based on COMPASS assessment
- Students must complete WCCCD Program Application and submit to the Campus Academic Officer during the semester they are enrolled in EE 101 Circuit Analysis I – 4 credit hours
- Students with prior electrical electronics, licenses, training and experience may be qualified to waive certain classes

Electrical Electronics Engineering Technology: Computer Technology Concentration
Associate of Applied Science (A.A.S.)
Recommended Sequence of Courses

CR. No.	COURSE TITLE	CREDITS
SEMESTER 1		
CT 203	Digital Logic I	.4
EE 101	Circuit Analysis I	.4
EE 105	Electronics Fabrication and Design	.2
EE 107	Mathematics for Electrical/ Electronics I	.4
ENG 119	English I	.3
SEMESTER TOTAL		**.17**
SEMESTER 2		
CT 205	Introduction to Microprocessors	.4
EE 102	Alternate Current Fundamentals	.4
EE 115	Mathematics for Electrical/ Electronics II	.4
EE 111	Solid State Fundamentals	.3
SEMESTER TOTAL		**.15**
SEMESTER 3		
CT 207	Digital Logic II	.3
CT 209	Computer Repair I - CompTIA A+	.4
TCM 200	Introduction to Telecommunications	.3
ENG 134	Technical Communications	.3
SEMESTER TOTAL		**.13**
SEMESTER 4		
CT 211	Computer Networking I	.4
EE 205	Linear Integrated Circuits	.2
Elective:	Natural Science Elective	.3
PS 101	American Government	.3
SEMESTER TOTAL		**.12**
SEMESTER 5		
CT 213	Computer Networking II	.4
PHY 235	General Physics I	.4
SEMESTER TOTAL		**.8**
EEE: COMPUTER TECHNOLOGY PROGRAM TOTAL		**.65**

Note: Program total hours may not include prerequisites.

ELECTRICAL ELECTRONICS ENGINEERING TECHNOLOGY: PROGRAMMABLE LOGIC CONTROLLERS

- College Certificate: (CERT-PLC)

About the Program

The Electrical/Electronics Engineering Technology: Programmable Logic Controllers Technology certificate is designed to provide students with in-depth instruction in the field of Programmable Logic Controllers (PLC). This program will prepare students for employment in the ever-expanding Electrical/Electronics industry as entry-level programmable logic controller programmers and technicians, instrumentation technicians, field engineers, and sales and marketing engineers.

This program offers:

- College Certificate: **34** credit hours

College Certificate Goals

- Prepare students for employment in the manufacturing industry using applied knowledge of manufacturing with the ability to perform a task with minimal human intervention through automation
- Assure that students are provided educational experiences in the areas of automation that include entry level programming, installation and maintenance
- Provide transferability to four-year universities offering BS in electrical electronic engineering technology

College Certificate Outcomes

- Demonstrate proficiency in reading and interpreting electrical drawings, electronic schematics and building and machinery blueprints

Continued on next page.

Electrical Electronics Engineering Technology continued

- Repair, maintain, install, upgrade, layout and modify industrial automation equipment
- Identify, troubleshoot and repair hardware and software problems related to PLC

Admission Requirements

Students are required to do the following:

- Fulfill all WCCCD admission requirements
- Fulfill course placement requirements based on COMPASS assessment
- Complete WCCCD Program Application and submit to the Campus Academic Officer

EEE: Programmable Logic Controllers: College Certificate

Recommended Sequence of Courses

CR. No.	COURSE TITLE	CREDITS
SEMESTER 1		
CT 203	Digital Logic I	4
EE 101	Circuit Analysis I	4
EE 107	Math for E/E I	4
MCT 202	Introduction to Robotics	3
SEMESTER TOTAL		**15**
SEMESTER 2		
EE 102	Circuit Analysis II	4
EE 111	Solid State Fundamentals	3
MCT 207	Introduction to Hydraulics and Pneumatics	3
MCT 208	Programmable Logic Controllers	3
SEMESTER TOTAL		**13**
SEMESTER 3		
MCT 203	Electrical Machinery and Controls	3
MCT 215	Advanced Programmable Logic Controllers	3
SEMESTER TOTAL		**6**
CERTIFICATE TOTAL		**34**

Note: Certificate total hours may not include prerequisites.

EMERGENCY MEDICAL TECHNOLOGY

• College Certificate: (CERT-EMT)
Associate of Applied Science Degree: (EMT-AAS)

Visit this link for additional program information.
http://www.wcccd.edu/dept/EmMedTech/EmMedTech.html

About the Program

The Emergency Medical Technology (EMT) Associate of Applied Science degree and College Certificate of Completion curriculum stresses the integration of knowledge and skills required to competently perform pre-hospital basic, limited, and advanced life support. Wayne County Community College District's EMT Program is an approved State of Michigan Education Program Sponsor with the Michigan Department of Community Health EMS Section. The Emergency Medical Technician-Paramedic Program at Wayne County Community College District is accredited through The Commission on Accreditation of Allied Health Education Programs (CAAHEP) from the recommendation of the Committee on Accreditation of Educational Programs for Emergency Medical Services Professions (CoA EMSP).

Therefore, students that successfully meet the completion criteria and are eligible for Emergency Medical Technology (EMT) Program certification and the National Registry for EMT's certification examination necessary for and Michigan licensure as a EMS Professional.

This program offers:

- Certificate of Completion: First Medical Responder = **3** credit hours
- Certificate of Completion: Basic Emergency Medical Technician (Basic EMT) = **9** credit hours
- College Certificate: Paramedic = **53** credit hours
- Associate of Applied Science Degree: Emergency Medical Technology = **72** credit hours

Medical First Responder: A point of contact as a first responder in a medical emergency.

Basic EMT: For persons directly involved or intending to become involved in Emergency Care Services (e.g. ambulance employees, fire department EMT's).

Paramedic: This certificate program is designed for individuals who desire employment on Advanced Life Support (ALS) Ambulance Agencies, Fire Departments or Hospital Emergency Departments requiring Paramedic skills.

Program Goals (CoAEMSP): Goal Emergency Medical Technician

- To prepare competent entry-level Emergency Medical Technicians in the cognitive (knowledge) psychomotor (skills) and affective (behavior) learning domains to the Paramedic or the Emergency Medical Technician-Intermediate or Emergency Medical Technician-Basic or First Responder Levels

Program Outcomes

- Demonstrate appropriate level of technical capability and proficiency with psychomotor skills and assessment
- Recognize the nature and seriousness of the patient's condition or extent of injuries to assess requirements for emergency medical care
- Administer appropriate emergency medical care based on assessment of the patient's condition
- Properly and safely lift, move, position and handle the patient to minimize discomfort and prevent further injury
- Provide a service in an environment requiring special skills and knowledge in such areas as communications, transportation and record keeping
- Perform the expectations of the position description safely and effectively
- Commitment to life-long learning

Admission Requirements

Entry into the Paramedic Program occurs each Fall semester and the Basic EMT program every Fall and Spring semester. Students interested in either program must submit a completed application and required documentation by the application due date. Any remaining openings will be filled on a first come basis to qualified applicants. Students are required to do the following:

- Fulfill all WCCCD admission requirements
- Successfully complete a minimum of 12 college credits with a "C" or better and/or have COMPASS scores that fulfill program requirements
- Declare intent to enter the Emergency Medical Technology program on the WCCCD Application for Admission
- Must be 18 years of age or older
- Must complete physical exam and other health requirements
- Complete WCCCD Program Application and submit to the Campus Academic Officer

Based upon Michigan Law, students applying for admission to the EMT program will be subject to a criminal background check, the results of which could preclude admission to Wayne County Community College District's EMT program on the basis of any of the following:

- A felony conviction or conviction for an attempt or conspiracy to commit a felony within the past fifteen (15) years
- Any misdemeanor conviction involving abuse, neglect, assault, battery or criminal sexual conduct within the past fifteen (15) years
- Any misdemeanor conviction involving fraud or theft

Continued on next page.

Emergency Medical Technology continued

EMT: Paramedic - College Certificate

CR. No.	COURSE TITLE	CREDITS
EMT 218	Emergency Medicine Preparatory	.5
EMT 221	Paramedic I	.10
EMT 231	Paramedic II	.10
EMT 236	Paramedic Clinical Experience I	.6
EMT 241	Paramedic III	.3
EMT 242	Paramedic IV	.2
EMT 246	Paramedic Clinical Experience II	.6
EMT 243	Paramedic V	.2
EMT 244	Paramedic VI	.3
EMT 256	Paramedic Field Internship	.6
CERTIFICATE OF COMPLETION TOTAL		**.53**

Emergency Medical Technology: College Certificate

CR. No.	COURSE TITLE	CREDITS
EMT 114	Basic EMT I	.4
EMT 124	Basic EMT II	.4
EMT 126	Basic EMT Clinical Experience	.1
- AND-		
CAREER COURSES:		
(Any 21 credits from the following courses)		
EMT 105	Medical First Responder	.3
EMT 218	Emergency Medicine Preparatory	.5
EMT 221	Paramedic I	.10
EMT 231	Paramedic II	.10
EMT 236	Paramedic Clinical Experience I	.6
EMT 241	Paramedic III	.3
EMT 242	Paramedic IV	.2
EMT 243	Paramedic V	.2
EMT 244	Paramedic VI	.3
EMT 246	Paramedic Clinical Experience II	.6
EMT 256	Paramedic Field Internship	.6
EMT COLLEGE CERTIFICATE TOTAL		**.30**

Note: Certificate total hours may not include prerequisites.

Emergency Medical Technology: Associate of Applied Science

CR. No.	COURSE TITLE	CREDITS
GENERAL EDUCATION COURSES		
ENG 119	English I	.3
ENG 120	English II	.3
SPH 101	Fundamentals of Speech	.3
PS 101	American Government	.3
Elective:	Natural Science with Lab	.4
SOC 100	Introduction to Sociology	.3
CAREER COURSES		
EMT 218	Emergency Medicine Prep	.5
EMT 221	Paramedic I	.10
EMT 231	Paramedic II	.10
EMT 236	Paramedic Clinical Experience I	.6
EMT 241	Paramedic III	.3
EMT 242	Paramedic IV	.2
EMT 243	Paramedic V	.2
EMT 244	Paramedic VI	.3
EMT 246	Paramedic Clinical Experience II	.6
EMT 256	Paramedic Field Internship	.6
A.A.S. PROGRAM TOTAL		**.72**

Note: Program total hours may not include prerequisites.

EMERGENCY ROOM MULTI-SKILL HEALTHCARE TECHNOLOGY

• College Certificate: (CERT-ERT)
Associate of Applied Science Degree: (ERHT-AAS)

About the Program

The Emergency Room Multi-Skill Heath Care Technology (ERT) Associate of Applied Science Degree and College Certificate program is designed to prepare the student to work in the hospital and urgent health care environments. Students will find employment opportunities with various hospital emergency departments, special care units and urgent care centers. Emergency Room Technicians receive specialized training in hospital procedures and protocols. Practical skills include insertion of Foley catheters, EKG, phlebotomy, 12-lead cardiac monitoring, sterile procedures, insertion of nasal gastric tubes and many other skills.

This program offers:

- Associate of Applied Science: **61** credit hours
- College Certificate: **30** credit hours

Program Goals

- Prepare students for advanced responsibilities in the emergency room assisting nurses and health care professionals in providing basic patient care
- Prepare graduates to successfully obtain employment in a hospital, urgent care or primary health care environment
- Support the profession by preparing graduates who are competent Emergency Room Multi-Skilled Technicians and as members of the health care team

Program Outcomes

- Demonstrate appropriate level of technical capability and proficiency with psychomotor skills and assessment as delineated in basic patient care practices in an emergency room setting
- Apply therapeutic and professional communication skills when working with patients, families, colleagues and other health care providers and members of the community
- Provide the Basic EMT with the principle skills and techniques necessary to provide additional patient care within a hospital, urgent care, or primary health care environment

Admission Requirements

Students are admitted to the program each year for the Fall and Spring semesters. Student must have the Program's approval, a completed application, and other required information submitted by the required due date. After the application deadline any remaining openings will be filled on a first come basis to qualified applicants.

Based upon Michigan Law

Based on Michigan Law: Students applying for admission to the Emergency Room Multi-Skill Healthcare Technology (ERT) program will be subject to a criminal background check, the results of which could preclude an applicant from admission to Wayne County Community College District's ERT program on the basis of any of the following:

- A felony conviction or conviction for an attempt or conspiracy to commit a felony within the past fifteen (15) years
- Any misdemeanor conviction involving abuse, neglect, assault, battery or criminal sexual conduct within the past fifteen (15) years
- Any misdemeanor conviction involving fraud or theft

Students are required to do the following:

- Fulfill all WCCCD admission requirements
- Successfully complete a minimum of 12 college credits with a "C" or better and/or COMPASS scores that fulfill program requirements

Continued on next page.

Emergency Room Multi-Skill Healthcare continued

- Declare intent to enter the Emergency Medical Technology on the WCCCD Application for Admission
- Must be 18 years of age or older
- Must complete physical exam and other health requirements
- Complete and pass background check
- Obtain a basic EMT Certificate or License

Emergency Room Multi-Skill Healthcare Technology Program
College Certificate Requirements:

CR. No.	COURSE TITLE	CREDITS
EMT 114	Basic EMT I	.4
EMT 124	Basic EMT II	.4
EMT 126	Basic EMT Clinical Experience	.1
ERT 210	Emergency Room Technology	.6
ERT 215	Emergency Room Technician Clinical	.6
CERTIFICATE REQUIREMENTS SUBTOTAL		**.21**

CAREER COURSES
(Any 9 from the following courses)

ALH 105	Medical Math	.3
ALH 110	Medical Terminology	.3
BIO 240	Anatomy and Physiology I	.4
BIO 250	Human Anatomy and Physiology II	.4
ENG 119	English I	.3
ENG 120	English II	.3
BIO 155	Introductory to Biology	.4
BIO 252	Pathophysiology	.4
PS 101	American Government	.3
SOC 100	Introduction to Sociology	.3
CERTIFICATE TOTAL		**.30**

Note: Certificate total hours may not include prerequisites.

Emergency Room / Multi-Skill Healthcare Technology Program
Associate of Applied Science:
Recommended Sequence of Courses

CR. No.	COURSE TITLE	CREDITS
SEMESTER 1		
EMT 114	Basic EMT I	.4
EMT 124	Basic EMT II	.4
EMT 126	Basic EMT Clinical Experience	.1
ENG 119	English I	.3
SEMESTER TOTAL		**.12**
SEMESTER 2		
ERT 210	Emergency Room 1	.6
ERT 215	Emergency Room Clinical Experience	.6
SEMESTER TOTAL		**.12**
SEMESTER 3		
ENG 120	English II	.3
BIO 155	Introduction to Biology	.4
SOC 100	Introduction to Sociology	.3
Elective:	Humanities	.3
SEMESTER TOTAL		**.13**
SEMESTER 4		
ALH 110	Medical Terminology	.3
BIO 240	Anatomy and Physiology I	.4
PS 101	American Government	.3
SEMESTER TOTAL		**.10**
SEMESTER 5		
ALH 105	Medical Math	.3
BIO 250	Human Anatomy and Physiology II	.4
Elective:		.3
BIO 252	Pathophysiology	.4
SEMESTER TOTAL		**.14**
A.A.S. PROGRAM TOTAL		**.61**

Note: Program total hours may not include prerequisites.

ENTREPRENEURSHIP

- College Certificate: (CERT-ENT)

Visit this link for additional program information.
http://www.wcccd.edu/dept/Entrep/Entrep.html

About the Program

The Entrepreneurship College Certificate program is designed for those individuals who have, or desire to have, their own business. Emphasis is on successfully creating and sustaining a competitive advantage in starting, managing and growing a small business. This program focuses on the preparation needed for small business ownership.

College Certificate Goals

- Teach students basic principles, concepts and procedures necessary to start a business and/or grow an existing small business
- Provide students a foundation for strategic planning, decision making, critical thinking, communication skills and resources in starting and/or growing an existing business

College Certificate Outcomes

- Apply knowledge of what it takes to start a new business including the basics of finance, marketing and management
- Demonstrate and apply leadership and workplace relationship skills when communicating with customers, employees, suppliers, etc. specific to the field
- Understand and apply a working knowledge of legal issues of operating a small business
- Demonstrate knowledge in completing a comprehensive business plan that will enable the business to secure adequate funding
- Effectively use written, oral, listening and electronic communication skills when interacting in the office environment

Admission Requirements

Students are required to do the following:

- Possess a high school diploma or GED
- Fulfill all WCCCD admission requirements
- Declare intent to enter this program on the WCCCD Application for Admission or change intent at the Admissions Office
- Fulfill course placement requirements based on COMPASS assessment
- Students must complete WCCCD Program Application and submit to the Campus Academic Officer

Entrepreneurship: College Certificate
Recommended Sequence of Courses

CR. No.	COURSE TITLE	CREDITS
SEMESTER 1		
ENT 100	Introduction to Entrepreneurship	.3
BUS 175	Small Business Management	.3
BL 201	Business Law I	.4
BUS 177	Small Business Financing	.3
SEMESTER TOTAL		**.13**
SEMESTER 2		
ENT 205	Operations Management for Small Business	.3
BUS 225	Computer Applications in Business	.3
MKT 200	Principles of Marketing	.3
SEMESTER TOTAL		**.9**
SEMESTER 3		
ENT 210	Human Resource Management for Small Business	.3
BUS 240	Business Communications	.3
BUS 221	Business Statistics	.3
CIS 250	E-Commerce Strategies	.3
SEMESTER TOTAL		**.12**
CERTIFICATE TOTAL		**.34**

Note: Certificate totals may not include prerequisites.

FACILITY MAINTENANCE

• College Certificate: (FAM-CERT)
Associate of Applied Science Degree: (FAM-AAS)

Visit this link for additional program information.
http://www.wcccd.edu/dept/FacMain/FacMain.html

About the Program

The Facility Maintenance Associate of Applied Science degree and College Certificate program prepares the student for immediate employment as a facility maintenance technician, maintenance and stationary engineer, and facility maintenance manager at health care institutions, large office towers, apartment complexes, professional buildings, multiuse facilities, plants, government and educational building, etc.

Students will be able to perform work related to carpentry, plumbing, ground maintenance, electrical, general maintenance of heating, ventilation, air conditioning and refrigeration, (HVAC/R) and operation and complete maintenance of boiler plants. The program also prepares students to take local and State of Michigan examinations for obtaining license(s) for Mechanical Maintenance and Mechanics Education and Certification for Health Care (MECH) State of Michigan. The certificate will fulfill the competency requirements for the Joint Commission on Accreditation of Hospital Organization (JCAHO) for facility maintenance training. Students may be eligible to waive certain course.

This program offers:

- Associate of Applied Science: **62** credit hours
- College Certificate: **32** credit hours

Program Goals

- To teach students to proficiency in performing electrical and HVAC/R (heating, ventilating, air conditioning and refrigeration) systems maintenance and repairs in multi-purpose buildings and facilities

Program Outcomes

- Demonstrate proficient use of hand tools, equipment and gauges commonly used in the repair and troubleshooting of commercial HVAC/R (heating, ventilating, air conditioning and refrigeration) systems
- Describe and apply the principles of operation of basic components and systems used in meeting specific needs in conditioning air, heating air, providing ventilating and refrigerating objects
- Interpret and apply EPA regulatory laws in properly handling refrigerants and other environmentally hazardous materials used with HVAC/R systems
- Demonstrate proper selection and application of HVAC/R components in maintenance of a commercial system.
- Solve basic technical problems encountered in commercial refrigeration, cooling and heating equipment
- Effectively demonstrate competent verbal communication skills with individuals and teams

College Certificate Goals

- Provide students with a basic foundation in performing electrical and HVAC/R (heating, ventilating, air conditioning and refrigeration) systems maintenance and repairs

College Certificate Outcomes

- Demonstrate proficient use of tools, equipment and gauges commonly used in the repair and troubleshooting of commercial HVAC/R systems
- Demonstrate applied competency in proper selection and application of HVAC/R components in maintenance of a commercial system
- Solve basic technical problems encountered in commercial refrigeration, cooling and heating equipment

Admission Requirements

Students are required to do the following:

- Fulfill all WCCCD admission requirements
- Declare intent to enter this program on the WCCCD Application for Admission or change intent at the Admissions Office
- Fulfill course placement requirements based on COMPASS assessment
- Complete WCCCD Program Application and submit to the Campus Academic Officer

Facility Maintenance: College Certificate
Recommended Sequence of Courses

CR. No.	COURSE TITLE	CREDITS
SEMESTER 1		
ENG 119	English I	3
FM 101	Basic Facility Maintenance	3
FM 102	Plumbing and Pipe Fitting	3
MAT 121	Technical Mathematics I	3
SEMESTER TOTAL		**12**
SEMESTER 2		
FM 103	Carpentry	3
FM 104	General Maintenance	3
HVA 106	Basic Heating and Heating Controls	5
SEMESTER TOTAL		**11**
SEMESTER 3		
EE 103	Residential Wiring	3
FM 105	Grounds Maintenance	3
HVA 200	Introduction to Boiler Plant Maintenance	3
SEMESTER TOTAL		**9**
CERTIFICATE TOTAL		**32**

Note: Certificate total hours may not include prerequisites.

Facility Maintenance:
Associate of Applied Science
Recommended Sequence of Courses

CR. No.	COURSE TITLE	CREDITS
SEMESTER 1		
ENG 119	English I	3
FM 101	Basic Facility Maintenance	3
FM 102	Plumbing and Pipe Fitting	3
MAT 121	Technical Mathematics I	3
SEMESTER TOTAL		**12**
SEMESTER 2		
FM 103	Carpentry	3
FM 104	General Maintenance	3
HVA 106	Basic Heating and Heating Controls	5
MAT 122	Technical Mathematics II	3
SEMESTER TOTAL		**14**
SEMESTER 3		
ENG 134	Technical Communications	3
FM 105	Grounds Maintenance	3
HVA 200	Introduction to Boiler Plant Maintenance	3
PS 101	American Government	3
SEMESTER TOTAL		**12**
SEMESTER 4		
Elective	Other	3
FM 106	Safety and Support Services	3
HVA 118	Codes and Regulations	3
HVA 205	Steam I	3
SEMESTER TOTAL		**12**
SEMESTER 5		
Elective	Natural Science or Social Science	3
Elective	Other	3
FM 299	Facility Maintenance Co-op	3
HVA 215	Boiler Room Accessories	3
SEMESTER TOTAL		**12**
A.A.S. PROGRAM TOTAL		**62**

Note: Program total hours may not include prerequisites.

FIRE PROTECTION TECHNOLOGY

• College Certificate: (CERT-FPT)
Associate of Applied Science Degree: (AAS-FPT)

About the Program

The Fire Protection Technology Associate of Applied Science degree program addresses the constant change and growing complexities of modern living and the environment as it pertains to fire suppression. There is a demand for college-trained people in the various fields of Fire Protection. The degree addresses the needs of a person wanting to be an entry level firefighter, those desiring advancement within their fire career as well as those individuals seeking fire related jobs within companies. The program adheres to the National Fire Academy's Fire and Emergency Services Higher Education (FESHE) model curriculum. WCCCD is an approved Regional Training Center (RTC) with the Michigan Firefighter Training Council, Bureau of Fire Services/OFFT.

This program offers:

- Associate of Applied Science: (AAS-FPT)
  Fire Administration **62** credit hours
- Associate of Applied Science: (AAS-FS)
  Fire Suppression **62** credit hours
- College Certificate: (CERT-FPT)
  Fire Protection Technology **30** credit hours

Program Goals

- To instruct students on the competencies and skills implored in the principles of fire development, cause and prevention
- To teach students advanced principles of fire chemistry, arson and investigation and fire health and safety according to the National Fire Protection Association (NFPA) guidelines
- To prepare entry level students to successfully pass the State of Michigan Fire Fighter Certification exam with a proficiency score of 70% or higher

Program Outcomes

- Students will be able to articulate and apply the principles of fire control through the utilization of personnel, equipment and extinguishing agents in fire management
- Demonstrate an understanding of the principles of fire development, cause and prevention
- Demonstrate a knowledge of hazardous materials and successful emergency scene operations
- Utilize knowledge of building construction principles, fire protection systems, and fire prevention codes to affect a safer community
- Demonstrate a working knowledge of fire ground strategy and tactics
- Effectively use written, oral, listening and electronic communications consistent with the fire service and related professional environment
- Understand and articulate the regulations governing legal and ethical boundaries of the profession
- Provide students with general education courses to competently and effectively use written/oral communication, computation, governmental systems, general science and humanities skills

College Certificate Goals

- To provide basic instruction on the competencies and skills in the principles of fire protection technology

College Certificate Outcomes

- Demonstrate basic and advance fire fighter competencies and skills
- Demonstrate knowledge of fire protection systems
- Demonstrate knowledge of hazardous materials
- Identify elements of building construction and how fire will effect construction
- Demonstrate basic communication skills
- Exhibit professional and ethical behavior consistent with the profession

Admission Requirements

Students are admitted to the program each year for the Fall, Spring and Summer semesters. Students must have the Program's approval, a completed application, and other required information submitted by the due date. If there are openings after the application deadline, any remaining openings will be filled on a first come basis to qualified applicants.

Students are required to do the following:

- Fulfill all WCCCD admission requirements.
- Complete any prerequisite course with a "C" or better
- Declare intent to enter the Fire Protection Technology program on the WCCCD application
- Must be 18 years old on the day of State Examination
- Successfully complete a minimum of 12 college credits with a "C" or better and/or have COMPASS scores that fulfill program requirements
- Must submit a completed "Public Safety Program Application" packet.
- Have access to a computer and the internet
- Complete WCCCD Program Application and submit to the Campus Academic Officer

Fire Protection Technology: College Certificate Recommended Sequence of Courses

CR. No.	COURSE TITLE	CREDITS
SEMESTER 1		
FPT 110	Fire Fighter I	8
FPT 115	Fire Fighter I Lab	5
FPT 150	Principles of Emergency Services	3
SEMESTER TOTAL		**16**
SEMESTER 2		
FPT 120	Fire Fighter II	5
FPT 125	Fire Fighter II Lab	3
Elective:	FPT	6
SEMESTER TOTAL		**14**
CERTIFICATE TOTAL		**30**

Note: Certificate total hours may not include prerequisites.

Fire Protection Career Courses (Electives):

FPT 100	Incipient Fire Brigade	2
FPT 165	Fire Protection Systems	3
FPT 170	Strategy and Tactics	3
FPT 180	Occupational Safety and Health for the Fire Service	3
FPT 185	Fire Protection Hydraulics and Water Supply	3
FPT 205	Introduction to Fire and Emergency Services Administration	3
FPT 235	Legal Aspects of Fire	3
FPT 245	Fire Investigation I	3
FPT 246	Fire Investigation II.	4

Continued on next page.

Fire Protection Technology continued

Fire Protection Technology: Fire Administration
Associate of Applied Science
Recommended Sequence of Courses

CR. No.	COURSE TITLE	CREDITS
SEMESTER 1		
FPT 150	Principles of Emergency Services	.3
BUS 225	Computer Applications in Business	.3
Elective:	FPT Courses	.3
ENG 119	English I	.3
FPT 160	Fire Behavior and Combustion	.3
SEMESTER TOTAL		**.15**
SEMESTER 2		
FPT 155	Fire Prevention	.3
FPT 225	Principles of Fire and Emergency Services Safety and Survival	.3
ENG 120	English II	.3
SOC 100	Introduction to Sociology	.3
Elective:	FPT Courses	.3
SEMESTER TOTAL		**.15**
SEMESTER 3		
FPT 215	Building Construction for the Fire Service	.3
PS 101	American Government	.3
MAT 112	Elementary Algebra	.3
BIO 155	Introduction to Biology	.4
PSY 260	Social Psychology	.3
SEMESTER TOTAL		**.16**
SEMESTER 4		
FPT 175	Fire Protection Systems	.3
CHM 105	Introductory Chemistry	.4
Elective:	FPT Courses	.9
SEMESTER TOTAL		**.16**
FPT: ADMINSTRATION PROGRAM A.A.S. TOTAL		**.62**

Note: Program total hours may not include prerequisites.

Fire Protection Technology: Fire Suppression
Associate of Applied Science
Recommended Sequence of Courses

CR. No.	COURSE TITLE	CREDITS
SEMESTER 1		
FPT 110	Fire Fighter I	.8
FPT 115	Fire Fighter I Lab	.5
FPT 150	Principles of Emergency Services	.3
SEMESTER TOTAL		**.16**
SEMESTER 2		
FPT 120	Fire Fighter II	.5
FPT 125	Fire Fighter II Lab	.3
ENG 119	English 1	.3
Elective:	FPT	.6
SEMESTER TOTAL		**.17**
SEMESTER 3		
ENG 120	English II	.3
SOC 100	Introduction to Sociology	.3
BIO 155	Introduction to Biology	.4
PSY 260	Social Psychology	.3
BUS 225	Computer Applications in Business	.3
SEMESTER TOTAL		**.16**
SEMESTER 4		
FPT 225	Principles of Fire and Emergency Services Safety and Survival	.3
CHM 105	Introductory Chemistry	.4
PS 101	American Government	.3
MAT 112	Elementary Algebra	.3
SEMESTER TOTAL		**.13**
FPT: SUPPRESSION A.A.S. PROGRAM TOTAL		**.62**

Note: Program total hours may not include prerequisites.

FOODSERVICE SYSTEMS MANAGEMENT

• College Certificate: (FSS-CERT)
Associate of Applied Science Degree: (FSS-AAS)

Visit this link for additional program information.
http://www.wcccd.edu/dept/FoodSev/FoodSev.html

About the Program

The Foodservice Systems Management Associate of Applied Science degree and College Certificate program is designed to provide students with in-depth instruction in the field of Foodservice Systems Management (FSM). The program begins with the history and development of the food service industry leading to its current best practices approach to food service operations management and continues with an overview of the various segments of the industry. This program is consistent with the recent updated educational topics of The National Restaurant Associations (NRA) Educational Foundation Manage First certification program. Students will be prepared to pass the various food service examinations given by the NRA. All persons who have earned the NRA certifications are recognized nationally as best-in-class professionals.

This program offers:

- Associate of Applied Science: **64** credit hours
- College Certificate: **34** credit hours

College Certificate Goals

- Equip students to begin or advance in the Food Service Systems Management industry
- Prepare students to succeed in the National Restaurant Association certification exams
- To learn the knowledge and skills to perform as supervisors and managers in the food service industry

College Certificate Outcomes

- Effectively integrate and apply foodservice occupational specific competencies e.g. product and menu development, facilities design and marketing within a problem solving context, proper use of equipment, development of a management style, understanding laws and regulations, human resources and financial management
- Demonstrate knowledge and application of sanitation, safety and personal hygiene

Program Goals

- To teach and prepare students to comprehend, apply and integrate principles of food service production and management
- To learn the knowledge and skills to perform as supervisors and managers in the food service industry
- To prepare the student to be field ready with the tools necessary to be successful
- To give the student the language of the industry

Program Outcomes

- Students will be able to demonstrate a mastery of the knowledge, techniques, skills and standards in foodservice management
- Effectively integrate and apply foodservice occupational specific competencies e.g. product and menu development, facilities design and marketing within a problem solving context, proper use of equipment, development of a management style, understanding laws and regulations, human resources and financial management
- Demonstrate accuracy in applying competencies in purchasing, cost control management and labor cost control

Continued on next page.

Foodservice Systems Management continued

- Demonstrate knowledge and application of sanitation, safety and personal hygiene
- Demonstrate ability to work as a team member in a group setting toward a common goal
- Effective use of written, oral, listening and electronic communication in a foodservice management environment

Admission Requirements

Students are required to do the following:

- Fulfill all WCCCD admission requirements
- Fulfill course placement requirements based on COMPASS assessment
- Students must complete WCCCD Program Application and submit to the Campus Academic Officer

Foodservice Management: College Certificate
Recommended Sequence of Courses

CR. No.	COURSE TITLE	CREDITS
PREREQUISITE COURSES		
MAT 110	Business Mathematics	.3
PREREQUISITE TOTAL		**.3**

CR. No.	COURSE TITLE	CREDITS
SEMESTER 1		
BUS 225	Computer Application in Business	.3
FSM 105	Principles of Foodservice Systems Management	.3
FSM 110	Food Safety and Sanitation (ServSafe)	.2
FSM 118	Nutrition	.3
SEMESTER TOTAL		**.11**
SEMESTER 2		
FSM 120	Customer Service	.3
FSM 125	Controlling Foodservice Costs	.2
FSM 132	Foodservice Purchasing	.2
FSM 135	Hospitality Accounting	.3
SEMESTER TOTAL		**.10**
SEMESTER 3		
FSM 142	Hospitality and Restaurant Marketing	.2
FSM 205	Special Events and Catering Management	.3
FSM 215	Hospitality Human Resources Management and Supervision	.3
FSM 222	Bar and Beverage Management	.2
FSM 225	Hospitality and Restaurant Management	.3
SEMESTER TOTAL		**.13**
CERTIFICATE TOTAL		**.34**

Note: Certificate total hours may not include prerequisites.

Foodservice Management:
Associate of Applied Science
Recommended Sequence of Courses

CR. No.	COURSE TITLE	CREDITS
PREREQUISITE COURSES		
MAT 110	Business Mathematics	.3
PREREQUISITE TOTAL		**.3**

CR. No.	COURSE TITLE	CREDITS
SEMESTER 1		
BUS 225	Computer Application in Business	.3
ENG 119	English I	.3
FSM 105	Principles of Foodservice Systems Management	.3
FSM 110	Food Safety and Sanitation (ServSafe)	.2
FSM 118	Nutrition	.3
SEMESTER TOTAL		**.14**
SEMESTER 2		
FSM 120	Customer Service	.3
FSM 125	Controlling Foodservice Costs	.2
FSM 132	Foodservice Purchasing	.2
FSM 135	Hospitality Accounting	.3
FSM 145	Financial Practicum	.3
SEMESTER TOTAL		**.13**
SEMESTER 3		
FSM 142	Hospitality and Restaurant Marketing	.2
ENG 134	Technical Communications	.3
FSM 205	Special Events and Catering Management	.3
FSM 210	Food Preparation and Production Lab	.2
PS 101	American Government	.3
SEMESTER TOTAL		**.13**
SEMESTER 4		
Elective:	Humanities	.3
Elective:	Natural Science w/Lab	.4
Elective:	Social Science	.3
FSM 215	Hospitality Human Resources Management and Supervision	.3
SEMESTER TOTAL		**.13**
SEMESTER 5		
FSM 222	Bar and Beverage Management	.2
FSM 225	Hospitality and Restaurant Management	.3
FSM 232	Management Practicum	.3
SPH 101	Introduction to Speech	.3
SEMESTER TOTAL		**.11**
A.A.S. PROGRAM TOTAL		**.64**

Note: Program total hours may not include prerequisites.

GERONTOLOGY

- College Certificate: (GER-CERT)

Visit this link for additional program information.
http://www.wcccd.edu/dept/Geront/Geront.html

About the Program

The Gerontology College Certificate program is designed to prepare students for direct service occupations in the care of seniors. Students are trained for positions in case management and program administration. The job opportunities are available in diverse locations, such as housing complexes, nursing and congregate care facilities, adult day care centers and mental and health agencies. The program explores the normal processes of aging and related social, legal and economic issues.

College Certificate Goals

- To proficiently prepare students to competently and ethically serve the gerontology community as a highly skilled care provider

College Certificate Outcomes

- Students will have an understanding and knowledge regarding mental health as it relates to aging, later life transitions, mental illness and treatment
- Effectively use written, oral and listening skills when following care plans, providing appropriate documentation and working collaboratively with all stakeholders' e.g. multidisciplinary teams, medical and healthcare professionals, family and community members
- Understand, articulate and adhere to the professional and ethical care standards and regulations governing the profession

Continued on next page.

Gerontology continued

Admission Requirements

Students are admitted to the program each year for the Fall, Spring and Summer semesters. Students must have the Programs' approval, a completed application, and other required information submitted by the due date.

If there are openings after the application deadline, any remaining openings will be filled on a "first-come" basis to qualified applicants. Students are required to do the following:

- Fulfill all WCCCD admission requirements
- Declare intent to enter the Gerontology Program on the WCCCD Application for Admission or change intent at the Admissions office
- Fulfill course placement requirements based on COMPASS assessment
- Students must complete WCCCD Program Applications during the semester they are enrolled in the GER 110, Introduction to Study of Aging course and submit to the Campus Academic Officer

Gerontology: College Certificate
Recommended Sequence of Courses

CR. No.	COURSE TITLE	CREDITS
SEMESTER 1		
GER 110	Introduction to the Study of Aging	.3
GER 115	Program/Services to the Aged	.3
HUS 135	Professionalism in Human Services	.3
BUS 225	Computer Applications in Business	.3
SEMESTER TOTAL		**.12**
SEMESTER 2		
GER 120	Health and Physical Processes of Aging	.3
SW 105	Field Instruction I	.4
SW 108	Case Documentation	.2
SEMESTER TOTAL		**.9**
SEMESTER 3		
GER 125	Mental Health and Aging	.3
SW 106	Field Practicum II	.4
SW 110	Case Management and Service Care Navigation	.3
SEMESTER TOTAL		**.10**
CERTIFICATE TOTAL		**.31**

Note: Certificate total hours may not include prerequisites.

GLOBAL SUPPLY CHAIN MANAGEMENT

- College Certificate: (CERT-LOG)

About the Program

The Global Supply Chain Management College Certificate program is a unique business management program that prepares graduates for employment in the areas of global supply chain (logistics) management, inventory control, materials management, and distribution. The field of global supply chain management includes occupations such as supervisors and/or managers of transportation, storage, and/or distribution; helpers, laborers, and/or hand material movers; and transportation/machine and vehicle material movers. The program combines core education courses with specific occupational courses in the area of customer service, supervision, and supply chain management.

College Certificate Goals

- To provide foundational understanding of the logistics support process as it pertains to product management and consumer distribution

College Certificate Outcomes

- Students will be able to utilize purchasing vocabulary and marketing concepts related to source selection, pricing, quality, and negotiating strategies to effectively procure goods and services
- Demonstrate, establish and maintain systems to track and control inventory
- Evaluate and effectively translate oral, written and electronic communication in a variety of business and manufacturing environments

Admission Requirements

Students are admitted to the program each year for the Fall, Spring, and Summer semesters. Students must have the Director's approval, a completed application, and other required information submitted by the due date. If there are openings after the application deadline, they will be filled on a "first come" basis by qualified applicants.

- Fulfill all WCCCD admission requirements
- Declare intent to enter the Global Supply Chain Management program on the WCCCD Application for Admission
- Must be 18 years old on the first day of class
- Fulfill course placement requirements based on COMPASS assessment or completed 12 credits or more of college courses with a grade of a "C" or better
- Complete WCCCD Program Application and submit to the Campus Academic Officer

Global Supply Chain Management: College Certificate
Recommended Sequence of Courses

CR. No.	COURSE TITLE	CREDITS
SEMESTER 1		
BUS 150	Introduction to Business	.3
CIS 110	Introduction to Computer Information Systems	.4
LOG 101	Principles of Logistics	.3
SEMESTER TOTAL		**.10**
SEMESTER 2		
LOG 102	Purchasing	.3
LOG 103	Introduction to Supply Chain Management	.3
MGT 205	Management Principles	.3
MKT 200	Principles of Marketing	.3
SEMESTER TOTAL		**.12**
SEMESTER 3		
LOG 104	Materials Management	.3
LOG 105	Inventory and Warehouse Management	.3
LOG 110	Transportation and Distribution	.3
LOG 200	International Supply Chain Management	.3
SEMESTER TOTAL		**.12**
CERTIFICATE TOTAL		**.34**

Note: Certificate total hours may not include prerequisites.

GRAPHIC DESIGN TECHNOLOGY

• College Certificate: (CERT-GDT)

Visit this link for additional program information.
http://www.wcccd.edu/dept/GrapDes/GrapDes.html

About the Program

The Graphic Design Technology College Certificate program has been developed to prepare students for entry level positions in a variety of industries that require computer aided desktop publishing and graphic design applications. This program gives each student a solid foundation in basic concepts, and parallel today's latest graphic design technology. After receiving the foundations in art, computer literacy and basic math, the student will receive extensive training in all aspects of Adobe Creative Suite.

College Certificate Goals

- To develop student's oral, written and visual communication skills in graphic design technology
- To provide a basic foundation of the principles of computer aided desktop publishing design in print and visual media

College Certificate Outcomes

- Students will be able to demonstrate sound principles of basic visual perception evident in their graphic design work
- Define, identify and produce denotative and connotative messages in graphic designs, logos, illustrations and photographs
- Define, identify and implement design strategy and critical thinking techniques for visual problem solving in visual communication that addresses client needs.
- Demonstrate proficiency in various graphic design, publishing and Web design technologies

Admission Requirements

- Fulfill all WCCCD admissions requirements
- Possess a high school diploma or GED
- Submit a transcript (copy) of grades earned for transfer in any course completed at WCCCD
- Submit a Program Application form with a declaration of intent for the career option in Graphic Design
- Fulfill course placement requirements based on the COMPASS Test
- Students must complete WCCCD Program Application and submit to the Campus Academic Officer

Graphic Design Technology: College Certificate Recommended Sequence of Courses

CR. No.	COURSE TITLE	CREDITS
SEMESTER 1		
ART 101	Drawing I	3
CIS 110	Introduction to Computer Information Systems	4
HUM 101	Introduction to Visual Arts	3
PRN 101	Introduction to Print Technology	3
SEMESTER TOTAL		**13**
SEMESTER 2		
ART 111	Design I	3
CIS 266	Introduction to Graphic Design	3
DMP 105	Media Programming	3
OIS 227	Desktop Publishing I	3
SEMESTER TOTAL		**12**
SEMESTER 3		
ART 112	Design II	3
MAT 100	Basic Mathematics	3
OIS 228	Desktop Publishing II	3
PRM 101	Project Management	3
SEMESTER TOTAL		**12**
CERTIFICATE TOTAL		**37**

Note: Certificate total hours may not include prerequisites.

HEATING, VENTILATION, AIR CONDITIONING (HVAC)

• College Certificate: (HVAC-CERT)
Associate of Applied Science Degree: (HVAC-AAS)

Visit this link for additional program information.
http://www.wcccd.edu/dept/HeatVentAC/HeatVentAC.html

About the Program

The Heating, Ventilation and Air Conditioning (HVAC) Associate of Applied Science degree and College Certificates are designed to provide students an opportunity to develop their skills and competencies for entry-level positions in the Heating, Ventilation, Air Conditioning and Refrigeration field. The curriculum focuses on the ability to maintain, install and repair climate control and refrigeration devices in residential, industrial and commercial buildings. The program provides students with training in the layout and design of cooling, heating and refrigeration systems, the use of the latest tools, gauges and testing equipment used in the field, as well as troubleshooting and inspection of equipment. The program certificates and degree prepare students for federal, state and local licensing exams.

This program offers:

- Associate of Applied Science Degree:
  64 credit hours

- College Certificate(s):

1. 3rd Class Refrigeration (SCERT-HVAC-TCR):
   28 credit hours
2. Geothermal Technology (CERT-HVAC-GTT):
   34 credit hours
3. High Pressure Steam (CERT-HVAC-HPS):
   30 credit hours
4. Sheet Metal Design and Fabrication
   (CERT-HVAC-SMDF): **34** credit hours

Program Goals:

- To teach students the principles and technical application of installing, maintaining, and repairing heating, air conditioning and cooling systems according to industry standards
- Students will be prepared to pass federal, state and local licensing/certification exams

Program Outcomes:

- Students will be able to exhibit knowledge of basic principles of electricity, electrical current, and circuitry for heating, refrigeration and air conditioning devices
- Describe and apply refrigeration theory and refrigeration cycle, troubleshoot, diagnose and repair sealed systems
- Demonstrate proper application and use of tools, test equipment, safety procedures, and safety techniques of basic shop tools used in the refrigeration and air conditioning industry
- Apply mathematical, reading, and communication skills essential to the HVAC service industry
- Apply and describe the sequence of operation for industrial systems
- Exhibit knowledge and hands-on ability to perform electrical repairs in an efficient and safe manner
- Exhibit knowledge and hands-on ability to perform soldering and brazing techniques in a safe manner
- Exhibit knowledge of equipment used in the HVAC field and use it in a safe manner
- Distinguish quality standards of products commonly used in professional HVAC operations and install HVAC equipment compliant with local codes

Continued on next page.

HVAC continued

College Certificate Goals:

- To teach students the principles and technical application of installing, maintaining, and repairing heating, air conditioning and refrigeration systems according to industry standards
- Students will be familiar with operation and maintenance of low and high pressure boilers and/or operation, maintenance, installation and servicing of non-domestic refrigeration systems, depending on the certificate
- Students will be prepared to pass federal, state and local licensing/certification exams

College Certificate Outcomes: 3rd Class Refrigeration

- Students will be able demonstrate knowledge of basic principles of electricity, electrical current, and circuitry for food preservation refrigeration systems
- Describe and apply refrigeration theory and refrigeration cycle, troubleshoot, diagnose and repair sealed systems
- Students will understand and demonstrate the knowledge of: relief valves rupture disks, fusible plugs, high and low pressure controls, safety heads, leak testing, condensers, expansion valves and evaporators, as well as correct start and stop procedures, causes of pressure problems and purging procedures
- Demonstrate proper application and use of tools, test equipment, safety procedures, and safety techniques of basic shop tools used in the refrigeration industry
- Students will be prepared to pass the local 3rd Class Refrigeration license examination as well as the EPA Certification Exam to be able to handle refrigerants

College Certificate Outcomes: Geothermal Technology

- Students will be able demonstrate knowledge of the basic principles of geothermal energy production
- Students will be able to describe and apply reverse refrigeration theory and the reverse refrigeration cycle as well as troubleshoot, diagnose and repair sealed geothermal systems
- Demonstrate proper application and use of tools, test equipment, safety procedures, and safety techniques of basic shop tools used in the industry
- Exhibit knowledge of safety and equipment used in HVAC/Geothermal field
- Students will be able to pass the GHEX Accreditation Examination for Geothermal installers

College Certificate Outcomes: High Pressure Steam

- Students will be able demonstrate knowledge of basic principles of steam boilers systems as well as electricity, electrical current, and circuitry for High Pressure Steam Boilers
- Describe and apply steam heating theory and troubleshoot, diagnose and repair systems
- Students will understand and demonstrate the knowledge of: boiler appliances and auxiliaries, pumps, regulators, gauges, valves and injectors as well as boiler inspection, maintenance and periodic system testing procedures. All requirements to operate, maintain, test and shut-down low and high pressure boilers and pass the local high pressure boiler exam will be demonstrated by the student
- Demonstrate proper application and use of tools, test equipment, safety procedures, and safety techniques of basic shop tools used to install, maintain and repair steam boilers
- Students will be prepared to pass the local High Pressure Steam license examination

College Certificate Outcomes: Sheet Metal Design and Fabrication

- Students will be able demonstrate knowledge of duct and air handing system design
- Students will be able to build simple and complicated sheet metal ductwork
- Demonstrate proper application and use of tools, test equipment, safety procedures, and safety techniques of basic shop tools used in the refrigeration and air condition industry
- Exhibit knowledge of safety and equipment used in HVAC field

Admission Requirements

Students are required to do the following:

- Fulfill all WCCCD admission requirements
- Fulfill course placement requirements based on COMPASS assessment
- Complete WCCCD Program Application and submit to the Campus Academic Officer

HVAC College Certificate: 3rd Class Refrigeration Recommended Sequence of Courses

CR. No.	COURSE TITLE	CREDITS
SEMESTER 1		
DRT 101	Blueprint Reading	3
HVA 100	Introduction to HVAC and Hermetic Systems	5
MAT 113	Intermediate Algebra	3
SEMESTER TOTAL		**11**
SEMESTER 2		
ENG 119	English I	3
HVA 103	Commercial Refrigeration	4
HVA 108	Refrigeration Controls	4
SEMESTER TOTAL		**11**
SEMESTER 3		
HVA 111	Applied Electricity in Air Conditioning and Heating	3
HVA 118	Codes and Regulations	3
SEMESTER TOTAL		**6**
HVAC: 3RD CLASS REFRIGERATION CERTIFICATE TOTAL		**28**

Note: Certificate total hours may not include prerequisites.

HVAC College Certificate: Geothermal Technology Recommended Sequence of Courses

CR. No.	COURSE TITLE	CREDITS
SEMESTER 1		
GTT 101	Principles of Thermogeology	3
MAT 113	Intermediate Algebra	3
RET 100	Renewable Energy/Alternative Energy Principles	4
SEMESTER TOTAL		**10**
SEMESTER 2		
GTT 105	Applications of Geothermal Systems	4
HVA 100	Introduction to HVAC and Hermetic Systems	5
SEMESTER TOTAL		**9**
SEMESTER 3		
HVA 104	Air Conditioning I (Fast-Track)	4
HVA 105	Air Conditioning II (Fast-Track)	4
GTT 201	Geothermal REHC Technology	3
GTT 220	GHEX Accreditation	4
SEMESTER TOTAL		**15**
HVAC: GEOTHERMAL CERTIFICATE TOTAL		**34**

Note: Certificate total hours may not include prerequisites.

Continued on next page.

HVAC continued

HVAC College Certificate: High Pressure Steam Recommended Sequence of Courses

CR. No.	COURSE TITLE	CREDITS
SEMESTER 1		
DRT 101	Blueprint Reading	.3
HVA 106	Basic Heating	.5
MAT 113	Intermediate Algebra	.3
SEMESTER TOTAL		**.11**
SEMESTER 2		
HVA 110	Forced Air and Hydronic Heating	.4
HVA 118	Codes and Regulations	.3
HVA 200	Introduction to Boiler Plant Maintenance	.3
SEMESTER TOTAL		**.10**
SEMESTER 3		
HVA 205	Steam I	.3
HVA 210	Steam II	.3
HVA 215	Boiler Room Accessories	.3
SEMESTER TOTAL		**.9**
HVAC: HIGH PRESSURE STEAM CERTIFICATE TOTAL		**.30**

Note: Certificate total hours may not include prerequisites.

HVAC College Certificate: Sheet Metal Design and Fabrication Recommended Sequence of Courses

CR. No.	COURSE TITLE	CREDITS
SEMESTER 1		
DRT 101	Blueprint Reading	.3
HVA 106	Basic Heating and Heating Controls	.5
MAT 113	Intermediate Algebra	.3
SEMESTER TOTAL		**.11**
SEMESTER 2		
HVA 100	Introduction to HVAC and Hermetic Systems	.5
HVA 109	Ventilation and Duct Fabrication	.5
SEMESTER TOTAL		**.10**
SEMESTER 3		
HVA 104	Air Conditioning I (Fast-Track)	.4
HVA 105	Air Conditioning II (Fast-Track)	.4
HVA 115	Physical Properties of Air and Duct Design	.5
SEMESTER TOTAL		**.13**
HVAC: SHEET METAL DESIGN CERTIFICATE TOTAL		**.34**

Note: Certificate total hours may not include prerequisites.

HVAC: Associate of Applied Science Recommended Sequence of Courses

CR. No.	COURSE TITLE	CREDITS
SEMESTER 1		
DRT 101	Blueprint Reading	.3
ENG 119	English I	.3
HVA 100	Introduction to HVAC and Hermetic Systems	.5
MAT 113	Intermediate Algebra	.3
SEMESTER TOTAL		**.14**
SEMESTER 2		
HVA 103	Commercial Refrigeration	.4
HVA 106	Basic Heating and Heating Controls	.5
HVA 108	Refrigeration Controls	.4
SEMESTER TOTAL		**.13**
SEMESTER 3		
HVA 104	Air Conditioning I (Fast-Track)	.4
HVA 105	Air Conditioning II (Fast-Track)	.4
HVA 120	Advanced Heating and Heating Controls	.3
SEMESTER TOTAL		**.11**
SEMESTER 4		
HVA 110	Forced Air and Hydronic Heating	.4
HVA 118	Codes and Regulations	.3
Elective:	Humanities	.3
PS 101	American Government	.3
SEMESTER TOTAL		**.13**
SEMESTER 5		
HVA 111	Applied Electricity in Air Conditioning and Heating	.3
ENG 134	Technical Communications	.3
Elective:	Natural Science w/Lab	.4
Elective:	Social Science	.3
SEMESTER TOTAL		**.13**
HVAC: AAS PROGRAM TOTAL		**.64**

Note: Program total hours may not include prerequisites.

HEMODIALYSIS PATIENT CARE SPECIALIST

• College Certificate: (CERT-HDM)

About the Program

The Hemodialysis Patient Care Specialist College Certificate program trains students to help patients with chronic kidney disease (CKD) receive safe and effective dialysis. Students will learn what dialysis, how it was developed, how to ensure high-quality care for patients and how to perform and carry out their duties in a professional manner.

A student's educational experience includes both classroom course work (didactic) and practical (clinical) instruction in a peri-operative environment. Upon successful completion of the Hemodialysis Patient Care Specialist College Certificate, students will also receive a certificate of completion from WCCCD and be eligible to sit for the national certification exam.

Note: Enrollment in the Hemodialysis Patient Care Specialist program is limited to 15 students per year due to the number of clinical - learner positions available at each of the clinical settings.

College Certificate Goals

- To prepare students for patient care roles in a Hemodialysis unit

College Certificate Outcomes

- Students will be able to assist in the care of patients undergoing hemodialysis treatment under the proper supervision of an attending health care professional
- Students will be able to apply proper techniques to successfully handle and monitor patients undergoing hemodialysis therapy
- Proficiently perform basic laboratory testing procedures under appropriate supervision

Continued on next page.

Hemodialysis Patient Care Specialist continued

- Effectively utilize appropriate personal protective devices and techniques to operate safely in a healthcare environment
- Effectively use computer software programs and technology, in a healthcare setting, to accomplish tasks of the profession
- Effective use of written, oral and interpersonal communication skills when interacting with patients, clients and healthcare professionals
- Understand, articulate and adhere to all ethical standards, moral and legal practices governing the profession

Admission Requirements

Students are required to do the following:

- Fulfill all WCCCD admission requirements
- Fulfill course placement requirements based on COMPASS assessment
- Complete WCCCD Program Application and submit to the Campus Academic Officer

Hemodialysis Patient Care Specialist: College Certificate
Recommended Sequence of Courses

CR. No.	COURSE TITLE	CREDITS
CERTIFICATE PREREQUISITES		
ENG 119	English I	3
BUS 225	Computer Application in Business	3
EMT 105	Medical First Responder	3
PLB 100	Phlebotomy Fundamentals	3
SEMESTER TOTAL		**12**
SEMESTER 1		
HMD 110	Hemodialysis Terms and Principles	3
HMD 120	Anatomy and Physiology of the Kidney and Urinary System	3
HMD 130	Surgical Principles of Peritoneal and Vascular Access	3
SEMESTER TOTAL		**9**
SEMESTER 2		
HMD 140	Hemodialysis Patient Care Management	3
HMD 150	Hemodialysis Machine Setup and Maintenance (Laboratory)	4
ALH 230	Medical Ethics	3
SEMESTER TOTAL		**10**
SEMESTER 3		
HMD 160	Hemodialysis Clinical Pharmacology	3
HMD 170	Hemodialysis Clinical Practicum	6
SEMESTER TOTAL		**9**
CERTIFICATE TOTAL		**40**

Note: Certificate total hours may not include prerequisites.

HOME HEALTH CARE AIDE

- Short-Term Certificate: (SCERT-HHA)

About the Program

The Home Health Care Aide Short-Term certificate is designed to provide students with in-depth instruction and will prepare students for employment in the home health care industry. Home Health Care Aides (HHA) provide personal and homemaking services to ill, convalescing, elderly, and disabled persons and, if needed, to their families. Home Health Care Aides may provide services in a variety of environments including rehabilitation centers, long term care centers and hospice; however, most assignments are usually in the patients' home. Graduates will learn to care for clients in a holistic, respectful and professional manner. Graduates will demonstrate the ability to properly follow directions/care plans, respect client privacy, as well as provide emotional comfort and support to diverse clients and their families. Graduates will be able to assist in client observation, ambulation, transfer, transport, personal grooming and hygiene in a safe and effective manner.

College Certificate Goals

- To prepare students to gain employment in a health care setting as a Home Health Care Aide
- To teach students the basic principles of safety as it relates to patient care in the home
- To teach students to comprehend, apply and integrate principles of home health care
- To prepare the student to be field ready with the tools necessary to be successful
- Students will learn to care for clients in a holistic, respectful and professional manner

College Certificate Outcomes

- Identify the role and scope of practice of the Home Health Care Aide as part of the holistic health care team
- Be able to immediately recognize any safety or medical emergency issues concerning a patient
- Demonstrate effective, efficient and culturally sensitive communication skills
- Adhere to HIPPA regulations at all times
- Understand the special needs of specific client populations including the elderly, physically and emotionally challenged, very young patients or those dealing with end of life concerns
- Explore concerns and feelings regarding end of life issues including death and dying and respecting client/family values
- Identify and understand the reporting process for any ethical concerns
- Identify the role of the Home Health Care Aide in the maintenance of a clean, safe and healthy environment

Admission Requirements

Students are required to do the following:

- Fulfill all WCCCD admission requirements
- Fulfill course placement requirements based on COMPASS assessment
- Complete WCCCD Program Application and submit to the Campus Academic Officer

Home Health Care Aide: Short-Term Certificate
Recommended Sequence of Courses

CR. No.	COURSE TITLE	CREDITS
SEMESTER 1		
ALH 110	Medical Terminology	3
ALH 230	Medical Ethics	3
SOC 100	Introduction to Sociology	3
SEMESTER TOTAL		**9**
SEMESTER 2		
EMT 101	First Aid	2
HHA 200	Home Health Aide Skills	4
PSY 101	Introduction to Psychology	3
SEMESTER TOTAL		**9**
CERTIFICATE TOTAL		**18**

Note: Certificate total hours may not include prerequisites.

HOMELAND SECURITY

• College Certificate: (CERT-HLS)

About the Program

The Homeland Security College Certificate is designed to provide a comprehensive overview of the roots of terrorism and various international and national historic examples to understand this complex problem. Focusing on converting theory and awareness into pragmatic strategies designed to help practitioners develop informed responses to the threat of terrorism. The program will emphasis on the public, private, and legal responses to this threat and specific skills designed to help students respond strategically to real situation emergencies. Students will apply their knowledge and skills to develop specific plans at the local level to enhance public awareness and local security.

The Homeland Security College Certificate is designed for managers, administrators, officers and those responsible for developing and implementing strategies and procedures in Homeland Security.

College Certificate Goals

- To educate and prepare students and in-service emergency management providers on how to mitigate human physical consequences of natural and technological disasters
- To teach and provide a general foundation of the field of homeland security management as a precursor towards the associate in applied science degree

College Certificate Outcomes

- Students will be able to apply critical thinking and decision-making concepts to emergency and disaster management issues
- Demonstrate knowledge of critical thinking concepts to adapt intervention and assessment skills to support and supervise comprehensive, integrated and effective management in the event of natural, system-wide, or human-induced crisis
- Develop competence in applying a code of behavior consistent with the professional attitudes and ethical standards expected of homeland security management professionals
- Demonstrate an understanding of the importance of maintaining effective communication and collaborative relationships with all federal, state and local criminal justice organizations, human service agencies, area communities and community-based organizations

Admission Requirements

Students are admitted to the program each semester. Students must have program approval, a completed application, and other required information submitted by the due date. If there are openings after the application deadline, remaining openings will be filled on a "first-come" basis.

To be admitted into the Homeland Security certificate program Students must:

- Fulfill all WCCCD admission requirements.
- Declare program intent on the WCCCD admission application or change program intent at the campus admission office
- Fulfill course placement requirements based on COMPASS assessment
- Students must complete WCCCD program admission applications during the semester they are first HLS course and then submit the program application to the Campus Chief Academic Officer

Homeland Security Certificate Program Recommended Sequence of Courses

CR. No.	COURSE TITLE	CREDITS
SEMESTER 1		
HLS 100	Introduction to Homeland Security	3
HLS 101	Introduction to Terrorism	3
HLS 201	Introduction to Intelligence	3
HLS 202	Homeland Security Emergency Management	3
HLS 203	Counterterrorism for First Responders	3
SEMESTER TOTAL		**15**
SEMESTER 2		
CAREER COURSES		
(Select 15 credit hours from the list below)		
CJS 100	Introduction to Criminal Justice	3
LEA 201	Introduction to Law Enforcement	3
LEA 230	Introduction to Criminal Investigation	3
EMT 105	Medical First Responder	3
FPT 150	Principles of Emergency Service	3
HLS 102	Business and Industry Crisis Management	3
HLS 103	Emergency Management Principles and Application for Tourism, Hospitality and Travel Management Industries	3
HLS 104	Terrorism and Emergency Management Course	3
HLS 105	Hazards Risk Management	3
SEMESTER TOTAL		**15**
CERTIFICATE TOTAL		**30**

Note: Certificate total hours may not include prerequisites.

HOTEL AND RESTAURANT MANAGEMENT

• College Certificate: (CERT-HTM)

Visit this link for additional program information.
http://www.wcccd.edu/dept/HotRestMgmt/HotResMgmt.html

About the Program

The Hotel and Restaurant Management College Certificate program prepares students for immediate employment in the hotel industry. Students will learn about the different departments within the hotel. The areas of front desk, food and beverage, housekeeping, facility management, catering and sales will be explored. The course objectives are reached by the use of case analysis, technology, leadership and marketing training. The Hotel and Restaurant Management certificate is designed to prepare students for a broad range of positions across the hospitality industry.

College Certificate Goals

- To prepare students for careers in the hospitality field by providing a foundation for advancement and professional development.

College Certificate Outcomes

- Students will be able to perform all entry-level functions in the rooms division, housekeeping area and food and beverage service departments
- Apply knowledge of the hospitality industry, within a specific career track within the industry, and demonstrate the unique professional requirements pursuant to a successful career
- Communicate effectively using written, oral and nonverbal skills including the use of technology in the gathering and presenting of information

Continued on next page.

Hotel and Restaurant Management continued

- Interpret and analyze information to engage critical thinking and problem solving with regard to business performance of hospitality operations and budgeting
- Understand, articulate and demonstrate the practice of ethical, legal and safe professional behavior
- Demonstrate effective and competent use of necessary computer and software systems specific to the industry
- Knowledge and application of accounting principles, including, but not limited to budgets, labor, menu planning and inventories
- Demonstrate knowledge of and proficiency in completing security audits
- Demonstrates and presents an image of a self-confident, knowledgeable employee with excellent interpersonal skills interacting with guests, clients, and colleagues

Admission Requirements

Students are required to do the following:

- Fulfill all WCCCD admission requirements
- Possess a high school diploma or GED
- Submit a transcript (copy) of grades earned for transfer in any course completed at WCCCD
- Declare intent to enter this program on the WCCCD Application for Admission or change intent at the Admissions Office
- Complete WCCCD Program Application and submit to the Campus Academic Officer
- Fulfill course placement requirements based on COMPASS assessment

Hotel and Restaurant Management: College Certificate
Recommended Sequence of Courses

CR. No.	COURSE TITLE	CREDITS
SEMESTER 1		
HTM 105	Introduction to Hotel and Restaurant Management	.3
ACC 110	Principles of Accounting	.4
MKT 200	Principles of Marketing	.3
HTM 210	Customer Service Management	.3
SEMESTER TOTAL		**.13**
SEMESTER 2		
HTM 106	Hotel and Restaurant Management	.3
BUS 225	Computer Applications in Business	.3
HTM 200	Hotel and Restaurant Operations	.3
SEMESTER TOTAL		**.9**
SEMESTER 3		
HTM 225	Special Events and Catering Management	.3
HTM 299	Hotel Management Practicum	.3
~~FSM 115~~	~~Food Safety and Sanitation~~	~~.3~~
FSM 110	Food Safety and Sanitation	.2*
SEMESTER TOTAL		**.8**
CERTIFICATE TOTAL		**.30**

Note: Certificate total hours may not include prerequisites.

**Amended on 7/23/15*

INDUSTRIAL COMPUTER GRAPHICS TECHNOLOGY

- College Certificate: (ICGT-CERT)

Associate of Applied Science Degree: (ICGT-AAS)

Visit this link for additional program information.
http://www.wcccd.edu/dept/CompGraph/CompGraph.html

About the Program

The Industrial Computer Graphics Technology program provides students with career-based training in mechanical design using computer-aided drafting/design technology. To provide the necessary technical education base, the program also includes education and training in applied technical mathematics, engineering drawing, and geometric dimensioning and tolerance skills. Basic training in computer technology is included to prepare students for the two-dimensional, three-dimensional and solid modeling computer-aided design technology in the program.

All technical manufacturing and engineering design in today's high-technology business and industry uses computer-based, computer- aided design technologies that integrate the design, engineering and manufacturing design analysis, and manufacturing of complex products and product parts, subassemblies, and assemblies into a single, technically coherent process.

The Industrial Computer Graphics Technology program provides the skills and knowledge required for entry-level employment in industrial drafting, computer-aided drafting, and mechanical design fields. Emphasis is placed on the applications, procedures and techniques of principles involved in industrial drafting and design techniques. Areas include layouts and detailing in product design, tool design, die design, machine design, and advanced computer-aided design. Laboratory work in an integral part of the program for all technical courses.

This program offers:

- Associate of Applied Science: **63** credit hours
- College Certificate: **30** credit hours

Program Goals

- To provide students a foundation of the basic principles of mechanical design technology utilizing computer integration in the manufacturing industry
- To teach students knowledge in producing engineering drawings related to manufacturing

Program Outcomes

- Students will be able to utilize computer based simulation and programming tools for system design and analysis
- Demonstrate and apply knowledge of machines' principles and operation, tools and materials, requisite mathematics and physics, to select operations parameters in order to program, setup, and operate production manufacturing equipment
- Demonstrate and apply knowledge of machines' principles and operation, tools and materials, requisite mathematics and physics, to select operations parameters to troubleshoot and diagnose both numerically/computer numerically (NC/CNC) controlled machines and programmable logic controlled (PLC) equipment
- Demonstrate and apply knowledge of material science, machining tolerances, blueprint/ schematics, and hands on skills in welding, burning, pipefitting, rigging, the use of basic hand tools and mobile equipment for the fabrication of designed parts incorporating accepted industry methods

Continued on next page.

Industrial Computer Graphics Tech. continued

- Demonstrate knowledge and application of the principles of drafting, the communication of ideas, designs and visualization skills as the language of the engineering field, including the creation and interpretation of drawings using proper dimensioning and tolerancing for size and geometry, use of computer-aided drawing programs to incorporate proper industry acceptable standards and conventions

College Certificate Goals

- To provide students a basic understanding of principles of mechanical design technology utilizing computer integration in the manufacturing industry

College Certificate Outcomes

- Demonstrate and apply knowledge of machines' principles and operation, tools and materials to program, setup, and operate production manufacturing equipment
- Demonstrate and apply knowledge of machines' principles and operation, tools and materials, requisite mathematics and physics, to select operations parameters to troubleshoot and diagnose both numerically/computer numerically (NC/CNC) controlled machines and programmable logic controlled (PLC) equipment
- Apply the basic principles of equipment maintenance, troubleshooting and problem solving techniques to maintain industrial machines that ensures the production of quality products
- Incorporate safety awareness, principles and practices of machine safety, environmental safety, chemical safety and personal/employee protection

Admission Requirements

Individuals interested in the Industrial Computer Graphics Technology program are required to fulfill the following requirements:

- Fulfill all WCCCD college admission requirements
- Declare intent to enter the Computer Graphics Technology program on the WCCCD Application for Admission or change intent at the Admissions Office
- Fulfill course placement requirements based on COMPASS assessment
- Complete WCCCD Program Application and submit to the Campus Academic Officer during the semester they are enrolled in CAD 101, Fundamentals of Computer Aided Drafting (4 credits) or CAD 110, Introduction to NX CAD/CAM (4 credits)

Industrial Computer Graphics Technology: College Certificate
Recommended Sequence of Courses

CR. No.	COURSE TITLE	CREDITS
SEMESTER 1		
DRT 101	Blueprint Reading	.3
CAD 101	Fundamentals of Computer Aided Drafting	.4
	----OR----	
CAD 110	Introduction to NX CAD/CAM	.4
MAT 121	Technical Mathematics I	.3
MAN 110	Manufacturing Processes	.3
SEMESTER TOTAL		**.13**
SEMESTER 2		
DRT 102	Fundamentals of Mechanical Drawing	.4
CAD 102	Advanced Computer Aided Drafting	.4
	----OR----	
CAD 222	NX Solids Modeling	.4
ENG 119	English I	.3
SEMESTER TOTAL		**.11**

SEMESTER 3		
DRT 112	Technical Drawing Applications	.3
DRT 113	Descriptive Geometry	.3
SEMESTER TOTAL		**.6**
CERTIFICATE TOTAL		**.30**

Note: Certificate total hours may not include prerequisites.

Industrial Computer Graphics Technology: Associate of Applied Science
Recommended Sequence of Courses

CR. No.	COURSE TITLE	CREDITS
SEMESTER 1		
DRT 101	Blueprint Reading	.3
CAD 101	Fundamentals of Computer Aided Drafting	.4
	----OR----	
CAD 110	Introduction to Unigraphics CAD/CAM	.4
MAT 121	Technical Mathematics I	.3
Elective:	Other	.4
MAN 110	Manufacturing Processes	.3
SEMESTER TOTAL		**.17**
SEMESTER 2		
DRT 102	Fundamentals of Mechanical Drawing	.4
Elective:	Other	.3
CAD 102	Advanced Computer Aided Drafting	.4
	----OR----	
CAD 222	Unigraphics Solids Modeling	.4
ENG 119	English I	.3
SEMESTER TOTAL		**.14**
SEMESTER 3		
DRT 112	Technical Drawing Applications	.3
DRT 113	Descriptive Geometry	.3
CAD 121	Tool and Fixture Detailing	.4
CAD 203	CAD Applications	.4
	----OR----	
CAD 224	Unigraphics Assembly/ Components/Drafting	.4
MAT 122	Technical Mathematics II	.3
SEMESTER TOTAL		**.17**
SEMESTER 4		
CAD 211	Die Design and Panel Tipping	.4
DRT 115	Geometric Dimensioning Tolerancing	.2
ENG 134	Technical Communications	.3
PS 101	American Government	.3
Elective:	Humanities	.3
SEMESTER TOTAL		**.15**
A.A.S. PROGRAM TOTAL		**.63**

Note: Program total hours may not include prerequisites.

INTERNATIONAL BUSINESS

Associate of Applied Science Degree: (IBU-AAS)

About the Program

This program is designed to prepare students for employment in international business, marketing, global supply chain management and other international related areas. This program also offers working professionals a certificate program that will enable them to refine their skills and prepare them to compete in any industry globally. The curriculum provides students with a solid background in language, culture, international politics and business. This program will provide the student with a better understanding of global political, social, economic, and trade relationships. Graduates of this program may work for a variety of organizations and businesses, both in this country and overseas. Foreign language skills and a technical or business specialty increases the graduate's employability.

This program provides students with the technical skills for entry-level positions as specialists in exporting and importing for the significant and growing international trade community. Most students focus on careers in import-export trading or management, international transportation and logistics, global supply chain management, international marketing, or various international business support services. Emphasis is placed on the contribution of speaking a foreign language, logistics, and preparing students for career(s) in an international trade marketplace.

This program offers courses that can prepare students to take the National Association of Small Business International Trade Educators (NASBITE) Certified Global Business Professional exam.

This program offers:

- Associate of Applied Science: **62** credit hours

Program Goals

- To teach students to become an effective leader in the international business arena
- To teach students an applied knowledge of global concepts to compete effectively in the ever-changing international business environment
- To learn a second language and see its use in international business
- To prepare students to successfully pass the National Association of Small Business International Trade Educators (NASBITE) Certified Global Business Professional exam

Program Outcomes

- Demonstrate the ability to plan and act strategically in an international business environment
- Demonstrate analytical and decision-making skills in international business and trade
- Analyze various international business practices and determine appropriate strategies for working across borders
- Develop basic written and verbal communication skills in at least one foreign language
- Describe current practices, issues, and concerns in international business and trade
- Summarize differences in business practices in different parts of the world and understand how these differences affect managing companies in various countries
- Explain the various ways to direct the allocation of materials, supplies, and finished products across international borders

Admission Requirements

Students are required to do the following:

- Fulfill all WCCCD admission requirements
- Fulfill course placement requirements based on COMPASS test
- Students must be 18 years of age and possess a high school diploma or GED
- Declare intent to enter the International Business Program
- Students must complete WCCCD Program Application and submit to the Campus President/CAO

International Business: Associate of Applied Science Recommended Sequence of Courses

CR. No.	COURSE TITLE	CREDITS
SEMESTER 1		
ENG 119	English I	3
BUS 150	Introduction to Business	3
LANG 1	Any Beginner I Language (101 class)	4
BUS 225	Computer Applications in Business	3
SEMESTER TOTAL		**13**
SEMESTER 2		
ENG 120	English II	3
MKT 200	Principles of Marketing	3
LANG 2	Any Beginner II Language (102 class)	4
BUS 155	International Business and Trade	3
SEMESTER TOTAL		**13**
SEMESTER 3		
PS 101	American Government	3
PHL 101	Comparative Religions I	3
ACC 110	Principles of Accounting I	4
SEMESTER TOTAL		**10**
SEMESTER 4		
ECO 101	Principles of Economics I	3
MGT 210	International Management	3
BL 201	Business Law I	4
PS 160	International Politics	3
SEMESTER TOTAL		**13**
SEMESTER 5		
ECO 102	Principles of Economics II	3
MAT 113	Intermediate Algebra	3
BL 210	International Business Law	4
BUS 240	Business Communications	3
SEMESTER TOTAL		**13**
A.A.S. PROGRAM TOTAL		**62**

Note: Program total hours may not include prerequisites.

LIBRARY TECHNOLOGY

- College Certificate: (CERT-LBT)

Visit this link for additional program information.
http://www.wcccd.edu/dept/LibTech/LibTech.html

About the Program

The Library Technology Certificate program prepares students for employment in the library industry. Students will learn about the different departments, library types and issues within library science. The areas of service including circulation, reference and technical services will all be explored. The course objectives are reached by the use of case analysis, research papers, technology, tours and group projects.

College Certificate Goals

- To provide skills for paraprofessional technicians in library and information services as a foundation of exploring the elements within library science and the users it serves
- To enable students to critically explore and understand the roles of information technologies and resources as it relates to information access, retrieval and dissemination

College Certificate Outcomes

- Students will be able to evaluate oral, written and electronic communication used in library and information services.
- Apply knowledge of basic technology skills including online computer automation systems; productivity software, Internet, and database searching
- Identify, define and describe basic reference, information resource and referral procedures
- Demonstrate mastery of, apply critical thinking solutions to and explain basic library classification systems, their use and how to catalog and retrieve materials
- Analyze and evaluate information and utilize a variety of resources in making decisions or solving problems

Continued on next page.

Library Technology continued

- Demonstrate appropriate methods and techniques for material processing, storage and preservation

Admission Requirements

- Fulfill all WCCCD admissions requirements
- Declare intent to enter this program on the WCCCD Application for Admission or change intent at the Admissions Office
- Complete WCCCD Program Application and submit to the Campus Academic Officer
- Fulfill course placement requirements based on the COMPASS Test

Library Technology: College Certificate
Recommended Sequence of Courses

CR. No.	COURSE TITLE	CREDITS
SEMESTER 1		
BUS 225	Computer Applications in Business	3
ENG 119	English I	3
LBT 100	Introduction to Libraries and Service	3
SEMESTER TOTAL		**9**
SEMESTER 2		
ENG 120	English II	3
LBT 105	Library Technical Services and Acquisitions	3
LBT 200	Evaluating Information Sources	3
LBT 210	Library Technology	3
SEMESTER TOTAL		**12**
SEMESTER 3		
ENG 285	Children's Literature	3
LBT 215	Introduction to Media Management and Service	3
LBT 220	Library Internship	3
SPH 101	Fundamentals of Speech	3
SEMESTER TOTAL		**12**
CERTIFICATE TOTAL		**33**

Note: Certificate total hours may not include prerequisites.

LIGHT RAIL ENGINEERING TECHNOLOGY: ELECTROMECHANICAL

Associate of Applied Science (LRTEM-AAS)

About the Program

The Light Rail Engineering Technology: Electromechanical Associate of Applied Science degree is designed to provide students with in-depth instruction in the field of Light Rail Engineering Technology (LRT). The program will prepare students for employment in the expanding light rail industry developing in urban areas nationwide. Students will be prepared to sit for standardized railroad worker certification exams upon completing the program. The AAS degree in Light Rail Engineering Technology will allow a career path for maintaining and repairing railcars through a degree orientation in electromechanical equipment.

This program offers:

- LRT: Electromechanical Associate of Applied Science: **62** credit hours

Additional Concentrations in Light Rail Engineering Technology:

- Signaling and Communications A.A.S. (LRTSC-AAS) Degree: **63** credit hours
- Railroad Rules and Safety Short-Term College Certificate (RRSS-SCERT): **16** credit hours

Program Goals

- To prepare students with a foundational understanding of railroad rules, regulations, operating procedures and safety provisions
- To prepare a student to take an application exam on basic railroad knowledge and skills for employment in the railroad/light rail industry

Program Outcomes

- Demonstrate a basic understanding of the operation of railcar electromechanical systems
- Be able to diagnose and conduct troubleshooting and repairs of electromechanical systems on railcars
- Be prepared to take an examination on electromechanical maintenance and repair for employment in the railroad industry
- Demonstrate and have an understanding of railroad rules, regulations, operating procedures and safety provisions
- Be able to diagnose and conduct troubleshooting and repairs of electromechanical systems on railcars
- Be prepared to take an examination on electromechanical maintenance and repair for employment in the railroad industry

Admission Requirements

Students are required to do the following:

- Fulfill all WCCCD admission requirements
- Fulfill course placement requirements based on COMPASS assessment
- Complete WCCCD Program Application and submit to the Campus Academic Officer

LRT: Electromechanical: Associate of Applied Science
Recommended Sequence of Courses

CR. No.	COURSE TITLE	CREDITS
SEMESTER 1		
ENG 119	English I	3
EE 101	Circuit Analysis I	4
EE 107	Mathematics for Electrical/ Electronics I	4
LRT 101	Rail Transportation and Railroad Careers	3
SEMESTER TOTAL		**14**
SEMESTER 2		
ENG 134	Technical Communications	3
EE 102	Circuit Analysis II	4
EE 115	Mathematics for Electrical/ Electronics II	4
LRT 102	Railroad Rules, Regulations, Standards and Practices	3
SEMESTER TOTAL		**14**
SEMESTER 3		
CT 203	Digital Logic I	4
PHY 235	General Physics I	4
EE 111	Solid State Devices	3
SEMESTER TOTAL		**11**
SEMESTER 4		
MCT 203	Mechatronics II	3
LRT 201	Safety in the Railroad Workplace	3
LRT 202	Reading and Interpreting Railroad Diagrams	3
LRT 210	Railroad Pneumatics and Hydraulic Controls	3
SEMESTER TOTAL		**12**
SEMESTER 5		
LRT 220	Railroad HVAC Systems	4
LRT 230	Railroad Electromechanical Troubleshooting	4
PS 101	American Government	3
SEMESTER TOTAL		**11**
A.A.S. PROGRAM TOTAL		**62**

Note: Program total hours may not include prerequisites.

LIGHT RAIL ENGINEERING TECHNOLOGY: RAILROAD RULES AND SAFETY

• Short-Term Certificate (SCERT-RRS)

About the Program

The Light Rail Engineering Technology: Railroad Rules and Safety certificate is designed to prepare the student to work within the expanding passenger and freight railroad industry. Railroads employ a substantial workforce to service, maintain, operate and manage their transportation networks. While railroads are required by federal law to train their own employees, the basic safety concerns, rules, orders and regulations are all standardized in the industry. Students in this program will be exposed to these issues and be prepared to pass the standardized rail examinations required by each rail industry employer. Students will find employment with freight railroads, and passenger or light rail operations in railcar or track maintenance, dispatch, signaling, and many other related positions.

This program offers:

- Short-Term Certificate: **16** credit hours

Certificate Goals

- The program will allow for a basic understanding of the career opportunities within the railroad and light rail industry
- The program will prepare a student to have an understanding of railroad rules, regulations, operating procedures and safety provisions
- The program will allow a student to obtain an understanding of the operation of railcar systems and or signaling/communication systems at use in the railroad industry nationwide
- The program will prepare a student to take the standardized application exam on basic railroad knowledge and skills for employment in the railroad/light rail industry

Certificate Outcomes

- Demonstrate a basic understanding of the career opportunities within the railroad and light rail industry
- Demonstrate and have an understanding of railroad rules, regulations, operating procedures and safety provisions
- Be prepared to take and pass standard railroad rules and safety examinations

Admission Requirements

Students are required to do the following:

- Fulfill all WCCCD admission requirements
- Fulfill course placement requirements based on COMPASS assessment
- Complete WCCCD Program Application and submit to the Campus Academic Officer

Light Rail Engineering Technology: Railroad Rules and Safety: Short-Term Certificate Recommended Sequence of Classes

CR. No.	COURSE TITLE	CREDITS
SEMESTER 1		
LRT 101	Rail Transportation and Railroad Careers	.3
BUS 150	Introduction to Business	.3
CIS 110	Introduction to Computer Information Systems	.4
SEMESTER TOTAL		**.10**
SEMESTER 2		
LRT 102	Railroad Rules, Regulations, Standards and Practices	.3
LRT 201	Safety in the Railroad Workplace	.3
SEMESTER TOTAL		**.6**
CERTIFICATE TOTAL		**.16**

Note: Certificate total hours may not include prerequisites.

LIGHT RAIL ENGINEERING TECHNOLOGY: SIGNALING AND COMMUNICATIONS

Associate of Applied Science (LRTSC-AAS)

About the Program

The Light Rail Engineering Technology: Signaling and Communications degree is designed to provide students with in-depth instruction in the field of Light Rail Engineering Technology (LRT). The program will prepare students for employment in the expanding light rail industry to sit for standardized railroad worker certification exams for employment in the railroad industry maintaining and repairing rail line and railcars where signaling and communications systems are used.

This program offers:

- LRT: Signaling and Communications Associate of Applied Science: 63 credit hours

Program Goals

- The program will prepare a student to have a basic understanding of rules, regulations, operating procedures and safety provisions within the railroad and light rail industry
- Prepare a student to take an application exam on basic railroad knowledge and skills for employment in the railroad/light rail industry

Program Outcomes

- Demonstrate a basic understanding of the operation of a rail line and railcar signaling/communication systems
- Be able to diagnose and conduct troubleshooting and repairs on signaling and communications systems along rail lines and on railcars
- Be prepared to take an application exam on signaling and communications skills for employment in the railroad industry

Admission Requirements

Students are required to do the following:

- Fulfill all WCCCD admission requirements
- Fulfill course placement requirements based on COMPASS assessment
- Complete WCCCD Program Application and submit to the Campus Academic Officer

LRT: Signaling and Communications: Associate of Applied Science Recommended Sequence of Courses

CR. No.	COURSE TITLE	CREDITS
SEMESTER 1		
ENG 119	English I	.3
EE 101	Circuit Analysis I	.4
EE 107	Mathematics for Electrical/ Electronics I	.4
LRT 101	Rail Transportation and Railroad Careers	.3
SEMESTER TOTAL		**.14**
SEMESTER 2		
ENG 134	Technical Communications	.3
EE 102	Circuit Analysis II	.4
EE 115	Mathematics for Electrical/ Electronics II	.4
LRT 102	Railroad Rules, Regulations, Standards and Practices	.3
SEMESTER TOTAL		**.14**
SEMESTER 3		
CT 203	Digital Logic I	.4
PHY 235	General Physics I	.4
EE 111	Solid State Devices	.3
SEMESTER TOTAL		**.11**
SEMESTER 4		
MCT 203	Mechatronics I	.3
LRT 201	Safety in the Railroad Workplace	.3
LRT 240	Railroad Signaling and Switching	.4
TCM 203	Communications I	.3
SEMESTER TOTAL		**.13**
SEMESTER 5		
LRT 242	Railroad Communications	.4
LRT 250	Railroad Maintenance, Troubleshooting and Repair	.4
PS 101	American Government	.3
SEMESTER TOTAL		**.11**
A.A.S. PROGRAM TOTAL		**.63**

Note: Program total hours may not include prerequisites.

MANUFACTURING TECHNOLOGY

- College Certificate: (CERT-MANT)
- Short-Term Certificate: (SCERT-MANT)

About the Program

The Manufacturing Technology Associate of Applied Science program provides instruction that allows students to become familiar with and use the tools, materials, and processes needed in the manufacturing phase of industry. Students are also exposed to occupations in the manufacturing field. Program courses cover structure of industry, elements of manufacturing, mass production and automation, primary metals industry, casting metal, forging and forming metal, measuring and layout (English and/or metric), machining and finishing metal, fastening and finishing metal, cutting and shaping, assembling and finishing, and opportunities in manufacturing. Each unit includes specific objectives, student competencies and related student activities.

Certificate Goals

- To instruct students on how to apply critical thinking and analytical problem solving skills in an advanced manufacturing setting
- To prepare the student to successfully complete the National Institute of Metalworking Skills (NIMS) certification exams
- To teach students to adhere to industry safety standards and procedures

Certificate Outcomes: Manufacturing Technology

- Demonstrate knowledge of safety standards as they apply to all manufacturing environments
- Demonstrate ability to measure and gage parts accurately
- Demonstrate and apply proficient use of point-to-point measuring equipment as well as surface scanning
- Demonstrate an understanding of hard part machining
- Manage and develop quality control documentation to ensure part quality adheres to design and manufacturing intent

Certificate Outcomes: Metrology

- Understand the principles, history, and concepts of metrology
- Understand the critical tracking of data as it applies to measurement
- Understand and apply modern tools and standards in measurement systems
- Be able to document, graph and present results in a useful documentation format

Admission Requirements

Individuals interested in the Manufacturing Technology program are required to fulfill the following requirements:

- College admission requirements
- Declare their intent to enter the Manufacturing Technology program on the WCCCD Admission Application or change their intent within the admission office.
- Course placement requirements based on COMPASS assessment results
- Students must complete WCCCD Program Application and submit to the Campus President/CAO

Manufacturing Technology: College Certificate (CERT-MANT) Recommended Sequence of Courses

CR. No.	COURSE TITLE	CREDITS
SEMESTER 1		
CNC 111	Introduction to Computer Numerical Control	3
CNC 122	CNC Machine Controls	3
MAN 101	Manufacturing Processes I	3
MAN 105	Basic Metrology	3
SEMESTER TOTAL		**12**
SEMESTER 2		
CNC 230	CNC Design I	3
CNC 231	CNC Programming and Machining I	3
MAN 115	Manufacturing Processes II	3
MAN 205	Advanced Metrology	3
SEMESTER TOTAL		**12**
SEMESTER 3		
CNC 234	CNC Design II	3
CNC 235	CNC Programming and Machining II	3
SEMESTER TOTAL		**6**
SEMESTER 4		
MAN 215	Quality and Inspection	3
MAN 225	Introduction to Hard Machining	3
SEMESTER TOTAL		**6**
CERTIFICATE TOTAL		**36**

Note: Certificate total hours may not include prerequisites.

Metrology: Short-Term Certificate (SCERT-MANT) Recommended Sequence of Courses

CR. No.	COURSE TITLE	CREDITS
SEMESTER 1		
CNC 111	Introduction to Computer Numerical Control	3
MAN 101	Manufacturing Processes I	3
MAN 105	Basic Metrology	3
SEMESTER TOTAL		**9**
SEMESTER 2		
MAN 115	Manufacturing Processes II	3
MAN 205	Advanced Metrology	3
MAN 215	Quality and Inspection	3
SEMESTER TOTAL		**9**
CERTIFICATE TOTAL		**18**

Note: Certificate total hours may not include prerequisites.

MECHATRONICS TECHNOLOGY

• College Certificate: (CERT-MET)

About the Program

The Mechatronics Technology College Certificate is designed to prepare technicians through cross-training to work in the diverse fields of mechanical, electrical, and industrial automation. Mechatronics technology and industrial automation is a combination of mechanical systems, electrical systems, fluid power control systems and computer control technology with sensors, transducers and actuators which are integrated to perform some facet of manufacturing. Robot sensors, conveyor systems and software are all components of Computer Integrated Manufacturing (CIM) which is an outcome of Mechatronics. Students with this diverse set of skills are better prepared for the evolving manufacturing industry and will be trained to manufacture a product or perform a task with minimal human intervention through automation that best meets the changing needs of a global economy.

Students who complete the program are prepared for work in a variety of industries to include food processing, pulp and paper metals manufacturing and automated warehousing.

College Certificate Goals

- To prepare students for employment in the manufacturing industry through applied knowledge of manufacturing a product and/or perform a task with minimal human intervention through automation

College Certificate Outcomes

- Students will be able demonstrate their knowledge and application of mechanical systems, electrical systems, thermal systems and computer control technology to manufacturing technology design problems.
- Identify and demonstrate the ability to analyze and interpret the behavior of a physical system through experimentation
- Utilize computer software and hardware tools to create, predict and develop solutions to manufacturing industrial engineering problems
- Design, model and manufacture components, systems and/or processes necessary to meet product specifications for a competitive industrial industry

Admission Requirements

Students are required to do the following:

- Fulfill all WCCCD admission requirements
- Fulfill course placement requirements based on COMPASS assessment
- Complete WCCCD Program Application and submit to the Campus Academic Officer

Mechatronics Technology: College Certificate Recommended Sequence of Courses

CR. No.	COURSE TITLE	CREDITS
SEMESTER 1		
CT 203	Digital Logic	.4
CT 205	Introduction to Microprocessors	.4
EE 101	Circuit Analysis I	.4
EE 107	Math for E/E I	.4
SEMESTER TOTAL		**.16**
SEMESTER 2		
EE 102	Circuit Analysis II	.4
EE 111	Solid State Devices	.3
EE 115	Math for E/E II	.4
MCT 202	Introduction to Robotics	.3
MCT 208	Programmable Logic Controllers	.3
SEMESTER TOTAL		**.17**
SEMESTER 3		
MCT 203	Electrical Machinery and Controls	.3
MCT 207	Introduction to Hydraulics and Pneumatics	.2
MCT 212	Advanced Robotics	.3
MCT 215	Advanced Programmable Logic Controllers	.3
SEMESTER TOTAL		**.11**
CERTIFICATE TOTAL		**.44**

Note: Certificate total hours may not include prerequisites.

MEDICAL ADMINISTRATIVE SPECIALIST (MAS)

Associate of Applied Science Degree: (MAS-AAS)
• College Certificate: (MAS-CERT)

About the Program

The Medical Administrative Specialist Program prepares students for work in the office of a doctor, clinic, hospital, or for employment wherever knowledge of medical terminology, professional procedures and ethics is required. It also provides excellent preparation for administrative positions in any business. The status of Certified Medical Administrative Specialist can be acquired upon completion of the required job experience and written examinations. To graduate from the program, a student must receive a grade of C or higher in all program courses.

Career Potentials include, but are not limited to: Medical Administrative Assistant, Clinical Administrative Coordinator, Patient Appointment Scheduler, Medical Receptionist, Medical Records Clerk, Medical Secretary, Health Unit Coordinator, Medical Billing Specialist, Insurance Claims Processor, Program Assistant, Admitting/Discharge Clerk, Department/Clinic Assistant, and General Office Receptionist.

Program Goals:

- To understand all aspects of the Medical Administrative Specialist field including medical terminology as well as billing and coding
- To understand the different types of communication in the healthcare industry (therapeutic, doctor/patient, multi-cultural, electronic systems, etc.)

Program Outcomes:

After successful completion of Medical Administrative Specialist, you will be able to function as an important member of the healthcare team in the area of office administration. You will also learn how to do the following:

- Communicate in the healthcare industry, including therapeutic and multicultural communication
- Reduce occupational hazards in the workplace, including blood-borne pathogens.
- Safeguard patient confidentiality in the computerized medical office, discover the importance of the medical record, and learn the ambulatory use of the electronic medical record (EMR)
- Screen and take appropriate messages and fax confidential information
- Use different types of patient scheduling systems
- Recognize the contents of the medical record, including SOAP notes, consultations, discharge summaries and operative reports and distinguish what makes them accurate and complete
- Learn the aspects of payables and receivables and become familiar with bookkeeping and practice management software

After successful completion of Medical Billing and Coding, you will be able to do the following:

- Adhere to legal concepts, such as advance directive, living will, power of attorney, and guardianship
- Explain the HIPAA Privacy Rule
- Safeguard and disclose protected health information (PHI)
- Recognize the implications of health insurance fraud and abuse
- Discover the five models of managed care organizations
- Assign accurate codes from the ICD-9-CM, CPT, and HCPCS Level II coding manuals

Continued on next page.

Medical Administrative Specialist continued

- Assign accurate codes from the ICD-10-CM Official Draft Code Set
- Develop an insurance claim
- Use the electronic data interchange (EDI)
- Recognize health insurances delivered by private companies and government-sponsored program

Admission Requirements

- Students are admitted to the program during the Fall semester. Students must have the Program's approval, a completed application, and other required information submitted by the required due date. After the application deadline, any remaining openings will be filled on a first come basis to qualified applicants.

Students are required to do the following:

- Fulfill all WCCCD admission requirements
- Successfully complete a minimum of 12 college credits with a "C" or better and/or COMPASS scores that fulfill program requirements
- Declare intent to enter the Medical Administrative Specialist program on the WCCCD Application for Admission
- Must complete a physical exam and other health requirements
- Complete and pass a background check

Medical Administrative Specialist (MAS): Associate of Applied Science Degree Recommended Sequence of Courses

CR. No.	COURSE TITLE	CREDITS
PREREQUISITE COURSES		
ACC 100	Introduction to Accounting	3
ALH 110	Medical Terminology	3
BUS 225	Computer Applications in Business	3
ALH 115	Medical Computer System	3
PREREQUISITE TOTAL		**12**
SEMESTER 1 FIRST 7.5 WEEKS		
MBS 108	Medical Coding	3
MOS 120	Medical Office Management	3
MOS 140	Patient Case Management	3
SEMESTER 1 SECOND 7.5 WEEKS		
MBS 112	Medical Billing	3
SEMESTER TOTAL		**12**
SEMESTER 2 FIRST 7.5 WEEKS		
MBS 122	Advanced Coding	3
OIS 280	Office Administration and Professional Development	3
MOS 150	Medical Administrative Specialist Practicum	5
SEMESTER 2 SECOND 7.5 WEEKS		
MBS 124	Advanced Coding CPT	3
SEMESTER TOTAL		**14**
SEMESTER 3		
MBS 126	Medical Billing Practicum Experience	4
SEMESTER TOTAL		**4**
SEMESTER 4		
BIO 155	Introductory Biology	4
ENG 119	English I	3
PS 101	American Government	3
SEMESTER TOTAL		**10**
SEMESTER 5		
ENG 120	English II	3
PSY 101	Introductory Psychology	3
SOC 100	Introduction to Sociology	3
SEMESTER TOTAL		**9**
AAS DEGREE TOTAL		**61**

Medical Administrative Specialist (MAS): College Certificate Recommended Sequence of Courses

CR. No.	COURSE TITLE	CREDITS
SEMESTER 1 FIRST 7.5 WEEKS		
MBS 108	Medical Coding	3
MOS 120	Medical Office Management	3
MOS 140	Patient Case Management	3
SEMESTER 1 SECOND 7.5 WEEKS		
MBS 112	Medical Billing	3
SEMESTER TOTAL		**12**
SEMESTER 2 FIRST 7.5 WEEKS		
MBS 122	Advanced Coding	3
OIS 280	Office Administration and Professional Development	3
MOS 150	Medical Administrative Specialist Practicum	5
SEMESTER 2 SECOND 7.5 WEEKS		
MBS 124	Advanced Coding CPT	3
SEMESTER TOTAL		**14**
SEMESTER 3		
MBS 126	Medical Billing Practicum Experience	4
SEMESTER TOTAL		**4**
CERTIFICATE TOTAL		**30**

MEDICAL OFFICE SPECIALIST

- Short-Term Certificate: (SCERT-MES)

About the Program

This Medical Office Specialist Short-Term Certificate is a short-term program established to prepare students for employment in physician's offices, medical insurance companies and hospital offices. Some of the duties of a Medical Office Specialist include, but are not limited to, preparing patient insurance claims, processing accounts payable and accounts receivable, scheduling appointments, preparing patient files, coordinating the patient filing system, preparing medical correspondence, processing medical records, and scheduling hospital admissions.

Certificate Goals

- To prepare students to gain employment in a health care system or private practice medical office environment
- To prepare students with the complete skill set to assist a health care provider in all medical office, administration and support needs

Certificate Outcomes

- Apply customer service skills to interact professionally among clients, colleagues, and other health care professionals
- Utilize both oral and written skills to effectively communicate and interact with health care professionals, colleagues, administration and customers to enhance satisfaction
- Apply skills to find, build, research, manage and report both electronic and paper data efficiently
- Apply coding manual data to the billing process accurately

Continued on next page.

Medical Office Specialist continued

- Utilize knowledge and skills of medical terminology, code sets, reimbursement methodologies and regulations to accurately and thoroughly assign respective code sets
- Be able to compose well written medical correspondence
- Be able to maintain provider appointment schedules
- Understand all relevant medical terminology
- Establish and maintain accurate patient charts and electronic medical records with confidentiality
- Prepare insurance claims, referrals and prior authorizations accurately
- Perform medical billing, analyzing patient accounts and apply collection procedures
- Practice confidentiality, as well as legal and ethical standards

Admission Requirements

Students are required to do the following:

- Fulfill all WCCCD admission requirements
- Fulfill course placement requirements based on COMPASS assessment
- Complete WCCCD Program Application and submit to the Campus Academic Officer

Medical Office Specialist: Short-Term Certificate Recommended Sequence of Courses

CR. No.	COURSE TITLE	CREDITS
SEMESTER 1		
ALH 110	Medical Terminology	3
ALH 115	Medical Computer Systems	3
BUS 225	Computer Applications in Business	3
SPH 101	Fundamentals of Speech	3
ENG 119	English 1	3
SEMESTER TOTAL		**15**
SEMESTER 2		
MOS 120	Medical Office Management	3
OIS 251	Microsoft Word Specialist	3
OIS 252	Microsoft Excel Specialist	3
MOS 140	Patient Case Management	3
SEMESTER TOTAL		**12**
CERTIFICATE TOTAL		**27**

Note: Certificate total hours may not include prerequisites.

MENTAL HEALTH

- College Certificate: (MEH-CERT)

Visit this link for additional program information.
http://www.wcccd.edu/dept/MentHeal/MentHeal.html

About the Program

The Mental Health College Certificate programs studies the fundamentals of mental health with a concentration in such areas as group process, social science, psychopathology and preventive and rehabilitative therapies. Clinical and classroom training familiarizes students with the delivery of services to adult clients. Students also study interviewing techniques and the dynamics of interpersonal relationships. The curriculum is designed for those who desire employment in human service settings.

This program offers:

- College Certificate: **31-33** credit hours

College Certificate Goals

- Provide a basic foundation for students to serve Human Service clients and/or support human service agencies as paraprofessionals

College Certificate Outcomes

- Students will be able to demonstrate an applied understanding of the mental health profession to include trends in the delivery of human services and effective practices
- Identify, analyze and suggest appropriate strategies, services or intervention strategies when developing proper case evaluation plans
- Effectively communicate in written, verbal and interpersonal skills when managing information and utilizing data to support client services

Admission Requirements

Students are required to do the following:

- Fulfill all WCCCD admission requirements
- Fulfill course placement requirements based on COMPASS test
- Complete WCCCD Program Application and submit to the Campus Academic Officer

Mental Health: College Certificate Recommended Sequence of Courses

CR. No.	COURSE TITLE	CREDITS
SEMESTER 1		
MEH 100	Introduction to Mental Health	3
HUS 135	Professionalism in Human Services	3
SW 110	Case Management and Service Care Navigation	3
SEMESTER TOTAL		**9**
SEMESTER 2		
ADD 103	Co-Occurring Disorders	3
MEH 240	Psychopathology and Behavior I	3
SW 105	Field Instruction I	4
	—OR—	
	MEH 250 and MEH 251	6
SW 108	Case Documentation	2
SEMESTER TOTAL		**12-14**
SEMESTER 3		
MEH 120	Direct Care Services in Community Settings	3
MEH 135	Mental Health in Criminal Justice	3
SW 106	Field Instruction II	4
SEMESTER TOTAL		**10**
CERTIFICATE TOTAL		**31-33**

Note: Certificate total hours may not include prerequisites.

NURSING

Associate of Applied Science Degree: (NUR-AAS)

About the Program

The Nursing program at WCCCD offers an Associate of Applied Science degree in Nursing. Graduates of the Nursing program are eligible to take the National Council Licensure Examination for Registered Nurses (NCLEX-RN). Program requirements include specific courses in the nursing major and general education. All Nursing courses are 7.5 weeks. The Nursing program is designed to prepare graduates to provide nursing care as staff nurses in a variety of health care settings.

Program Goals

The goal of the nursing program is to produce accountable, adaptable generalists who are prepared to successfully take the NCLEX-RN exam and function as registered nurses in diverse care settings.

Program Graduate Outcomes

Upon successful completion of the WCCCD Nursing Program, the student will:

- Practice nursing with professional accountability
- Demonstrate communication competency in professional interactions
- Manage (leadership) health care resources and use the nursing process to meet the health needs of clients
- Demonstrate clinical reasoning (critical thinking) when planning care for our individuals, families and groups
- Integrate caring constructs into professional nursing activities
- Integrate teaching and learning principles into health promotion (quality improvement) activities for individuals, families and groups
- Collaborate with health care team members to promote health of individuals, families and groups
- Integrate knowledge (information management) from nursing and general education courses when providing nursing care to individuals, families and groups throughout the lifespan.
- Outcomes listed are not all-inclusive and are subject to change based on accreditation requirements

Application Requirements

The WCCCD Nursing program admits students twice a year in the Spring and Fall semesters. Admission is competitive and student selection is based on the following:

- High School transcript, copy of High School diploma or Certified GED scores showing date of completion
- Official transcripts from ALL colleges and universities previously attended, including WCCCD
- Two (2) original Reference Letters; one from employer and one personal reference, signed and dated within 60 days of application submission. If unemployed, submit two personal references. Letters written by family and WCCCD faculty or staff are not accepted
- Entrance exam scores
- Essay. Typed, signed and dated 500-1,000 word essay describing, ***"How I plan to be successful in completing the Nursing Program"***
- Background Check via www.certifiedbackground.com required upon acceptance to program
- A Student Recommendation Form, if an applicant has attended a nursing program at another college
- Current healthcare licenses or certifications from Michigan Department of Community Health (MCDH) with or without work experience
- Original Information Meeting Attendance Verification Form dated within a year of nursing application submission
- Completion of Nursing Program prerequisite courses

PLEASE NOTE: WCCCD Nursing Program does not accept the College Level Examination Program (CLEP) to fulfill any program requirements.

Students are also required to complete the following:

- Fulfill all of WCCCD admission requirements
- Fulfill WCCCD Nursing program admission requirements
- Pass a background check, drug screen, and other health requirements
- Complete WCCCD Program Application and submit to the Campus Academic Officer

Admission into the Nursing program is contingent upon all requirements being successfully met.

Degree Requirements

- Students must complete all coursework with a grade of "C" or better to meet graduation requirements

Nursing: Associate of Applied Science Degree Recommended Sequence of Courses

CR. No.	COURSE TITLE	CREDITS
PREREQUISITE COURSES		
ENG 119	English I	3
BIO 155	Introduction to Biology	4
*BIO 240	Human Anatomy and Physiology I	4
BIO 250	Human Anatomy and Physiology II	4
*BIO 295	Microbiology	4
PSY 101	Introductory Psychology	3
PREREQUISITE TOTAL		**22**

**BIO 155 is a prerequisite to BIO 240 and BIO 295*

CR. No.	COURSE TITLE	CREDITS
SEMESTER 1 FIRST 7.5 WEEKS		
NUR 110	Nursing Foundations	4
NUR 118	Physical Assessment	2
SEMESTER 1 SECOND 7.5 WEEKS		
NUR 112	Medical Surgical Nursing I	4
NUR 119	Pharmacology	2
SEMESTER TOTAL		**12**
SEMESTER 2		
DT 130	Introduction to Nutrition	3
NUR 114	Obstetric Nursing	3
NUR 116	Medical Surgical Nursing II	4
SEMESTER TOTAL		**10**
SEMESTER 3		
SOC 100	Introduction to Sociology	3
NUR 210	Psychiatric Nursing	3
NUR 212	Medical Surgical Nursing III	4
SEMESTER TOTAL		**10**
SEMESTER 4		
NUR 214	Pediatric Nursing	3
NUR 216	Medical Surgical Nursing IV	4
NUR 218	Nursing Issues, Transitions and Leadership	2
SEMESTER TOTAL		**9**
A.A.S. PROGRAM TOTAL		**63**

Note:
- *Program total hours include prerequisites and corequisites.*
- *Program totals do not include District remedial courses.*
- *Students must also complete College Degree Requirements in order to be eligible for graduation:*
  - *Complete at least 60 credit hours*
  - *A minimum of 15 credit hours of program requirements at WCCCD*
  - *PS 101 American Government (3 credit hours)*
  - *ENG 120 II (3 credit hours)*
  - *Have a minimum grade point average of 2.0 upon completion*
- *Students interested in transferring to a 4-year institution are encouraged to take the following courses*
  - *BIO 252 Pathophysiology (4 credit hours)*
  - *PSY 200 Lifespan Development (3 credit hours)*

Students should see an advisor for additional information.

NURSING ASSISTANT TRAINING

• Short-Term College Certificate: (SCERT-CNA)

About the Certificate

The Nursing Assistant Training is a short-term certificate comprised of one (1) ten credit hour course:

NURSING ASSISTANT TRAINING:
NHS 100 Nursing Assistant 10

Course Description:

This course provides the theory and skills necessary to assist professional health care providers in providing direct patient care. Candidates will receive training to provide care in the classroom, lab and long-term facility settings. The curriculum is modeled according to the State of Michigan guidelines. Nurse aide students taking this course will be expected to adhere to guidelines and standards that will help them to be successful in the workplace setting.

Upon successful completion of the course, students are eligible to take the Michigan Nurse Aide Examination for CNA Certification.

Admission Requirements

- A high school diploma or equivalent GED
- Certified in Basic Life Support (BLS)
- Negative criminal background check
- Current physical examination conducted by a MD, PA, DO, or NP
- Negative Tuberculosis Test (TB) that is valid throughout the program
- Completed Hepatitis B series or a signed declination form
- 14-panel urine drug screen
- Current immunizations
- Two letters of reference
- Complete WCCCD Program Application and submit to the Campus Academic Officer
- Seasonal Flu Vaccine
- Tetanus. Last date or evidence of current booster

The Nursing Assistant course is offered each semester. It is a 10 credit course consisting of 94 contact hours over a 3.5 to 5-week period of time. Clinical experience is provided in 24 contact hours. Lab skills are provided in a laboratory setting and consist of 30 hours and lecture content is provided over 40 hours. Clinical experiences are conducted in a long term care facility.

OFFICE INFORMATION SYSTEMS: E-BUSINESS

• Short-Term Certificate: (SCERT-EUS)
Associate of Applied Science Degree: (AAS-EBUS)

About the Program

The Office Information Systems E-Business Associate of Applied Science degree and Short-Term Certificate programs are designed to prepare students for successful careers as administrative assistants, in an e-Business environment. The program will prepare students to be proficient in the use of advanced computer programs, are capable of assuming some decision-making responsibilities, and are qualified to manage a business Web site. Students in e-Business develop a breadth of knowledge related to developing an e-business, including business-to-business (B2B) and business to customer (B2C) initiatives, and understanding the key e-business technologies.

Students are introduced to a variety of topics including assessing technical infrastructure requirements, understanding the impact of evolving legal and regulatory issues, strategies for obtaining funding, management, marketing and selling.

Students will obtain the skills needed to understand the e-commerce world, create e-commerce web sites and conduct business online.

This program offers:

- E-Business: Associate of Applied Science: **61** credit hours
- E-Business: Short-Term Certificate: **27** credit hours

Program Goals

- To teach student's fundamental marketing and management strategies pertaining to e-business
- To teach students proficiency in operating key e-business technologies
- To provide students knowledge of the financial, legal and regulatory issues in e-business

Program Outcomes

- Students will be able to demonstrate knowledge and competency in marketing and management strategies of e-business
- Understand and demonstrate proficiency in operating software and equipment related to e-business
- Demonstrate competency in applying Internet and Web search engine tools for locating information for selected projects
- Articulate and apply knowledge of marketing and management principles and the ethical, legal and regulatory compliance of e-business practices
- Demonstrate appropriate competency in interpersonal skills and attitudes for working in a business office environment

Certificate Goals

- To teach fundamental marketing and management concepts pertaining to e-business

Certificate Outcomes

- Understand issues related to e-business.
- Compare and contrast e-business with traditional business
- Identify, classify and demonstrate management activities for e-business
- Identify legal and ethical issues for e-business

Admission Requirements:

Students are required to do the following:

- Obtain an Education Development Plan (Plan of Work), outlining the student's plan for program completion from an academic advisor
- Complete 15 credits of required program courses, including BUS 150 or BUS 225
- Fulfill all WCCCD admission requirements
- Declare intent to enter this program on the WCCCD Application for Admission or change intent at the Admissions Office

Continued on next page.

OIS: E-Business continued

- Fulfill course placement requirements based on COMPASS assessment
- Complete WCCCD Program Application and submit to the Campus Academic Officer

Prerequisite Work

Prior to beginning the OIS courses, students must have computer competencies, which include the ability to key text at a minimum rate of 35 words per minute. These skills can be obtained from your life experiences or by completing the following courses such as: OIS 100, OIS 101 and OIS 102.

Program Requirements

- Students for the Office Information Systems program must have the academic preparedness and commitment to meet the rigorous course work for the program
- Students should follow the Recommended Sequence of Courses

OIS: E-Business: Short-Term Certificate
Recommended Sequence of Courses

CR. No.	COURSE TITLE	CREDITS
SEMESTER 1		
BUS 150	Introduction to Business	3
CIS 110	Introduction to Computer Information Systems	4
CIS 241	Internet Foundations	4
BL 201	Business Law I	4
SEMESTER TOTAL		**15**
SEMESTER 2		
BUS 228	Internet Web Page Design for Business Applications	3
CIS 250	E-Commerce Strategies and Practices	3
MGT 205	Management Principles	3
MKT 200	Principles of Marketing	3
SEMESTER TOTAL		**12**
CERTIFICATE TOTAL		**27**

Note: Certificate total hours may not include prerequisites.

OIS: E-Business:
Associate of Applied Science Degree
Recommended Sequence of Courses

CR. No.	COURSE TITLE	CREDITS
SEMESTER 1		
ENG 119	English I	3
CIS 110	Introduction to Computer Information Systems	4
BUS 150	Introduction to Business	3
SPH 101	Fundamentals of Speech	3
MAT 113	Intermediate Algebra	3
SEMESTER TOTAL		**16**
SEMESTER 2		
CIS 241	Internet Foundations	4
BUS 225	Computer Application in Business	3
MGT 205	Management Principles	3
PS 101	American Government	3
Elective:	English	3
SEMESTER TOTAL		**16**
SEMESTER 3		
BUS 228	Internet Web Page Design for Business Applications	3
BL 201	Business Law I	4
Elective:	Social Science	3
Elective:	Other	3
Elective:	Humanities	3
SEMESTER TOTAL		**16**
SEMESTER 4		
CIS 250	E-Commerce Strategies and Practices	3
MKT 200	Principles of Marketing	3
Elective:	Natural Science w/Lab	4
Elective:	Other	3
SEMESTER TOTAL		**13**
A.PROGRAM TOTAL		**61**

Note: Program total hours may not include prerequisites.

OFFICE INFORMATION SYSTEMS: OFFICE SPECIALIST

- College Certificate: (CERT-OS)

Associate of Applied Science Degree: (AAS-OS)

About the Program

The Office Information Systems Office Specialist Associate of Applied Science degree and College Certificate programs are designed to prepare students for a variety of certifications in the computer related industries. Students currently employed in this field can obtain the skills needed to advance in management positions in their career.

This program offers:

- Office Specialist Associate of Applied Science: **61** credit hours
- Office Specialist College Certificate: **30** credit hours

Program Goals

- To prepare students as skilled office information specialist, proficient in the operation of state-of-the-art equipment and software
- To teach students to appropriately utilize and accomplish work-related tasks accurately and proficiently in an office environment
- To provide students knowledge of the finance and legal aspects of the office environment
- To provide the foundation to prepare students to successfully pass the Microsoft Office Specialist certification exam administered by an independent Microsoft Office contractor

Program Outcomes

- Students will be able to successfully pass the Microsoft Office Specialist certification exam, given by an independent Microsoft Office contractor, with a proficiency score of 70% or higher
- Understand and demonstrate proficiency in applying basic application of Microsoft Office suite applications to manage information and solve problems.
- Demonstrate appropriate competency in interpersonal skills and attitudes for working in a business office environment
- Select, use and implement Internet and Web search engine tools for locating information for selected projects
- Apply critical thinking skills to solve problems through creative and appropriate methods

College Certificate Goals

- To prepare students to be proficient in and understand the functionality of Microsoft Office suite applications to manage information and solve problems

College Certificate Outcomes

- Understand and demonstrate competency in applying basic application of Microsoft Office suite applications
- Apply critical thinking skills to solve problems through creative and appropriate methods
- Demonstrate knowledge of and ability to implement Internet and Web search engine tools for locating information

Admission Requirements

Students are required to do the following:

- Obtain an Education Development Plan (Plan of Work), outlining the student's plan for program completion from an academic advisor
- Complete 15 credits of required program courses, including BUS 150 or BUS 225
- Fulfill all WCCCD admission requirements

Continued on next page.

OIS: Office Specialist continued

- Declare intent to enter this program on the WCCCD Application for Admission or change intent at the Admissions Office
- Fulfill course placement requirements based on COMPASS assessment
- Complete WCCCD Program Application and submit to the Campus Academic Officer

OIS: Office Specialist: College Certificate
Recommended Sequence of Courses

CR. No.	COURSE TITLE	CREDITS
SEMESTER 1		
BUS 150	Introduction to Business	.3
OIS 227	Desktop Publishing I	.3
BUS 225	Computer Application in Business	.3
BUS 240	Business Communication	.3
OIS 280	Office Administration and Professional Development	.3
SEMESTER TOTAL		**.15**
SEMESTER 2		
OIS 228	Desktop Publishing I	.3
OIS 251	Microsoft Word Specialist	.3
OIS 252	Microsoft Excel Specialist	.3
OIS 253	Microsoft PowerPoint Specialist	.3
OIS 254	Microsoft Access Specialist	.3
SEMESTER TOTAL		**.15**
CERTIFICATE TOTAL		**.30**

Note: Certificate total hours may not include prerequisites.

OIS: Office Specialist:
Associate of Applied Science Degree
Recommended Sequence of Courses

CR. No.	COURSE TITLE	CREDITS
SEMESTER 1		
ENG 119	English I	.3
BUS 225	Computer Application in Business	.3
BUS 150	Introduction to Business	.3
SPH 101	Fundamentals of Speech	.3
MAT 113	Intermediate Algebra	.3
SEMESTER TOTAL		**.15**
SEMESTER 2		
OIS 227	Desktop Publishing I	.3
OIS 280	Office Administration and Professional Development	.3
PS 101	American Government	.3
Elective:	Social Science	.3
Elective:	English	.3
SEMESTER TOTAL		**.15**
SEMESTER 3		
OIS 251	Microsoft Word Specialist	.3
OIS 252	Microsoft Excel Specialist	.3
OIS 228	Desktop Publishing II	.3
BUS 240	Business Communication	.3
Elective:		.3
SEMESTER TOTAL		**.15**
SEMESTER 4		
OIS 253	Microsoft PowerPoint Specialist	.3
OIS 254	Microsoft Access Specialist	.3
Elective:	Natural Science w/Lab	.4
Elective:	Humanities	.3
Elective:	Other	.3
SEMESTER TOTAL		**.16**
A.A.S. PROGRAM TOTAL		**.61**

Note: Program total hours may not include prerequisites.

PARALEGAL TECHNOLOGY

Associate of Applied Science Degree: (PART-AAS)

About the Program

The Paralegal Technology Associate of Applied Science degree program provides students with the educational background and training required to become a paralegal, legal assistant or legal aide, able to assist a licensed attorney in providing legal services to their clients. The program provides the knowledge and skills regarding the legal system and substantive and procedural law necessary to perform many routine legal processes under the supervision of a licensed attorney.

Program Goals

- To teach students to articulate the needs and goals of clients relevant to the skills required for a paralegal assistant meeting current and future needs and practices
- Provide students with an understanding of the roles and functions of paralegals in law firms and occupational settings
- Ability to use electronic software programs and technology, relevant to the profession, to conduct research and develop strategies for legal interpretation
- Understand, articulate and adhere to the ethical regulations and guidelines governing the legal profession

Program Outcomes

Students will be able to:

- Define and properly use terminology relating to areas of legal practice including civil, criminal, family, probate and estate, property, tort and business organizations
- Apply knowledge, critical thinking and skills in legal research, writing, concepts and terminology to interpret and process simple legal documents
- Critically evaluate and identify legal problems and procedures in various areas of substantive laws
- Evaluate and respond appropriately to situations requiring legal, moral and ethical judgment, evidence, facts and legal issues

Admission Requirements

To be admitted into the Paralegal Technology program students must:

- Fulfill all WCCCD admission requirements
- Declare program intent on the WCCCD admission application or change program intent at the campus admission office
- Fulfill course placement requirements based on the COMPASS assessment
- Complete and submit the WCCCD Program Application to the PLT Faculty Discipline Chair or designee
- Complete the following courses at WCCCD or obtain equivalent transfer credit for the following courses: ENG 119, PS 101, BUS 225, and SPH 101

Paralegal Technology:
Associate of Applied Science
Recommended Sequence of Courses

CR. No.	COURSE TITLE	CREDITS
SEMESTER 1		
ENG 119	English I	.3
MAT 113	Intermediate Algebra	.3
PLT 105	Legal Interviews and Investigation	.3
PLT 120	Legal Research Writing I	.3
PLT 135	Professional Responsibility/ Legal Ethics	.3
SEMESTER TOTAL		**.15**

Continued on next page.

Paralegal Technology continued

SEMESTER 2

ENG 120 English II 3
SPH 101 Fundamentals of Speech 3
—OR—
SPH 105 Improving the Speaking Voice 3
PLT 130 Law Office Procedures and Management 3
PLT 140 Business Organization and Corporation Law I 3
PLT 150 Legal Comp and Research II 3
SEMESTER TOTAL 15

SEMESTER 3

Elective: Humanities 3
PS 101 American Government 3
PLT 160 General Practice Survey 3
PLT 170 Probate Law and Practice 3
PLT 210 Administrative Law and Procedure 3
Elective: Social Science 3
SEMESTER TOTAL 18

SEMESTER 4

Elective: Natural Science with Lab 4
PLT 220 Criminal Law Practice and Procedure 3
PLT 245 Debtor Relief and Creditor Rights 3
Elective: Other 6
SEMESTER TOTAL 16
A.A.S. PROGRAM TOTAL 64
Note: Program total hours may not include prerequisites.

PATIENT CARE TECHNOLOGY

• Short-Term Certificate (SCERT-PCT)

About the Program

The Patient Care Technology Short-Term Certificate is designed to provide students with in-depth instruction in the field of Patient Care Technology (PCT). This program will prepare students for employment in the expanding area of patient care. Skills obtained will allow for work in a variety of settings from acute care to home care.

Successful completion of this program will allow graduates to sit for six **National Certification Exams** which include: **1)** the National Certified Patient Care Technician (NCPCT) Exam (after 1 year of employment as a PCT); **2)** the National Registered Title of Certified Electrocardiography Technician (NRCEKG) Exam (immediately after completing the program); **1)** the Certified Patient Care Technician/Assistant (immediately after completing the program); **4)** the National Certified Phlebotomy Technician (NCPT) Exam (after 1 year of employment as a PCT); **5)** the Phlebotomy Technician Certification (CPT) (upon completion of PLB 100 and PLB 105; and **6)** the National Registry of Emergency Medical Responder (EMR) Certification (upon completion of EMT 105).

Possessing the listed certifications provides the student with advanced skills, increased earning power and provide broader opportunities within the health care sector as options for employment.

Certificate Goals

- To prepare students for employment in the patient care technology industry through applied knowledge of patient caregiving
- To teach students the basic principles of safety as it relates to patient care in acute care facilities or home care
- To prepare students for six national certification exams

Certificate Outcomes

- Students will be able to identify and act upon basic patient care needs from taking vital signs to cleanliness and physical care of the patient
- Students will be able to perform electrocardiograms (EKGs)
- Students will be able to perform phlebotomy procedures (taking blood)
- Students will be able to perform CPR and first aid when necessary
- Students will be able to assist other medical professionals when necessary
- Students will be able to obtain individual credentialing through six national certification exams
- Students will be able to work independently or as a team member in patient care

Admission Requirements

Students are required to do the following:

- Fulfill all WCCCD admission requirements
- Fulfill course placement requirements based on COMPASS assessment
- Complete WCCCD Program Application and submit to the Campus Academic Officer
- Students must meet all health requirements
- Students must successfully pass a certified background check

Patient Care Technology: Short-Term Certificate Recommended Sequence of Classes

CR. No. COURSE TITLE CREDITS

SEMESTER 1

ALH 110 Medical Terminology 3
EMT 105 Medical First Responder 3
PLB 100 Introduction to Phlebotomy 3
SEMESTER TOTAL 9

SEMESTER 2

ALH 115 Medical Computer Systems 3
PLB 105 Phlebotomy Practicum 3
PCT 200 Introduction to Patient Care 5
SEMESTER TOTAL 11

SEMESTER 3

PCT 202 Patient Care Clinical 5
SEMESTER TOTAL 5
CERTIFICATE TOTAL 25
Note: Certificate total hours may not include prerequisites.

PHARMACY TECHNOLOGY

• College Certificate: (PAT-CERT)
Associate of Applied Science Degree: (PAT-AAS)

Visit this link for additional program information.
http://www.wcccd.edu/dept/PharTech/PharTech.html

About the Program

The Pharmacy Technology Associate of Applied Science degree and College Certificate programs are designed to prepare students for entry-level positions in general pharmaceutical services under the supervision of a licensed pharmacist. The pharmacy technician's responsibilities may include the preparation of medicines and assisting the pharmacist with the dispensing of medicines in accordance with standard procedures, laws, transcription of physicians orders, preparation of intravenous medications, maintaining inventory and patient profiles, and preparing bulk formulations.

The Pharmacy Technology Associate of Applied Science degree is a two-year degree program that allows for transfer to a four-year institution that offers a Bachelor of Science degree in pharmaceutical sciences. Students may choose to complete the certificate program accredited by the American society of Health System Pharmacists, secure employment, and/or continue their education.

This program offers:

- Associate of Applied Science: **89** credit hours
- College Certificate: **35** credit hours

Program Goals

• To teach students the policies and procedures governing hospital, retail and industrial pharmacy, to function and perform routine technical and clerical duties as a certified Pharmacy Technician

Program Outcomes

• Students will be able to demonstrate and apply knowledge of scientific concepts of anatomy, physiology and pharmacology as a pharmacy technician
• Students must pass coursework with a score of 80% or higher in order to be placed at clinical sites
• Perform accurate mathematical calculations necessary for the preparation and dispensing of a pharmaceutical product
• Effectively use computer software and technology, relevant to the pharmacy professional, to gather data, produce documents and process orders
• Effective use of written, oral and interpersonal communication skills when interacting with a diverse population of healthcare professionals and patients
• Understand, articulate and adhere to all ethical standards, moral and legal practices governing the profession
• The student may choose to take the national certification exam given by the Pharmacy Technician Certification Board as an option

College Certificate Goals

• To provide students a foundation into the policies and procedures governing pharmacies, to function and perform routine technical and clerical duties as a Pharmacist Technician

College Certificate Outcomes

• Students will proficiently pass coursework with a score of 80% or higher in order to be placed at clinical sites
• Perform accurate mathematical calculations necessary for the preparation and dispensing of a pharmaceutical product
• Effectively use computer software and technology, relevant to the pharmacy profession, to gather data, produce documents and process orders
• Effective use of written, oral and interpersonal communication skills when interacting with a diverse population of healthcare professionals and patients

Admission Requirements

Admission is competitive and based on academic performance, test scores and personal interviews. A limited number of students are admitted to the program each semester. Applications and other required information must be submitted prior to the start of class. Formal admission status must be achieved prior to enrollment. To be admitted into the Pharmacy Technology Program, students must complete the following:

• Fulfill all WCCCD admission requirements
• Possess a high school diploma or GED
• Declare program intent on the WCCCD Admission Application or change program intent in the campus Admissions Office
• Complete the Pharmacy Technician Admission Application and turn in the application to the program director
• Fulfill course placement requirements based on the COMPASS Test
• Submit two letters of reference: professional or personal
• Show proof of TB test
• Meet with a Pharmacy Technology Program representative
• Fulfill either of the following prerequisites:
Pass Pharmacy Technician Assessment Test (PTAT) with a score of 85% or higher
–OR–
Pass PHT 100 with a grade of "B" or better
• Successfully complete a criminal background check. (Source will be specified)
• Successfully pass a drug screening exam (Source will be specified)

Degree Requirements

• Students must complete all course work with a grade of "C" or better to meet graduation requirements

Pharmacy Technology: College Certificate Recommended Sequence of Courses

CR. No.	COURSE TITLE	CREDITS
PREREQUISITE COURSES		
PHT 100	Introduction to Pharmacy Technology	.3
PREREQUISITE TOTAL		**.3**

CR. No.	COURSE TITLE	CREDITS
SEMESTER 1		
PHT 105	Orientation to Pharmacy Technology	.5
PHT 115	Pharmaceutical Interpretations and Calculations	.5
SEMESTER TOTAL		**.10**
SEMESTER 2		
PHT 120	Drug Distribution Systems and Pharmacology	.5
PHT 135	Pharmacy Practice Settings	.5
SEMESTER TOTAL		**.10**
SEMESTER 3		
PHT 155	Pharmacy Technology Practicum	.7
PHT 220	Pharmacy Capstone Course	.5
SEMESTER TOTAL		**.12**
CERTIFICATE TOTAL		**.35**

Note: Certificate total hours may not include prerequisites.

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Pharmacy Technology continued

Pharmacy Technology: Associate of Applied Science Degree Recommended Sequence of Courses

CR. No.	COURSE TITLE	CREDITS
PREREQUISITE COURSES		
PHT 100	Introduction to Pharmacy Technology	3
BIO 155	Introductory Biology	4
ENG 119	English I	3
PS 101	American Government	3
BUS 225	Computer Applications in Business	3
PREREQUISITE TOTAL		**16**

CR. No.	COURSE TITLE	CREDITS
SEMESTER 1		
PHT 105	Orientation to Pharmacy Technology	5
PHT 115	Pharmaceutical Interpretations and Calculations	5
BIO 240	Human Anatomy and Physiology I	4
SEMESTER TOTAL		**14**
SEMESTER 2		
PHT 120	Drug Distribution Systems and Pharmacology	5
PHT 135	Pharmacy Practice Settings	5
BIO 250	Human Anatomy and Physiology II	4
SEMESTER TOTAL		**14**
SEMESTER 3		
PHT 155	Pharmacy Technology Practicum	7
PHT 220	Pharmacy Capstone Course	5
BIO 295	Microbiology	4
SEMESTER TOTAL		**16**
SEMESTER 4		
CHM 136	General Chemistry I	4
MAT 155	College Algebra	4
ECO 101	Principles of Economics I	3
PHL 211	Introduction to Logic	3
SEMESTER TOTAL		**14**
SEMESTER 5		
BIO 252	Pathophysiology	4
CHM 145	General Chemistry II	4
MAT 156	Trigonometry	4
ENG 120	English II	3
	—OR—	
ENG 270	Professional and Technical Writing	3
SEMESTER TOTAL		**15**
A.A.S. PROGRAM TOTAL		**89**

Note: Program total hours may not include prerequisites.

PHLEBOTOMY TECHNICIAN

• Short-Term Certificate: (SCERT-PLT)

Visit this link for additional program information.
http://www.wcccd.edu/dept/PhlebTech/PhlebTech.html

About the Program

The Phlebotomy Technician Short-Term Certificate program introduces students to the chief responsibilities of the position to include drawing blood and conducting other specimen collections. The phlebotomist must recognize any conditions that might alter collections, correlate types of lab tests to the written diagnosis, and communicate with both the laboratory and the patients to provide the best care possible. Graduates of the phlebotomy program will be competent in multiple skills of specimen collection, have a strong medical terminology background and possess excellent interpersonal skills.

Certificate Goals

- To provide students with the applied knowledge and technical skills to collect and process various blood, specimen and lab collections and procedures
- To prepare students to successfully pass the national certification exam as a registered phlebotomist

Certificate Outcomes

- Students will be able to apply proper phlebotomy technique to successfully collect, handle and process blood specimens including venipuncture and capillary punctures
- Proficiently perform basic laboratory testing procedures under appropriate supervision
- Effectively utilize appropriate personal protective devices and techniques to operate safely in a healthcare environment
- Effectively use computer software programs and technology, in a healthcare setting, to accomplish tasks of the profession
- Effective use of written, oral and interpersonal communication skills when interacting with patients, clients and healthcare professionals
- Understand, articulate and adhere to all ethical standards, moral and legal practices governing the profession
- Exhibit proficiency in successfully completing the national certification exam as a phlebotomist with a 75% or better proficiency rate

Admission Requirements

Students are required to complete the following:

- Fulfill all WCCCD admissions requirements
- Fulfill course placement requirements based on the COMPASS assessment
- Must be 18 years of age and possess a high school diploma or GED (copy required)
- After successfully completing PLB 100 with a “B” or better, the student must complete an Allied Health Application and declare program intent
- Successfully complete a criminal background check. *(Source will be specified)*
- Successfully pass a drug screening exam. *(Sources will be specified*
- Complete WCCCD Program Application and submit to the Campus Academic Officer

Certificate Requirements

- All science classes must be completed within (5) five years

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Phlebotomy Technician continued

Phlebotomy Technology: Short-Term Certificate Recommended Sequence of Courses

SEMESTER 1

ALH 110 Medical Terminology 3
ALH 115 Medical Computer Systems 3
PLB 100 Introduction to Phlebotomy 3*
PLB 110 Pediatric Phlebotomy 3*
SEMESTER TOTAL 12

SEMESTER 2

ALH 230 Medical Ethics 3
BIO 155 Introductory Biology 4
PLB 105 Introduction to Phlebotomy II Practicum 3**
SEMESTER TOTAL 10
CERTIFICATE TOTAL 22

Note: Certificate total hours may not include prerequisites.
***Prerequisite for course*

PRE-ENGINEERING

Associate of Science Degree: (PREE-AS)

About the Program

The Pre-Engineering Associate of Science degree program is designed to provide the first two-years of an engineering program whose credits will transfer to a four-year college of engineering program. Adjustments in the listed recommended program may be necessary to meet the requirements of other colleges or universities for special fields of engineering. Students should contact the institution they intend to transfer to ensure that they will have the necessary courses to transfer.

Program Goals

- To provide the foundation and prepare engineering science majors to transfer to a four-year baccalaureate degree program.

Program Outcomes

- Students will be able to understand the basic principles of the physical sciences.
- Demonstrate an understanding of the major concepts of differential and integrated calculus.
- Prepare, write, document and describe a computer program.

Admission Requirements

Students are required to fulfill the following requirements:

- Fulfill all WCCCD admission requirements
- Declare intent to enter the Pre-Engineering program on WCCCD Admission Application or change intent at the Admissions Office.
- Fulfill course placement requirements based on COMPASS assessment.
- Complete WCCCD Program Application during the second semester in which they are enrolled and submit to the Campus Academic Officer.

Pre-Engineering Program Associate of Science Recommended Sequence of Courses

CR. No.	COURSE TITLE	CREDITS
SEMESTER 1		
CHM 136	General Chemistry I	.4
ENG 119	English I	.3
MAT 171	Calculus I	.4
Elective:	Social Science	.3
SEMESTER TOTAL		**.14**
SEMESTER 2		
CIS 209	C Programming Language	.4
ENG 120	English II	.3
MAT 172	Calculus II	.4
Elective:	Humanities	.3
SEMESTER TOTAL		**.14**
SEMESTER 3		
MAT 271	Analytic Geometry and Calculus III	.4
Elective:	Natural Science	.4
PHY 265	Physics for Scientists and Engineers I	.4
SEMESTER TOTAL		**.12**
SEMESTER 4		
Elective:	Humanities	.3
MAT 272	Linear Algebra	.4
PHY 275	Physics for Scientists and Engineers II	.4
SPH 101	Fundamentals of Speech	.3
SEMESTER TOTAL		**.14**
SEMESTER 5		
MAT 273	Differential Equations	.4
PS 101	American Government	.3
Elective:	Social Science	.3
SEMESTER TOTAL		**.10**
A.S. PROGRAM TOTAL		**.64**

Note: Program total hours may not include prerequisites.

PRE-MORTUARY SCIENCE

Associate of Applied Science Degree: (AAS-MS)

About the Program

Pre-Mortuary Science Associate of Applied Science degree program prepares students for entrance into a mortuary science program and an eventual career as a mortician. This program is designed in accordance with the Mortuary Science program at Wayne State University, which is the only institution in Michigan that prepares students for State certification in mortuary science. Because entrance into the WSU program is competitive, a minimum requirement for application is completion of at least 68 credit hours with a grade of 'C' or better as outlined in the WSU graduate bulletin.

Program Goals

- To educate and develop students in all phases of funeral service to meet and exceed the standards of care in dealing with the health, safety and care associated in the preparation and care of the deceased
- To provide a general in a Pre-Mortuary Science Associate of Applied Science studies as the precursor for a declared four-year degree

Program Outcomes

- Students will be able to successfully complete the Pre-Mortuary Associate of Applied Science program of study with a "C" average or higher as a foundation to transfer to WSU or other four-year baccalaureate institutions
- Develop and demonstrate proficient and the technical skills in the ethical care of human remains
- Articulate, apply and practice federal, state and local regulatory guidelines to situations pertaining to the mortuary science profession

Continued on next page.

Pre-Mortuary Science continued

- Demonstrate applied knowledge of funeral service emphasizing and exhibiting high ethical, moral, community and personnel performance and integrity standards as they apply to the profession

Admission Requirements

Students are required to fulfill the following requirements:

- Fulfill all WCCCD admission requirements
- Declare intent to enter the Pre-Mortuary Science Program on the WCCCD admission application or change intent at the campus admission office
- Fulfill course placement requirements based on COMPASS assessment
- Complete WCCCD Program Application and submit to the Campus Academic Officer
- Complete prerequisite coursework with a "C" or better and a grade point average (GPA) of 2.50 on a 4.00 scale

Pre-Mortuary Science: Associate of Applied Science Recommended Sequence of Courses

CR. No.	COURSE TITLE	CREDITS
SEMESTER 1		
ENG 119	English I	3
SOC 100	Introduction to Sociology	3
BIO 155	Introductory Biology	4
Elective:	Humanities	3
SEMESTER TOTAL		**13**
SEMESTER 2		
ENG 120	English II	3
SOC 120	Death and Dying	3
BIO 240	Human Anatomy and Physiology I	4
BUS 150	Introduction to Business	3
SEMESTER TOTAL		**13**
SEMESTER 3		
SPH 101	Fundamentals of Speech	3
ACC 110	Principles of Accounting I	4
BIO 250	Human Anatomy and Physiology II	4
BUS 240	Business Communications	3
SEMESTER TOTAL		**14**
SEMESTER 4		
CHM 105	Introduction to Chemistry	4
BIO 295	Microbiology	4
BUS 225	Computer Applications in Business	3
PHL 221	Ethics	3
SEMESTER TOTAL		**14**
SEMESTER 5		
CHM 155	Survey Organic and Biochemistry	4
PS 101	American Government	3
BL 201	Business Law	4
Elective:	Other	3
SEMESTER TOTAL		**14**
A.A.S. PROGRAM TOTAL		**68**

Note: Program total hours may not include prerequisites.

PRE-PHYSICIAN ASSISTANT

Associate of Applied Science Degree: (PPA-AAS)

About the Program

The Pre-Physician Assistant program is designed to prepare students for transfer to a Physician Assistant program at a four-year college or university. The curriculum is academically rigorous and provides the knowledge base necessary to complete the baccalaureate degree and continue to the master's degree level physician assistant curriculum.

Program Goals

- To prepare the student with the knowledge and foundation in preparation of a four year baccalaureate degree
- To prepare a student as an entry level Paramedic
- To serve as a vital link in the chain of the health care team
- To deliver the knowledge and skills necessary to provide medical care
- To prevent and reduce mortality and morbidity due illness and injury for emergency patients in the out-of-hospital setting

Program Outcomes

- Recognize the nature and seriousness of the patient's condition or extent of injuries to assess requirements for emergency medical care
- Administer appropriate emergency medical care based on assessment findings of the patient's condition
- Properly and safely lift, move, position and handle the patient to minimize discomfort and prevent further injury
- Provide a service in an environment requiring special skills and knowledge in such areas as communications, transportation and record keeping
- Perform safely and effectively the expectations of the position description
- Commitment to life-long learning

Admission Requirements

Students are admitted to the program each year for the Fall, Spring and Summer semesters. Students must have the Program's approval, a completed application, and other required information submitted by the due date. If there are openings after the application deadline, any remaining openings will be filled on a first come basis to qualified applicants.

Students are required to do the following:

- Fulfill all WCCCD admission requirements
- Successfully complete a minimum of 12 college credits with a "C" or better and/or COMPASS scores that fulfill program requirements
- Must be 18 years of age or older
- Must complete physical exam and other health requirements
- Complete background check
- Complete WCCCD Program Application and submit to the Campus Academic Officer

Based upon Michigan Law

Students applying for admission to the Pre-Physician Assistant program will be subject to a criminal background check, the results of which could preclude an applicant from admission to Wayne County Community College District's Pre-Physician Assistant Program on the basis of any of the following:

- A felony conviction or conviction for an attempt or conspiracy to commit a felony within the past 15 years
- Any misdemeanor conviction involving abuse, neglect, assault, battery or criminal sexual conduct within the past 10 years
- Any misdemeanor conviction involving fraud or theft against

Continued on next page.

Pre-Physician Assistant continued

Pre-Physician Assistant: Associate of Applied Science Recommended Sequence of Courses

CR. No.	COURSE TITLE	CREDITS
SEMESTER 1		
ALH 110	Medical Terminology	.3
ENG 119	English I	.3
Elective:	Humanities	.3
SOC 100	Introduction to Sociology	.3
SEMESTER TOTAL		**.12**
SEMESTER 2		
ALH 230	Ethics for Allied Health	.3
BIO 155	Introductory Biology	.4
ENG 120	English II	.3
Elective:	Social Science	.3
SEMESTER TOTAL		**.13**
SEMESTER 3		
BIO 240	Human Anatomy and Physiology	.4
CHM 136	General Chemistry	.4
DT 130	Fundamentals of Nutrition	.3
SPH 101	Fundamentals of Speech	.3
SEMESTER TOTAL		**.14**
SEMESTER 4		
BIO 250	Human Anatomy and Physiology II	.4
CHM 145	General Chemistry II	.4
Elective:	Humanities	.3
PS 101	American Government	.3
SEMESTER TOTAL		**.14**
SEMESTER 5		
BIO 295	Microbiology	.4
CHM 155	Survey Organic and Biochemistry	.4
SEMESTER TOTAL		**.8**
A.A.S. PROGRAM TOTAL		**.61**

Note: Program total hours may not include prerequisites.

Special Note: *Students without health care experience are recommended to participate in Emergency Medical Technology certificate programs in addition to Pre-Physician Assistant transfer degree curriculum.*

PRE-SOCIAL WORK

Associate of Arts Degree: (PSW-AA)

About the Program

The Pre-Social Work Associate of Arts degree program provides a broad based two year Associate of Arts (A.A.) degree curriculum. The Pre-Social Work program is designed to:

- Provide a foundation in liberal arts coursework leading to a BSW degree at select four-year institutions
- Prepare students for culturally competent, ethical, effective and accountable generalist social work practice
- Provide academic support for the successful completion of the Pre-Social Work Associate of Arts degree while preparing for future educational and employment opportunities.
- Instill a knowledge base of the basic foundations of social work practice: purpose and mission, sanctions, values and ethics, knowledge and methods and skills

Program Goals

- To teach students to use the Social Work Mission while improving the social functioning and well-being of clients
- To teach students the Code of Ethics according to the National Association of Social Workers
- To instill in students the value and knowledge of advocacy for their clients

Program Outcomes

- Students will be able to implement themes of the Social Work Mission while assessing clients
- Students will be able to navigate through the Code of Ethics, while employing the most appropriate ethics
- Students will learn about various social programs, services, activities, agencies, organizations, and institutions which will be useful in advocating for clients

Admission Requirements

Students are required to do the following:

- Fulfill all WCCCD admission requirements
- Complete all prerequisite requirements
- Possess a high school diploma or GED
- Declare intent to enter the Pre-Social Work Program on the WCCCD Application for Admission
- Fulfill course placement requirements based on COMPASS assessment.
- Complete prerequisite courses with a grade "C" or better
- Submit a human service program application to the assistant dean or designate who administers the Pre-Social Work Program before the ninth week of the Fall or Winter semesters.
- Complete an Individual Education Plan

Pre-Social Work: Associate of Arts Degree Recommended Sequence of Courses

CR. No.	COURSE TITLE	CREDITS
SEMESTER 1		
ENG 119	English I	.3
MAT 155	College Algebra	.4
PS 101	American Government	.3
SOC 103	Social Problems	.3
SEMESTER TOTAL		**.13**
SEMESTER 2		
ENG 120	English II	.3
MAT 156	Trigonometry	.4
PSY 101	Introductory Psychology	.3
SW 101	Introduction to Field Practice of Social Work – Practicum	.5
SEMESTER TOTAL		**.15**
SEMESTER 3		
ANT 152	Introduction to General Anthropology	.3
Elective:	Foreign Language 100	.4
HUM 101	Introduction to the Visual Arts	.3
	----OR----	
HUM 102	Introduction to the Performing Arts	.3
SEMESTER TOTAL		**.10**
SEMESTER 4		
SOC 230	Ethnic Minorities	.3
Elective:	Foreign Language 100	.4
ECO 101	Principles of Economics I	.3
PSY 220	Child Growth and Development	.3
SEMESTER TOTAL		**.13**
SEMESTER 5		
BIO 155	Introductory Biology	.4
PHL 211	Introduction to Logic	.3
Elective:	Foreign Language 100	.4
SPH 101	Fundamentals of Speech	.3
SEMESTER TOTAL		**.14**
A.A. PROGRAM TOTAL		**.65**

Note: Program total hours may not include prerequisites.

PRODUCT DEVELOPMENT PROTOTYPING

Associate of Applied Science Degree: (PDP-AAS)

- Introduction to Rapid Prototyping Short-Term Certificate (PDP-SCERT)
- Advanced Rapid Prototyping Short-Term Certificate: (PDP-SCERT)

About the Program

This program introduces students to product development and prototyping opportunities with emphasis on core design concepts, testing analysis, and rapid prototyping through the use of modern graphic software, laser scanning technology, and industry standard rapid prototyping equipment. This program is well suited for students looking for a career in product development, current professionals who want to update their skill level, as well as entrepreneurs interested in working to develop their own ideas and products.

This Program Offers:

- Associate of Applied Science Degree: **60** credit hours
- Introduction to Rapid Prototyping Short-Term Certificate: **24** credit hours
- Advanced Rapid Prototyping Short-Term Certificate: **21** credit hours

Program Goals

- Introduce students to the broad scope of the product development process from concept to production
- Understand the necessity for product prototyping and testing as part of the design and product development process

Program Outcomes

- Demonstrate knowledge of the product design process
- Understand and be able to articulate the material and production processes
- Exhibit the ability to capture design intent through various sketching and design processes
- Accurately capture product functionality in modern design software
- Generate accurate prototype parts for testing and analysis
- Initiate and implement design modifications as the part evolves from concept to producible product
- Be able to generate reports throughout the various stages of product development and design testing

Certificate Goals

- Provide product prototyping skills used in additive manufacturing to beginning and/or advanced students preparing them for beginning or advanced employment opportunities

Certificate Outcomes: Introduction to Rapid Prototyping

- Accurately capture product functionality in modern design software
- Generate accurate prototype parts for testing and analysis
- Initiate and implement design modifications as the part evolves from concept to producible product
- Be able to generate reports throughout the various stages of product development and design testing
- Demonstrate knowledge of the product design process
- Understand and be able to articulate the material and production processes
- Exhibit the ability to capture design intent through various sketching and design processes

Certificate Outcomes: Advanced Rapid Prototyping

- Accurately capture product functionality in modern design software
- Generate accurate prototype parts for testing and analysis
- Initiate and implement design modifications as the part evolves from concept to producible product
- Be able to generate reports throughout the various stages of product development and design testing

Admission Requirements

Students are required to do the following:

- Fulfill all WCCCD admission requirements
- Fulfill course placement requirements based on COMPASS test
- Declare intent to enter the Computer Numerical Control Program
- Students must complete WCCCD Program Application and submit to the Campus President/CAO

Product Development Prototyping: Associate of Science Degree
Recommended Sequence of Courses

CR. No.	COURSE TITLE	CREDITS
SEMESTER 1		
ART 101	Drawing I	3
PDP 100	Introduction to Rapid Prototyping	3
PDP 105	Product Development Process	3
PDP 110	Design Concepts I – 2D Graphics	3
SEMESTER TOTAL		**12**
SEMESTER 2		
ART 111	Design I	3
PDP 115	Introduction to 3D Printing	3
PDP 120	Introduction to Model Surfacing	3
PDP 150	Design Concepts II – 3D Graphics	3
SEMESTER TOTAL		**12**
SEMESTER 3		
ART 112	Design II	3
ENG 119	English I	3
MAT 113	Intermediate Algebra	3
PS 101	American Government	3
SEMESTER TOTAL		**12**
SEMESTER 4		
ENG 134	Technical Communications	3
PDP 200	Advanced Rapid Prototyping	3
PDP 205	3D Surface Scanning	3
PDP 210	Design Concepts III – Assembly	3
SEMESTER TOTAL		**12**
SEMESTER 5		
PDP 225	Surface – Quality Control	3
PDP 250	Reverse Engineering	3
NS REQ	Natural Science	3
SS REQ	Social Science	3
SEMESTER TOTAL		**12**
A.S. PROGRAM TOTAL		**60**

Note: Program total hours may not include prerequisites.

Introduction to Rapid Prototyping: Short-Term Certificate
Recommended Sequence of Courses

CR. No.	COURSE TITLE	CREDITS
SEMESTER 1		
ART101	Drawing I	3
PDP100	Introduction to Rapid Prototyping	3
PDP105	Product Development Process	3
PDP110	Design Concepts I – 2D Graphics	3
SEMESTER TOTAL		**12**
SEMESTER 2		
ART111	Design I	3
PDP115	Introduction to 3D Printing	3
PDP120	Introduction to Model Surfacing	3
PDP150	Design Concepts II – 3D Graphics	3
SEMESTER TOTAL		**12**
CERTIFICATE TOTAL		**24**

Note: Certificate total hours may not include prerequisites.

Advanced Rapid Prototyping: Short-Term Certificate
Recommended Sequence of Courses

CR. No.	COURSE TITLE	CREDITS
SEMESTER 1		
ENG134	Technical Communications	3
PDP200	Advanced Rapid Prototyping	3
PDP205	3D Surface Scanning	3
PDP210	Design Concepts III – Assembly	3
SEMESTER TOTAL		**12**
SEMESTER 2		
ART112	Design II	3
PDP225	Surface – Quality Control	3
PDP250	Reverse Engineering	3
SEMESTER TOTAL		**9**
CERTIFICATE TOTAL		**21**

Note: Certificate total hours may not include prerequisites.

PROJECT MANAGEMENT

• College Certificate: (CERT-PRM)

Visit this link for additional program information.
http://www.wcccd.edu/dept/ProjectMgt/ProjectMgt.html

About the Program

The Project Management Certificate will provide students with the information and skills necessary to secure an entry level position managing projects in business and industries such as IT, business, health care and others. The courses will provide the required contact hours and information needed to take the Project Management Professional (PMP) exam. Upon completion of the certificate program students will understand beginning, intermediate and advance project management software.

Students will learn skills necessary for the occupational positions which include, but are not limited to: Associate Project Manager, Project Manager, Program Manager, Scheduling Technician, and IT Specialist/Project Manager.

College Certificate Goals

- To provide students with a basic foundation of theory and practice of project management as it relates to project management positions in business, IT, healthcare and others

College Certificate Outcomes

- Students will be able to initiate, plan, execute, monitor, control and close a specified project to completion
- Meet the educational requirements to become certified by taking the Project Management Professional (PMP) exam with a 70% or higher proficiency score
- Identify, describe and explain appropriate techniques for oral, written and electronic communication vehicles when communicating with team members and stakeholders

Admission Requirements

Students are required to do the following:

- Fulfill all WCCCD admission requirements
- Fulfill course placement requirements based on COMPASS assessment
- Complete WCCCD Program Application and submit to the Campus Academic Officer

Project Management: College Certificate Recommended Sequence of Courses

CR. No.	COURSE TITLE	CREDITS
SEMESTER 1		
BUS 150	Introduction to Business	3
CIS 110	Introduction to Computer Information System Services	4
PRM 101	Introduction to Project Management	3
SEMESTER TOTAL		**10**
SEMESTER 2		
BUS 240	Business Communication	3
CIS 112	Structured Designed	3
PRM 105	Project Management Tools	3
SEMESTER TOTAL		**9**
SEMESTER 3		
CIS 203	Visual Basic	3
PRM 210	Intermediate Project Management Methods	3
PRM 215	IT Project Management	3
SEMESTER TOTAL		**9**
SEMESTER 4		
CIS 120	Introduction to Database Concepts	3
MAT 155	College Algebra	4
PRM 220	Advanced Concepts in Project Management	3
SEMESTER TOTAL		**10**
CERTIFICATE TOTAL		**38**

Note: Certificate total hours may not include prerequisites.

RENEWABLE ENERGY

• Short-Term Certificate: (SCERT-RNW)

About the Program

The Renewable Energy Short-Term Certificate is designed to provide students with the theoretical knowledge necessary for a career in energy management and renewable energy technology fields. Students acquire hands-on skills in troubleshooting, maintenance, installation, operation and repair and replacement of related equipment. The program addresses the need for an alternative career track for students to pursue careers in the renewable energy field.

The certificate requires a minimum of 25 credits of coursework. Students may choose from online and face-to-face courses in several areas of emphasis including, photovoltaic, solar thermal, and wind.

Certificate credits may be combined with additional coursework to enhance traditional degree, transfer and associate programs at WCCCD. The credits also may be combined with additional training, job experience and/or professional examinations to qualify for certification by national renewable energy institutions.

Certificate Goals

- To teach and provide students with the knowledge and skills for entry-level employment opportunities in the industry
- To provide students currently employed in the industry with knowledge and skills relevant to technology as well as a broader understanding of the scientific, economic and political context of the industry
- To provide current practitioners with continued learning education in renewable energy/energy efficiency field as a precursor towards a two-year associate's degree or four-year baccalaureate degree program

Certificate Outcomes

- Students will be able to demonstrate basic principles of energy efficiency and conservation
- Identify, troubleshoot and repair and maintain equipment efficiency

Admission Requirements

Students are required to do the following:

- Fulfill all WCCCD admissions requirements
- Declare intent to enter the Renewable Energy Certificate program by completing a Program Application
- Indicate intent on the college application form
- Fulfill course placement requirements based on the COMPASS assessment
- Fulfill all prerequisites with a grade of "C" or better
- Must be 18 years of age and possess a high school diploma or GED (copy required)

Renewable Energy: Short-Term Certificate Recommended Sequence of Courses

CR. No.	COURSE TITLE	CREDITS
SEMESTER 1		
RET 100	Renewable Energy/Alternative Energy Principles	4
RET 140	Energy and Electricity	3
RET 142	Wind Power	3
SED 100	Principles of Sustainable Environmental Design	3
SEMESTER TOTAL		**13**
SEMESTER 2		
RET 120	Conventional Energy Sources and Application	3
RET 144	Solar Power	3
RET 146	Geothermal and Hydropower	3
SED 148	Sustainable Systems	3
SEMESTER TOTAL		**12**
CERTIFICATE TOTAL		**25**

Note: Certificate total hours may not include prerequisites.

SURGICAL TECHNOLOGY

Associate of Applied Science Degree: (SURT-AAS)

About the Program

The Surgical Technology and Surgical Assisting programs are accredited by the Commission on Accreditation of Allied Health Education programs (www.caahep.org) upon the recommendation of the Accreditation Review Council on Education in Surgical Technology and Surgical Assisting. The curriculum is designed to enable the student to perform a variety of duties, as well as provide technical support to the surgical team in the operating room before, during and after surgery. The surgical technologist is trained to maintain a sterile and safe surgical environment. Duties may include, but are not limited to, preparing sterile supplies; equipment, instruments, and drapes for surgical procedures, assisting the surgical team with gowning and gloving, and positioning patients for surgery, passing instruments, sponges, sutures and other supplies to the surgeon or the assistant, preparing specimens for laboratory analysis, sterilizing equipment, etc.

The Surgical Technology program offers:

1. Surgical Technology Associate of Applied Science Degree (SURT-AAS): **68-72** credit hours
2. Accelerated Alternative Delivery (AAD) (AAD-CERT): **22** credit hours
3. Central Service Technician Certificate (SCERT SURT): **10** credit hours
4. First Assistant College Certificate (CERT-SFA): **36** credit hours

Program Goals

- To prepare students with the knowledge and technical skills to effectively perform as a team member of the surgical team unit under the direct supervision of a doctor or registered nurse
- To prepare students to proficiently exercise the duties and responsibilities including peri-operative preparation, equipment supply, sterilization and post-operative procedures
- To prepare students to successfully pass the National Certifying Examination for Surgical Technologists.

Program Outcomes

- Students will be able to demonstrate and apply technical competency as it applies to the surgical technology profession
- Exhibit proficiency in successfully completing the National Certifying Examination for Surgical Technologists with a 80% or better proficiency rate
- Demonstrate expertise in the application of sterile and aseptic technique
- Apply principles of pharmacology as related to the Surgical Technologist
- Demonstrate critical thinking skills during peri-operative procedural management according to the facility policies, procedures and surgeon preferences
- Perform competently in the Scrub and Circulator role in accordance with Association of Surgical Technologists (AST) standards
- Maximize patient safety by facilitating a safe surgical environment
- Demonstrate self-direction and responsibility for maintaining surgical competency
- Effective use of written, oral and interpersonal communication skills operating as a member of a diverse team of medical professionals
- Incorporate the safety principles, practices and standards regulations as governed by the profession

Admission Requirements

To be admitted into the Surgical Technology program, students are required to complete the following:

- Fulfill all WCCCD admission requirements
- Be 18 years of age or older and have a high school diploma or GED
- If required, fulfill course placement requirements based on the COMPASS scores
- Declare intent to enroll in the Surgical Technician program by submitting an Allied Health Department application to the program director
- Must complete criminal background check, physical exam, Hepatitis B (HBV) shots, and other health requirements
- Complete all prerequisites with a grade of "C" or better
- Possess current AHA Healthcare Provider Basic Life Support (BLS)/CPR card
- Submit official transcripts from previous institutions
- Submit three letters of recommendation: two professional and one personal.
- Valid State Picture I.D.
- Meet with the Program Director to review and complete paperwork
- Complete WCCCD Program Application and submit to the Campus Academic Officer

Note: *If COMPASS scores are lower in any area, provide a transcript of the recommended course(s) completed with a "B" or better. All program applications are reviewed by the Surgical Technology Department Admissions Committee. Students who have completed the Central Service Technician program prior to application to the Surgical Technology Program are given preference. Students must submit all paperwork by July 15th for the start of the Fall Semester. Students beginning the program in the Spring Semester should submit all paperwork by November 15th. The COMPASS minimum passing composite score is 60. The reading comprehension sections must be at least 50. Test scores are considered valid for two (2) years if scores meet current requirements. Check the appropriate campus location for adherence to the above submission dates.*

Based upon Michigan Law

Students applying for admission to the Surgical Technology Program will be subject to a criminal background check, the results of which could preclude an applicant from admission to Wayne County Community College District's Surgical Technology Program on the basis of any of the following:

- A felony conviction, or conviction for an attempt or conspiracy to commit a felony within the past 15 years
- Any misdemeanor conviction involving abuse, neglect, assault, battery or criminal sexual conduct within the past 10 years
- Any misdemeanor conviction involving fraud or theft

Degree Requirements

- Students must complete all core course work with a grade of "B" or better to meet graduation requirements

Surgical Technology: Associate of Applied Science Degree Recommended Sequence of Courses

PREREQUISITE COURSES

ENG 119	English I	3
ENG 120	English II	3
BIO 155	Introductory Biology	4*
BIO 240	Human Anatomy and Physiology I	4
BIO 250	Human Anatomy and Physiology II	4
BIO 295	Microbiology	4
PSY 101	Introductory Psychology	3
ALH 110	Medical Terminology	3
SUR 100	Orientation to Surgical Technology	3
PREREQUISITE TOTAL		**27-31**

Continued on next page.

Surgical Technology continued

CR. No.	COURSE TITLE	CREDITS
SEMESTER 1		
PS 101	American Government	.3
ALH 230	Ethics for Allied Health	.3
SUR 110	Surgical Technology Principles	.3
SUR 120	Surgical Specialties and Techniques I	.4
SUR 125	Surgical Technology Clinical I	.4
SEMESTER TOTAL		**.17**
SEMESTER 2		
ALH 115	Medical Computer Systems	.3
SUR 130	Surgical Specialties and Techniques II	.4
SUR 140	Surgical Pharmacology	.3
SUR 145	Surgical Technology Clinical II	.4
SEMESTER TOTAL		**.14**
SEMESTER 3		
SUR 155	Surgical Technology Clinical III	.6
SUR 160	Surgical Seminar and Certification Preparatory	.4
SEMESTER TOTAL		**.10**
A.A.S. PROGRAM TOTAL		**.68-72**

Note: Program total hours may not include prerequisites. Program totals do not include remedial courses.
** Only if needed.*

SURGICAL TECHNOLOGY: ACCELERATED ALTERNATE DELIVERY

• Short-Term Certificate: (SCERT-SAAD)

About the Program

The purpose of the Surgical Technology Accelerated Alternate Delivery (AAD) Short-Term Certificate is to prepare professionals working in the Surgical Technology field to sit for the Accreditation Review Committee on Education in Surgical Technology's national certification examination. The instructional format for this program is online delivery. The Surgical Technologist delivers care in the operating room before, during and after surgery as a member of the surgery team (Surgeon, Surgical First Assistant, Anesthesiologist, Registered Nurse and other surgical personnel). The Surgical Technologist's primary responsibility is to maintain a sterile field in the operating room.

The Surgical Technologist must be constantly vigilant to make sure that every member of the surgical team follows aseptic procedures. Duties of a Surgical Technologist include: Setting up sterile supplies, equipment, instruments and drapes for surgical procedures; and preparing specimens for laboratory analysis.

Certificate Goals

- To prepare students with the knowledge and technical skills to effectively perform as a team member of the surgical team unit under the direct supervision of a doctor or registered nurse
- To teach students how to proficiently exercise the duties and responsibilities related to peri-operative preparation, equipment supply, sterilization and post-operative procedures
- To prepare students to successfully pass the National Certifying Examination for Surgical Technologists

Certificate Outcomes

- Students will be able to demonstrate and apply technical competency as it applies to the surgical technician profession
- Exhibit proficiency in successfully completing the National Certifying Examination for Surgical Technologists with a 80% or better proficiency rate
- Demonstrate expertise in the application of sterile and aseptic technique
- Apply principles of pharmacology as related to the Surgical Technologist
- Demonstrate critical thinking skills during peri-operative procedural management according to the facility policies, procedures and surgeon preferences
- Perform competently in the Scrub and Circulator role in accordance with Association of Surgical Technologist (AST) standards
- Maximize patient safety by facilitating a safe surgical environment
- Demonstrate self-direction and responsibility for maintaining surgical competency
- Effectively use written, oral and interpersonal communication skills operating as a member of a diverse team of medical professionals
- Incorporate safety principles, practices and standards as governed by the profession

Admission Requirements

An applicant for Surgical Technology Accelerated Alternate Delivery (ADD) Certificate Program is required to:

- Complete WCCCD Program Application and submit to the Campus Academic Officer
- Submit two letters of recommendation from current or former supervisors attesting to competency in surgical technology
- Complete an online course provided by the Distance Learning Department of Wayne County Community College District. Contact distance learning@wcccd.edu or (313) 496-2734 for more information
- Show proof of a current CPR card
- Submit documentation verifying clinical experiences for at least 125 surgical procedures in the first scrub role and/or two of the last four years or experiences were performed in the first scrub role. Upon submission of the documentation, a student will prepare the appropriate paperwork so that experiential credit can be granted as part of the AAD curriculum. Credit will be recorded on the student's academic record, without a grade as follows:
- Surgical Technology (SUR) 125 – Surgical Technology Clinical I – 4 credits hours. Experiential leaning credit is given to a student who has participated in 30 surgery cases, primarily in the specialty areas of general surgery; gynecology and obstetrics surgery; orthopedic surgery; vascular surgeries; and endoscopic surgery)
- Surgical Technology (SUR) 145 – Surgical Technology Clinical II – 4 credits hours. Experiential learning credit is given to a student who has participated in 30 surgery cases, primarily in the specialty areas of general surgery; and neck and thyroid surgery)
- Surgical Technology (SUR) 155 – Surgical Technology Clinical III – 6 credit hours. Experiential learning credit is given to a student who has participated in 65 surgery cases, primarily in the specialty areas of orthopedic surgery; thoracic surgery; cardiovascular surgery; neurological surgery; plastic/reconstruction surgery; endoscopic surgery; geriatric/pediatric surgery; and dental surgery)

*(**NOTE:** A Student who is applying for this experiential credit is required to pay a processing fee. The student is also required to pay a fee for each course of an amount that is equal to half the normal tuition for the courses he or she is seeking credit for).*

Continued on next page.

Surgical Technology: Accelerated Alternate Delivery continued

College Certificate Requirements

- Students must complete all core course work with a grade of "B" or better to meet graduation requirements.

Surgical Technology: Accelerated Alternative Delivery Short-Term Certificate Recommended Sequence of Courses

CR. No.	COURSE TITLE	CREDITS
SEMESTER 1		
SUR 120	Surgical Specialties and Techniques I	4
SUR 140	Surgical Pharmacology	3
SEMESTER TOTAL		**7**
SEMESTER 2		
BIO 295	Microbiology	4
SUR 130	Surgical Specialties and Techniques II	4
SEMESTER TOTAL		**8**
SEMESTER 3		
ENG 119	English I	3
SUR 160	Surgical Seminar/Certification Preparatory	4
SEMESTER TOTAL		**7**
A.A.D. CERTIFICATE TOTAL		**22**

Note: Certificate total hours may not include prerequisites.

SURGICAL TECHNOLOGY: CENTRAL SERVICE TECHNICIAN

- Short-Term Certificate: (SURT-SCERT)

About the Program

The Surgical Technology Central Service Technician Short-Term Certificate is accredited by the Commission on Accreditation of Allied Health Education programs (www.caahep.org) upon the recommendation of the Accreditation Review Council on Education in Surgical Technology and Surgical Assisting. The curriculum is designed to enable the students to perform a variety of duties, as well as provide technical support to the surgical team in the operating room before, during and after surgery.

The Central Service Technician is responsible for the procurement of surgical supplies and equipment. Central Service Technicians provide support to all patient care services in the health care facility. They are responsible for decontaminating, cleaning, processing, assembly, sterilizing, storing and distributing the medical supplies needed in patient care, especially during surgery.

With the ever-expanding technological advancements in medical supplies, instrumentation, medical devices and equipment, highly trained individuals are needed in the field of central service. Central service technicians are trained in principles, methods and control of sterilization processes; and the cleaning, processing, packaging, distributing, storing and inventory control of sterile supply, instruments, trays and equipment.

Certificate Goals

- To prepare students with knowledge and technical skills to effectively perform duties relevant to a Central Service Technician
- To prepare students to successfully pass the National Certifying Examination for a Central Service Technician

Certificate Outcomes

- Exhibit proficiency in successfully completing the National Certifying Examination for Central Service Technicians with a 80% or better proficiency rate
- Demonstrate expertise in the application of sterile and aseptic technique
- Demonstrate self-direction and responsibility for maintaining central sterilization competency
- Effectively use written, oral and interpersonal communication skills operating as a member of a diverse team of medical professionals
- Incorporate the safety principles, practices and standards regulations as governed by the profession

Admission Requirements

To be admitted into the Central Service Technician program, students are required to complete the following:

- Fulfill all WCCCD admission requirements
- Be 18 years of age or older and have a high school diploma or GED
- Complete WCCCD Program Application and submit to the Campus Academic Officer
- If required, fulfill course placement requirements based on the COMPASS scores
- Declare intent to enroll in the Surgical Technician program by submitting an Allied Health Department application to the program director
- Must complete criminal background check, physical exam, Hepatitis B (HBV) shots, and other health requirements
- Complete all prerequisites with a grade of "C" or better
- Submit official transcripts from previous institutions
- Submit three letters of recommendation: two professional and one personal
- Valid Sate Picture I.D.
- Meet with the Program Director to review and complete paperwork

Note: *If COMPASS scores are lower in any area, provide a transcript of the recommended course(s) completed with a "B" or better. All program applications are reviewed by the Surgical Technology Department Admissions Committee. Students who have completed the Central Service Technician program prior to application to the Surgical Technology Program are given preference.*

- Students must submit all paperwork by July 15th for the start of the Fall Semester, or by November 15th for the start of the Spring Semester, or by March 15th for the start of the summer semester. The COMPASS minimum passing composite score is 60. The reading comprehension sections must be at least 50. Test scores are considered valid for two (2) years if scores meet current requirements

Based upon Michigan Law

Students applying for admission to the Central Service Technician Program will be subject to a criminal background check, the results of which could preclude an applicant from admission to Wayne County Community College District's Surgical Technology Program on the basis of any of the following:

- A felony conviction or conviction for an attempt or conspiracy to commit a felony within the past 15 years
- Any misdemeanor conviction involving abuse, neglect, assault, battery or criminal sexual conduct within the past 10 years
- Any misdemeanor conviction involving fraud or theft

College Certificate Requirements

- Students must complete all core course work with a grade of "B" or better to meet graduation requirements

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Surgical Technology: Central Service Technician continued

Surgical Technology: Central Service Technician Program Short-Term Certificate Recommended Sequence of Courses

CR. No.	COURSE TITLE	CREDITS
SEMESTER 1		
SUR 100	Orientation to Surgical Technology	3
SUR 101	Central Service Technician	3
SEMESTER TOTAL		**6**
SEMESTER 2		
SUR 102	Central Service Technician Lab and Clinical	4
SEMESTER TOTAL		**4**
CENTRAL SERVICE TECHNICIAN CERTIFICATE TOTAL		**10**

Note: Certificate total hours may not include prerequisites.

SURGICAL TECHNOLOGY: SURGICAL FIRST ASSISTANT

• College Certificate: (CERT-SFA)

Visit this link for additional program information.
http://www.wcccd.edu/dept/SurgTechFirstAsst/SurgTechFirstAsst.html

About the Program

The Surgical First Assistant (SFA) College Certificate program is offered as one of four career options for students admitted into the Surgical Technology program. Enrollment in the program is limited due to the number of clinical-learner positions available at each of the clinical settings. A student's educational experience in the program includes both classroom course work (didactic) and practical (clinical) instruction in a peri-operative environment. Upon successful completion of the SFA Certificate program, students will also receive a Certificate of Completion and will be eligible to sit for the national certification examination.

A Surgical First Assistant works under the direction and supervision of the surgeon and in accordance with hospital policy and appropriate laws and regulations. The SFA provides aid in exposure, homeostasis, and other technical functions that help the surgeon carry out a safe operation with optimal results for the patient. A SFA must be knowledgeable in surgical procedures and the use of surgical instruments on tissues.

College Certificate Goals

- To prepare students with the knowledge and technical skills to effectively perform as a team member of the surgical team unit under the direct supervision of a doctor or registered nurse
- To prepare students to proficiently exercise the duties and responsibilities including peri-operative preparation and post-operative procedures
- To prepare students to successfully pass the National Certification Examination for Surgical First Assistants

College Certificate Outcomes

- Students will be able to demonstrate and apply technical competency as it applies to the duties and technical responsibilities of the position
- Exhibit proficiency in successfully completing the National Certification Examination for Surgical First Assistants with a 80% or better proficiency rate
- Demonstrate critical thinking skills during peri-operative and post-operative procedural management according to the facility policies, procedures and surgeon preferences
- Operate all equipment safely, effectively and efficiently while using appropriate protocols
- Demonstrate self-direction and responsibility for maintaining surgical competency
- Accurately and effectively demonstrate information literacy skills, written, oral and interpersonal communication skills operating as a member of a diverse team of medical professionals
- Incorporate the safety principles, practices and ethical standards and regulations as governed by the profession

Admission Requirements

To be admitted into the Surgical First Assistant program, students must complete the following requirements for admissions prior to acceptance into the program:

- Must complete criminal background check, physical exam, HBV shots, TB test and other health requirements
- Fulfill course placement requirements based on COMPASS assessment
- Complete WCCCD Program Application and submit to the Campus Academic Officer
- Prerequisite courses may be required depending upon COMPASS assessment
- Students must complete the WCCCD Allied Health application
- Current CPR/BLS certification
- Submit official transcripts from previous institutions
- Must be Certified surgical technologist (CST), or certified nurse-operating room (CNOR), or physician assistant – current certified (PA-C)
- Proof of liability insurance covering health care activities
- Proof of proficiency in Microbiology, Pharmacology, Anatomy and Physiology
- Proof of computer literacy
- Work history from employers
- Submit three letters of recommendation: two professional and one personal
- Proof of immunization against Hepatitis B or waiver
- Interview with the Program Director

All program applications are reviewed by the Surgical Technology Department Admission Committee. Students must submit all paperwork by November 15th for the start of the Spring Semester.

The Surgical First Assistant program offers a College Certificate and may be completed in 45 instructional weeks. The certificate option is designed to prepare students with the skills required for a broad range of surgical specialist positions.

College Certificate Requirements

- Students must complete all core course work with a grade of "B" or better to meet graduation requirements

Continued on next page.

Surgical Technology: Surgical First Assistant continued

Surgical Technology: Surgical First Assistant College Certificate
Recommended Sequence of Courses

CR. No.	COURSE TITLE	CREDITS
SEMESTER 1		
BIO 252	Pathophysiology	4
SFA 200	Fundamentals of Surgical First Assisting	3
SFA 210	Advance Surgical Pharmacology	3
SEMESTER TOTAL		**10**
SEMESTER 2		
SFA 253	Surgical Anatomy	4
SFA 220	Surgical Patient Management	3
SFA 230	Surgical First Assistant Techniques	3
SEMESTER TOTAL		**10**
SEMESTER 3		
SFA 235	Clinical Preceptorship	8
SEMESTER TOTAL		**8**
SEMESTER 4		
SFA 245	Clinical Preceptorship II	8
SEMESTER TOTAL		**8**
SURGICAL FIRST ASSISTANT CERTIFICATE TOTAL		**36**

Note: Certificate total hours may not include prerequisites.

SUSTAINABLE ENVIRONMENTAL DESIGN: BUILDINGS AND SITES

- College Certificate: (CERT-SED)

About the Program

The Sustainable Environmental Design Sustainable Buildings and Sites College Certificate is designed to prepare students for careers that integrate sustainable construction applications in a variety of business, allied health and industrial environments. Students will gain knowledge on principles of sustainable practices in alternative energy, business, construction, energy usage and natural resource management. This curriculum prepares students to fully understand the Leadership in Energy and Environmental Design (LEED) green building rating system which is the standard for environmentally sustainable construction.

Graduates of the certificate program may complement their studies by pursuing an Associate of Applied Science degree in Sustainable Environmental Design offered at Wayne County Community College District. The associate's degree serves as a precursor to students pursuing a four-year baccalaureate degree. The increased expansion of green career's include: Green Engineering and Renewable Energy Production, Sustainable Urban Planning and Design, Sustainable Interior Design, and Sustainable Building Construction.

College Certificate Goals

- Prepare students to understand the moral and ethical implications of environmental design decisions that impact land use, the environment and society as a whole
- Prepare students to enter a rapidly changing and growing workforce of Green Technology professionals in the Renewable Energy and Sustainable Construction
- Allow students with work experience in related fields (such as HVAC, Construction Project Management, Architecture, Landscape Architecture, Interior Design and Energy Development) the opportunity to obtain needed knowledge and skills in sustainable design and energy efficiency
- Prepare practicing professionals or individuals in career change situations to gain needed knowledge in order to sit for the U.S. Building Council's Leadership in Energy and Environmental Design Accredited Professional (LEEDAP) exam

College Certificate Outcomes

- Demonstrate knowledge of basic concepts and principles of sustainable design, green building practices and alternative energy production
- Apply critical and analytical thinking skills to determine where sustainable designs, technologies and practices are appropriate and effective
- Demonstrate the concept of green building basics and how to move from traditional practices towards sustainable design principles
- Analyze and evaluate energy use patterns for residential and commercial buildings
- Apply critical thinking and problem solving skills to measure, monitor and recommend actions to reduce and innovate energy in commercial settings

Admission Requirements

Students are required to do the following:

- Fulfill all WCCCD admission requirements
- Fulfill course placement requirements based on COMPASS assessment
- Complete WCCCD Program Application and submit to the Campus Academic Officer

Sustainable Environmental Design: Sustainable Buildings and Sites College Certificate
Recommended Sequence of Courses

CR. No.	COURSE TITLE	CREDITS
SEMESTER 1		
SED 100	Principles of Sustainable Environmental Design	3
SED 120	Residential and Commercial Sustainable Design	3
SEMESTER TOTAL		**6**
SEMESTER 2		
SED 140	Sustainable Materials	3
SED 142	Sustainable Sites	3
SED 144	Ecologically Aware Interiors	3
SEMESTER TOTAL		**9**
SEMESTER 3		
SED 146	Sustainable Project Management	3
SED 148	Sustainable Systems	3
SED 160	Sustainable Community Principles	3
SEMESTER TOTAL		**9**
SEMESTER 4		
SED 200	LEED Certification Exam Preparation	3
SED 220	Sustainable Environmental Design Capstone	6
SEMESTER TOTAL		**9**
CERTIFICATE TOTAL		**33**

Note: Certificate total hours may not include prerequisites.

SUSTAINABLE TECHNOLOGY SPECIALIST

• Short-Term College Certificate: (ST-SCERT)

About the Program

The Sustainable Technology Specialist Short-Term Certificates are designed to provide students with an understanding of the principles and practices of sustainability that can be applied to any industry. Attention is given to developing a written sustainability plan, creating the marketing case for incorporating sustainability into any business, and the development of practical skills in green operations, sales and purchasing. This program will expose the student to a wide range of topics in the expanding Green Collar job arenas including: urban agriculture, environmentally friendly cleaning supplies, energy efficient construction, sustainable building and site design, alternative transportation methods (light rail and hybrid cars) as well as many other topics.

This program offers:

- STS: Alternative Fuels: **10** credit hours
- STS: Geothermal Energy: **10-11** credit hours
- STS: Renewable Energy: **10-11** credit hours
- STS: Sustainable Bldg. and Sites: **10** credit hours
- STS: Water Environmental Tech: **10** credit hours

Certificate Goals

- To create a sustainability pathway related to the business sector and give our students a new and expeditious way into the developing Green Collar jobs market

Certificate Outcomes

Upon completion, a student shall be able to:

- Articulate the Triple Bottom Line philosophy imbedded in Sustainable Business practices
- Articulate the importance of sustainable products and services and demonstrate the marketing of same
- Demonstrate how to access distribution opportunities for sustainable products and processes in the governmental, business and non-profit sectors
- Effectively communicate the results of analyses of the economic and political viability of sustainable products and services
- Demonstrate a clear understanding of how to present project data in easily digestible formats
- Be able to identify emerging career opportunities in businesses where there is an emphasis on sustainability

Admission Requirements

Students are required to do the following:

- Fulfill all WCCCD admission requirements
- Fulfill course placement requirements based on COMPASS assessment
- Complete WCCCD Program Application and submit to the Campus Academic Officer

Sustainable Technology Specialist: Short-Term Certificate Alternative Fuels Track Recommended Sequence of Classes

CR. No.	COURSE TITLE	CREDITS
SEMESTER 1		
Any AUT Course Between AUT 150 to AUT 155		.3
ST 101	Sales Skills for Sustainable Products and Services	.3
ST 102	Applications of Sustainable Technologies	.4
SHORT-TERM CERTIFICATE TOTAL		**.10**

Sustainable Technology Specialist: Short-Term Certificate Geothermal Energy Track Recommended Sequence of Classes

CR. No.	COURSE TITLE	CREDITS
SEMESTER 1		
Any GTT Course		.3-4
ST 101	Sales Skills for Sustainable Products and Services	.3
ST 102	Applications of Sustainable Technologies	.4
SHORT-TERM CERTIFICATE TOTAL		**.10-11**

Sustainable Technology Specialist: Short-Term Certificate Renewable Energy Track Recommended Sequence of Classes

CR. No.	COURSE TITLE	CREDITS
SEMESTER 1		
Any RET Course		.3-4
ST 101	Sales Skills for Sustainable Products and Services	.3
ST 102	Applications of Sustainable Technologies	.4
SHORT-TERM CERTIFICATE TOTAL		**.10-11**

Sustainable Technology Specialist: Short-Term Certificate Sustainable Buildings and Sites Track Recommended Sequence of Classes

CR. No.	COURSE TITLE	CREDITS
SEMESTER 1		
Any SED Course		.3
ST 101	Sales Skills for Sustainable Products and Services	.3
ST 102	Applications of Sustainable Technologies	.4
SHORT-TERM CERTIFICATE TOTAL		**.10**

Sustainable Technology Specialist: Short-Term Certificate Water Environmental Technology Track Recommended Sequence of Classes

CR. No.	COURSE TITLE	CREDITS
SEMESTER 1		
Any WET Course		.3
ST 101	Sales Skills for Sustainable Products and Services	.3
ST 102	Applications of Sustainable Technologies	.4
SHORT-TERM CERTIFICATE TOTAL		**.10**

TEACHER EDUCATION: ELEMENTARY EDUCATION

Associate of Arts Degree: (AA-TEEE)

About the Program

The Teacher Education Associate of Arts degree in elementary education offers career opportunities to complete the first two years of the baccalaureate degree requirements leading to teacher certification in special, elementary and secondary education. The program is designed to prepare prospective teachers to be innovative role models and leaders in academic environments. In order to acquire the skills and abilities necessary for excellence in teaching, students will participate in classes, fieldwork, support services and workshops.

Program Goals

- To prepare students with the knowledge and necessary foundation as the precursor for a declared four-year degree in Elementary Teacher Education
- To teach students the social, philosophical, historical perspectives and best practices in educational methodology that impact elementary education

Program Outcomes

- Students will be able to describe the policies, issues, and trends in the field of elementary education
- Analyze and identify major historical events in education and its impact with current educational trends
- Identify the psychological, cognitive, emotional, and physical characteristics of typically developing children, children with disabilities, and children who are culturally and linguistically diverse
- Demonstrate knowledge of and critically evaluate current instructional practices in elementary education to compare and contrast instructional strategies based on students' learning styles
- Design and implement individual development learning plans that include cognitive processes associated with critical thinking, creative thinking, problem solving, invention, memorization and recall that are appropriate for all students across the learning continuum
- Identify and explain the models of classroom and behavior management
- Identify strategies for working and advocating for families of culturally and linguistically diverse (CLD) students and students with disabilities in order to facilitate a child's educational program
- Identify community resources serving students with special needs and their families
- Demonstrate excellent written, verbal, critical thinking, and problem solving skills, which will allow them to effectively make connections between prior knowledge/ experience and new learning

Admission Requirements

Students are required to complete the following:

- Fulfill all WCCCD admissions requirements
- Declare intent to enter the Teacher Education program by completing a program application form
- Fulfill course placement requirements based on the COMPASS assessment
- Successfully complete 18 credit hours by taking these courses (or approved equivalents) with a minimum grade of C or better, including:
  - ENG 119 English I
  - HIS 249 U.S. History I 1607-1865 –OR– HIS 250 U.S. History II 1865 to Present
  - MAT 113 Intermediate Algebra
  - PS 101 American Government
  - PSY 101 Introductory Psychology
  - SPH 101 Fundamentals of Speech
  - Earn and maintain a minimum overall 2.5 grade point average
- Submit a completed program application for admission along with other supporting documentation as specified in the application
- Schedule a personal interview with a program advisor
- Participate in a Teacher Education orientation workshop

Students are required to do the following:

- Fulfill all WCCCD admission requirements
- Fulfill course placement requirements based on COMPASS assessment
- Complete WCCCD Program Application and submit to the Campus Academic Officer

Teacher Education: Associate of Arts Recommended Sequence of Courses

CR. No.	COURSE TITLE	CREDITS
SEMESTER 1		
Elective:	Humanities	3
ENG 119	English I	3
MAT 113	Intermediate Algebra	3
PS 101	American Government	3
SEMESTER TOTAL		**12**
SEMESTER 2		
EMT 101	First Aid	2
ENG 120	English II	3
GEL 210	Physical Geology	4
MAT 128	Math for Elementary Teachers I	3
SEMESTER TOTAL		**12**
SEMESTER 3		
Elective:	Humanities	3
Elective:	Social Science	3
MAT 129	Math for Elementary Teachers II	3
SPH 101	Fundamentals of Speech	3
SEMESTER TOTAL		**12**
SEMESTER 4		
Elective:	Humanities	3
Elective:	Social Science	3
ED 110	Introduction to Education with Practicum	4
BIO 151	Human Ecology	4
SEMESTER TOTAL		**14**
SEMESTER 5		
Elective:	Social Science	3
ED 202	Earth Science with Practicum (Program admission or approval)	5
BIO 204	Life Science for Elementary School Teachers	4
SEMESTER TOTAL		**12**
A.A. PROGRAM TOTAL		**62**

Note: Program total hours may not include prerequisites.

VETERINARY TECHNOLOGY

Associate of Applied Science Degree: (VETT-AAS)

About the Program

The Veterinary Technology program (VTP) offers a well-rounded two year curriculum in veterinary technology. It has the full accreditation status of the American Veterinary Medical Association. Graduates are eligible to take state and national examinations to become Licensed Veterinary Technicians (LVT). Subjects of study include anatomy and physiology of animals, small animal hospital techniques, laboratory animal medicine, small animal disease, large animal medicine, regulatory veterinary medicine, anesthesiology, radiology, surgical assisting, pharmacology, and clinical pathology (hematology, urinalysis, and parasitology). The program offers hands-on experience with a wide variety of animals including dogs, cats, rats, mice, hamsters, ferrets, gerbils, rabbits, chickens, horses, sheep, guinea pigs, goats, and cattle. For student's convenience, classes for the program are held on weekday evenings to accommodate those who work while attending college. The non-VTP courses may be taken at any WCCCD campus. The program is located at Wayne State University in the Applebaum College of Pharmacy and Health Sciences Building.

Program Goals

- Provide students with entry-level skills in veterinary technology allowing them to enter the field in a wide variety of areas

Program Outcomes

- Students will be able to provide proficient services to support the health and well-being of animals
- Identify and understand the pharmacology and effects of drugs and therapeutic substances in various animal species
- Understand the role and responsibilities in operating and maintaining a veterinary facility
- Apply organizational principles and practices that provide quality veterinary care and client service
- Demonstrate knowledge of, ensure compliance with and act in a professional and ethical manner in accordance with State and Federal regulations, American Veterinary Medical Association (AVMA) and National Association of Veterinary Technicians in America (NAVTA) guidelines

Admission Requirements

Admission is granted through a selection process prior to the Fall semester. The program staff will review all applications of admission and will interview qualifying candidates. Written confirmation of admission will be issued to the applicant.

To be admitted into the Veterinary Technology Program students must:

- Declare program intent on the WCCCD admission application or change program intent in the campus admissions office
- Complete a program application packet by June 1st of the year you plan to enter the program. (Includes resume, health form, and proof of health insurance)
- Receive a grade of "C" or better in prerequisite courses
- Fulfill course placement requirements based upon the COMPASS assessment results
- Submit transcript of prerequisite coursework, and proof of high school graduation or GED to the program office
- Applicants are required to spend a minimum of 40 hours in a work or volunteer situation within veterinary clinics, humane societies, nature centers, farms or other animal related areas where veterinary technicians may be observed in a work environment
- All candidates for the Veterinary Technology Program need to take the Health Education Systems, Inc. (HESI) exam. Results are used in conjunction with GPA and other factors in the admission process

Degree Requirements

- Students must complete all course work with a grade of "C" or better to meet graduation requirements.

Veterinary Technology: Associate of Applied Science Recommended Sequence of Courses

CR. No.	COURSE TITLE	CREDITS
PREREQUISITE COURSES		
BIO 155	Introductory Biology	.4
ENG 119	English I	.3
Elective:	Humanities or Social Science	.3
ALH 105	Medical Math	.3
BIO 295	Microbiology	.4
PREREQUISITE TOTAL		**.17**
SEMESTER 1		
VTP 103	Laboratory Animal Medicine – Lecture	.2
VTP 104	Laboratory Animal Medicine – Laboratory	.2
VTP 123	Veterinary Technology Practicum I	.4*
CHM 105	Introduction to Chemistry – Lec/Lab	.4
SEMESTER TOTAL		**.12**
SEMESTER 2		
VTP 105	Small Animal Technology I – Lecture	.2
VTP 106	Small Animal Technology I – Laboratory	.2
VTP 107	Small Animal Disease – Lecture	.3
VTP 108	Clinical Pathology – Lec/Lab	.2
VTP 233	Veterinary Technology Practicum II	.4*
SEMESTER TOTAL		**.13**
SEMESTER 3		
Elective:	Humanities of Social Science	.3
ENG 120	English II	.3
	—OR—	
ENG 134	Technical Communications	.3
PS 101	American Government	.3
VTP 201	Small Animal Technology II – Lecture	.2
VTP 202	Small Animal Technology II – Laboratory	.2
VTP 211	Regulatory Veterinary Medicine	.1
SEMESTER TOTAL		**.14**
SEMESTER 4		
VTP 209	Large Animal Medicine – Lecture	.2
VTP 210	Large Animal Medicine – Laboratory	.2
VTP 212	Issues in Veterinary Technology	.5
VTP 243	Veterinary Technology Practicum III	.2*
XVT 300	Veterinary Technology Practicum IV (Optional)	.1
SEMESTER TOTAL		**.12-13**
PROGRAM TOTAL		**.68-69**

Note: Program total hours may not include prerequisites.

**In addition to regularly scheduled classes, three practical experience classes are required. Each of these courses requires 128 – 200 hours of applied veterinary technology in veterinary hospitals and laboratories. The practical courses are also offered during the Summer semester. This semester may be used to ease the course load if necessary between the first and second year.*

WATER AND ENVIRONMENTAL TECHNOLOGY

• College Certificate: (CERT-WET)

About the Program

The Water Environment Technology (WET) College Certificate program offers the intellectual exposure and on-the-job experience required to operate and manage a wide range of water-treatment technologies. The program recognizes that the efficient application of water-treatment technologies is essential for the survival of earth's population and ecosystems, and that the technologist is largely responsible for the day-to-day compliance with treatment requirements. WET students study water and wastewater treatment processes, and are introduced to topics that include water chemistry, microbiology, toxicity and pollution prevention. Coursework and hands-on experience in utility equipment maintenance complete the technical program.

Completion of the program will help prepare graduates to write the entry level water and wastewater certification examinations administered by the Michigan Department of Environmental Quality.

Certificate Goals

- To prepare students with an understanding of methods related to the production of clean water and pollution control

Certificate Outcomes

- Students will be able to demonstrate an applied understanding of the basic principles of pollution assessment, management and control related to water quality.
- Demonstrate knowledge of the main types and categories of pollution treatment processes and treatment systems
- Demonstrate critical thinking skills when applying knowledge of common water and wastewater production facilities related to pollution control
- Prepare students for individual credentialing by the Michigan Department of Environmental Quality (MDEQ) wastewater certification examinations with a 70% or better proficiency rate
- Understand and articulate knowledge of occupational health and safety standards and requirements related to environmental laws, statutes and regulations that govern water quality

Admission Requirements

Students are required to do the following:

- Fulfill all WCCCD admission requirements
- Fulfill course placement requirements based on COMPASS assessment
- Complete WCCCD Program Application and submit to the Campus Academic Officer

Water and Environmental Technology: College Certificate

Recommended Sequence of Courses

CR. No.	COURSE TITLE	CREDITS
SEMESTER 1		
CHM 105	Introduction to Chemistry	3
MAT 121	Technical Math	3
WET 101	Water Treatment Technologies	3
WET 102	Waste Water Treatment Technologies	3
SEMESTER TOTAL		**12**
SEMESTER 2		
BUS 225	Computer Applications in Business	3
WET 210	Advanced Waste Water Treatment Technologies	3
WET 212	Advanced Water Treatment Technologies	3
WET 215	Water Quality Analysis and WET Instrumentation	3
SEMESTER TOTAL		**12**
SEMESTER 3		
WET 220	Water Quality Analysis and Microbiology	3
WET 224	Water/Waste Water Utility Equipment Maintenance	2
WET 265	Practicum	3
SEMESTER TOTAL		**8**
CERTIFICATE TOTAL		**32**

Note: Certificate total hours may not include prerequisites.

WELDING TECHNOLOGY

• College Certificate
Associate of Applied Science Degree: (WELT-AAS)

Visit this link for additional program information.
http://www.wcccd.edu/dept/WeldTech/WeldTech.html

About the Program

The Welding Technology Associate of Applied Science degree and College Certificate programs are designed to provide students with in-depth instruction in the field of welding matched with the American Welding Society (AWS) certification Levels: 1, 2 and 3. Core program courses provide students with experience related to design, theory and use of welding equipment. Course learning objectives include: an introduction to welding; safe welding practices; identification of metals; oxygen fuel gas welding; oxygen fuel gas cutting; shielded metal arc welding; gas tungsten arc welding; gas metal arc welding fabrication, weld quality testing; working with specialized welding practices and troubleshooting. Each welding course consists of an introduction; competencies; general performance goals/objectives; specific performance objectives and mastery criteria. The certificates are stacked so that a student will complete a level and be ready to test out at the AWS certificate level while continuing on seamlessly for an associate degree.

This program offers:

- Associate of Applied Science:
  64 credit hours (WELT-AAS)
- College Certificate – General:
  32 credit hours (WLTGW-CERT)
- Short-Term Certificate – Advanced:
  29 credit hours (SCERT-WLTAW)
- Short-Term Certificate – Specialized:
  28 credit hours (SCERT-WLTSW)
- College Certificate – Artistic Welding:
  37 credit hours (ARTW-CERT)

Continued on next page.

Welding Technology continued

Program Goals

- To teach students to proficiently apply technical skills required in fabrication, construction, maintenance, apprenticeship and other metal working industries
- To prepare students to successfully register and pass the certification exam for Welders

Program Outcomes

- Students will be able to demonstrate competence in solving welding design problems and creating welding joints and steel welds by applying American Welding Society (AWS) economic justification and weld connection performance measures and methods
- Exhibit proficiency in successfully completing the certification exam for Welders with a proficiency score of 75% or better
- Demonstrate competence and applied knowledge of the welding, brazing and cutting processes and technology
- Demonstrate proficiency in blueprint reading, weld symbol interpretation, basic metallurgy and math reasoning applied to layout and fabrication techniques
- Demonstrate subject mastery and skill in welding and cutting processes by averaging 70% on respective program post-tests
- Apply critical thinking, mathematical reasoning to the welding process
- Incorporate the safety principles, practices, standards and regulations as governed by the profession
- Effective use of written, oral, interpersonal and listening skills operating as a member of a diverse team

Certificate Goals

- To teach students proficiency and apply technical skills required in fabrication, construction, maintenance, apprenticeship and other metal working industries

Certificate Outcomes

- Students will be able to demonstrate competence in solving welding design problems and creating welding joints and steel welds by applying American Welding Society (AWS) economic justification and welding connection performance measures and methods

Admission Requirements

Students are required to do the following:

- Fulfill all WCCCD admission requirements
- Fulfill course placement requirements based on COMPASS assessment
- Complete WCCCD Program Application and submit to the Campus Academic Officer

WLT: General Welding – Level 1 (WLTGW-CERT): College Certificate

Recommended Sequence of Courses

CR. No.	COURSE TITLE	CREDITS
SEMESTER 1		
FM 106	Safety and Support Service	.3
WLT 101	Arc/Oxygen – Acetylene Welding	.5
WLT 103	Gas Tungsten Arc Welding	.5
SEMESTER TOTAL		**.13**
SEMESTER 2		
ENG 119	English I	.3
MAT 121	Technical Mathematics I	.3
DRT 101	Blueprint Reading	.3
SEMESTER TOTAL		**.9**
SEMESTER 3		
WLT 104	Tungsten Inert Gas Welding	.5
WLT 105	MIG/Flux-Core/Plasma Welding	.5
SEMESTER TOTAL		**.10**
WLT: GENERAL WELDING CERTIFICATE TOTAL		**.32**

Note: Certificate total hours may not include prerequisites.

WLT: Advanced Welding – Level 2 (SCERT-WLTAW): Short-Term Certificate

Recommended Sequence of Courses

CR. No.	COURSE TITLE	CREDITS
SEMESTER 1		
MAT 122	Technical Mathematics II	.3
WLT 102	Arc Welding	.5
WLT 106	Welding Fabrication	.3
SEMESTER TOTAL		**.11**
SEMESTER 2		
MAN 120	Survey of Material Science	.3
ENG 134	Technical Communications	.3
Elective:	Welding	.3
WLT 107	Welding Fabrication II	.3
SEMESTER TOTAL		**.12**
SEMESTER 3		
Elective:	Welding	.3
WLT 112	Troubleshooting and Repair	.3
SEMESTER TOTAL		**.6**
WLT: ADVANCED WELDING CERTIFICATE TOTAL		**.29**

Note: Certificate total hours may not include prerequisites.

WLT: Specialized Welding – Level 3 (SCERT-WLTSW): Short-Term Certificate

Recommended Sequence of Courses

CR. No.	COURSE TITLE	CREDITS
SEMESTER 1		
MAN 110	Manufacturing Processes	.3
WLT 201	Specialized Welding Process	.3
WLT 208	Pipe Welding	.5
SEMESTER TOTAL		**.11**
SEMESTER 2		
PHY 115	Fundamentals of Physics	.4
WLT 209	Advanced Pipe Welding	.5
SEMESTER TOTAL		**.9**
SEMESTER 3		
WLT 202	Quality Testing - Welding	.3
WLT 210	Weld Certification	.5
SEMESTER TOTAL		**.8**
WLT: SPECIALIZED WELDING CERTIFICATE TOTAL		**.28**

Note: Certificate total hours may not include prerequisites.

Welding Technology: (WELT-AAS) Associate of Applied Science

Recommended Sequence of Courses

CR. No.	COURSE TITLE	CREDITS
SEMESTER 1		
DRT 101	Blueprint Reading	.3
WLT 101	Arc/Oxygen – Acetylene Welding	.5
WLT 103	Gas Tungsten Arc Welding	.5
SEMESTER TOTAL		**.13**
SEMESTER 2		
FM 106	Safety and Support Service	.3
WLT 104	Tungsten Inert Gas Welding	.5
WLT 105	MIG/Flux-Core/Plasma Welding	.5
SEMESTER TOTAL		**.13**
SEMESTER 3		
ENG 119	English I	.3
MAT 121	Technical Mathematics I	.3
PS 101	American Government	.3
WLT 102	Arc Welding	.5
SEMESTER TOTAL		**.14**
SEMESTER 4		
ENG 134	Technical Communications	.3
Elective:	Humanities	.3
MAT 122	Technical Mathematics II	.3
WLT 106	Welding Fabrication	.3
SEMESTER TOTAL		**.12**

Continued on next page.

Welding Technology continued

SEMESTER 5

Elective: Natural Science w/ Lab 4
Elective: Social Science 3
WLT 210 Weld Certification 5
SEMESTER TOTAL 12
WELDING AAS: PROGRAM TOTAL . . .64
Note: Program total hours may not include prerequisites.

WELDING TECHNOLOGY: ARTISTIC

• College Certificate: (ARTW-CERT)

About the Program

The Artistic Welding Certificate is designed for the beginner or advanced welder or artist. The program will give students the opportunity to explore the basics of welding and metal sculpture. Students will learn basic safety, set-up and operation of Oxy-Acetylene cutting, MIG welding, TIG welding as well as Plasma cutting and fabrication equipment. Artistic development will be encouraged through fabrication techniques, critiques, and lectures. Students will develop a body of work that is cohesive in concept, material and/or subject. An artist statement and presentation of work during critiques will help the student become confident and prepared to display or sell work.

College Certificate Goals

- To introduce the student to working with metal to create a welded sculpture and to explore welding techniques that enhance sculptural expression
- To teach students welding proficiency and apply technical skills required in metal fabrication and construction applicable to art and also traditional metal fabrication

College Certificate Outcomes

- Students will be able to demonstrate proper safety, set-up and operation of welding equipment and fabrication equipment
- Apply critical thinking and mathematical reasoning to the welding process
- Be able to fabricate a 3-Dimensional Sculpture out of metal
- Be able to identify different metals
- Discuss their work in an objective and conceptual way
- Have a body of work that represents their concept, medium and/or subject
- Understand how space, shape and form are represented in their work
- Have knowledge of new artistic ideas and fabrication techniques

Admission Requirements

Students are required to do the following:

- Fulfill all WCCCD admission requirements
- Fulfill course placement requirements based on COMPASS assessment
- Complete WCCCD Program Application and submit to the Campus Academic Officer

Artistic Welding: College Certificate Recommended Sequence of Courses

CR. No. COURSE TITLE CREDITS

SEMESTER 1

ART 101 Drawing I 3
WLT 101 Arc/Oxygen – Acetylene Welding 5
WLT 103 Gas Tungsten Arc Welding (GTAW) 5
SEMESTER TOTAL 13

SEMESTER 2

ART 111 Design I 3
WLT 105 MIG/Flux-Core/Plasma Welding 5
WLT 110 Introduction to Metal Sculpture . .4
SEMESTER TOTAL 12

SEMESTER 3

ART 112 Design II 3
WLT 111 Advanced Metal Sculpture 4
WLT 102 Arc Welding 5
SEMESTER TOTAL 12
CERTIFICATE TOTAL 37
Note: Certificate total hours may not include prerequisites.

COURSE INDEX

COURSE INDEX

COURSE DESCRIPTIONS

ACCOUNTING (ACC)

ACC 100 **3 C/45 CH**
Introduction to Accounting
Fundamental accounting techniques as related to small business firms. The accounting equation and account classification, journalizing, posting, adjustments and preparation of financial statements. For students desiring a single course in accounting or for students who need to strengthen a limited background prior to pursuing ACC 110.

ACC 105 **3 C/45 CH**
Income Tax Accounting
This course is a study of basic Federal and State Income Tax regulations with an emphasis on the skills necessary for the preparation of individual income tax returns. Included are filing requirements, determination of taxable income, allowable deductions, tax computation, tax credits, other taxes, payment methods, and audit procedures. Development of proficiency in the preparation of individual, federal, state and municipal tax returns.

ACC 110 **4 C/60 CH**
Principles of Accounting I
This course covers the fundamentals of financial accounting to include current accounting theories and practices, presented from a financial and managerial viewpoint. Other topics include journal and ledger techniques, working papers, financial statements, inventory evaluation, depreciation methods, financial resources and cost/revenue matching will also be reviewed.

ACC 111 **4 C/60 CH**
Principles of Accounting II
Prerequisite: ACC 110
This course covers the fundamentals of managerial accounting to include; partnership and corporate accounting, including bonds. Other topics include financial statement analysis, cash flow, manufacturing and cost accounting.

ACC 112 **3 C/45 CH**
Computerized Accounting Software
Prerequisite: ACC 110
Designed to introduce the student to applying their accounting knowledge to at least two software programs used by bookkeepers, accountants and other accounting personnel in the industry. Software programs that could be used in this course include Peachtree and Quick Books Pro. The class is taught in a computer classroom with 75% - 85% of the course being hands-on. Accounting skills applied to the software programs utilized include accrual accounting, non-customer cash receipts, sales and cash receipts, payroll expenses, journal entries, etc.

ACC 210 **3 C/45 CH**
Intermediate Accounting I
Prerequisite: ACC 111
An in-depth study of accounting theory, analysis of stockholder's equity (capital stock, retained earnings, dividends) assets cash, receivables, inventories and investments. Analysis of fixed assets, statement of cash flows, the time values of money and the difference in the preparation of balance sheets according to U.S. Accounting Principles and International Financial Reporting Standards. (IFRS)

ACC 211 **3 C/45 CH**
Intermediate Accounting II
Prerequisite: ACC 210
This course is an analysis of Accounting for investments, pensions, current and long-term liabilities. Additional concepts include accounting for leases, stockholder's equity, accounting changes and prior period error corrections and earnings per share of common stock.

ADDICTION STUDIES (ADD)

ADD 103 **3 C/45 CH**
Co-Occurring Disorders
Prerequisite: ADD 110
This course imparts the philosophies, practices, policies, and outcomes of the most generally accepted and scientifically supported models of treatment, recovery, relapse prevention, and continuing care for co-occurring disorders.

ADD 110 **3 C/45 CH**
Introduction to Addiction
This course explores the physical, emotional, psychological, and cultural aspects of the addictive process. Emphasis is placed on addiction to food, sex, alcohol, drugs, work, gambling, and relationships. This course provides foundational knowledge for counseling persons with addictive disorders. The student is introduced to working definitions of substance abuse, addiction, chemical dependency, and process addiction. Competencies and requirements for MCBAP and IC and RC certification are explained.

ADD 112 **3 C/45 CH**
Addictions and Criminal Justice
Prerequisite: ADD 110
This course is intended to provide students with a broad overview of the interdisciplinary nature of the drug crime linkage and addiction treatment within the criminal justice system. The course will introduce the student to the issue of substance abuse treatment within the context of the criminal justice system. The course examines the points along the criminal justice system continuum where substance abuse intervention programs exist. Perspectives, policies and goals of the criminal justice and treatment systems will be presented.

ADD 130 **3 C/45 CH**
Assessment, Diagnosis and Treatment of Addictions
Prerequisite: ADD 110
This is the first course in the methods sequence with the primary focus being on human service delivery to individual clients. Attention will be given to the development and enhancement of professional skills in social history taking, diagnostic assessment, and the relation of assessment to treatment planning/intervention with clients from various, diverse populations, and populations at risk.

AFRICAN-AMERICAN STUDIES (AAS)

AAS 120 **3 C/45 CH**
Sociology and the African-American Community
A survey of basic sociological concepts and theories of social organization from the African-American perspective. Emphasis on the nature of society and the factors affecting the development of culture; groups, and African-American institutions.

AAS 131 **4 C/60 CH**
American Government and African-American Struggle
Structure and function of American government. Critical inspection of city, state, and federal government operations and their responsiveness to the needs of African-Americans and other minorities.

AAS 140 **3 C/45 CH**
The Psychology of the African-American Experience
Fundamental concepts and principles of psychology from the African-American perspective. Emphasis on behavioral elements affecting black and white relations, and on linkages between the behavior of traditional and contemporary African people. The role of the black family in the struggle for equality and liberation is explored.

Continued on next page.

COURSE DESCRIPTIONS

African-American Studies (AAS) continued

AAS 150 **3 C/45 CH**
African-American People in Michigan History
A course designed to give the student an historical perspective of the development of Michigan with emphasis on the accomplishments and roles the African-American has played in the development of the State and the surrounding region.

AAS 175 **3 C/45 CH**
History of African-American Music
This course traces the development of African-American music in America. An analysis of African music and its influence on the western world as well as the contributions and development of the blues, gospel, jazz and classical artists, such as Mahalia Jackson, Marion Anderson, William Grant Still, Charlie Parker, John Coltrane, Duke Ellington, etc.

AAS 180 **3 C/45 CH**
Introduction to African Politics
Examination of dynamics of African politics and nation-building and a comparison of various post-colonial African governments.

AAS 237 **3 C/45 CH**
Illegal Drug Traffic and the African-American Community
Overview of illegal drug traffic and its impact upon the African-American community and the majority community, as well as the criminal justice system. Concentration on the development and functions of local and federal programs, the role of law enforcement and the courts, the rights of the accused, the trafficker and the current situation in the United States.

AAS 253 **3 C/45 CH**
African Caribbean Literature
Study of African Caribbean literature encompassing the West Indian islands and adjacent countries South America; Guyana, Suriname, French Guiana and Belize in Central America. Emphasis will be on the linguistic and cultural influences on the prose and poetry of Caribbean literature.

ALLIED HEALTH (ALH)

ALH 105 **3 C/45 CH**
Medical Math
Prerequisite: MAT 100 or placement test
Mathematical concepts for the health profession. Application of mathematical principles relative to computations/calculations in the health professions.

ALH 110 **3 C/45 CH**
Medical Terminology
Introduction to the terminology of health professions. Usage, definition, pronunciation and spelling of terms common to the health professions. Computerized study guides and audio cassette tapes are used to enhance student learning.

ALH 115 **3 C/45 CH**
Medical Computer Systems
Exploration of computer systems used in the health care industry. Laboratory included.

ALH 214 **3 C/45 CH**
Pharmacology
Introduction to Pharmacology.

ALH 230 **3 C/45 CH**
Medical Ethics
Ethical principles and consideration for the allied health professional. Guidelines for practice and conduct relative to legal, moral and ethical duties and responsibilities.

ALH 240 **3 C/45 CH**
Health and Wellness Services in the Community
This course is designed to provide students with an introduction to community health. Community health issues and the causes of health inequality will be examined. Power relations among racial, social, cultural and economic groups will also be discussed.

ALH 250 **3 C/45 CH**
Community Health Issues
This course will examine social, behavioral and environmental community health-related issues and the controversies that surround them. Group and class presentation work will be emphasized.

ALH 260 **3 C/45 CH**
Community Health Resources
This course examines health issues in the community in terms of organization, resources, programming, and special populations. Field trip experiences designed to connect and integrate theory with specific activities in a "real" environment are required in this course.

AMERICAN SIGN LANGUAGE (ASL)

ASL 101 **3 C/45 CH**
American Sign Language I
This introductory course is designed to develop the basic skills of American Sign Language. It consists of a preparatory phase to attune students to communication in the manual-visual mode, followed by instruction and practice in vocabulary, sentence structure, elementary conversation, and literature.

ASL 102 **3 C/45 CH**
Structure of American Sign Language
An examination of ASL phonetics, phonology, morphology, syntax and semantics is reviewed. Linguistic facial expressions and uses of physical space in verb agreement, aspectual morphology, and classifier constructions; an exploration of acquisition, psycholinguistics and historical change will also be discussed. Class activities include drills where students will analyze their own production of ASL phonological parameters.

ASL 103 **3 C/45 CH**
Visual Gestural Communication
This introductory course is a continuation of the initial introductory American Sign Language course (ASL 101). Continuation and skill enhancement through instruction and practice is designed to create confidence in the language.

ASL 105 **3 C/45 CH**
Orientation to Deafness
This class is an overview of deafness that encompasses three major topics: the nature and experience of deafness; the education of deaf children and adults; and the adult deaf community. Medical, educational, psychological, social, and vocational aspects are considered.

ASL 107 **4 C/60 CH**
Introduction to the American Deaf Culture
This class is designed to introduce the students to the Deaf community as a complex and diverse community with a rich heritage and prosperous future. This course focuses on three aspects of the deaf community and culture: 1) historical perspectives and cultural norms within the Deaf community, 2) diversity within the Deaf community and 3) artistic expression and humor.

ASL 201 **4 C/60 CH**
American Sign Language II
A continuation of the basic study of the language and culture of the deaf community, this course builds on the receptive and expressive sign vocabulary, the use of signing space, non-manual

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American Sign Language (ASL) continued

components of ASL grammar including facial expression and body postures, and introduction to conversational regulators. This class is an overview of deafness that encompasses three major topics: the nature and experience of deafness; the education of deaf children and adults; and the adult deaf community.

ANESTHESIA TECHNOLOGY (ANE)

ANE 100 **3 C/45 CH**
Introduction to Anesthesia Technology
This course focuses on the basic fundamentals of Anesthesia Technology including historical, practical, and safety aspects of the profession. This will also include the role of the Anesthesia Care Team and the scope of practice and specific duties of the Anesthesia Technologist, as well as the policies and standards of patient care practice. The course will also introduce the student to various regulatory associations and credentialing and examine future technologies in Anesthesia Technology. Topics covered will include: malignant hyperthermia, electrical and fire safety, patient position along with basic monitoring, and inhaled agents. Set up and function of basic equipment for anesthesia care such as EKG, B/P, and Pulse OX monitors.

ANE 105 **3 C/45 CH**
Basic and Advanced Principles of Anesthesia Technology
Prerequisites: ANE 100, ALH 110, BIO 155
This course focuses on the basic as well as advanced aspects of Anesthesia Gas Machines and Anesthesia related equipment. The set-up and function of basic equipment for anesthesia care, anesthesia machine check out and types of anesthesia will be discussed. Students will learn about the various medical gas cylinders and pipelines used in the medical atmosphere. Hemodynamic and gas monitoring, intravenous lines and skin preparation will be covered. Transducer set up for various types of surgery. Students will also be exposed to transfusion medicine and preoperative blood management. Topics covered will also include scope of practice, occupational health, electrical safety, fire safety and will include the anesthesia workstation. The students will also learn about the severity of latex allergic patients and being a part of the Anesthesia Care.

ANE 110 **4 C/90 CH**
Anesthesia Technology Instrumentation
Prerequisite: ANE 105
This course focuses on the instrumentation utilized in providing anesthesia, hemodynamic monitoring equipment; function, application and troubleshooting. Invasive and non-invasive, emergent and nonemergent. Advanced knowledge of Anesthesia machine will be discussed and examined as well as intubation equipment techniques and emergency responses. Students will set up and learn the use of complex Anesthesia equipment. Students will diagnosis and troubleshoot minor repairs of Anesthesia equipment for proper function and maintenance. Students will demonstrate, cleaning, documentation, safety and asepsis. Students will explore policies and standards for quality assurance and process improvement. In addition students will identify the various Regulatory Associations and credentialing in Anesthesia Technology.

ANE 200 **4 C/240 CH**
Anesthesia Technology Clinical I
Prerequisites: ANE 110, BIO 240, BIO 250
Corequisite: ANE 205
Prior to entering the clinical and patient care setting the student will acquire a Basic Life Support and an Advanced Cardiovascular Life Support card.

This course serves as the first of three externship experiences, with a focus on the integration of the theory, simulation and practical application of basic skills acquired from previous didactic coursework in the clinical and patient setting. The student will first observe, and then provide support during surgical procedures. Students will be expected to maintain a weekly case log of all procedures, as well as detailed case reports of procedures involving direct patient care. Student will progress to independently set-up, and or assess efficacy of equipment, medications,and technique. Student will evaluate the circumstance of the patient, consult with the Anesthesia provider and assist in the care of the patient. Student will interact with vendors and other departments.

ANE 205 **3 C/45 CH**
Anesthesia Technology Pharmacology
Prerequisites: ANE 110, BIO 240, BIO 250
Corequisite: ANE 200
This course focuses on the pharmacokinetics and pharmacodynamics of drugs used in the administration of anesthesia and analgesia. Topics covered will include routes of administration, drug interactions, drug metabolism and elimination, and the various classes of anesthetic agents. Intravenous therapy and emergency mediations will also be covered.

ANE 210 **6 C/240 CH**
Anesthesia Technology Clinical II
Prerequisites: ANE 205, BIO 250
This course serves as the second of three externship experiences, with a focus on the integration of theory, simulation and practical skills acquired from previous didactic coursework to be applied in the clinical and patient care setting. The student will progressively function as a member of the Anesthesia Care Team. Interact professionally with vendors and other departments. Students will be expected to maintain a weekly case log of all procedures, as well as detailed case reports of procedures involving direct patient care.

ANE 220 **4 C/45 CH**
Anesthesia Technology Seminar and Certification Preparation
Prerequisites: ANE 215, BIO 250
Corequisite: ANE 225
This course serves as a capstone course for the anesthesia technology program. Students will discuss clinical scenarios and form patient care plans. Students will prepare for the national technologist credential exam. Students will review Anesthesia Technologist career opportunities now and future technologies.

ANE 225 **4 C/45 CH**
Anesthesia Technology Clinical III
Prerequisites: ANE 210, BIO 250
Corequisite: ANE 220
This course serves as the third and final externship experiences, with a focus on the integration of theory, simulation and practical skills acquired from previous didactic coursework to be applied in the clinical and patient care setting. The student will progressively function as a member of the Anesthesia Care Team. Interact professionally with vendors and other departments. Students will be expected to maintain a weekly case log of all procedures, as well as detailed case reports of procedures involving direct patient care.

ANTHROPOLOGY (ANT)

ANT 150 **1 C/15 CH**
Introduction to Global Studies
This is an international study course that provides students an opportunity to explore many aspects of globalization as a driving force in human life. This interactive class is designed to engage students in a public intellectual conversation that contributes to our common life together and to our

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understanding of the wider world. This course prepares students for travel overseas after which two to three weeks are spent in the cultural context of a country with opportunities to participate in research, journal writing, creative projects and group sessions. Travel destinations will vary.

ANT 151 **2 C/30 CH**
Introduction to Genealogical Research
This course provides an overview of the principles, ethics and technology utilized to conduct a personal genealogical search. Students will learn ethical best practices, establish a genealogical proof standard, employ and execute basic search techniques and exhibit an understanding of genealogical records associated with the research process.

ANT 152 **3 C/45 CH**
Introduction to General Anthropology
The physical and cultural nature and development of humans in relationship to their environment. Race and human variation, archaeology and its uses, the nature and function of culture and the relevance and application of anthropology in modern society.

ANT 153 **4 C/ 60 CH**
Introduction to Physical Anthropology
A study of humans from a biological perspective: genetics, comparative behavior of human and nonhuman primates, human growth and development, the concept of "race" and racial variation, fossil evidence concerning human evolution. (Satisfies non-lab natural science requirement.)

ANT 154 **3 C/45 CH**
Introduction to Cultural Anthropology
A comparative study of different cultures and lifestyles throughout the world. From a cross-cultural perspective, such concepts as kinship, sex roles, taboos, food and eating customs, folklore, magic and religious practices are studied.

ANT 201 **3 C/45 CH**
Urban Life and Culture
Prerequisite: One Course in ANT or SOC
Using the city and its cultural settings as a classroom and field laboratory, this course is designed to help students develop an awareness and understanding of the nature and diversity of cultural patterns and life-styles within urban America in general and metropolitan Detroit in particular. Various ethnic, religious, social and sexual life-styles and traditions are studied through field experiences and cultural informants.

ANT 210 **3 C/45 CH**
Anthropology of Sex and Culture
Prerequisite: One Course in ANT or SOC
A cross cultural study of the range, diversity and cultural basis of human sexual behavior in the world and contemporary American Society.

ARABIC (ARA)

ARA 101 **4 C/60 CH**
Introduction to Arabic I
Prerequisite: ARA 100 or equivalency test
Grammatical construction, vocabulary, simple idioms, oral and written drills to illustrate the linguistic pattern of the Arabic language.

ARA 102 **4 C/60 CH**
Introductory Arabic II
Prerequisite: ARA 101
Continuing the study of grammatical construction, vocabulary, simple idioms, oral and written drills to illustrate the linguistic pattern of the Arabic language.

ARA 105 **4 C/60 CH**
Conversational Arabic I
Prerequisite: ARA 102 or departmental approval
Application of skills learned in ARA 101 and 102 to conversation and dialogue. Attention given to various links between modern classical Arabic and the spoken language.

ARA 106 **4 C/60 CH**
Conversational Arabic II
Prerequisite: ARA 102 or departmental approval
Application of skills learned in ARA 101 and 102 to conversation and dialogue. Attention given to various links between modern classical Arabic and the spoken language with particular stress on media, broadcast and various dialects (May be taken independently of ARA 105).

ARA 201 **4 C/60 CH**
Intermediate Arabic I
Prerequisites: ARA 101, ARA 102
An in-depth study of grammatical construction, composition and idioms with emphasis on the use of modern Arabic language in literature, newspaper and radio.

ARA 202 **4 C/60 CH**
Intermediate Arabic II
Prerequisite: ARA 201
An extended development of Arabic 201.

ART (ART)

ART 101 **3 C/45 CH**
Drawing I
Supplies Cost Extra
Introduction to perspective, composition, rendering and other fundamental techniques and elements of drawing. Explores the potentials working with various media with emphasis on drawing, value, perspective, rendering, proportion, color, and composition. All of the subject matter areas including still life, the figure and landscape are explored.

ART 102 **3 C/45 CH**
Drawing II
Supplies Cost Extra
Prerequisite: ART 101
An introduction to advanced techniques in drawing. Explores the potentials working with various media with emphasis on drawing, value, perspective, rendering, proportion, color, and composition. All of the subject matter areas including still life, the figure and landscape are explored. Greater emphasis on personal expression.

ART 103 **3 C/45 CH**
Drawing III
Supplies Cost Extra
Prerequisite: ART 102
This course explores the potentials working with various media with emphasis on drawing, value, perspective, rendering, proportion, color, and composition. All of the subject matter areas including still life, the figure and landscape are explored. Greater emphasis on personal expression.

ART 111 **3 C/45 CH**
Design I
Supplies Cost Extra
An introduction to Design and Composition. An exploration of line, value, texture, shape and space, color and mass through lectures, demonstrations and assignments related to these design elements through various projects.

ART 112 **3 C/45 CH**
Design II
Supplies Cost Extra
Prerequisite: ART 111
An introduction to Two Dimensional Design and Composition. An exploration of line, value,

Continued on next page.

texture, shape and space, color and mass through a series of lecture/demonstrations and "Hands-On" assignments. Various elements and materials including glass, wood, metals, ceramic and other materials will be investigated through various projects.

ART 115 **3 C/45 CH**
Basic Drawing for Animation
This course will introduce students to the fundamental principles of drawing and drawing for animation. The student will learn the basics skill for drawing principles with an emphasis in game development providing the foundation for understanding and creating animation. Topics are how to draw: animals, human anatomy, natural setting and drawing effectively for animation. The student will develop the essential drawing skill necessary to be a successful animator.

ART 121 **3 C/45 CH**
Painting I
Supplies Cost Extra
An introduction to opaque media painting. Explores the potentials of painting media with emphasis on drawing, value handling, color, and composition. All of the subject matter areas including still life, the figure and landscape are explored.

ART 122 **3 C/45 CH**
Painting II
Supplies Cost Extra
Prerequisite: ART 121
Continuation of ART 121 with emphasis upon new techniques and materials and more complex subject matter. Explores the potentials of painting media with emphasis on drawing, value handling, color, and composition. All of the subject matter areas including still life, the figure and landscape are explored.

ART 123 **3 C/45 CH**
Painting III
Supplies Cost Extra
Prerequisite: ART 122
Continuation of ART 122 with emphasis upon personal expression. Composition, individual painting techniques and development of a painting portfolio will be important aspects of the course.

ART 131 **3 C/45 CH**
Ceramics I
Lab fee
Introduction to fundamental techniques of creating ceramics. Course covers hand-constructed clay objects, glaze preparation, glaze application, the kiln and firing. Supplies cost extra. (Meets six hours per week)

ART 132 **3 C/45 CH**
Ceramics II
Lab fee
Prerequisite: ART 131
This course places an emphasis on the use of the potter's wheel and related skills. Students in this course will continue to use and improve their primary hand building (slab and coil) and wheel throwing techniques, while producing their required assignments. An exploration of glazing, stacking and firing of kilns, developing a potter's vocabulary, and a further study of Ceramic History are also covered by this course.

ART 151 **3 C/45 CH**
Sculpture I
Lab fee
Introduction to the fundamental techniques of sculpture. (Meets six hours per week)

ART 152 **3 C/45 CH**
Sculpture II
Lab fee
Prerequisite: ART 151
Continuation of ART 151 with emphasis upon new techniques and materials. (Meets six hours per week)

ART 171 **3 C/45 CH**
Printmaking I
Lab fee
Introduction to basic printmaking, multi-color silkscreen printing, relief printing and engraving.

ART 172 **3 C/45 CH**
Printmaking II
Lab fee
Prerequisite: ART 171
Additional printmaking methods including multi-color reductive woodcut and linecut, multi-etched etching, photo silk screen and paper lithography.

ART 173 **3 C/45 CH**
Printmaking III
Lab fee
Prerequisite: ART 172
Advanced printmaking techniques and methods including stone lithography, photo silk screen, collagraph and other printing processes.

ART 174 **3 C/45 CH**
Printmaking IV
Lab fee
Prerequisite: ART 173
Emphasis will be placed on individual expression and concentration in one or two printmaking methods.

ASTRONOMY (AST)

AST 101 **3 C/45 CH**
Astronomy I: New Solar System
A survey course including a study of the solar system, stars and constellations as well as some topics of current astronomical interest.

AUTO BODY TECHNOLOGY (ABT)

ABT 101 **4 C/60 CH**
Introduction to Auto Body Technology
This introductory course covers skills needed to become a good auto body shop employee, the various career opportunities in the auto body industry, and the repair and finishing procedures used in a typical paint and body shop. The proper selection of hand and power tools for auto body work will be covered. Students will be exposed to panel and trim replacement, MIG welding and automotive finishes. The history of auto body design and the material differences used in auto bodywork over time will also be covered.

ABT 103 **4 C/60 CH**
Auto Body Work Environment and Safety
Prerequisite: ABT 101
Safety in any industry is paramount and this class covers environmental, safety, OSHA and other critical laws and regulations in the auto body paint and refinishing industry. Hazardous warning information for products used in auto refinishing is discussed as well as the proper use of personal protective equipment, the correct use of tools and equipment in the shop and customer safety obligations.

ABT 105 **4 C/60 CH**
Damage Analysis and Repair Estimating
Prerequisite: ABT 101
This course provides students with exposure to damaged automobiles for the generation of collision analysis and the development of repair estimates. Damage assessment will lead to parts compilation and the calculation of final repair costs, including labor estimates. Additionally, effective and profitable auto body shop management will be discussed.

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Auto Body Technology (ABT) continued

ABT 131 **2 C/30 CH**
Introduction to Electrical/Mechanical Repair
This introductory course focuses on the basic principles and practices of electrical and mechanical repair when an auto has been damaged due to a collision. The course will introduce the most common mechanical and electrical repair issues required to restore vehicle to pre-collision condition.

ABT 141 **4 C/60 CH**
Auto Body Surface Preparation and Body Fillers
Prerequisite: ABT 105
This course covers all aspects of auto body surface preparation after surface defects in panels and trim pieces have been corrected. Determining the auto body surface condition, the steps left to finish it and ready the auto body for painting are central to this course. Also covered are the correct mixing and application of body fillers to increase the quality of the finished repair.

ABT 201 **4 C/60 CH**
Basic Automotive Finishes
Prerequisite: ABT 141
This course focuses on understanding the variety of automotive finishes, including chemical composition, mixing formulas, dry time and finish application technique. Application of base and clear coat systems, as well as primers, single stage coatings and sealers are covered. This hands-on course exposes a student to proper mixing of spray materials, proper spray gun techniques with various types of equipment, the use of reference manuals, and adherence to safety procedures in the industry.

ABT 203 **4 C/60 CH**
Advanced Finishes, Custom Painting and Detailing
Prerequisite: ABT 201
Fundamental auto body finishing skills are further developed in this course with the addition of proper techniques for the application of metallic colors, spot repairs. Color blending, tri-coat finishes and specialty products. Basic custom painting techniques, advanced color mixing and matching, detailing, pin striping, and decal application will be covered. The removal of overspray and the proper cleaning of the exterior of the vehicle will also be emphasized.

AUTOMOTIVE SERVICE TECHNOLOGY (AUT)

AUT 114 **3 C/60 CH**
Electrical/Electronic Systems I
Lab fee
Prerequisite: Program Approval
Corequisite: AUT 115
This course is a required course in the Automotive Technology certificate and associate degree programs. This fundamental course provides students with the necessary skills and understanding to identify, describe, and locate basic parts of major electrical/electronic automotive systems. Electrical theory, operating principles, construction, and maintenance of various components will be applied in this class. Introduction to on-vehicle testing procedures and inspection of electrical components will be performed by students. There will be discussion and testing of on-board computers included. ASE certification requirements will be introduced in this course.

AUT 115 **3 C/60 CH**
Electrical/Electronic Systems II
Lab fee
Corequisite: AUT 114
This course is a required course in the Automotive Technology certificate and associate degree programs. This course provides students with the necessary skills and understanding to system construction and operations. Electrical theory, operating principles, construction, maintenance and repair of various components are included in the class. On-vehicle testing, inspection, and diagnoses will be performed by students. There will be discussion and testing of on-board diagnostic computers stressed in this course. In addition, ASE certification disciplines will be stressed and applied in this course.

AUT 116 **3 C/60 CH**
Electrical/Electronic Systems III
Lab fee
Prerequisites: AUT 114, AUT 115
Corequisite: AUT 117
This course is a required course in the Automotive Technology certificate and associate degree programs. This advanced course provides students with the necessary skills and understanding of system diagnosis and repair. The student will perform vehicle testing, diagnoses and repair. Students will be expected to perform the necessary service of OBD I and II vehicles with the use of scan tools and analyzers. In addition, ASE certification testing procedures will be implemented and applied in this course.

AUT 117 **3 C/60 CH**
Electrical/Electronic Systems IV
Lab fee
Prerequisites: AUT 114, AUT 115
Corequisite: AUT 116
This course is a required course in the Automotive Technology certificate and associate degree programs. This advanced course provides students with the necessary skills and understanding of advanced Inspection, diagnosis and repair of electrical/electronics in automotive vehicles. The student will perform advanced diagnosing, vehicle testing and repair on today's automobiles using the latest testing equipment. Students will perform the necessary service on OBD I and II vehicles with the use of scan tools and analyzers. In addition, sample ASE certification tests and procedures will be implemented and strongly applied in this course.

AUT 118 **3 C/60 CH**
Engine Performance I
Lab fee
Prerequisites: AUT 114, AUT 115, AUT 116, AUT 117
Corequisite: AUT 119
This introductory course is designed to help the student identify engine and computer control systems on the modern automobile. Basic troubleshooting procedures will be used to diagnose the engines electrical, ignition, fuel and emissions systems. Other areas such as ASE certification techniques will also be introduced in this course.

AUT 119 **3 C/60 CH**
Engine Performance II
Lab fee
Prerequisites: AUT 114, AUT 115, AUT 116, AUT 117,
Corequisite: AUT 118
This course is a continuation of AUT 118 and is designed to help the student identify the complex engine and computer control systems on the modern automobile. Basic troubleshooting procedures will be used to diagnose the engines electrical, ignition, fuel and emissions systems. Other areas such as ASE certification techniques will also be introduced in this course.

AUT 120 **3 C/60 CH**
Brakes I
Lab fee
Prerequisites: AUT114, AUT115, AUT 116, AUT 117
Corequisite: AUT 203
This course is designed to provide students with the necessary skills and understanding to research, diagnose, repair and maintain the automotive braking systems. In addition, it will provide the necessary skills to be prepared for the ASE certification brakes exam. Hydraulic theory, brake operating principles, anti-locking brake theory and systems, construction maintenance, and inspection will be performed by the student.

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Automotive Service Technology (AUT) continued

AUT 121 **3 C/60 CH**
Steering and Suspension I
Lab fee
Prerequisites: AUT114, AUT115, AUT 116, AUT 117
Corequisite: AUT 204
This course is designed to introduce the student to basic components and operations of the automotive suspension and steering systems. Troubleshooting, inspection, and diagnosing of suspension and steering problems will be applied in this course. The student is expected to perform these techniques to show competency in this area. In addition, ASE principles for certification will be highly stressed and applied in this course.

AUT 122 **4 C/75 CH**
Automatic Transmission and Transaxle I
Lab fee
Prerequisites: AUT114, AUT115, AUT 116, AUT 117,
Corequisite: AUT 206
This course is designed to provide students with the necessary skills and understanding to research, diagnose, repair, overhaul and maintain automatic transmissions, operating principles, hydraulics, power flow, testing and overhaul procedures for transmissions and transaxles. On-vehicle inspection, diagnosis and repair are performed by the student.

AUT 124 **4 C/75 CH**
Engine Repair I
Lab fee
Prerequisites: AUT114, AUT115, AUT 116, AUT 117
Corequisite: AUT 207
Engine repair is the study of basic theory, design, service, and diagnosis of live automotive engines. Practical application of diagnosis, removal, inspection, measurement, repair, installation, and safety procedures will also be taught.

AUT 125 **3 C/60 CH**
Heating and Air Conditioning I
Lab fee
Prerequisites: AUT114, AUT115, AUT 116, AUT 117
Corequisite: AUT 208
This course is designed to provide students with the necessary skills and understanding to research, diagnose, repair and maintain the automotive Heating, Ventilation, and Air Conditioning systems. In addition, it will provide the necessary skills to be prepared for the ASE certification exam.

AUT 126 **3 C/60 CH**
Manual Drive Train and Axles
Lab fee
Prerequisites: AUT114, AUT115, AUT 116, AUT 117
Corequisite: AUT 209
This course is designed to provide students with the necessary skills and understanding to identify basic characteristics and components of the manual drive train and axle design. On-vehicle inspection, diagnosis, and repair are performed by the student. Identification of special tools used on these systems will also be explained. In addition, ASE principles for certification will be introduced to the student.

AUT 150 **4 C/60 CH**
Introduction to Alternative Fuels
Prerequisite: AUT 117
Students will use various sources in the alternative fueled vehicle industry to learn what alternative fuels are available, which include an overview of alternative fuel engine technology, compressed natural gas technology, electronic diagnostic and integration methods, system specific electronics, emission testing, cylinder inspection, and driver orientation/safety/ vehicle inspection.

AUT 151 **4 C/60 CH**
Light Duty Diesel Engines
Prerequisite: AUT 117
This course covers the operation of light duty diesel engines. Students will diagnosis and repair

mechanical and electronic fuel injection systems, aid induction and exhaust systems, and perform general engine diagnosis according to engine manufacturer standards.

AUT 152 **4 C/60 CH**
Introduction to Electric and Fuel Cells
Prerequisite: AUT 117
This course is designed to help prepare the student to enter the automotive repair and service industry in the area of alternative fuels and advance technology vehicle. It is an intensive study of vehicle electric and fuel cell theory, application, installation, diagnosis, service and safety regulations.

AUT 153 **4 C/60 CH**
Introduction to Gaseous Fuels
Prerequisite: AUT 117
This course is designed to help prepare the student to enter the auto repair and service industry in the area of alternative fuels and advanced technology vehicles. It is an intensive study of three gaseous fuels - natural gas, propane and hydrogen. Theory, application, installation, diagnosis and safety regulations will be covered.

AUT 154 **4 C/60 CH**
Introduction to Hybrid Fuel Technology
Prerequisite: AUT 117
This course covers the fundamentals of hybrid vehicle technology. The course is intended to give the student an understanding of the types of hybrid vehicles, hybrid vehicle components, how hybrid vehicles operate and basic service procedures; this will enable the student to obtain employment as an advanced technology vehicle technician.

AUT 155 **4 C/60 CH**
Introduction to Hydrogen Applications and Safety
Lab fee
Prerequisite: AUT 117
This course will give the student an understanding of the properties of hydrogen, it's use as a fuel for internal combustion engines and fuel cells, and the storage, transportation and safety considerations, enabling the student to obtain employment as an alternative fuel or advanced technology vehicle technician.

AUT 200 **3 C/60 CH**
Engine Performance III
Lab fee
Prerequisites: AUT114, AUT115, AUT116, AUT117, AUT 118, AUT119
Corequisite: AUT 201
This intermediate course is designed to help the student diagnose and repair the complex engine and computer control systems on the modern automobile. Basic diagnostic procedures will be used to troubleshoot and diagnose the engines electrical, ignition, fuel and emissions systems. Other areas such as ASE certification techniques will also be utilized in this course.

AUT 201 **3 C/60 CH**
Engine Performance IV
Lab fee
Prerequisites: AUT114, AUT115, AUT 116, AUT 117, AUT 118, AUT 119,
Corequisite: AUT 200
This advanced course is designed to provide the student with hands-on techniques to inspection, diagnose and repair of complex engine and computer control systems on modern automobiles. Advanced diagnostic procedures will be used to troubleshoot and diagnose the engines electrical, ignition, fuel and emissions systems. An understanding of employment opportunities, "pertaining to engine performance", will be discussed. While utilizing these tasks, ASE certification principles will be highly stressed and applied in this course.

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Automotive Service Technology (AUT) continued

AUT 203 **3 C/60 CH**
Brakes II
Lab fee
Prerequisites: AUT114, AUT115, AUT 116, AUT 117,
Corequisite: AUT 120
This course is a continuation of Brakes I and will be used to exercise the student's abilities to perform theory, diagnosis and operations of automotive braking systems. The student will inspect, remove and replace braking system components, perform machining techniques, overhaul and repair braking systems. This automotive brakes class is a combination of (70%) laboratory experiences and (30%) lecture. Every student will be expected to participate in lab exercises and will be evaluated on an individual basis. The ASE certification requirements will be highly stressed in this course.

AUT 204 **2 C/45 CH**
Steering and Suspension II
Lab fee
Prerequisites: AUT114, AUT115, AUT 116, AUT 117,
Corequisite: AUT 121
This course is a continuation course of Steering and Suspension I. This course is designed to provide the student with the knowledge and skills to inspect, diagnose and perform repair procedures on automotive steering and suspension systems, as well as introduction to basic inspection and diagnosing of steering and suspension problems will be applied in this course. Identification of special tools used on these systems will also be explained. In addition, ASE principles for certification will be introduced to the student.

AUT 206 **3 C/60 CH**
Automatic Transmission and Transaxle II
Lab fee
Prerequisites: AUT114, AUT115, AUT 116, AUT 117,
Corequisite: AUT 122
This course is a continuation of Automatic Transmission and Transaxle I and will be used to exercise the student's abilities to perform research, diagnose, repair, overhaul and maintain automatic transmissions, operating principles, hydraulics, power flow, testing and overhaul procedures for transmissions and transaxles. On-vehicle inspection, diagnosis and repair are performed by the student.

AUT 207 **3 C/60 CH**
Engine Repair II
Lab fee
Prerequisites: AUT114, AUT115, AUT 116, AUT 117,
Corequisite: AUT 124
This course is a continuation of Engine Repair I and will be used to exercise the student's abilities to perform theory, diagnosis and operations of automotive engines. Students measure, inspect, recondition, disassemble, and assemble various engine components.

AUT 208 **3 C/60 CH**
Heating, Ventilation, and Air Conditioning II
Lab fee
Prerequisites: AUT114, AUT115, AUT 116, AUT 117,
Corequisite: AUT 125
This course is a continuation of Heating, Ventilation, and Air Conditioning I and will be used to exercise the student's abilities to perform theory, diagnosis and operations of automotive heating, ventilation, and air conditioning systems. In addition, it will provide the necessary skills to be prepared for the ASE certification exam.

AUT 209 **2 C/45 CH**
Manual Drive Train and Axles II
Lab fee
Prerequisites: AUT114, AUT115, AUT 116, AUT 117,
Corequisite: AUT 126
This course is a continuation of AUT 126 and is designed to provide students with the necessary skills and understanding to diagnose, disassemble, and reassemble a manual transmission. On-vehicle inspection, diagnosis, and repair are performed by the student.

AVIATION TECHNOLOGY: AIR SCIENCE (ATP)

ATP 101 **8 C/120 CH**
Introduction to Aviation I
The Introduction to Aviation is comprised of the following four components: Aircraft History, Mathematics, Aircraft Drawings and Physics. Students will learn basic computer and software application, study skills and the history of aviation with early balloons and gliders through modern transport jet aircrafts. An introduction to basic math formulas used by aviation technicians in performing daily tasks and elements necessary for effective understanding and interpretation of aircraft drawings will also be reviewed.

ATP 102 **8 C/120 CH**
Introduction to Aviation II
This course will provide a solid foundation in the Federal Aviation Administration's (FAA) acceptable publications to include maintenance manuals, privileges and limitations of an Airframe and Powerplant license. Additional subjects include weight and balance, tools, safety and grounds operations and fluid lines and fittings skills based on industry standard practices.

ATP 103 **8 C/120 CH**
Basic Electricity
Students will be introduced to electrical theory and principles, and their application to aircraft systems. Aircraft electrical circuit diagrams, including solid state devices and logic functions, DC/AC circuit operation and electrical fundamentals will prepare the student for advanced electrical functions and troubleshooting.

ATP 104 **8 C/120 CH**
Materials, Fuel, Fire and Corrosion
Students will learn and practice the process for cleaning aircraft parts and structures as well as methods employed to protect them from corrosion. Additional topics include aircraft repair and maintenance, aircraft fuel systems and all associated components and fire detection warning and protection systems related to the airframe and powerplant.

AVIATION TECHNOLOGY: AIRFRAME (AFM)

AFM 201 **8 C/120 CH**
Basic Sheet Metal
Students receive a general introduction to the FAA's requirements for sheet metal fabrication and repair.

AFM 202 **8 C/120 CH**
Non-Metallic Structures and Finishes
This course is designed to introduce the student to composite materials used in aircraft construction. Rules regarding installation of aircraft registration numbers will also be reviewed.

AFM 203 **8 C/120 CH**
Airframe Electrical
This course will familiarize the student with basic airframe and powerplant electrical installation and troubleshooting.

AFM 204 **8 C/120 CH**
Aircraft Navigation and Communications
This course will instruct students on the theory of all instruments and instrument systems used for flight navigation of an aircraft to include inspection, installation, service and FAA regulations.

AFM 205 **8 C/120 CH**
Assembly and Rigging and Aircraft Systems
An in-depth study of cabin atmosphere control systems, assembly rigging hydraulics and pneumatics will be covered.

Continued on next page.

Aviation Technology: Airframe (AFM) continued

AFM 206 **8 C/120 CH**
Landing Gear Systems and Airframe Inspections
Student s will learn aircraft landing gear systems, position and warning systems and airframe inspection.

AVIATION TECHNOLOGY: POWERPLANT (PPM)

PPM 201 **8 C/120 CH**
Reciprocating Engine Operation
Students will learn the theory and operation of reciprocating engine's powerplant instrument systems and reciprocating engine fuel metering systems.

PPM 202 **8 C/120 CH**
Reciprocating Engine Systems
Students will learn "how to" identify, inspect, troubleshoot and service powerplant systems, engine induction, exhaust and ignition systems.

PPM 203 **8 C/120 CH**
Reciprocating Engine Overhaul and Troubleshooting
This course will provide theory and hands-on experience on reciprocating engine inspection, troubleshooting and overhaul systems.

PPM 204 **8 C/120 CH**
Propellers and Turbine Engine Operation
Students will learn the theory of aircraft propellers and be introduced to the future technician to gas turbine engines from the development of gas turbines and jet propulsion followed by a study of the major sections of a typical gas turbine engine.

PPM 205 **8 C/120 CH**
Turbine Engine Designs, Accessories and Instruments
This course is designed to develop an understanding of turbine engine accessories and design used on aircrafts to include turbojet, turbofan and turboprop engines.

PPM 206 **8 C/120 CH**
Turbine Engine Overhaul and Troubleshooting
Students will be introduced to the maintenance and inspections required for turbine engines. Students will also practice the systemic identification of problems that develop in turbine engines including intake, compressor, ignition, combustion, power, exhaust, bleed air and fuel.

BIO-MEDICAL EQUIPMENT REPAIR TECHNOLOGY (BET)

BET 110 **3 C/45 CH**
Bio-Medical Instrumentation and Safety I
Prerequisites: CT 205, EE 101, EE102, EE 107, EE 111, EE 115, EE 205
Students will be introduced to the Bio-Medical profession and terminology. Usage, definition, pronunciation and spelling of terms related to anatomy, medical equipment, electronic test equipment and safety will be introduced. Students will become aware of the fundamentals of medical equipment and testing concepts.

BET 210 **3C/45 CH**
Biomedical Instrumentation and Safety II
Prerequisite: BET 110
This course is designed to provide students with knowledge on how to properly manage and maintain medical equipment in the hospital setting. Fundamental principles related to Bio-Medical Equipment Repair Technology will also be discussed in this course.

BET 240 **3C/45 CH**
Biomedical Equipment Repair Technology Practicum I
Prerequisite: BET 110
This course provides observations and participation in structured learning roles and activities within a hospital setting or with an employer in the Bio-Medical field. Students will be required to complete 300 hours at an approved practicum site.

BET 250 **3C/45 CH**
Biomedical Equipment Repair Technology Practicum II
Prerequisites: BET 210, BET 240
This course provides observations and participation in structured learning roles and activities within a hospital setting or with an employer in the Bio-Medical field. Students will be required to complete 300 hours at an approved practicum site.

BIOLOGY (BIO)

BIO 125 **4 C/60 CH**
Biology for Non-Science Majors
Lab fee
A lecture and laboratory course designed for students who have had little or no prior instruction in biology. Four major topic areas will be studied; (1) ecology; (2) cells and genetics; (3) human biology; and (4) hands-on biological methods. Course highlights include using the Internet to reinforce biological concepts and engaging in exciting laboratory-based and lecture-based activities. Strategies to help students apply biology to their everyday life will also be emphasized.

BIO 151 **4 C/60 CH**
Human Ecology
A course which develops interrelationships among living things and their environment, with emphasis on these interrelationships in the human community including environmental organization, life processes and conservation in everyday life. The student will be encouraged to offer solutions for environmental problems created by technology.

BIO 155 **4 C/60**
Introductory Biology
Lab fee
Lecture and laboratory introductory course for the non-science as well as the pre-professional transfer student. Biological concepts covering the chemical and cellular basis of life will be presented, including such topics as cell structure and function, DNA, bioenergetics, reproduction, metabolic principles, genetics, plant and animal anatomy, ecology and evolution. (Meets six hours per week; four hours lecture and two hours laboratory.)

BIO 158 **6 C/90 CH**
Experimental Biology
Lab fee
Prerequisite: BIO 155
This is the first part of a two semester sequence laboratory course. The main objective of the PHAGE Discovery Laboratory course is to provide authentic research opportunities for the beginning undergraduate students to experience real, inquiry-based science in person as soon as possible. The course will introduce students to the experimental methodology starting in the field (in vivo) with the isolation of bacterial viruses from environmental soil samples, progressing to the laboratory for in-vitro molecular analysis, and completed in silico, a bioinformatics analysis of the isolated genomes and sequenced by entering the data into a national database. During the course the students will develop critical thinking skills as well as a deeper understanding of the process of science.

Continued on next page.

Biology (BIO) continued

BIO 165 **4 C/60 HL/30 HLB**
Botany
Lab fee
Prerequisite: BIO 155
Lecture and laboratory course emphasizing principles of plant biology, including a survey of the plant kingdom with representative life cycles and relationships between plant groups. Emphasis is placed on the development, anatomy, physiology and evolution of gymnosperms and angiosperms. (Meets six hours per week; four hours lecture and two hours laboratory)

BIO 175 **4 C/ 60 HL/30 HLB**
Zoology
Lab fee
Prerequisite: BIO 155
Principles of animal biology as they apply to major animal phyla. A survey of the animal kingdom with emphasis on evolutionary and comparative relationships of the various phyla. A comparative study of major animal phyla emphasizing anatomy, physiology and ecological principles. (Meets six hours per week; four hours lecture and two hours laboratory)

BIO 204 **4 C/60 CH**
Life Science for Elementary School Teachers
Lab fee: $20.00
Prerequisite: ED 111, Program Admission
Lecture and laboratory course dealing with life science concepts and the variety of strategies used to teach these concepts in elementary schools. Current State of Michigan life science teaching objectives and associated learning activities will be emphasized. In addition, students will develop a life science lesson and teach it to children in an elementary (K-8) school.

BIO 240 **4 C/60 HL/30 HLB**
Human Anatomy and Physiology I
Lab fee
Prerequisite: BIO 155
Lecture and laboratory course on the structure and function of the human body. The cellular, tissue, organ and systems levels are considered. Emphasis is on the integumentary, skeletal, muscular and nervous systems including the special senses. The laboratory supplements the lecture with the use of microscopes to study the four basic tissues. The use of the torso, models, articulated/disarticulated skeletons, dissection of sheep brain and bovine eyes are used to study the other systems. (Meets six hours per week; four hours lecture and two hours laboratory)

BIO 250 **4 C/60 HL/30 HLB**
Human Anatomy and Physiology II
Lab fee
Prerequisite: BIO 240
Lecture and laboratory course that is a continuation of the systems found in the human body: circulatory, respiratory, digestion, metabolism, urinary, endocrine and reproductive systems. Body fluid, electrolytes and acid/base balance are also included. The laboratory supplements the lecture topics with the use of the torso, dissection of bovine heart models, charts and slides. (Meets six hours per week; four hours lecture and two hours laboratory)

BIO 252 **4 C/60 HL**
Pathophysiology
Lab fee
Prerequisite: BIO 250
This course is designed to introduce mechanism and manifestation of different human diseases. The basic science of pathology is concerned with the etiology and pathogenesis of disease. Essential information is provided for understanding the diagnosis of disease in the clinical setting.

BIO 258 **6C/90CH**
Genomics Bioinformatics
Lab Fee: $75
Prerequisite: BIO 158
This is the second part of a two semester laboratory sequence course that is designed to provide you with an opportunity to conduct a meaningful research project using a hands-on approach, the way professional scientists do. In this course, you will first annotate and analyze the genome of Mycobacterium smegmatis bacteriophage. As a group, you will publish Mycobacterium phage's annotated genome in a national database, GenBank (the National Institutes of Health genetic sequence database, an annotated collection of all publicly available DNA sequences) http://www.ncbi.nim.nih.gov/genbank/. You will also annotate additional Mycobacterium phage genomes (isolated by you and/or your classmates) as they become available. The course uses a student-centered learning approach, is inquiry based with fully integrated research experiences and assignments that emphasize active learning strategies, teamwork, communication, and peer-review using real-world scenarios.

BIO 295 **4 C/45 HL/45 HLB**
Microbiology
Lab fee
Prerequisite: BIO 155
Lecture and laboratory course studying the biology of microorganisms. Lecture topics survey the microbes, their uniqueness of cell structure and function, growth, physiological characteristics, genetics, physical and chemical control and selected communicable diseases. The laboratory emphasizes the use of the microscope, staining procedures, cultural and physiological techniques, use of keys to identify representatives of the various microbes. (Meets six hours per week; four hours lecture and two hours laboratory)

BUSINESS (BUS)

BUS 112 **3 C/45 CH**
Personal Business Affairs
Phases of business activity in which the individual or family is normally involved: consumer rights, banking, taxation, among others.

BUS 150 **3 C/45 CH**
Introduction to Business
An examination of the legal, economic and organizational environments in which modern business operates, including the global dimension of business. A survey approach to the functional areas of business-accounting, information systems, research, finance, management, supervision, human resources and marketing and how they relate to the overall organization.

BUS 155 **3 C/45 CH**
International Business and Trade
Prerequisite: BUS 150
This course covers various methods for entering the international marketplace. Topics include national differences in political economy and culture, international trade theory, entering foreign markets, exporting/importing and countertrade, as well as the international monetary system. Emphasis is placed on the impact and dynamics of sociocultural, economic, and political factors in the foreign trade environment.

BUS 161 **3 C/45 CH**
Introduction to Big Data and Business Analytics
Prerequisite: MAT 113
This course introduces concepts and possibilities for the business community when employing "Big Data." Students enter the world of business analytics through the exploration of business careers and basic software tools. Course content

Continued on next page.

Business (BUS) continued

presents business intelligence, data visualization, statistical analyses, and data mining theory and techniques. Instruction employs descriptive, predictive, and prescriptive analytics leading to data-based decision making. Incorporation of case study methodology engages real-world scenarios.

BUS 175 **3 C/45 CH**
Small Business Management
General business concepts with special application to small businesses. Detailed treatment of credit practices, franchising, location, inventory and other topics particularly crucial in a small business setting. Cases will be used to develop the student's analytical.

BUS 177 **3 C/45 CH**
Small Business Financing
Prerequisite: BUS 150
This course is a survey of financing policy for small business. Purchase discounts, borrowing, credit purchases, finance charges, consumer credit, financial management, financial statements, financial ratios and equity leverage are included.

BUS 210 **3 C/45 CH**
Supervision
Prerequisite: BUS 150
In this course students will learn to identify the five supervisory roles of a leader: influencing people, communicating effectively, supervising work, coaching, and managing through conflict. A supervisor's job is constantly affected by technological changes, a more competitive marketplace, and corporate restructuring and workflow redesign. Supervisors need to understand the traditional elements of directing the work of others and the specific skills required to do so: goal setting, budgeting, scheduling, delegating, interviewing, negotiating, handling grievances, guiding employees, and evaluating employee performance. Effective supervisory performance depends on a blend of skills, knowledge, attitudes and behaviors coupled with relevant experience.

BUS 215 **3 C/45 CH**
Interpersonal Communications in Business
Managing an organization's people is often the most challenging and complex task that is required of a leader. In this course, you will acquire the knowledge and skills needed to manage people in a business setting by developing your human relations skills. Students will learn the principles and concepts of the behavioral sciences as the apply to interpersonal relationships. Emphasis is placed on developing effective human relations skills for the workplace, including teamwork, and motivating and influencing others.

BUS 221 **3 C/45 CH**
Business Statistics
Prerequisite: MAT 113
Methods of gathering and presenting statistical data will be discussed. Basic concepts of probability, sampling and tests of significance for decision making are emphasized.

BUS 225 **3 C/45 CH**
Computer Application in Business
A study of the computer environment and practice of selected applications on the personal computer. Specific topics include Microsoft applications, the use of word processing with hands-on applications using Microsoft Word, spreadsheets with hands–on applications using Microsoft Access. Other topics of current interest in information processing and office automation will be discussed (Course is 75-80% hands-on).

BUS 228 **3 C/45 CH**
Internet Web Page Design
Prerequisite: OIS 101 Recommended, BUS 225 or CIS 110
A study of the Internet focusing on Web Page Design for Business Applications using software programs such as Microsoft FrontPage as well as the HTML (Hypertext Markup Language). Course content is designed to provide students with hands-on applications using the above software tools.

BUS 240 **3 C/45 CH**
Business Communications
Prerequisite: ENG 120
An examination of the basic elements of oral and written communications applying basic skills already acquired in the business setting. A study and practice of writing letters, memoranda, short papers and a research paper drawing on business sources. Oral Presentations are required.

BUS 241 **4 C/60 CH**
Business Analytics Software and Programming
Prerequisite: BUS 161
An exploration of the various software tools used in business analytics forms the core of this course. Use of commonly available business data manipulation software (both commercially available and open source types) will be utilized extensively in the course. Students will learn to comb through increasingly more complex business data sets using the correct software application to produce business intelligence. The class meets in a computer lab and hands-on work is to be expected throughout the course.

BUS 261 **3 C/45 CH**
Business Applications of Big Data
Prerequisite: BUS 241
The presentation of complex and relevant data in readily apparent ways is central to this course. Techniques in probability and statistics are continually explored and advanced while ways of exposing such business intelligence in easily digestible methods to decision makers is honed. Students will deal with actual business scenarios like sales, marketing, logistics and finance. Students are expected to bring in practical problems from fields of their own interest. Students practice presentation techniques and in leading discussions with relevant business data. Teamwork is an essential part of this course. The class meets in a computer lab and hands-on work is to be expected throughout the course.

BUSINESS LAW (BL)

BL 201 **4 C/60 CH**
Business Law I
A survey of the American legal system designed to develop an understanding of the fundamentals of business law. Classes are conducted by using text and actual case studies for the purpose of observing the development and application of legal principles in a business activity. Topics covered include the nature of law, courts and court procedures, crimes and torts, contracts, sales and negotiable instruments.

BL 210 **4 C/60 CH**
International Business Law
Prerequisite: BL 201
This course is designed to explore the fundamentals of international business law and examine the scope of how international disputes affect global trade. Students who wish to pursue a career in the business field, especially those who are interested in international business, would gain knowledge useful in international business dealings.

CAREER AND PROFESSIONAL DEVELOPMENT (CPD)

CPD 100 **1 C/15 CH**
Career and Professional Development
A course designed to assist students in making career choices. Development of self-confidence, motivation, human relation skills and stress reduction in the classroom and the work place are emphasized. Study skills, time management and conflict resolution are emphasized.

CPD 100-RM **1 C/ 15CH**
Career and Professional Development-Introduction to Research Methods
This course provides an introduction to research methods. The course will focus on an introduction to various research designs including experimental and non-experimental, as well as quantitative and qualitative research methods. In addition, the course will focus on providing a practical understanding of several statistical tools.

CHEMISTRY (CHM)

CHM 105 **4 C/60 HL/30 HLB**
Introduction to Chemistry
Lab fee
An introductory lecture and laboratory course in chemistry for persons without any previous high school chemistry or for those with an inadequate background for CHM 136. Topics include properties of matter, atomic theory and structure, chemical bonds, nomenclature, composition of compounds, chemical equations and calculations from chemical equations and stoichiometry (meets six hours per week; four hours lecture and two hours laboratory).

CHM 136 **4 C/60 HL/30 HLB**
General Chemistry I
Lab fee
Prerequisites: CHM 105, MAT 112
First lecture and laboratory course in a two semester general chemistry sequence. It includes a study of stoichiometry, solutions and concentrations of solutions, the gaseous state, molecular geometry and chemical bonding theory, reactions in aqueous solutions and a descriptive study of liquids and solids (meets six hours per week; four hours lecture and two hours laboratory).

CHM 145 **4 C/60 HL/30 HLB**
General Chemistry II
Lab fee
Prerequisite: CHM 136
This is the second lecture and laboratory course in a two-semester general chemistry sequence. It includes a study of chemical kinetics, chemical equilibrium, acid-base concepts, acid-base equilibria solubility and complex ion equilibria, thermodynamics and electrochemistry. Students participating in the REBUILD Detroit program who have selected the chemistry option should enroll in the appropriate section of CHM 145. The laboratory component for the REBUILD section will follow a RCN (Research Coordinated Network) model where students will explore various aspects of a research question for the entire semester.

CHM 155 **4 C/60 HL/30 HLB**
Survey Organic and Biochemistry
Lab fee
Prerequisites: CHM 105 or CHM 136
A lecture and laboratory course introducing the student to elementary structural organic chemistry as it relates to understanding biochemical reactions. The structure and function of protein, carbohydrates, lipids and nucleic acids are presented. The major metabolic pathways are explored. The role of food nutrition in optimizing metabolism and energy production is discussed (meets six hours per week; four hours lecture and two hours laboratory).

CHM 250 **4 C/60 CH**
Organic Chemistry I
Prerequisite: CHM 145
First lecture course of a one-year sequence in organic chemistry designed for chemistry majors and for students planning to attend professional schools. Topics include introduction to the nomenclature of organic compounds, stereochemistry, reaction intermediates, spectroscopy, kinetics, and thermodynamics (meets four hours per week).

CHM 252 **4 C/60 CH**
Organic Chemistry II
Prerequisite: CHM 250
Corequisite: CHM 255
Second course of a one-year sequence in organic chemistry designed for chemistry majors and for students planning to attend professional schools. Topics include aromatic structures and nomenclature, a more extensive study of reaction mechanisms and synthesis. The chemical basis of biological compounds will also be introduced (meets four hours per week).

CHM 255 **4 C/90 HLB**
Laboratory for Organic Chemistry I and II
Lab fee
Prerequisite: CHM 250
Corequisite: CHM 252
Preparations, properties, and identification of organic compounds provide the student with basic laboratory skills in organic chemistry (meets six hours per week; six hours laboratory).

CHILD CARE TRAINING (CCT) EARLY CHILDHOOD EDUCATION

CCT 101 **3 C/45 CH**
Introduction to Early Childhood Education
Students will be prepared to promote Child Development and Learning from children birth to age eight. Their knowledge base will allow them to understand children's characteristics and needs and the multiple interacting influences on children's development and learning to create environments that are healthy, respectful, supportive, and challenging for each child.

CCT 104 **4 C/60 CH**
Methods and Techniques in Child Care: Infant and Toddler Development
Prerequisites: CCT 101, EMT 101; program admittance, police clearances, FIA clearance, immunizations, physical exam and food handler's card
Students will explore methods that meet the needs and stimulate the development of infants and toddlers. Students will learn various child management techniques that ensure an environment that is socially, emotionally, communicatively, cognitively, creatively and physically supportive. A multicultural approach to learning is emphasized. Students will be required to complete 45 hour field experience in an infant and toddler setting. Course will meet partial requirements in preparation for the CDA assessment. (One credit hour for practicum and three credit hours for in-class time.) Class recommended for those completing the State of Michigan Child Care Directors' 12 credit hours requirement and will work with infants and toddlers. AAS degree students enrolled in CCT 104 must complete CCT 257.

Continued on next page.

Child Care Training (CCT) Early Childhood Education continued

CCT 106 **4 C/60 CH**
Methods and Techniques Pre-School Development
Prerequisites: CCT 101, EMT 101; program admittance, police clearances, FIA clearance, immunizations, physical exam and food handler's card.
Students will explore methods that meet the needs and stimulate the development of preschool children ages 2 1/2 to 5. Students will learn various child management techniques that ensure an environment that is socially, communicatively, emotionally, cognitively, creatively and physically supportive. A multicultural approach to learning is emphasized. Students will be required to complete a 45 hour field experience in a preschool setting. Course will meet requirements in preparation of the CDA assessment. (One credit hour for practicum and three credit hours of in-class time.) Class is not interchangeable, nor will it be substituted for CCT 105. Class recommended for those who are meeting the State of Michigan Child Care Directors' 12 credit hours requirement and will work with preschoolers. Students enrolled in CCT 106 must enroll in ENG 285.

CCT 111 **3 C/45 CH**
Child Assessment Techniques
Prerequisites: CCT 101, EMT 101
Students will understand that child observation, documentation, and other forms of assessment are central to the practice of all early childhood professionals. The students will be knowledgeable of effective systematic observation, documentation, and the goals, benefits, and uses/strategies of assessment. Additionally, students will learn how to partner with parents and other professional in a respectful and responsible manner to positively influence the development of every child.

CCT 120 **3 C/45 CH**
Building Family and Community Relationships
Corequisite: CCT 101, EMT 101
Students will be prepared to understand successful early childhood education depends upon partnerships with children's families and communities. The students will be knowledgeable, understand, and value the importance and complex characteristics of children's families and communities. Additionally, students will learn how to create respectful, reciprocal, relationships that support and empower families and to involve families in their child's development and learning.

CCT 157 **4 C/164 CH**
Child Care Practicum and Seminar I
Prerequisites: HUS 135, CCT 101, CCT 104 or CCT 106, and EMT 101
A supervised practical learning experience in which students work with children (infant and toddlers or preschool ages) in actual facilities under the direction of certified professional staff. Students preparing for the CDA certification will use the field placement to prepare for assessment. Students will meet with their instructor on a weekly basis for a seminar. Student will be required to complete 180 hours field placement experience in a childcare/pre-school setting.

CCT 210 **3 C/45 CH**
Special Populations
Prerequisites: CCT 101, EMT 101
A survey class with an emphasis on the identification of the cognitive, communicative, creative, emotional, physical and social growth of infants, toddlers and preschoolers with special needs, accelerated, physical, and emotional; and methods used in the address of these needs to stimulate development. Class will aid CDA students in the completion of the CDA portfolio.

CCT 220 **3 C/45 CH**
Children, Instruction and the Media
Prerequisites: ENG 119, HUS 105, HUS 135, CCT 101, CCT 104 or CCT 106, PSY 101 and EMT 101
A curriculum design course, students will learn to design curriculum and use content analytical methods to examine various forms of media (i.e., audio recorders, CDs, computers, display boards, film, overhead transparencies, radio, tape recorders, television, text, video and visuals), and utilize media to augment and enhance classroom curricula. Class recommended for those meeting the State of Michigan Child Care Directors' 12 credit hours requirement.

CCT 227 **4 C/ 164 CH**
Child Care Practicum and Seminar II
Prerequisites: CCT 101, CCT 157 EMT 101, HUS 135
A supervised practical learning experience in which students work with children (infants and toddlers or preschool ages) in actual facilities under the direction of certified professional staff. Students preparing for the CDA certification will use the field placement to prepare for CDA assessment. Students will meet with their instructor on a weekly basis for a seminar. Class is not interchangeable, nor will it be substituted for CCT 226.

CCT 230 **3 C/45 CH**
Program Management and Supervision
Prerequisites: HUS 105, CCT 101, EMT 101
This course will focus on the administrative program management, and supervision fundamental to the operation of early childhood programs and centers. Includes establishment of an organizational system, budget development and controls, licensing, business proposal writing, staffing, staff evaluation and supervision. CDA course requirement. Class recommended for those who are meeting the State of Michigan Child Care Directors' 12 credit hours requirement.

CCT 257 **3 C/45 CH**
Infant Literature; Birth to 36 Months
Prerequisites: CCT 101
The "Infant Literature" course is designed in response to developing literature foundations among infants and toddlers ages two weeks to 36 months, and identifies methods to assist parents. Recommended for CDA students who are seeking certificate upgrade. CCT 104 students must also enroll in this class.

CCT 260 **1 C/15 CH**
Portfolio - Methods and Techniques
Prerequisites: CCT 101, 104, 106, 120, 157, 210, 220, 230,
Students will construct a portfolio using data collected from previous course work and/or practical experiences. The portfolio can be used to meet CDA requirements. It can serve as a demonstration of knowledge and experience when applying to a university and for employment.

CHINESE (CHN)

CHN 101 **4 C/60 CH**
Elementary Chinese Language
This course is designed for beginning students and aimed at developing the four skills of listening to, speaking, reading, and writing Chinese. Emphasis is on grammatical constructions, vocabulary, basic idioms, and phonetics. Special emphasis will be on development of conversational Chinese. An appreciation of Chinese culture will be an integral part of the course.

CHN 102 **4 C/60 CH**
Elementary Chinese II
This is the Second course of elementary Chinese. The course provides the fundamentals of basic

Continued on next page.

Chinese (CHN) continued

sentence structure, basic grammars, and essential simplified characters, with particular emphasis placed on speaking and understanding Mandarin Chinese. Emphases are on grammatical constructions, vocabulary, and development of conversational Chinese. The course helps students obtain basic methods to learn Chinese, laying the foundation to study Chinese at higher level. An appreciation of Chinese culture will be an integral part of this course.

COLLEGE ORIENTATION (CCO)

CCO 10 **1 C/15 CH**
Community College Orientation
This course is designed to assist new students in making a successful adaptation to the college environment and enhancing basic study skills. The course emphasis is on improving students' academic, social and interpersonal skills through introduction to the life and study skills essential for academic success. This course is designed to increase student's awareness and use of resources both within and outside of the college (meets two hours per week for seven and one-half weeks).

COMPUTER INFORMATION SYSTEMS (CIS)

CIS 110 **4 C/ 60 CH**
Introduction to Computer Information Systems
Designed as a first course for Computer Information Systems majors which will introduce the vocabulary and concepts of computer hardware and software. The computer information industry, career paths, systems, concepts, societal impacts and ethical issues will be discussed.

CIS 112 **3 C/45 CH**
Structured Design
Designed to introduce problem solving methods, algorithm development and designing, coding, debugging and documenting programs using techniques of top-down, structured programming style.

CIS 120 **3 C/45 CH**
Introduction to Database Concepts
(Formerly CIS 285)
Prerequisite: CIS 110
This course is designed to introduce the student to the concepts of database design. The student will learn the fundamentals of SQL (Structure Query Language) using the most popular database management systems available today. The student will learn to create, query, update and change tables in database using SQL commands, as well as create reports, use forms, and embed SQL commands in another programming.

CIS 203 **3 C/45 CH**
Visual Basic Programming Language
Prerequisites: CIS 110, CIS 112
This course is designed to introduce the student to Visual Basic programming language. This course covers Visual Basic concepts, tools, and programming methodology to create user friendly Microsoft Windows Application.

CIS 207 **4 C/60 CH**
Java Programming Language
Prerequisites: CIS 110, CIS 112
This course is designed to introduce the student to Java programming including providing the knowledge and skills necessary for object-oriented programming. The student will learn how to program in JAVA which includes its syntax, its environment and its support for graphical user interface.

CIS 209 **4 C/60 CH**
C Programming Language
Prerequisites: CIS 110, CIS 112
This course is designed to develop an understanding of the C programming language. C is a general-purpose programming language widely used in both systems programming and application programming. Student will solve programming assignments using C what is a programming known for its brevity of expression, modern control flow and data structures, and a rich set of operators.

CIS 210 **3 C/45 CH**
Introduction to Unix Operating Systems
Prerequisites: CIS 110
This course is designed as a first course for computer information systems majors, and novice Unix users with computer skills but no experience with any operating system. This course is a comprehensive overview of the Unix Operating System, and the environment in which it functions. Students will use the college's desktop computers, ubiquitous network, and Unix Server to facilitate their understanding.

CIS 212 **4 C/60 CH**
Linux
Prerequisites: CIS 110, CIS 210
In this course students will define and identify origins, benefits, drawbacks, and uses of the Linux operating system. The students will log in, enter commands, shut down and restart your Linux workstation, create and configure users and groups, and manage the file system. The students will use Linux text editors and redirection to create and modify files, archive files with tar, cpio, and other commands. The students will work in the X Window environment, manage print services, and add and update packages through package management utilities.

CIS 213 **3 C/45 CH**
Web Design Methodology and Technology
Prerequisites: CIS 110, CIS 241
This course teaches students how to create and manage Web sites with Multimedia tools such as Macromedia Dreamweaver and Flash, FrontPage, Dynamic HTML, and various multimedia and CSS standards. Students will also implement strategies to develop third-generation Web sites, evaluate design tools, discuss future technology standards, and explore the incompatibility issues surrounding current browsers. This course also focuses on theory, design and Web construction.

CIS 223 **3 C/45 CH**
COBOL I
Prerequisites: CIS 110, CIS 112
Cobol I is designed to enable the students to learn the COBOL programming language from algorithm development and designing to coding, debugging, and documenting programs using structured programming methodologies.

CIS 237 **7 C/105 CH**
Cisco CCNA
Prerequisites: CIS 110, CIS 240
In this class the students will broaden their working knowledge of routing protocols. Through hands on work with Cisco switches and routers the student will install, configure and operate small networks

CIS 240 **3 C/45 CH**
Networking Essentials
Prerequisite: CIS 110
This course will be an introduction to network concepts. The students will describe the features and functions of networking components, and possesses the knowledge and skills needed to install, configure and troubleshoot basic networking hardware. Protocols and standards, network implementation, and network support are also covered in this course.

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Computer Information Systems (CIS) continued

CIS 241 **4 C/60 CH**
Internet Foundations
Prerequisite: CIS 110
This course teaches students about internet connection methods, protocols, hypertext markup language, along with networking technologies. Students will learn about how websites are developed, wireless networking, and networking troubleshooting.

CIS 242 **3 C/45 CH**
Web Administration
Prerequisites: CIS 110, CIS 210, CIS 244
This class is a comprehensive course that teaches students how to install a website and keep it in up and running. Students will also learn how to keep the hosting server working in different operating systems. At the end of this course, students will be able to provide essential services for anyone interested in establishing an effective e-business presence.

CIS 243 **3 C/45 CH**
Network Security Fundamentals
Prerequisites: CIS 110, CIS 210, CIS 240
This course will teach students the latest security industry recommendations and how to properly protect servers from attacks in a variety of settings. Students will learn how to keep servers reconfigure the operating system to fully protect it, and scan hosts for known security problems. By the end of the course, students will have a solid understanding of the security architectures used by Windows and Linux.

CIS 244 **3 C/45 CH**
TCP/IP Concepts and Practices
Prerequisites: CIS 110, CIS 240
In this course the students will learn Transmission Control Protocol/Internet Protocol (TCP/IP) key concepts and protocols. Network routing, network troubleshooting and network management also will be addressed.

CIS 245 **3 C/45 CH**
Wireless Networking
Prerequisites: CIS 110, CIS 240
This course will introduce the student to wireless networking over a range of applications, from local area networks to broadband wide area network links. Students will be able to describe the advantages and disadvantages of wireless communication in general, and understand the difference between radio and infrared. The course will cover WLANs, configuration and security problems.

CIS 246 **4 C/60 CH**
Oracle Database Administrator I
Prerequisite: CIS 285
In this course the student will gain a conceptual understanding of the Oracle database and how its components work and interact with one another. Students will learn how to create a working database and properly manage it including performance monitoring, database security, user management, and backup/recovery techniques.

CIS 247 **4 C/60 CH**
Oracle Database Administrator II
Prerequisite: CIS 246
In this class, the students will learn how to configure an Oracle database for multilingual applications. Students will practice various methods of recovering the database, using RMAN, SQL, and Flashback technology. Tools to monitor database performance and improve database performance.

CIS 248 **3 C/45 CH**
Computer Support II
Prerequisites: CIS 110, CIS 240, CT 211
In this class the student will learn how to resolve end-user operating systems problems by phone or, by connecting to the system remotely. It also gives the students skills needed to support end-users from Microsoft windows in a corporate environment or at home.

CIS 249 **3 C/45 CH**
Computer Support I
Prerequisites: CIS 110 , CIS 240, CT 211
In this course the student will over view the operating systems concept and how to troubleshoot windows. The students will also learn how to answer end-user questions and troubleshoot security settings.

CIS 250 **3 C/45 CH**
E-Commerce Strategies and Practices
Prerequisites: CIS 110, CIS 241
The E-Commerce Strategy and Practices course teaches students how to conduct business online and how to manage the technological issues associated with constructing an electronic-commerce website. Students will implement a genuine transaction-enabled business-to-consumer website, examine strategies and products available for building electronic-commerce sites, examine how such sites are managed, and explore how they can complement an existing business infrastructure. Students get hands-on experience implementing the technology to engage cardholders, merchants, issuers, payment gateways and other parties in electronic transactions.

CIS 258 **4 C/60 CH**
JavaScript /PERL
Prerequisites: CIS 110, CIS 112
This course teaches developers JavaScript Fundamentals and how to use the features of the JavaScript language. Students will also learn how to write JavaScript programs, script for the JavaScript object model, control program flow, validate forms, animate images, target frames, and create cookies.

CIS 259 **4 C/60 CH**
C++ Object Oriented Programming Language
Prerequisite: CIS 209
Designed to foster an understanding of object oriented programming and to develop a working knowledge of the C++ programming language, this course stresses the use of objects and designing and implementing individual classes using C++. Students will be using computers to solve programming assignment which practice the syntax of C++.

CIS 260 **3 C/45 CH**
System Analysis and Design
Prerequisites: CIS 110, CIS 112
This course is designed to introduce the systems design process in designing systems using project management techniques. Emphasis is placed on systems concepts and systematic thinking. Major topics include the basic tools and methods of traditional systems development, traditional analysis, design, and implementation through the data flow analysis and systems development life cycle approach, and methods for structured analysis and design.

CIS 266 **3 C/45 CH**
Introduction to Graphic Design
Prerequisite: CIS 110
This course is designed to enhance the computer skills of those using graphics programs to prepare images for the Web or for print in 2D. Students will learn to enhance and create digital images using Photoshop; optimize images for speed of download; place and manipulate type in an image; work with layers and masks; use filters for special effects; work with background images and transparent gifs; create image maps; use Image Ready to create animations, slices, web photo gallery, and rollovers.

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Computer Information Systems (CIS) continued

CIS 267 **3 C/45 CH**
Understanding and Developing Multimedia
Prerequisite: CIS 110
Recommended: CIS 266
Students in this course will create dynamic media that communicates effectively through the use of sound, images, motion, and text. The students in this course will also examine in detail the concepts and tools necessary for producing their own interactive projects using a number of professional authoring tools, including Macromedia Flash and Dreamweaver.

COMPUTER NUMERICAL CONTROL (CNC)

CNC 111 **3 C/45 CH**
Introduction to Computer Numerical Control (CNC)
Corequisite: CNC 122
This course is an introduction to the basic concepts of computer numerical control (CNC). Topics include controls, coordinate systems, components, functioning systems of modern day CNC equipment, as well as an introduction to the fundamentals of blueprint reading. This class is designed for the entry-level student as an introduction to advanced manufacturing careers.

CNC 122 **3 C/45 CH**
CNC Machine Controls
Corequisite: CNC 111
This course is an introduction to programming language, program structure and command codes (G codes, M, I, J, etc.). Students will write and execute word address programs, and will continue to build skills in the areas of blueprint reading and Geometric Dimensioning and Tolerancing (GD&T). Students will also begin to utilize machine control systems to properly start-up and warm-up for CNC equipment.

CNC 230 **3 C/45 CH**
CNC Design I
Prerequisite: CNC 122
Corequisite: CNC 231
In this class students will learn the basics of 2D drawing creation utilizing state-of-the-art computer graphics systems and software leading to a broad understanding of the tools and techniques necessary to accurately design parts in a modern manufacturing environment.

CNC 231 **3 C/45 CH**
CNC Programming and Machining I
Prerequisite: CNC122
Corequisite: CNC230
In this course students will be introduced to the concepts, industry practices and basic fundamentals of 2D programming and machine set-up. Topics include machine start up, proper warm up procedures, loading and unloading of tools, and securing of stock within modern CNC equipment.

CNC 234 **3 C/45 CH**
CNC Design II
Prerequisite: CNC 230
Corequisite: CNC 235
In this class students will learn the basics of 3D solid model creation utilizing state-of-the-art computer graphics systems and software leading to a broad understanding of the tools and techniques necessary to accurately design parts in a modern manufacturing environment.

CNC 235 **3 C/45 CH**
CNC Programming and Machining II
Prerequisite: CNC 231
Corequisite: CNC 234
In this course students will be introduced to the concepts, industry practices and basic fundamentals of programming from a 3D solid model and continue to expand their knowledge of set-up and operation of modern CNC equipment.

CNC 240 **3 C/45 CH**
CNC Programming and Machining III
Prerequisite: CNC235
Corequisite: CNC245
In this course students will perform machine operations including set-up, loading and execution of programs to complete multiple parts with a significant amount of hands-on lab work required.

CNC 245 **3 C/45 CH**
CNC Intuitive Programming
Prerequisite: CNC 235
Corequisite: CNC 240
In this course students will be exposed to Intuitive Programming System (IPS). This software simplifies the development of full CNC programs. Students will learn how to access the IPS menus, turn the system on and off, as well as work-flow and the use of IPS Recorder.

COMPUTER TECHNOLOGY (CT)

CT 203 **4 C/75 CH**
Digital Logic I
Lab fee
This course covers Boolean algebra, operation of digital combinational gates, flip-flop circuitry, shift registers and clock circuits and design combinational and sequential circuits. Laboratory is an essential phase of this course, which emphasizes the use of logic probes, logic pulsers and logic clips on gating circuits, flip-flops, counters, shift registers and multiplexers and demultiplexers.

CT 205 **4 C/75 CH**
Introduction to Microprocessors
Lab fee
An introduction to microprocessor systems, instruction sets, algorithm development and detail description of microprocessor system hardware. The instruction set of Motorola and Intel family microprocessors are used to write various application programs. Laboratory experience involves program generation and interfacing.

CT 207 **3 C/60 CH**
Digital Logic II
Prerequisite: CT 203
An advanced course in digital electronics as applied in the modern digital computer. This course covers the various types of memories, ALU's, interfacing (A/D and D/A), conventional codes and large-scale shift register memories. Laboratory is an essential phase of this course which includes digital counters, multiplexers, memories and multivibrators. Techniques of interfacing and input/output devices are examined.

CT 209 **4 C/90 CH**
Computer Repair I - CompTIA A+
This course is designed to provide an in-depth study of various areas that are related to servicing computers and peripheral devices. Areas of study include assembly, disassembly of computers, upgrading hardware, troubleshooting hardware, installation and troubleshooting of operating systems such as DOS, Windows 9x, Windows 2000, Windows XP and Vista. This course and CT 210 prepares students for the A+ certification exams.

CT 210 **6 C/90 CH**
Computer Repair II - CompTIA A+
Prerequisite: CT 209
The student will gain the experience required to build, troubleshoot and repair current microcomputer systems. This course provides in-depth troubleshooting of Windows 200/XP, VISTA and Windows 7. This course covers introduction to networking. This course and CT 209 prepare students for the A+ certification exams.

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Computer Technology (CT) continued

CT 211 **4 C/60 CH**
Computer Networking I
Prerequisite: CT 209
Installing, Configuring, and Administering Microsoft Windows XP Professional. Also include users, group, profiles and policies, security and access controls, network protocols, internetworking with groups, printing and faxing, performance tuning, application support, booting, registry, fault tolerance, and troubleshooting of Windows XP.

CT 213 **4 C/60 CH**
Computer Networking II
Prerequisite: CT 211
This course covers Managing and Maintaining a Microsoft Windows Server 2003 Environment. Topics include: creating and managing users and groups; administrating server and web resources; managing hardware, access to files, disk and data storage, backup and disaster and basic security.

CT 215 **4 C/60 CH**
Computer Networking III
Prerequisite: CT 211
This course covers Implementing, Managing, and Maintaining a Microsoft Windows Server 2003 Network Infrastructure. Topics include: networking overview; IP addressing; implementing and managing DHCP, DNS, WINS; configuring name resolution; remote access; routing and security templates and network traffic.

CT 217 **4 C/60 CH**
Computer Networking IV
Prerequisite: CT 215
This course covers introduction to Microsoft Windows Directory Services Infrastructure. Topics include active directory overview, planning the active directory structure, directory sites, replication, groups, policies and certificates, planning and implementing active directory connectors, upgrading to Windows NT domain models to active directory.

CORRECTIONS (COR)

COR 100 **3 C/45 CH**
Introduction to Corrections
Introduction to the history, theory and practice of corrections. The role of probation, parole, prisoner rights in correctional institutions and community based corrections. Course needed to satisfy the requirements to become a State of Michigan Corrections Officer. Before students enroll in COR 100 they should have completed the ENG 115 requirements designated by the COMPASS examination.

COR 101 **3 C/45 CH**
Introduction to Juvenile Justice
Prerequisite: CJS 100
Overview of the juvenile justice system; its history, philosophy and interrelationship with other components in the criminal justice system. Evaluation of major court decisions effecting juvenile rights and specific diversion programs.

COR 105 **3 C/45 CH**
Introduction to Correctional Counseling
Prerequisite: CJS 100
The course will differentiate between normal and criminal behavior. Discussions will include psychological influences as it relates to behavior as well as the role of environment and the family on behavior. Various correctional intervention strategies will be discussed. Course needed to satisfy the requirements to become a State of Michigan Corrections Officer.

COR 110 **3 C/45 CH**
Introduction to Deviant Behavior
Prerequisite: CJS 100
Definitions and characteristics of behavior classified as deviant. Overview of theories and schools of thought for understanding deviant behaviors and their diagnosis, discrimination of minorities in Michigan, and formation of attitudes, ethics and values.

COR 200 **3 C/45 CH**
Social Science for Correctional Personnel
Prerequisite: CJS 100
The course will define the personal, psychological and environmental meanings of culture in contemporary society. The impact and meaning of discrimination will be discussed. The student will be expected to identify ways in which the various environments impact the development of attitude formation. Professional responses in the correctional setting will be discussed.

COR 205 **3 C/45 CH**
Institution Corrections Personnel
Prerequisite: CJS 100
This course will review the history and philosophy of correctional institutions' personnel and human growth and development. Study of institutional administration, management, supervision and personnel in parole, probation, community intervention strategies, treatment and control. Overview of specific problems of substance, medical and mental abuse. Course needed to satisfy the requirements to become a State of Michigan Corrections Officer.

COR 210 **3 C/45 CH**
Correctional Institution Facilities
Prerequisite: CJS 100
An in-depth study of the purpose of prisons and correctional institutions. There will be discussion of the management and organization of correctional institutions with specific description of traditional job roles. Custodial care and safety/security issues will be discussed as well as other institutional concerns in reference to incarceration. Course needed to satisfy the requirements to become a State of Michigan Corrections Officer.

COR 215 **3 C/45 CH**
Correctional Fieldwork
Prerequisite: CJS 100
This course will examine interpersonal relationships in correctional systems and the dynamics of attitude change. The course is a supervised work experience in a correctional setting under the direction of a faculty adviser and a field supervisor, in which students will maintain a log of their work activity and meet weekly with their advisor.

COR 218 **3 C/45 CH**
Race Relations - COR Personnel
Prerequisite: CJS 100
Examines racial tensions as they relate to correctional personnel, including emphasis on case histories of institutional problems and psychological games. Confrontation tactics for attitude change, economic oppression and competition, educational deprivation and social injustices and their relationship to institutional actions are discussed. Examines the woman's identity, and life choices and position in society in relation to correctional work in the criminal justice system.

COR 255 **3 C/45 CH**
Legal Issues in Corrections
Prerequisite: CJS 100
This course is an overview of the major legal issues, trends and the political and social dimensions of convictions. An analysis of constitutional law, courts decisions, current legislation of the federal and state law affecting prisons and the judicial

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Corrections (COR) continued

proceedings. Examines a forum for the legal rights of prisoners and the responsibilities of the legal system and the adjudication of juveniles and the alternatives to incarceration. Course needed to satisfy the requirements to become a State of Michigan Corrections Officer.

CRAFT BREWING (BRW)

BRW 101 **3 C/45 CH**
Introduction to Craft Beer Brewing
In this course, students will take a look at the history of beer from early civilization up to the present day. Students will make note of major paradigm shifts along with changes in technology that allow us to brew the way we do. The class will look at the industry of craft brewing from microbreweries to brew pubs. Emphasis will be placed on the State of Michigan and the business perspective of local breweries.

BRW 110 **3 C/45 CH**
Beverage Technology and Calculations
Prerequisite: MAT 113
This class will look at the technology and calculations used in brewing and fermentation from computers to pumps, brewing calculations, record keeping, calculations for recipe control and the fundamentals in math and electricity needed for a brewing operation.

BRW 200 **4 C 60HL/30HLB**
Brewing Science
Prerequisite: BRW 101
Corequisite: BRW 210
This class will cover the chemistry, biochemistry, and microbiology as it applies to the brewing process. Emphasis will be placed on yeast and fermentation science.

BRW 210 **3 C/45 CH**
Raw Materials, Soil, and Malting Lab
Prerequisite: BRW 101
Corequisite: BRW 200
In this course, the key raw materials (water and starch sources, i.e. grains, hops, and yeast) in beer will be discussed, as well as grain handling, the malting process and analysis. Other topics of discussion include the growth location of raw materials, soil chemistry and composition, as well as diseases associated with and affecting raw materials.

BRW 220 **4 C 60HL/30HLB**
Brewing Systems, Materials, Safety, and Sanitization
Prerequisite: BRW 200
Corequisite: BRW 240
This course will compare systems used by home brewers, brewpubs, and small, medium, and large breweries. This course will examine the differences in equipment, recipe calculations, materials and standards used in various settings. Safety protocols for each will be reviewed along with proper handling, storage, and sanitization of equipment, raw materials, chemicals, and fermented products. This class introduces equipment controls and programmable logic controllers used in production and will survey the materials needed for packaging and line bottling. Quality control and inspection practices, material understanding and basic engineering concepts will also be discussed.

BRW 230 **3 C/45 CH**
Heat Transfer and Fluid Flow
Prerequisite: BRW 200
Corequisite: BRW 245
This course will cover the fundamentals of heat transfer and the types of heat used and created during the brewing process. This course also involves the basic principles of thermodynamics, gas laws, and energy. Fluid mechanics and flow calculations in the brewing process will also be discussed.

BRW 240 **4 C 60HL/30HLB**
Recipe Formulation
Prerequisite: BRW 200
Corequisite: BRW 220
With the knowledge of the brewing systems, chemistry, fermentation science, calculations and raw materials, this class will formulate brewing recipes. The students will use specific yeast and other brewing processes to create their own recipe based on hops concentrations and adjuncts used.

BRW 245 **4 C 60HL/30HLB**
Batch Recipe Formulation
Prerequisite: BRW 240
Corequisite: BRW 230
This course will build on the basics of craft beer recipe formulation and will offer insight into the challenges and opportunities of recipe scaling and batch production. This course will discuss and demonstrate different beer styles based on recipes and introduce professional scale standards for brewing.

BRW 250 **4 C 60HL/30HLB**
Advanced Craft Brewing
Prerequisite: BRW 245
This course will cover advanced brewing techniques used by breweries. Students will assist in the production of large batches of beer. This course will take a comprehensive look at the sub-procedures that comprise the brewing process. Programmable logic controllers and software commonly used in the brewing industry will be discussed.

BRW 260 **1 C/15 CH**
Brewing Internship I
Prerequisite: Program Approval
This course will provide students with an initial experience in an actual brewery. This course will apply the principles learned in the program and provide an opportunity for the student to observe professionals and develop working skills.

BRW 265 **5 C/75 CH**
Brewing Internship II
Prerequisite: Program Approval
Corequisite: BRW 270
This course offers an advanced internship experience in a brewery. Students will have the opportunity to assist brew masters in the production of craft beer.

BRW 270 **2 C/30 CH**
Certification and Capstone
Prerequisite: Program Approval
Corequisite: BRW 265
This class will summarize the student experiences by building a portfolio and resume. This course will cover sensory evaluation of beer by industry standards using the flavor wheel. An introduction to judging systems will also be covered.

CRIMINAL JUSTICE (CJS)

CJS 100 **3 C/45 CH**
Introduction to Criminal Justice
This course examines the foundations of the Criminal Justice System and provides an historical perspective on the law's development. It also examines the main components of the Criminal Justice System including law enforcement (police), the court system, and corrections.

DENTAL (DEN)

DEN 100 **3 C/45 CH**
Professional Development
An introductory course designed to prepare the dental programs student to become a member of today's dental health team. Along with basic dental

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Dental (DEN) continued

and medical terminology, an orientation to the profession of dentistry, the student is instructed in developing skills necessary for success as a member of the dental health team. Emphasis is placed on professional standards, ethics, assertive communication, empathy training, time management, goal setting and job preparation.

DEN 112 **2 C/30 CH**
Medical and Dental Emergencies
Prerequisite: Program Admission
This course will familiarize the student with common medical emergencies in the dental office. Preventive measures and management of these emergencies will be reviewed. Additionally, information on the basic physiology and pathophysiology occurring with common medical emergencies as well as variations in clinical signs will be presented. Reinforcement occurs throughout the students clinical experiences by real or simulated emergencies.

DEN 200 **2 C/30 CH**
Dental Radiology Theory
This course includes lectures on the nature, effects, and use of radiology in dentistry with special emphasis on radiation hazards and protection.

DEN 201 **2 C/30 CH**
Dental Radiology Lab
This course concentrates on the practical aspect of exposing, developing, and mounting diagnostic radiographs with emphasis on the two intra-oral techniques: bisecting and paralleling. In addition, students will be able to identify normal radiographs landmarks. It is strongly recommended that this course be taken simultaneously with DEN 200 or after the completion of DEN 200.

DENTAL ASSISTING (DA)

DA 104 **5 C/75 CH**
Dental Materials
Prerequisite: Acceptance in to the Dental Assisting Program
A lecture and laboratory course which provides the student with a fundamental knowledge of the Dental cements and materials commonly used in dental practice. Lecture: Presents physical, chemical, and manipulative characteristic of impression materials, cements, bases, cavity liners, cavity varnishes, waxes, composites, gypsum products, metals, and resins. Laboratory: Prepares students to correctly manipulate dental cements and materials. Students also acquire the skill to obtain preliminary impressions and occlusal registrations; pour, trim and polish study casts; fabricate custom impression trays from preliminary impressions; and demonstrate mixing techniques for dental cements and impression materials.

DA 106 **4 C/60 CH**
Dental Applied Sciences and Medical Emergency
Prerequisite: Acceptance into the Dental Assisting Program
This course provides an in depth study of oral anatomy as well as medical emergencies in the dental office. Topics covered in oral anatomy include: head and neck anatomy, tooth anatomy and morphology, embryology, and histology. Dental charting for adults and children will also be covered. Medical emergencies will include: emergency carts/kits, administration of oxygen and emergency drugs, and the management of medical emergencies including the allergic reactions, syncope, circulatory, respiratory, epilepsy, diabetic and drug related emergencies. Monitoring of nitrous oxygen, face mask placement and emergency signs will also be discussed.

DA 110 **4 C/60 CH**
Clinical Dental Assisting
Prerequisite: Acceptance into the Dental Assisting Program
Lecture: Presents concepts of the dental health team including the history of dentistry and the dental career fields; professional development as a dental team member; dental equipment, chairside ergonomics; collection of patient data, medical/dental histories and vital signs; basics of four-handed technique (four-handed transfer, tissue retraction, irrigation, illumination, and evacuation); instrument identification and uses of dental terminology. Laboratory: To include the practice of four-handed dental techniques, instrument identification and restorative tray set-ups. Demonstrate Infection Control protocol during Set up and break down of dental units.

DA 115 **2 C/30 CH**
Infection Control and Preventive Dentistry
Prerequisite: Acceptance into the Dental Assisting Program
This lecture course provides students knowledge in Infection control protocol, disease transmission, Hazardous waste management. Instruction includes but not limited to Bloodbourne Pathogen Standard and Standard Precautions. Preventive dentistry will provide the student with basic understanding of patient education with an emphasis on individualized oral health counseling. The course includes instruction in the following topics: dietary considerations for oral health, dental plaque and other deposits, disclosing agents, tooth stains and discolorations, fluorides, periodontal tissues, home care for appliances and techniques for the prevention of oral diseases.

DA 117 **5 C/150 CH**
Clinical Practice I
Prerequisite: DA 104, DA 106, DA 110, DA 115, DA 120, DEN 200, DEN 201
This course is designed to perfect the students' competencies in performing dental assisting functions. Practice is provided in clinical chairside assisting in a dental setting. There is a one hour weekly seminar in conjunction with the field experience to integrate theoretical, laboratory, and clinical instruction and to provide opportunities for students to share their experiences. Assessment continues of student clinical skills. Developed professionalism is practiced and evaluated as well as student critical thinking abilities.

DA 120 **2 C/30 CH**
Dental Specialties
Prerequisite: Acceptance into the Dental Assisting Program
This is a lecture course designed to expose the dental assisting student to the dental specialties. Areas covered are oral surgery, endodontics, orthodontics, pediatrics, prosthetics, periodontics and community dentistry. Providing post-operative instructions and tray set-ups for the specialties will be included.

DA 125 **8 C/240 Seminar**
Clinical Practice II
Prerequisite: DA 104, DA 106, DA 110, DA 115, DEN 200, DEN 201, DA 117, DA 120, DA 126, DA 203, DA 204
This course is a continuation of Clinical Practice I. Students will be assigned to a dental practice settings for continued practice in chairside clinical dental assisting. There is a 15 hour seminar in addition to the field experience.

DA 126 **3 C/45 CH**
Pathology, Pharmacology and General Anatomy
Prerequisite: DA 104, DA 106, DA 110
This course will cover general anatomy of various body systems with emphasis on the relationship of body systems to general and oral health. The course also provides a basic knowledge of the names, uses, and effects of drugs commonly used in dentistry. In addition, pathological conditions related to dentistry will be covered. The etiology of common dental diseases such as dental caries, oral cancer and periodontal disease will also be discussed. Microbiology and its relevance to oral pathological conditions will also be reviewed.

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Dental Assisting (DA) continued

DA 127 **2 C/30 CH**
Dental Office Management
Prerequisites: DA 104, DA 106, DA 110
This lecture course is an introduction to basic dental practice management procedures. In addition, using computer software to schedule appointments, maintain patient information and record keeping. Inventory of supplies, recall systems and third party payment plans will be presented.

DA 129 **2 C/30 CH**
Legal, Ethical and Communication Issues
Prerequisites: DA 104, DA 106, DA 110
This lecture course includes basic concepts in oral and written communication and applied psychology. Emphasis will be placed on professional standards, ethics, effective communication and confidentiality. The purpose of this course is to prepare students to work effectively with patients and the allied health team within the law. Content areas include principles of human behavior, patient anxiety, special patients, coping mechanisms, principles of learning, verbal and nonverbal communications, and listening skills. The course will also explore the state and national dental practice acts as they pertain to members of the dental health team as well as explore the ethical role of team members through role-playing situations. Students will also prepare a resume and job search plan.

DA 203 **3 C/45 CH**
Expanded Functions for the Registered Dental Assistant Lecture
Prerequisites: DA 104, DA 106, DA 110, DA 115, DA 120
This lecture course is designed to prepare the student to sit for the RDA examination in the State of Michigan. Expanded functions not already covered allowed under Michigan law will be taught. Content Area include didactic instruction in: placing, packing and carving Intracoronal Temporaries and Amalgam restorations. Placement and removal of a rubber dam, fabrication and cementation of temporary crowns, removing excess cement from supragingival surfaces, selective coronal polishing prior to application of anticariogenics materials, mouth mirror inspection and charting of the oral cavity, taking final impressions and bite registrations, removal of sutures, and the placement and removal of periodontal dressings.

DA 204 **4 C/60 CH**
Expanded Functions for the Registered Dental Assistant Lab/Clinic
Prerequisites: DA 104, DA 106, DA 110, DA 115, DA 120
This Clinic/laboratory course is designed to prepare the student to sit for the RDA examination in the State of Michigan. Expanded functions not already covered allowed under Michigan law will be taught. Topics to be included but not limited to are: placing, packing and carving Intracoronal Temporaries and Amalgam restorations. Placement and removal of a rubber dam, fabrication and cementation of temporary crowns, removing excess cement from supragingival surfaces, selective coronal polishing prior to application of anticariogenics materials, mouth mirror inspection and charting of the oral cavity, taking final impressions and bite registrations, removal of sutures, and the placement and removal of periodontal dressings. Assessment of student progress in attaining program and clinical competency is ongoing.

DENTAL HYGIENE (DHY)

DHY 101 **3 C/45 CH**
Fundamentals of Dental Hygiene
Prerequisite: Program Admission
Corequisite: DHY 120
Fundamentals of dental hygiene focuses on developing the cognitive, affective, and psychomotor skills necessary for delivery of preventive, educational and therapeutic services to the public. This course will prepare the dental hygiene student with cognitive, psychomotor, and affective skills for entry into clinical dental hygiene practice. Also, this course will expose the student to selected services and skills performed by the dental hygienist. Fundamentals of Dental Hygiene is an introduction to the principles of dental hygiene practice. The students will be presented with topics to prepare them to perform basic skills safely and effectively. Theory of taking a complete medical and dental history, intra/extraoral examination, dental charting, periodontal charting, basic instrumentation, and use of the explorer will be covered. Students will practice procedures in the clinical course DHY 120. Emphasis will also be placed on professional standards, ethics, effective communication and confidentiality.

DHY 110 **3 C/60 CH**
Oral Anatomy and Physiology
Prerequisite: Program Admission
This course provides an in-depth study of the morphology and function of primary and permanent teeth, including all of the structures involved in the mechanism of mastication,primary and permanent tooth eruption schedules and anatomical forms, function of primary and permanent dentition, vocabulary used to describe teeth and other structures in the oral cavity and the principles of occlusion. Included is a detailed study of the skeletal, muscular, circulatory and nervous systems of the head and neck.

DHY 111 **3 C/45 CH**
Histology and Oral Embryology
Prerequisites: DHY 101, DHY 110, DHY 120
Basic principles of histology and embryology are reviewed with emphasis on tissues of the oral cavity and contiguous structures. Histology and embryology encompasses the development of the oral facial complex including the formation of the enamel, dentin and pulp, root formation, the attachment apparatus and the eruption and shedding of teeth.

DHY 120 **3 C/90 CH**
Clinical Techniques
Prerequisite: Program Admission
Corequisite: DHY 101
This course is designed to develop skills in the techniques utilized for dental hygiene practice. Students will practice techniques on mannequins and student partners in the clinical setting. Each topic covered in the didactic course DHY 101 will be practiced and evaluated in this course.

DHY 121 **3 C/45 CH**
Oral Pathology
Prerequisites: DHY 110, DHY 111, DHY 131, DHY 132
Oral Pathology will focus on the study of disease and the disease process with an emphasis on the detection, symptoms and treatment of diseases of the oral region and the oral manifestations of systemic diseases.

DHY 129 **2 C/30 CH**
Clinical Dental Hygiene I – Lecture
Prerequisites: DHY 101, DHY 120
Corequisite: DHY 130
Clinical dental hygiene is that portion of the dental hygiene curriculum focused on developing the cognitive, affective and psychomotor skills necessary for delivery of preventive, educational and therapeutic services to the public. This course will prepare the dental hygiene student with cognitive, psychomotor and affective skills for entry into clinical dental hygiene practice. Also this course will expose the student to all of the selected services and skills performed by the dental hygienist.

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Dental Hygiene (DHY) continued

DHY 130 **3 C/120 CH**
Clinical Dental Hygiene I – Lab
Prerequisites: DHY 101, DHY 120
Corequisite: DHY 129
The delivery of comprehensive care is accomplished through adherence to the process of care: assessment of patient needs, formulation of a dental hygiene diagnosis, planning for the prevention and treatment of oral disease, implementation of various dental hygiene interventions (services) and evaluation of both the patient and practitioner efforts and oral health outcomes. Clinical dental hygiene focuses on developing the cognitive, affective and psychomotor skills necessary for the delivery of preventive, educational and therapeutic services to the public. Clinical practice is provided in collaboration with the clinical dental hygiene faculty through an assessment of patient needs, planning for treatment and disease control. Treatment includes implementation of various clinical dental hygiene services and an evaluation of treatment effectiveness based on the patient and practitioners efforts. Sequential courses are designed to increase the student's speed and ability. Assessment of student progress in attaining program and clinical competency is ongoing.

DHY 131 **2 C/30 CH**
Clinical Dental Hygiene II – Lecture
Prerequisites: DHY 129, DHY 130
Corequisite: DHY 132
Clinical dental hygiene is that portion of the dental hygiene curriculum focused on developing the cognitive, affective and psychomotor skills necessary for delivery of preventive, educational and therapeutic services to the public. This course will expose the student to additional selected services and skills to enhance the students ability to provide comprehensive dental hygiene services.

DHY 132 **3 C/72 CH**
Clinical Dental Hygiene II – Lab
Prerequisites: DHY 129, DHY 130
Corequisite: DHY 131
The delivery of comprehensive care is accomplished through adherence to the process of care: assessment of patient needs, formulation of a dental hygiene diagnosis, planning for the prevention and treatment of oral disease, implementation of various dental hygiene interventions (services) and evaluation of both the patient and practitioner efforts and oral health outcomes. Clinical dental hygiene focuses on developing the cognitive, affective and psychomotor skills necessary for the delivery of preventive, educational and therapeutic services to the public. Clinical practice is provided in collaboration with the clinical dental hygiene faculty through an assessment of patient needs, planning for treatment and disease control. Treatment includes implementation of various clinical dental hygiene services and an evaluation of treatment effectiveness based on the patient and practitioners efforts. Sequential courses are designed to increase the student's speed and ability. Assessment of student progress in attaining program and clinical competency is ongoing.

DHY 209 **2 C/30 CH**
Clinical Dental Hygiene III – Lecture
Prerequisites: DHY 130, DHY 131, DHY 132
Corequisite: DHY 210
This course expands on the foundations of clinical dental hygiene care. Through the incorporation of case studies students will develop critical thinking skills to review assessment data and formulate a dental hygiene diagnosis for the purpose of developing a dental hygiene care plan including plans for implementation and evaluation. Topics to support the process include, but are not limited to, the identification of risk factors for periodontal and dental disease (CAMBRA), advanced power scaling and instrumentation techniques, adjunctive clinical procedures and nutritional counseling.

DHY 210 **5 C/240 CH**
Clinical Dental Hygiene III – Lab
Prerequisites: DHY 130, DHY 131, DHY 132
Corequisite: DHY 209
The delivery of comprehensive care is accomplished through adherence to the process of care: assessment of patient needs, formulation of a dental hygiene diagnosis, planning for the prevention and treatment of oral disease, implementation of various dental hygiene interventions (services) and evaluation of both the patient and practitioner efforts and oral health outcomes. Clinical dental hygiene focuses on developing the cognitive, affective and psychomotor skills necessary for the delivery of preventive, educational and therapeutic services to the public. Clinical practice is provided in collaboration with the clinical dental hygiene faculty through an assessment of patient needs, planning for treatment and disease control. Treatment includes implementation of various clinical dental hygiene services and an evaluation of treatment effectiveness based on the patient and practitioners efforts. Sequential courses are designed to increase the student's speed and ability. Assessment of student progress in attaining program and clinical competency is ongoing.

DHY 211 **3 C/45 CH**
Pharmacology
Prerequisites: DHY 129, DHY 130
Pharmacology embraces the physical and chemical properties of drugs, the preparation of pharmaceutical agents, the pharmarkinetics of drugs, and the effects of drugs on living systems. Pharmacology encompasses the therapeutic application of medicines, toxicity and practical and legal issues pertaining to the development, marketing and dispensing of drugs.

DHY 213 **2 C/30 CH**
Periodontology
Prerequisites: DHY 129, DHY 130
Periodontology is the scientific study of the periodontium in health and disease. This course covers the diagnosis, treatment, and prevention of pathologic conditions affecting the supporting and surrounding tissues of the teeth, the gingiva, periodontal ligament, alveolar bone and cementum.

DHY 214 **3 C/45 CH**
Local Anesthesia and Pain Control
Prerequisites: Program Approval, DHY 211, DHY 131, DHY 132
This course is designed to provide students with the basic and current concepts of local anesthetics, nitrous oxide sedation and pain control. Systemic effects, tissue diffusion and the toxicity of anesthetics and dental therapeutic agents used in dentistry will be reviewed. Assessment of the patient's health status, level of apprehension and pain threshold will be included in determining the indications and contraindications of pain control and alleviation of pain. Selection and administration of appropriate anesthetic agents and evaluation of the proper technique will be evaluated. The student will learn to administer local anesthesia, safely, effectively and painlessly. The student will learn to safely administer and monitor nitrous oxide oxygen sedation in compliance with Michigan Law.

DHY 219 **2 C/30 CH**
Clinical Dental Hygiene IV – Lecture
Prerequisites: DHY 209, DHY 210
Corequisite: DHY 220
This course is a continuation of Clinical Dental Hygiene III (DHY 209). The role of the dental hygienist in treatment planning and providing preventive care for various population groups will be explored.

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Dental Hygiene (DHY) continued

DHY 220 **5 C/240 CH**
Clinical Dental Hygiene IV – Lab
Prerequisites: DHY 209, DHY 210
Corequisite: DHY 219
The delivery of comprehensive care is accomplished through adherence to the process of care: assessment of patient needs, formulation of a dental hygiene diagnosis, planning for the prevention and treatment of oral disease, implementation of various dental hygiene interventions (services) and evaluation of both the patient and practitioner efforts and oral health outcomes. Clinical dental hygiene focuses on developing the cognitive, affective and psychomotor skills necessary for the delivery of preventive, educational and therapeutic services to the public. Clinical practice is provided in collaboration with the clinical dental hygiene faculty through an assessment of patient needs, planning for treatment and disease control. Treatment includes implementation of various clinical dental hygiene services and an evaluation of treatment effectiveness based on the patient and practitioners efforts. Sequential courses are designed to increase the student's speed and ability. Assessment of student progress in attaining program and clinical competency is ongoing.

DHY 221 **3 C/60 CH**
Dental Biomaterials
Prerequisites: DHY 101, DHY 120
Biomaterials is the science and technology of materials used in dentistry. Chemical, physical and manipulative characteristics of various restorative and procedural materials will be explored in the prevention and treatment of oral disease. Laboratory experiences develop skills in working with these materials. Laboratory experiences develop skills in working with these materials and illustrate the characteristics and uses of dental materials.

DHY 223 **3 C/45 CH**
Dental Health Education
Prerequisites: DHY 130, DHY 131, DHY 132
Dental health education is concerned with the knowledge, attitudes, skills and behaviors necessary to promote oral health and prevent oral disease through educational efforts. This course will explain the principles and theories of education which will enhance the ability of the dental hygiene student as an oral health educator. The approach taken will provide students with the knowledge and skills necessary to meet the needs of community groups as distinct from the traditional clinical approach designed to meet the needs of individual patients.

DHY 225 **3 C/45 CH**
Management of Special Patients
Prerequisites: DHY 209, DHY 210
Introduces the characteristics and unique dental health needs of patients with medical, physical, mental, social, emotional, the elderly, and selected medical and compromising conditions. Introduces the characteristics and unique dental health needs of patients with medical, physical, mental, social, emotional, the elderly, and selected medical and compromising conditions. Emphasis is placed on modified dental hygiene treatment integrating the dental hygiene process of care for these special patient populations.

DHY 226 **1 C/15 CH**
Advanced Periodontology
Prerequisite: DHY 213
Advanced Periodontology is designed to acquaint the dental hygiene student with the clinical diagnosis and treatment of periodontal diseases with special emphasis on the surgical techniques utilized.

DHY 227 **1 C/15 CH**
Radiology II
Prerequisites: DEN 200, DEN 201
Continuation of the science and clinical practice of oral radiography, including radiographic

interpretation, normal anatomy on periapical and extraoral films, recognition of abnormalities and the limitations of radiography.

DHY 229 **2 C/30 CH**
Clinical Dental Hygiene V – Lecture
Prerequisites: DHY 219, DHY 220
Corequisite: DHY 230
This course is a continuation of Clinical Dental Hygiene IV and offers other aspects of clinical practice to include career alternatives, job seeking skills, resume preparation, licensure requirements, rules and regulations and state practice acts. Course information will assist the student in applying legal and regulatory concepts to the practice of dental hygiene.

DHY 230 **5 C/144 CH**
Clinical Dental Hygiene V – Lab
Prerequisites: DHY 219, DHY 220
Corequisite: DHY 229
The delivery of comprehensive care is accomplished through adherence to the process of care: assessment of patient needs, formulation of a dental hygiene diagnosis, planning for the prevention and treatment of oral disease, implementation of various dental hygiene interventions (services) and evaluation of both the patient and practitioner efforts and oral health outcomes. Clinical dental hygiene focuses on developing the cognitive, affective and psychomotor skills necessary for the delivery of preventive, educational and therapeutic services to the public. Clinical practice is provided in collaboration with the clinical dental hygiene faculty through an assessment of patient needs, planning for treatment and disease control. Treatment includes implementation of various clinical dental hygiene services and an evaluation of treatment effectiveness based on the patient and practitioners efforts. Sequential courses are designed to increase the student's speed and ability. Assessment of student progress in attaining program and clinical competency is ongoing.

DHY 231 **4 C/60 CH**
Community Dentistry
Prerequisites: DHY 209, DHY 210
This course is designed to introduce dental hygiene students to the basic principles of dental public health and community dentistry and the responsibilities of the dental hygienist in promoting dental health. The health care system, including the social, political, psychological and economic forces directing the system will be discussed. Special emphasis is placed on the role of the dental hygienist in community practices as distinct from the private practice of the dental hygienist.

DHY 233 **2 C/30 CH**
Dental Hygiene Seminar
Prerequisites: DHY 219, DHY 220
Provide a comprehensive approach and review of the theories and practice of dental hygiene. This course is designed to apprise students of national and regional state board requirements, strengthen test-taking skills and provide an opportunity for review of topic areas evaluated on these board examinations.

DIETETIC TECHNOLOGY (DT)

DT 130 **3C/45 CH**
Fundamentals of Nutrition
Prerequisite: BIO 155
Fundamentals of Nutrition provides a sound and concise introduction to the science of human nutrition. Students explore the six essential nutrients and their functions in the body. These functions are developed around three fundamental problems of sustaining human life that nutrition solves: energy, tissue building, and regulation and control. Students are also introduced to the application of these nutrition concepts to normal adults, prenatal, infant, pre-school and elderly populations.

DIGITAL MEDIA PRODUCTION (DMP)

DMP 101 **3 C/45 CH**
Story Elements for a Digital Environment
This seminar course explores how meaning, message and story are conveyed through images. Students will learn about storyboarding, story elements and organizations, archetypes, visual and perception theory, the organization of visual elements to create meaning, the history of the image, typography, visual imagery in cinema and the use of the image in digital media today.

DMP 102 **3 C/45 CH**
Digital Video Production I
Certification: This course will help the student to prepare Apple Certified Pro in Final Cut Pro exam.
Digital Media Production teaches student basic camera components, project organization and management, basic video production values such as story elements, lighting design, camera use, framing, and camera angles. Students will also learn the fundamentals of digital editing software, file organization and management, sound integration, and DVD creation.

DMP 103 **3 C/45 CH**
Digital Video Production II
Prerequisite: DMP 102
Certification: This course will help the student to prepare Apple Certified Pro in Final Cut Pro exam.
Digital Media Production teaches student basic video production values such as scriptwriting, story elements, lighting design, camera use, camera angles, project management and the fundamentals digital video capture and editing basics on Final Cut Pro.

DMP 104 **3 C/45 CH**
Digital Audio Production and Broadcasting
This is a introduction course in digital signal processing, the fundamental elements of digital audio signal processing, such as sinusoids, spectra, the Discrete Fourier Transform (DFT), digital filters, transforms, transfer-function analysis, and basic Fourier analysis in the discrete-time case. The labs focus on practical applications of the theory, with emphasis on working with waveforms and spectra. This course will teach students will produce live web casts (capturing and transmission of live courses) in Windows Media, Real Media, QuickTime and MPEG formats as well as convert traditional video to almost any digital format including CD-ROM and DVD and publish sound files to the web.

DMP 105 **3 C/45 CH**
Media Programming
This class develops media literacy skills, so that students can critique the basic dynamics that shape current media programming and give a clearer perspective of the boundaries between the real world and the simulated media world. This cutting-edge approach, which encourages the acquisition of strong knowledge structures and analytical skills, includes broadcast (television and radio), print, and digital media. The class examines the history of the modern communications industry, the regulatory process that governs what it can do, and the technical process that produces content and scheduling.

DMP 107 **3 C/45 CH**
Digital Audio Production II
Prerequisite: DMP 104
This course expands on the fundamentals of audio production as it pertains to film and video begun in DMP 104. Students will learn advanced techniques in audio production. Students will assemble their own advanced audio productions as a part of this class.

DMP 111 **3 C/45 CH**
Television
This course covers techniques utilized by television stations in their programming. Emphasis is placed on commercial, cable and public television facilities and their relationship to the community.

DMP 112 **3 C/45 CH**
Broadcast Operations
This course is an introduction to the theory and techniques of radio programming and production, including the development and design of programming for audio broadcast production. Learners will explore the history of radio and program formats; make decisions about the use of effective words; music and sounds; and apply production techniques by creating and critiquing radio programs, public affairs and documentary programming, commercials, promotional and public service announcements, and music programs.

DMP 113 **3 C/45 CH**
Acting For The Camera
The basic physical and vocal skills required in performing before the camera are explored and developed through exercises improvisations and scene. The course covers acting theory, television and motion picture terminology, and script and role analysis.

DMP 114 **3 C/45 CH**
Writing for the Media
Prerequisite: ENG 119
This course covers basic writing for different audiences and different media outlets. Various writing styles and formats will be studied such as new stories, screenplays, press releases, radio and print advertising, writing for the internet, blogs and websites.

DMP 115 **3 C/45 CH**
Media Marketing
This course gives students a basic understanding of media market strategies and shows how public relations firm interface with the broadcast industry. Students learn the different strategies used by the different media.

DIGITAL PHOTOGRAPHY TECHNOLOGY (DPT)

DPT 110 **3 C/45 CH**
Digital Photography I
This is an introductory course that focuses on teaching students how to operate single lens reflect (SLR) digital cameras. The student will learn about digital cameras and equipment used to process digital images. Students will learn how to properly use camera controls, and to capture and expose digital images. Students should own or have access to the use of a digital camera with manual and automatic controls.

DPT 112 **3 C/45 CH**
Product Development, Framing and Matting
In this course students will learn how to use the correct materials, tools, and techniques necessary for digital photo product development. Students will develop hands on skills in photo composition, cropping, cutting, sizing, inking fabrications, packaging mock-ups, layouts, framing and matting.

DPT 115 **3 C/45 CH**
Digital Photo Imaging I
Prerequisite: DPT110
This course introduces students to computer based digital image processing. Through the use of digital production equipment (such as camera's, scanners,

Continued on next page.

printer, and photo imaging software) students learn will how to process images in a digital processing environment.

DPT 119 **3 C/45 CH**
Photographic Lighting
Prerequisite: DPT 110
This course will teach students how quality of light affects the subject. Students will learn the language of lighting including the softness and hardness of light as it relates to ideas and the emotional structure of the subject. Students gain an understanding of light variations and unique qualities, as well as design personal sensitive lighting set-ups which express the various lighting subject moods.

DPT 205 **3 C/45 CH**
Digital Photography II
Prerequisite: DPT 110
This course is a continuation of Digital Photography I. Using digital cameras, students will add to their basic skills and apply them to popular shooting situations. Topics include seeing the light, manipulating light with reflectors, using flash as main and fill light, portraiture, close up photography, and shooting at night. In this class emphasis will be on specific assignments geared to help the student find the image in the environment. The student should have a working knowledge of the camera as less time is spent on equipment and computer manipulation and more time spent on solving technical, aesthetic, and communication problems.

DPT 210 **3 C/45 CH**
Studio Photography
Prerequisite: DPT 110
This course introduces the use of artificial lighting to create photographic illustrations in a controlled environment. Lighting techniques are demonstrated and applied in a series of photographic exercises with tabletop still life and portraiture. Both "hot lights" and electronic flash are used to achieve total control of composition, color, contrast and reflection. Emphasis is placed on the technical mastery of complex equipment, coupled with an aesthetic understanding of the physical principles of light.

DPT 219 **3 C/45 CH**
Commercial Photography
Prerequisite: DPT 110
In this course students will receive training in specialized camera, studio and location photography of merchandise, facilities and other subjects for promotional advertising. Students will learn how to interpret and produce layouts as well as the working partnership between photographers and art directors.

DPT 220 **3 C/45 CH**
Architectural/Environmental Photography
Prerequisite: DPT 110
This course introduces the concepts and techniques applied in architectural/environmental photography. Emphasis is put on skill development in both interior and exterior photography. This course utilizes various camera formats to thoroughly comprehend the architectural subset of commercial photography. Topics include available, artificial and mixed lighting, use of filters, metering techniques, camera and lens selection, and location photography safety techniques.

DPT 235 **3 C/45 CH**
Photojournalism
Prerequisites: DPT 110
This course in photojournalism and introduction to documentary photography will focus on creating photographs for the media, be it digital or print. The student will cover the history and ethics of contemporary photojournalism and documentary photography. Students will work on weekly assignments, small picture packages and one long-term project.

DPT 255 **3 C/45 CH**
Capstone Portfolio Project
Prerequisite: Department Approval
This advanced-level course is designed to build on techniques learned in previous photographic technology courses. Students design and develop a creative and technical proposal with instructor guidance on a highly developed project that reflects what they have learned in the program and explores the unlimited, imaginative possibilities of artistic and commercial application to Imaging Technology of the student special interest. Group approach and class critiques will be important elements of the production of the capstone portfolio project.

DRAFTING (DRT)

DRT 101 **3 C/45 CH**
Blueprint Reading **F, Sp, Sm**
Fundamentals of blueprint reading as applied to specific problems. Designed for pre-engineers, draftsmen, machine operators, machine repairmen, electronic technicians, inspectors and supervisors.

DRT 102 **4 C/90 CH**
Fundamentals of Mechanical Drawing
Prerequisite: DRT 101
Fundamentals of Mechanical Drawing Basic course of students with minimal high school experience. Emphasizes use of instruments, introduction to drafting, introduction to drafting practices, geometric construction, lettering, line work, orthographic projection and three-dimensional visualization from two-view drawings, section cutting, auxiliary views and dimensioning systems.

DRT 112 **3 C/45 CH**
Technical Drawing Applications
Prerequisite: DRT 102
This course is focused on detailed drawings of a variety of parts, based on projection techniques, sectional views, threads and fasteners, dimensional fundamentals and other conventional drawing practices. Students will execute charts and graphs for data display and analysis and practice required instrument skills to produce ink drawings.

DRT 113 **3 C/45 CH**
Descriptive Geometry
Prerequisite: DRT 102
Occupational oriented solutions to descriptive geometry problems involving points, lines, planes and single and double curved surfaces and their intersections.

DRT 115 **2 C/30 CH**
Geometric Dimensioning and Tolerancing
Prerequisites: DRT 101, DRT 102
The theoretical and practical application of dimensioning and tolerance, as used in the world wide industry for the production of parts. GDT is the standard that defines clear and consistent application for precise interpretation of tolerances on geometric and characteristics. The standard is intended for the more advanced engineer, drafter, product designer, machinists, or inspector. At present, this is a Prerequisite in the Automotive Industry for employment in design, engineering, or manufacturing. Emphasis is placed upon building a solid foundation in understanding dimensioning and tolerance terms, as well as definitions and concepts as stated in ANSI Y 14.5 M 1982 and ASME Y 14.5 M 1994 (two CH).

ECONOMICS (ECO)

ECO 101 **3 C/45 CH**
Principles of Economics I
This course is the study of macroeconomics. The following topics are discussed: operation of the national economy, unemployment, inflation, money and banking and international economic relations.

ECO 102 **3 C/45 CH**
Principles of Economics II
Prerequisite: ECO 101
This course is a continuation of Economics 101, Microeconomics. Supply and demand, theory of the firm, price determination and resource allocation is discussed.

ECO 232 **3 C/45 CH**
Consumer Economic
This course is an analysis of consumer oriented issues; the economics of the cost and availability of consumer credit, insurance options, personal investments, housing and personal income taxation.

ECO 272 **3 C/45 CH**
Money and Banking
Prerequisite: ECO 102
This course is an analysis of the factors influencing bank reserves and the money supply. The ability of the Federal Reserve System to shape these factors; monetary policy and the determination of national income are discussed.

ELECTRICAL/ELECTRONICS (EE)

EE 101 **4 C/90 CH**
Circuit Analysis I
Corequisite: EE 107
The fundamentals of direct current (DC) as applied to all aspects of the electrical/ electronic field. Direct current electron flow theory, OHMS's law, series and parallel and compound circuits, network theorems, capacitors, magnetic circuits, inductors, American Wire Gauge, and different type of cables will be covered. The course also includes introduction to sinusoidal waveforms and ac circuits. Students experimentally verify the fundamental discussed in the course by constructing and testing circuits. Instruments such as multimeters, power supplies, signal generators, and oscilloscope are used.

EE 102 **4 C/ 90 CH**
Circuit Analysis II
Prerequisite: EE 101
Corequisite: EE 115
This course deals with fundamental concepts of AC waveforms, effective and average values of both current and voltage, series parallel and compound circuits, inductive and capacitive time circuits, time constants, resonance, passive filters bandwidth, Q of a circuit, polyphase systems and transformers. Instruments such as multimeters, AC power supplies, signal generators, oscilloscopes are used.

EE 103 **3 C/45 CH**
Residential Wiring
Prerequisite: EE 101
This course covers electrical symbols, schematic diagram, terms, series and parallel circuits, Ohm's Law, repair and operation of single phasemotor and three phase motor controls. Also, lightening-both incandescent and fluorescent, lighting and ballast specifications, safety precaution and troubleshooting techniques, identification of load and control circuits, load common and ground connection. Use of electrical lighting instruments, multimeters, other circuit testing instruments. Ground fault circuit interrupters (GFCI), receptacles and circuit breakers.

EE 105 **2 C/45 CH**
Electronic Fabrication and Design
This course serves as an introduction to electronic fabrication and design techniques. Students will learn about circuit drafting, PCB design and etching, assembly, soldering and use of hand tools. Students are required to build circuits assigned by the instructor.

EE 107 **4 C/60 CH**
Math for E/E I
Corequisite: EE 101
Provides detailed coverage of areas of introductory algebra needed by the technician to solve Electrical/Electronics circuits. The course includes fundamental of algebra, ratio, proportion, variation, basic geometry and trigonometry, linear systems, determinants and matrices, factoring and quadratic equations, exponents and radicals, exponential, and logarithmic function. Emphasis is placed on practical application to the solution of DC circuits.

EE 111 **3 C/60 CH**
Solid State Fundamentals
Prerequisite: EE 101
This course will cover diodes, transistors, power supplies, limiters, clippers, clampers, voltage multipliers, biasing, amplifiers and frequency effects. Students will assemble and test electronic circuits discussed in the course. Instruments such as DC power supplies, multimeters, oscilloscope, signal generators, transistors and diode testers will be used

EE 115 **4 C/60 CH**
Math for E/E II
Prerequisite: EE 107
Corequisite: EE 102
Trigonometry, trigonometry identities and equation, complex numbers are used to analyze and solve AC circuits. Also include analytic geometry and quadratic systems, polynomial function, series and polynomial formula, and introduction to derivative and integral will be covered.

EE 205 **2 C/45 CH**
Linear Integrated Circuits
Prerequisite: EE 111
This course will cover the fundamental of linear integrated circuits and their application. It will be concentrated on the design analysis of basic op-amps and their applications to comparators, integrators, differentiators, oscillators, amplifiers, timers, function generators, filters and phase circuits. Students will test the above circuits and devices in the lab using DC power supplies, signal generators, multimeters and oscilloscope.

EMERGENCY MEDICAL TECHNOLOGY (EMT)

EMT 101 **2 C/30 CH**
First Aid
This course is designed to provide the citizen responder with the knowledge and skills necessary in an emergency to help sustain life, reduce pain, and minimize the consequences of injury or sudden illness until professional help arrives.

EMT 105 **3 C/67.5 CH**
Medical First Responder
This course is an overview of emergency medical services, including Basic Life Support (BLS), patient assessment, triage, patient handling and management, bleeding and shock control, management of fractures, childbirth and other medical emergencies. This is a State of Michigan approved course. If all comprehensive written and practical examinations are passed successfully the students are eligible to apply for licensure exams.

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Emergency Medical Technology (EMT) continued

This program is recommended for police officers, security officers, corrections officer, health professionals, fire fighters, or anyone who may have a duty to act during emergency situations.

EMT 114 **4 C/90 CH**
Basic EMT I
Prerequisite: Program Admission
Lectures and lab sessions of this course include current principles and techniques in EMS operations, medical/legal issues, anatomy and physiology, patient assessment, respiratory emergencies, oxygen therapy, airway management, cardiovascular disease, CPR, triage, patient handling. This is a State of Michigan approved course. If all comprehensive written and practical examinations and corequisites are completed successfully the students are eligible to apply for licensure exams.

EMT 124 **4 C/90 CH**
Basic EMT II
Prerequisite: Program Admission
The lectures and lab sessions of this course include principles and techniques in communicable diseases, stress management in EMS, traumatic injuries, abdominal illness, shock, IV maintenance, diabetes, the Central nervous system, rescue, extrication, geriatric, obstetrical, gynecological, pediatrics, environmental emergencies and hazardous materials behavioral emergencies, poisons, and substance abuse. This is a State of Michigan approved course. If all comprehensive written and practical examinations and corequisites are passed successfully the students are eligible to apply for licensure exams.

EMT 126 **1 C/30 CH**
Basic EMT Clinical Experience
Prerequisite: Program Admission
This course is designed to provide Hospital and EMS experience to EMT Basic students to learn the psychomotor, affective and apply cognitive skills needed for entry level work as an Emergency Medical Technician Basic. These include but are not limited to Patient Assessment, Spinal Immobilization, Bleeding Control, and Donning and doffing of PPE's. This is a State of Michigan approved course. If all comprehensive written and practical examinations and corequisites are completed successfully the students are eligible to apply for licensure exams. Students are required to complete an orientation session prior to attending the clinical experience.

EMT 218 **5 C/75 CH**
Emergency Medicine Preparatory
Prerequisite: Program Admission
This course will integrate human anatomy, physiology, pathophysiology and medical math into patient assessment and treatment.

EMT 221 **10 C/150 CH**
Paramedic I
Prerequisite: Program Admission
This course will include lecture and lab sessions on EMS systems, the role and responsibilities of the paramedic, medical legal issues, airway management, cardiology, pharmacology, venous access and administration.

EMT 231 **10 C/150 CH**
Paramedic II
Prerequisite: Program Admission.
This course will include lecture and lab sessions on patient assessment, infectious and communicable diseases, behavioral and psychiatric disorders, pulmonary, gynecology, obstetrics, trauma, environmental conditions, allergies and anaphylaxis, neonatology, pediatrics, and geriatrics.

EMT 236 **6 C/135 CH**
Paramedic Clinical Exp. I
Prerequisite: Program Admission
This course is designed for EMT Paramedic students to practice the psychomotor skills in a hospital and EMS setting needed for entry level work. These include but are not limited to Medication administration, IV therapy, Cardiac Monitoring, and Airway Management.

EMT 241 **3 C/45 CH**
Paramedic III
Prerequisite: Program Admission
This course will include lecture on neurology, endocrinology, gastroenterology, renal/urology, toxicology and hematology.

EMT 242 **2 C/30 CH**
Paramedic IV
Prerequisite: Program Admission
This course will include lecture on ethics, life span development, abuse and assault, patients with special challenges, acute interventions for the chronic care patient, and the well-being of the paramedic.

EMT 243 **2 C/30 CH**
Paramedic V
Prerequisite: Program Admission
This course will include lecture on ambulance operations, medical incident command, rescue awareness and operations, hazardous materials incidents, illness and injury prevention and crime scene awareness.

EMT 244 **3 C/45 CH**
Paramedic VI
Prerequisite: Program Admission
This course will include lecture and lab session on assessment based management.

EMT 246 **6 C/90 CH**
Paramedic Clinical Exp. II
Prerequisite: Program Admission
This course is designed for paramedic students to practice their assessment skills in a hospital and EMS setting. It is needed for an entry level paramedic. The assessments can include but not limit to patients complaining of Chest Pain, DIB, Abdominal Pain, Syncope and Traumatic Injury.

EMT 256 **6 C/30 CH**
Paramedic Field Internship
Prerequisite: Program Admission
This Internship is designed for paramedic students to apply skills and knowledge from previous classes in an EMS setting to develop into an entry level paramedic.

EMERGENCY ROOM/MULTI-SKILLED HEALTH CARE TECHNOLOGY (ERT)

ERT 210 **6 C/90 CH**
Emergency Room Technology
Prerequisite: Program Admission
This course provides the Basic EMT with the principles and techniques necessary to provide additional patient care within a hospital, urgent care, or primary health care environment.

ERT 215 **6 C/135 CH**
Emergency Room Technician Clinical Experience
Prerequisite: Program Admission
This course is designed for the Emergency Room Technician student to practice the psychomotor skills in a hospital setting needed for entry level work. These skills may include but are not limited to EKG, phlebotomy, insertion of Foley catheters and sterile procedures.

ENGLISH (ENG)

ENG 111 **3 C/45 CH**
Introduction to Reading Skills
Prerequisite: Admission by referral only through assessment
This is the first course in reading development. It is designed to assist students in developing reading skills and becoming efficient and effective readers. The student concentrates on the major components of reading skills; visual and auditory discrimination, alphabet recognition, word attack, vocabulary and comprehension.

ENG 112 **3 C/45 CH**
Career and Technical Reading I
Prerequisite: ENG 111
This is an intermediate course in reading, designed to assist students in developing college reading skills and becoming efficient and effective readers. The student concentrates on the major categories of reading skills, comprehension, vocabulary and speed applying these skills in career and technical areas and resources.

ENG 113 **3 C/45 CH**
Career and Technical Reading II
Prerequisite: ENG 112
This course focuses on the development of effective and efficient reading and study skills for college work. Emphasis is on the acquisition of study habits and skills such as test-taking, note taking, outlining, vocabulary, speed-reading and critical thinking and on the mastery of reading materials of all kinds used in various professional fields and disciplines.

ENG 114 **3 C/45 CH**
Career and Technical Writing I
This course is designed to assist students in basic writing skills. The student will learn to recognize and produce units of clear writing, beginning with simple, compound and complex sentences. Through the use of reading selections, the student learn to identify and formulate topic sentences and organize groups of sentences into a larger unit of meaning, the paragraph. At the same time, attention is given to the mechanics of sentence formation, grammar, spelling and vocabulary.

ENG 115 **3 C/45 CH**
Career and Technical Writing II
Prerequisite: ENG 114
This course is designed to assist students in developing writing skills. The student learns to recognize and produce units of written communication. It focuses on the paragraph as the basis for larger units of expression. Beginning with the paragraph, the student progresses to the short essay (three paragraphs) by the end of the semester. Grammar, diction and organization are stressed.

ENG 119 **3 C/45 CH**
English I
This course will provide opportunities for students to work with a variety of forms that will lead to the mastery of effective organization, topic development and appropriate styles, including the development of processes of thoughtful, and analytical reading skills. Written work is required weekly.

ENG 120 **3 C/45 CH**
English II
Prerequisite: ENG 119
This course provides continued practice for clear expository writing. It is designed for the development of analytical expression and critical literary judgment, and serves as an introduction to research procedures.

ENG 134 **3 C/45 CH**
Technical Communications
Prerequisite: ENG 119
This course focuses on the identification of the basic elements of written communication in technical fields and the production of

communications appropriate to the technical field. Oral communication is also promoted.

ENG 190 **3 C/45 CH**
Introductory Journalism
Prerequisite: ENG 119
This is the study of news gathering and the writing of simple news stories and features.

ENG 192 **3 C/45 CH**
Advanced Journalism
Prerequisite: ENG 190
This course is the continued study in news writing with emphasis on special story types - economic news, movies, drama reviews and editorials.

ENG 212 **3 C/45 CH**
Women in Literature
This course focuses on the woman's roles as it is portrayed in plays, poetry and novels through the last century and the emergence of the female author as an important literary force.

ENG 228 **3 C/45 CH**
Introduction to Folklore and Mythology
Prerequisite: ENG 120
This course is a general survey of myths and folklore as the primary literature of different cultures.

ENG 231 **3 C/45 CH**
Introduction to Poetry
Prerequisite: ENG 120
This course is a study of poetic structures and poets, both traditional and modern.

ENG 232 **3 C/45 CH**
Introduction to the Novel
Prerequisite: ENG 120
This course is an analysis of the novels structure, determination and evaluation of theme and technique and the writing of critical essays.

ENG 233 **3 C/45 CH**
Introduction to Drama
Prerequisite: ENG 120
This course is a study of plays from the ancient Greek period to the present.

ENG 234 **3 C/45 CH**
English Bible as Literature
Prerequisite: ENG 120
This course is an examination of the literary aspects of the Bible and study of a number of its literary forms and devices.

ENG 240 **3 C/45 CH**
Introduction to Shakespeare
Prerequisite: ENG 120
This course is an introduction to Shakespeare, his plays, comedies, tragedies and histories.

ENG 250 **3 C/45 CH**
American Literature, 1800 to Present
Prerequisite: ENG 120
This course is a survey of major American writers in relation to their social and cultural environment. Writers will be chosen not only on their own literary merits, but also as representative of important periods, attitudes and styles.

ENG 252 **3 C/45 CH**
English Literature Across the Centuries
Prerequisite: ENG 120
This course is a survey of major British writers from the middle ages to the twentieth century. They are selected both on their own literary merits and because they represent the attitudes and values of their historical periods.

Continued on next page.

English (ENG) continued

ENG 260 **3 C/45 CH**
Introduction to African-American Literature
This course focuses on the historical and thematic overview of the African-American writer from 1760-1899. Particular attention shall be given to the early slave narrative using formal analytical techniques, thus introducing students to the various modes of critical and literary thought. Emphasis shall be placed upon some literary styles and forms including folklore, spirituals, gospel and historical tradition.

ENG 261 **3 C/45 CH**
African-American Literature in the Twentieth Century
Prerequisite: ENG 120
This course is a survey of all directions and phases of African-American writing from 1900 to the present. Particular attention is given to the writers of the Harlem Renaissance, major African-American novelists and contemporary poets. Such literary styles as the essay, short story, the novel and dialectic writing are explored. Masters of these literary styles, such as Chesnutt, Baraka, Locke, Hughes, Walker, Wright, Brooks, Ellison, Hayden and Angelou are studied.

ENG 266 **3 C/45 CH**
African-Caribbean Literature
Prerequisite: ENG 120
This course is a study of African-Caribbean literature, encompassing the West Indian Island and adjacent countries of South American - Guyana, Suriname, French Guiana and Belize in Central American. Emphasis will be on the diverse linguistic and cultural influences on the prose and poetry of Caribbean literatures. Study will also be on the writing of expatriates of the Caribbean.

ENG 270 **3 C/45 CH**
Professional and Technical Report Writing
Prerequisite: ENG 119
This course is designed for the advanced student in pre-professional or transfer programs; the designing and presentation of various forms of communications, both written and oral, as solutions to technical problems. The primary focus is report writing. The case approach is used, allowing students to actively engage in problem-solving situations.

ENG 275 **3 C/45 CH**
Advanced Expository Writing
Prerequisite: ENG 120
An advanced course in expository writing which will build on the rhetorical and analytical strategies taught in ENG 119 and 120. The class will focus primarily on writing an effective argument.

ENG 280 **3 C/45 CH**
Creative Writing
Prerequisite: ENG 120
Practice in writing in a variety of literary forms, as well as the analyzing of literary models and responding critically to the work of other students.

ENG 285 **3 C/45 CH**
Children's Literature
Prerequisite: ENG 120
A survey of children's literature, acquaintance with quality books for children and criteria for evaluating them.

ENG 290 **3 C/45 CH**
Latino Literature I
Prerequisite: ENG 119
This course will examine major 20th century Spanish-American writers and their works. These writers, living in the United States, will be referenced with other Latin-American writers (outside the United States) to show the cultural and historical links among them.

ENG 292 **3 C/45 CH**
Latino Literature II
Prerequisite: ENG 119
This course includes a comprehensive survey of nationally renowned and emerging Latino writers, musicians, and screen writers, covering cultural, racial, and gender identity, political activism, sexual orientation and spirituality.

ENTREPRENEURSHIP (ENT)

ENT 100 **3 C/45 CH**
Introduction to Entrepreneurship
This course is designed to introduce students to the entrepreneurial process from conception to birth of a new venture. The students will examine elements in the entrepreneurial process- personal, sociological, and environmental- that give birth to a new enterprise.

ENT 205 **3 C/45 CH**
Operations Management for Small Businesses
Production and Operations Management is important to the overall strategy and competitiveness of a small business owner. This course focuses on specific tools used to manage and enhance a firm's operations and production, such as facility layout, product design, aggregate planning, inventory management, and forecasting.

ENT 210 **3 C/45 CH**
Human Resource Management for Small Businesses
In an ever-changing world, entrepreneurs must adapt and flex, push and explore. This course surveys and analyzes contemporary techniques for managing a strategically oriented human resource function in a small business setting. Topics include staffing, rewarding, developing, and maintaining organizations, jobs and people.

FACILITY MAINTENANCE PROGRAM (FM)

FM 101 **3 C/45 CH**
Basic Facility Maintenance
This course covers the fundamentals of work orders, work descriptions, engineering and architectural print reading, the mechanical and electrical nature of the work, location and identification of the problem, tools and material requirements to schedule work.

FM 102 **3 C/45 CH**
Plumbing and Pipe Fitting
This course covers mechanical blueprint reading, pipes and valves construction, valve operation, repair and maintenance, BOCA mechanical codes for plumbing and pipe fitting methods of pipe connection, uses of sewer augers, size and cutting of piping materials, reading pressure gauges to determine fluid pressure, copper pipe letter codes to determine pipe thickness, repair, maintenance and operation of back flow preventers. Also, basic function of plumbing sanitation, fitting, piping, vents, traps, potable, hot water supply drain, waste and sewer, etc. will be covered.

FM 103 **3 C/45 CH**
Carpentry
This course covers carpentry terms, usage of carpentry equipment, basic construction materials, fractional arithmetic, wood jointing and fastening methods, types and sizes of fasteners, types of hinges, backing and latching devices, door sizes review, maintenance and installation. Also door code identification, counter tips and their standard heights, repair, repair maintenance and installation of counters, construction, repair and maintenance will be covered.

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Facility Maintenance Program (FM) continued

FM 104 **3 C/45 CH**
General Maintenance
This course covers preventive maintenance of mechanical equipment such as air compressors, pumps, hydraulic systems, troubleshooting of a wide variety of hospital/nursing home/hotel/office building equipment, gas and arc welding methods and procedures, alignment of flexible couplers for electric motors, packing glands, cut and installing glass panes. Use of various types of paint products and painting of walls, ceilings, floor coverings, use of hand and power tools in accordance with OSHA requirements, replacement of V-belts and alignment of pulleys and sheaves, selection and application of lubrication to machines and the adjustment of speed (RPM) of pulleys operated equipment and machines will be covered.

FM 105 **3 C/45 CH**
Grounds Maintenance
This course covers the maintenance of lawns and gardens, the mowing of lawns and grassy trees, the selection and use of proper fertilizers, irrigation of grounds, maintaining lawn and garden equipment, installing irrigation systems, building and install fencing. Also the removal of snow and ice, plowing below snow, scraping ice, spreading chemical/ice melters, clearing storm drains. The cleaning of outside areas: removing litter, sweeping/vacuuming entrances, cleaning outside of the building, the repair and installation of outside signs and the setup of seasonal displays/decorations will be covered.

FM 106 **3 C/45 CH**
Safety and Support Services
This course is a survey of the health and legal consideration affecting the work environment and includes historical backgrounds, safety standards, health standards, resources in hazard recognition, inspection procedures, complaint procedures and relevant legislation, law and judicial decisions. Also reviewed are OSHA and MIOSHA regulations, compliance and enforcement, health and safety committees, and the safe operation of hand and power tools, lock-out tag-out procedures, use and handling of sharp containers and blood borne pathogen safety.

FM 299 **3 C/45 CH**
Facility Maintenance Co-op
This course provides fieldwork experience.

FIRE PROTECTION TECHNOLOGY (FPT)

FPT 100 **2 C / 30 CH**
Incipient Fire Brigade
This course is designed to provide a student with the basic knowledge necessary to become a member of an Incipient Fire Brigade. Members of a Fire Brigade fight small (incipient) size fights in normal work clothes. Topics include organization and responsibilities, fire behavior, fire hoses, nozzles and appliances, portable fire extinguishers, fire detection and signaling systems, fixed fire extinguishing systems, hazard recognition, incident management, and loss control.

FPT 110 **8 C/120 CH**
Fire Fighter I
Prerequisite: Program Admission
Corequisites: FPT 115
This course is designed to provide a student with the knowledge necessary for entry level positions on fire departments. Topics include fire fighter safety, personal protection equipment, hose operations, ladders, fire prevention, and others. Students who complete all course requirements will be eligible to take the State of Michigan Fire Fighter Training Council (MFFTC) written and practical examinations leading to certification as a Fire Fighter I. This course must be taken in conjunction with FPT 115.

FPT 115 **5 C/75 CH**
Fire Fighter I Lab
Prerequisite: Program Admission
Corequisite: FPT 110
This course is designed to provide student with the psycho motor skill necessary for entry level positions in the fire department. Skills include hose operations, ladders, personal protective equipment, and others. Students who complete all course requirements will be eligible to take the State of Michigan Fire Fighter Training Council (MFFTC) written and practical examinations leading to certification as a Fire Fighter I. This course must be taken in conjunction with FPT 110.

FPT 120 **5 C/75 CH**
Fire Fighter II
Prerequisite: MFTTC Fire Fighter I Certification
Corequisites: FPT 125
This course is designed to provide student with the additional knowledge necessary for entry level positions on fire departments. This course builds on the knowledge acquired in FPT 110. Topics include vehicle extrication and hazardous materials operations. Students who complete all the requirements will be eligible to take the State of Michigan Fire Fighter Training Council (MFFTC) Fire Fighter II written and practical examinations leading to certification as a Fire Fighter II. This course must be taken in conjunction with FPT 125.

FPT 125 **3 C/45 CH**
Fire Fighter II Lab
Prerequisite: MFTTC Fire Fighter I Certification
Corequisites: FPT 120
This course is designed to provide student with the additional knowledge necessary for entry level positions in the fire department. This course builds on the knowledge acquired in FPT 115. Skills include vehicle extrication and hazardous materials operations. Students who complete all the requirements will be eligible to take for the State of Michigan Fire Fighter Training Council (MFFTC) written and practical examinations leading to certification as a Fire Fighter II. This course must be taken in conjunction with FPT 120.

FPT 150 **3 C / 45 CH**
Principle of Emergency Services
This course provides an overview to fire protection: career opportunities in fire protection and related fields: philosophy and history of fire protection/service: fire loss analysis: organization and function of public and private fire detection services: fire departments as part of local government; laws and regulations affecting the fire service; fire service nomenclature: specific fire protection functions; basic fire chemistry and physics; introduction to fire protection systems: introduction to fire strategy and tactics.

FPT 155 **3 C / 45 CH**
Fire Prevention
This course provides fundamental information regarding the history and philosophy of fire prevention, organization and operation of a fire prevention bureau, use of fire codes, identification and correction of fire hazards, and the relationships of fire prevention with built-in fire protection systems, fire investigation, and fire and life-safety education.

FPT 160 **3C / 45 CH**
Fire Behavior and Combustion
This course explores the theories and fundamentals of how and why fires start, spread, and how they are controlled.

Continued on next page.

Fire Protection Technology (FPT) continued

FPT 165 **3 C / 45 CH**
Fire Protection Systems
Prerequisite: FPT 155, FPT 160, MAT 113
This course provides information relating to the features of design and operation of fire alarm systems, water-based fire suppression systems, special hazard fire suppression systems, water supply for fire protection, and portable fire extinguishers.

FPT 170 **3 C / 45 CH**
Strategy and Tactics
Prerequisite: FPT 150
This course provides in-depth analysis of the principles of fire control through utilization of personnel, equipment, and extinguishing agents on the fire ground.

FPT 175 **4 C /60 CH**
Hazardous Materials Chemistry
This course provides basic fire chemistry relating to the categories of hazardous materials including problems of recognition, reactivity, and health encountered by firefighters.

FPT 180 **3 C /45 CH**
Occupational Safety and Health for the Fire Service
This course introduces the basic concepts of occupational health and safety as it relates to emergency services organizations. Topics include risk evaluations and control procedures for fire stations, training sites, emergency vehicles, and emergency situations involving fire, EMS, hazardous materials, and technical rescue. Upon completion of this course, students should be able to establish and manage a safety program in an emergency service organization.

FPT 185 **3 C /45 CH**
Fire Protection Hydraulics and Water Supply
Prerequisite: MAT 113
This course provides a foundation of theoretical knowledge in order to understand the principles of the use of water in fire protection and to apply hydraulic principles to analyze and to solve water supply problems.

FPT 205 **4 C /60 CH**
Introduction to Fire and Emergency Services Administration
Prerequisite: FPT 150
This course introduces the student to the organization and management of a fire department and the relationship of government agencies to the fire service. Emphasis is placed on fire service leadership from the prospective of the company officer.

FPT 210 **6 C/90 CH**
Fire Service Management I
Prerequisites: MFTTC Fire Fighter II Certification and three years experience on an organized fire department.
This program is designed to prepare fire fighters for advancement in the fire service. It is based on the Michigan Fire Fighters Training Council (MFFTC) Company Officer Prerequisite curriculum. Topics include Educational Methodology, Incident Safety, Incident Management and Strategy and Tactics. Students meeting all course requirements are eligible to continue on to the MFFTC Company Officer Course.

FPT 215 **3 C /45 CH**
Building Construction for the Fire Service
Prerequisite: FPT 150
This course provides the components of building construction that relate to fire and life safety. The focus of this course is on firefighter safety. The elements of construction and design of structures are shown to be key factors when inspecting buildings, preplanning fire operations, and operating at emergencies.

FPT 220 **6 C/90 CH**
Fire Service Management II
Prerequisite: FPT 210
This program is designed to prepare fire fighters for advancement in the fire service. It is based on the Michigan Fire Fighters Training Council (MFTTC) Company Officer curriculum. Topics build on those from Fire Service Management I. This program meets National Fire Protection Association (NFPA Standard 1021, Fire Officer Professional Qualifications. Student meeting all course requirements are eligible to take the MFFTC examination for certification.

FPT 225 **3 C /45 CH**
Principles of Fire and Emergency Services Safety and Survival
This course introduces the basic principles and history related to the national firefighter life safety initiatives, focusing on the need for cultural and behavior change throughout the emergency services.

FPT 230 **4 C/60 CH**
Fire Service Management III
Prerequisite: FPT 220
This program is designed to prepare fire fighters for advancement in the fire service. It is based on the Michigan Fire Fighters Training Council (MFTTC) Leadership and Health and Safety curriculum. Topics include problem solving, ways to identify and assess the needs of the Company Officer's subordinates, methods for running meetings effectively, decision-making skills for the Company Officer, ethics, use and abuse of power at the Company Officer level, delegation to subordinates, assess personal leadership styles through situational leadership, discipline subordinates, and applies coaching/motivational techniques for the Company Officer.

FPT 235 **3 C /45 CH**
Legal Aspects of the Fire Service
This course introduces the Federal, State, and Local laws that regulate emergency services, national standards influencing emergency services, standard of care, tort, liability, and a review of relevant court cases.

FPT 240 **3 C/45 CH**
Fire Service Management IV
Prerequisite: FPT 230
This course builds on the previous Fire Service Management courses, offering an in-depth look various topics. Topics considered budget management, marketing for the fire service, public relations, labor relations, and risk management. This course is designed for upwardly mobile individuals who seek to move into the upper ranks within the fire service.

FPT 245 **3 C /45 CH**
Fire Investigation I
Prerequisites: FPT 150, FPT 160, FPT 165
This course is intended to provide the student with the fundamentals and technical knowledge needed for proper fire scene interpretations, including recognizing and conducting origin and cause, preservation of evidence and documentation, scene security, motives of the fire setter, and types of fire causes.

FPT 246 **4 C /60 CH**
Fire Investigation II
Prerequisite: FPT 245
This course is intended to provide the student with advance technical knowledge on rule of law, fire scene analysis, fire behavior, evidence collection and preservation, scene documentation, case preparation, and testifying.

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Fire Protection Technology (FPT) continued

FPT 250 **3 C/45 CH**
Fire Service Management V
Prerequisite: FPT 240
This course continues the process of developing upwardly mobile individuals within the fire service. Topics in this course offer in-depth work in the following areas labor issues, labor law, diversity, dealing with NFPA standards, complying with OSHA regulations, and dealing with regulatory agencies. The course is designed to prepare those individuals to be fire chief.

FPT 255 **3 C/45 CH**
Fire Inspection Principles and Practice
The course provides fundamental information regarding the history and philosophy of fire prevention, organization and operation of a fire prevention bureau, use of fire codes, identification and correction of fire hazards, and the relationships of fire prevention with built in fire protection systems, fire investigation, and fire and life safety education. It is designed to enhance the student's knowledge of fire prevention and its purpose within fire service organizations.

FPT 260 **3 C/45 CH**
Industrial and Commercial Fire Protection
Prerequisite: FPT 255
This course considers the intricacies and differences between residential and commercial/industrial fire fighting. Students will discuss the strategies and tactics for a successful operation at larger structures, and the unique challenges for these types of operations. Topics include offensive and defensive operations, accountability, emergency escape techniques, and aerial operations.

FPT 265 **4 C/60 CH**
Search and Rescue Operations I
Prerequisite: FPT 120
This course will prepare the student to plan and respond to various technical rescue incidents. This includes development of an action plan, Scene safety considerations, trench collapse and rescue, confined space rescue, and building collapse. The student will take into account patient considerations including extrication of victims and patient packaging. Shoring of collapsed structures is discussed in length.

FPT 270 **3 C/45 CH**
Search and Rescue Operations II
Prerequisite: FPT 265
Course is meant to build on FPT 265 Search and Rescue Operations I. Topics include: types of Rescue Companies, qualifications for rescuers, specialized equipment, low angle rescue, high angle rescue, water rescue, and elevator rescue. This is not a hands on class, but is meant to give the student an in-depth perspective of theory and knowledge in the subject area.

FPT 275 **3 C/45 CH**
Hazardous Materials in Fire Service Operations
Prerequisite: FPT 120
This theory based class enhances knowledge in hazardous materials for the hazardous materials responder. The student will look in-depth at topics such as the physical and chemical properties of hazardous materials, USDOT regulation for hazardous materials, emergency response to hazmat incidents, potential hazards at these incidents, and hazmat prevention techniques.

FPT 280 **3 C/45 CH**
Current Concepts in Fire Service
Prerequisite: FPT 120
The student will review current issues affecting the fire and emergency service as well as their own organizations. Each week the student will research and report on current and pertinent topics within the fire service and their affect on their organization. The student will use many resources in doing research including fire department policy and procedure, Federal and State legislation and regulation, books, magazines, and the Internet.

FPT 285 **3 C/45 CH**
Fire Officer Internship
Prerequisite: FPT 220
This course has two tracks that can be followed. The first allows the student to work within their own department. Students will submit and carryout a project for use within the department. The project must be of value to the department. A written report on the final outcome of the project must be submitted, or, an internship with a fire department of the student's choice or a department of choice by the college. This track will be to enhance the student's abilities and skills as an officer. The student would work with various individuals in the host department, and keep a log of their activities.

FOODSERVICE SYSTEMS MANAGEMENT (FSM)

FSM 105 **3 C/45 CH**
Principles of Foodservice Systems Management
This course presents an overview of the food service industry and begins the core knowledge and skills required for further study in this area. This course begins with the history and development of food service. Discussions continue with an overview of the various segments of the food service industry. Topics include the functional components of foodservice systems, trends, kitchen layout, and general management techniques.

FSM 110 **2 C/30 CH**
Food Safety and Sanitation
State and national agencies are fast requiring certification training. Employees who work in the foodservice industry must be knowledgeable about safe food handling from purchasing to the consumer. This course provides the knowledge and skills necessary to effectively implement food safety and sanitation practices. Current concepts in food protection are presented. The course provides updated information and methodologies necessary for the assessment, planning, implementation, and evaluation of sanitation in today's foodservice operations. This course also covers application of factors basic to FDA standards, quality control, train-the-trainer techniques, Michigan Law and an in-depth coverage of the principles of Hazard Analysis Critical Control Point System.

FSM 118 **3 C/45 CH**
Nutrition
This course presents an overview of the foodservice menus and nutrition and begins the core knowledge and skills required for further study in this area. The course is taught in two parts. Part One discusses the understanding of nutrition and Part Two discussed how to establish a Nutrition Program. Discussions continue with an overview of the various segments of nutrition in the foodservice industry with topics that include the functional components of foodservice systems and nutrition.

FSM 120 **3 C/45 CH**
Customer Service
This course discusses the understanding and importance of customer service. Discussions continue with an overview of the various segments of customer service, and define what customercentric service means in the foodservice industry. Topics include the functional components of foodservice systems and management.

FSM 125 **2 C/30 CH**
Controlling Foodservice Costs
Prerequisites: FSM 105, BUS 225
This course presents an in-depth view of cost control within the foodservice industry and begins the core knowledge and skills required for further study in this area. This course begins with the importance of cost control and the development of

Continued on next page.

Foodservice Systems Management (FSM) continued

budget and forecasting of expenses and revenue within the foodservice operation. Discussions continue with an overview of the various segments of the foodservice industry with topics that include the functional components of foodservice systems, trends, and financial analysis.

FSM 132 **2 C/30 CH**
Foodservice Purchasing
Prerequisites: BUS 225
This course provides basic knowledge in food procurement. As a subsystem of the food service, procurement is a functional unit. The knowledge and skills required in this area are necessary for anyone employed as a supervisor in a foodservice establishment. Fundamentals of food and equipment purchasing, food storage, inventory, cost controls, development of specifications, budget analysis and data processing, receiving, storage issuing and inventory control will be covered. The purchasing subsystem is viewed as one component of the foodservice system with the menu as the central focus. A strong emphasis is placed on quality, quantity and cost control.

FSM 135 **3 C/45 CH**
Hospitality Accounting
Prerequisites: FSM 105, BUS 225
Foodservice math skills are necessary throughout the department. Each of the eight primary units in foodservice operations requires functions that are math based. Students are involved in the understanding of financial accounting of foodservice operation. Focus is on food and labor costs to include sales, budget, costing recipes, pricing, equipment, utilities, overhead and profit. Students will use required industry foodservice forms for data collection.

FSM 142 **2 C/30 CH**
Hospitality and Restaurant Marketing
Prerequisites: FSM 105, FSM 120
Hospitality and interpersonal skills are necessary throughout the industry. Each of the eight primary units in foodservice operations requires functions that are interpersonal skills based. Students examine foodservice situations requiring communication and public relation skills. Focus is on sales, advertising, pricing, and promotion. Students will use required industry foodservice forms for data collection. This course is taught using word software applications.

FSM 145 **3 C/45 CH**
Financial Practicum
Students are presented the tools necessary for effective management. Problem solving, continuous quality improvement, team management and developing leadership skills are taught and practiced as a component of a systems approach. Students practice management skills in a foodservice facility under the guidance of a foodservice manager. The practicum is scheduled for 10 sessions. During this time, students observe management techniques in purchasing, cost control, and other areas. Students will be expected to perform the observed functions in an acceptable professional manner.

FSM 205 **3 C/45 CH**
Special Events and Catering Management
Prerequisite: FSM 120
This course presents an overview of the event planning industry and begins the core knowledge and skills required for further study in this area. This course begins with the foundation of catering, special events and entertainment in the foodservice industry. Discussions continue with an overview of the various segments of the course with topics that include the functional components of the systems, trends, coordination and planning.

FSM 210 **2 C/30 CH**
Food Preparation and Production Lab
Prerequisites: FSM 105, FSM 110
This lab course is designed to provide the student with the fundamentals of kitchen operations associated with food preparation and production. Discussions continue with an overview of the various segments of the foodservice industry with topics that include the functional components of foodservice equipment, trends, kitchen layout, and knife handling.

FSM 215 **3 C/45 CH**
Hospitality Human Resources Management and Supervision
Prerequisite: FSM 120
This course presents a specific view of the foodservice industry and begins the core knowledge and skills required for further study in this area. This course looks at the art and science of human resources management in the foodservice industry. Discussions continue with an overview of the various segments of management with topics that include the functional components of foodservice systems, trends, employment law and staff development programs.

FSM 222 **2 C/30 CH**
Bar and Beverage Management
Prerequisites: FSM 120, FSM 125, FSM 132, FSM 142
This course presents an overview of the foodservice menus and nutrition and begins the core knowledge and skills required for further study in this area. This course discusses the understanding bar and beverage management. Discussions continue with an overview of the various segments of the service and management of alcohol services, and it's various styles of product and legal issues in the foodservice industry, as well as topics that include the functional components of foodservice systems and management, day of care, reasonable care and legal issues.

FSM 225 **3 C/45 CH**
Hospitality and Restaurant Management
Prerequisite: FSM 120
This course explores leadership, team work, communications and overall operations management in foodservice. Discussions continue with an overview of the various segments of the foodservice industry with topics that include the functional components of management systems, trends, planning and leadership.

FSM 232 **3 C/45 CH**
Management Practicum
Prerequisite: FSM 215
This is a capstone course for the management component of the FSM program. Students are presented the tools necessary for effective management. Problem solving, continuous quality improvement, team management and developing leadership skills are taught and practiced as components of a systems approach. Students will practice management skills in a foodservice facility under the guidance of a foodservice manager. This practicum is scheduled for 12 sessions. During this time, students observe management techniques in scheduling, quality assurance, employee training, purchasing, menu planning, cost control, and other areas. Students will be expected to perform the observed functions in an acceptable professional manner.

FRENCH (FRE)

FRE 101 **4 C/60 CH**
Elementary French I
This course is designed for beginning students and aimed at developing the four skills of understanding, speaking, reading and writing French. Emphasis is on grammatical constructions, vocabulary, basic idioms and phonetics. Special emphasis will be on the development of conversational French.

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French (FRE) continued

FRE 102 **4 C/60 CH**
Elementary French II
Prerequisite: FRE 101
Continued emphasis will be on the four basic skills, fundamental grammatical construction and vocabulary. Expanded training in reading, writing and composition. Emphasis is on French conversation and idiomatic constructions.

FRE 201 **4 C/60 CH**
Intermediate French I
Prerequisite: FRE 102
This course is an expansion of essential principle of grammatical idiomatic usage through oral and written exercise, emphasis is on French conversation, and continued development on reading French.

FRE 202 **4 C/60 CH**
Intermediate French II
Prerequisite: FRE 201
The focus of this course is on reading French on an advanced level and a continued emphasis on idiomatic usage in both speaking and writing French.

GEOGRAPHY (GEO)

GEO 202 **3 C/45 CH**
World Regional Geography
This course is a study of the spatial relationships between human societies, cultures and natural resources in the various regions of the world. Through lectures, geographic films and field experiences, the course examines the cultural and physical landscape to illustrate how they relate to and interact with each other as part of a total region.

GEOLOGY (GEL)

GEL 202 **4 C/60 CH**
Earth Science for Elementary School Teachers (Formerly ED 202)
Prerequisite: ED 111
Lab fee: $20.00
Lecture and laboratory course dealing with earth science concepts and strategies for teaching these concepts in elementary schools. Current State of Michigan earth science teaching objectives and associated learning activities will be emphasized. In addition, students will develop an earth science lesson and teach it to children in an elementary (K-8) school.

GEL 210 **4 C/90 CH**
Physical Geology Lecture
Geology is the scientific study of the Earth. Physical geology is concerned with earth materials, changes in the interior and surface of the earth, and the dynamic forces that cause those changes. The course is organized beginning with a focus on earth materials, minerals, igneous rocks and volcanoes, processes of weathering, sediments and sedimentary rocks, soils, and metamorphic rocks.

Internal earth processes are emphasized, covering the processes of mountain building, structural geology and maps, plate tectonics, earthquakes, and the earth's interior and the sea floor. The final focus is on surface processes including streams and groundwater, glaciers, deserts, wind and shoreline processes. (meets six hours per week, four hours lecture, two hours laboratory).

GERMAN LANGUAGE (GRM)

GRM 101 **4 C/60 CH**
Elementary German I
This course is designed to provide the learner with a solid background in the four language skills: understanding, speaking, reading and writing. Students will learn elementary pronunciation, vocabulary and grammatical principles necessary for comprehending and expressing simple ideas in both spoken and written German. Students will develop reading and listening skills and be introduced to diverse aspects of German life and culture. A variety of technologies, media and other supplementary materials will be used to enhance learning.

GRM 102 **4 C/60 CH**
Elementary German II
Prerequisite: GRM 101
This course is a continuation of Elementary German I and further builds listening, speaking, reading and writing skills within communicative contexts. Students will continue to expand their knowledge of pronunciation and grammatical principles, which can be applied to everyday conversational situations. Topics of Germanic culture will also be presented. A variety of technologies, media and other supplemental materials will be used to enhance learning.

GRM 201 **4 C/60 CH**
Intermediate German I
Prerequisite: GRM 102
This course will focus on increasingly advanced German communication skills in a cultural context. It develops listening, speaking, reading and writing skills and deepens the students' knowledge of pronunciation and grammatical principles. Topics of Germanic culture will also be presented. A variety of technologies, media and other supplemental materials will be used to enhance learning.

GRM 202 **4 C/60 CH**
Intermediate German II
Prerequisite: GRM 201
This course will focus on the development of advanced communication skills in a cultural context. It further develops listening, speaking, reading and writing skills and deepens the students' knowledge of pronunciation and grammatical principles. Topics of Germanic culture and the European Union and its' monetary system will also be presented. A variety of technologies, media and other supplemental materials will be used to enhance learning.

GEOTHERMAL SYSTEMS TECHNOLOGY (GTT)

GTT 101 **3 C/45 CH**
Principles of Thermogeology
This course will cover the basic principles of the Earth's heat sources and their use as alternative, renewable, and baseload energy. Attention will be given to the Earth's formation, its core as a heat source, and its crust for solar energy storage. Ground source heat and its use as a renewable energy heating and cooling source will be emphasized. Field experience to geothermal sites will be conducted.

GTT 105 **4 C/60 CH**
Applications of Geothermal Systems
This course will explore the variety of geothermal systems installed around the world. The student will focus on emerging energy issues and challenges the nation and the geothermal REHC industry face in regard to economics, energy conservation, and energy use challenges to local economies. The course will emphasize how geothermal systems integrated with other renewable energy sources can play a significant role in successfully addressing these challenges. Students will learn how to systemically reduce the use of fossil fuels in local economies and municipalities while concurrently establishing sustainable local communities and buildings. Students will experience building sites or drilling sites geothermal/ground source heat.

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Geothermal Systems Technology (GTT) continued

GTT 201 **3 C/45 CH**
Geothermal REHC Technology
Prerequisites: GTT 101, GTT 105
This course is designed to provide the students with the knowledge of Geothermal HVAC/R technology. Ground Source Heat Pump trainer and conventional Gas Forced Air equipment will be used to articulate how the stability of the Earth's heat can heat and cool homes and commercial buildings. Sustainable systems for individuals, communities, and municipalities are surveyed as well as their environmental impact and cost-benefit analysis. Calculating Geothermal Renewable Energy Heating and Cooling (REHC) system efficiency ratings and calculating payback periods will be surveyed. Current incentives, tax credits, rebates, and local and national legislation will be researched.

GTT 220 **4 C/60 CH**
GHEX Accreditation Exam Preparation
Prerequisites: GTT 201
This course provides the student with practical field experience and hands-on techniques for the fusion of the two primary ground heat exchangers used in the day-to-day installation of a ground-source heat exchanger (GHEX) using today's industry standards. This course culminates the completion of the Geothermal REHC Technology Certification by taking the student through the process of preparing for the International Ground Source Heat Pump Association's Accredited Installer examination.

GERONTOLOGY (GER)

GER 110 **3 C/45 CH**
Introduction to The Study of Aging
This is an introduction to the major issues in the field of gerontology with emphasis on the normal process of aging. Topics include physiology, psychology, economics, political issues, demography, sociology, education and community programs.

GER 115 **3 C/45 CH**
Programs/Services to the Aged
This course provides a comprehensive view of the national, state and local structures, both public and private which provide services for the aging population. Included is an examination of the major legislative programs, agencies and regulations affecting the elderly.

GER 120 **3 C/45 CH**
Health and Physical Processes of Aging
Prerequisites: GER 110
Physiological changes which are normal to the aging process and to the health and well-being of the elderly are studied by examining issues unique to aging, including sensory abilities, exercise, nutrition and drug use and misuse. Present patterns of health, illness and disease behavior, as well as rates of utilization of health and medical facilities and services will be investigated. Longevity and the quality of life are considered with an emphasis on preventive care, health maintenance and alternatives to institutionalization.

GER 125 **3 C/45 CH**
Mental Health and the Aging
Prerequisites: GER 110
This course focuses on the mentally healthy older adult from a social-psychological perspective. It investigates the changing nature of social roles, emotional and social consequences of multiple losses, redefinition of needs in relationship to family and friends as well as the topic of retirement and the use of time.

GLOBAL SUPPLY CHAIN MANAGEMENT (LOG)

LOG 101 **3 C/45 CH**
Principles of Logistics
This course provides general knowledge of current management practices in logistics management. A study of the basic concepts in product distribution including distribution planning and terminology, transportation methods, traffic management, location strategies, inventory control and warehousing.

LOG 102 **3 C/45 CH**
Purchasing
Prerequisite: LOG 101
This course provides a general knowledge of purchasing for today's supply chains. The student will be introduced to cross-functional teaming, purchasing and supply performance, supplier integration into new product development, supplier development, strategic cost management and total ownership cost (TOC) and many other topics.

LOG 103 **3 C/45 CH**
Introduction to Supply Chain Management
Prerequisite: LOG 101
This course is designed to provide a general knowledge of Supply Chain Management (SCM) and the associated functions necessary for delivery of goods and services to customers. This course will focus on what employees and managers must do to ensure an effective Supply chain exists in their organizations. Topics include: introduction to SCM, E-Commerce, materials management, information technology, measuring SCT performance, purchasing and distribution and research and case studies.

LOG 104 **3 C/45 CH**
Materials Management
Prerequisite: LOG 101
This course will introduce students to materials management by learning the planning production process, master scheduling, material requirement and forecasting material demands and inventory levels. This course is designed to build on the student's knowledge of supply chains and how effective material management improves supply chain performance.

LOG 105 **3 C/45 CH**
Inventory and Warehouse Management
Prerequisite: LOG 101
This course emphasizes the relationships of inventory and warehouse management to customer service and profitability of the wholesale distributor. The course will focus on the role of computerized systems and resulting information for effective management of inventory and the warehouse under various conditions.

LOG 110 **3 C/45 CH**
Transportation and Distribution
Prerequisite: LOG 101
Transportation and Distribution course examines the structure and importance of the commercial transportation industry in the logistics sector of business. The course includes discussions of regulations, economics, characteristics, and development in major transportation modes.

LOG 200 **3 C/45 CH**
International Supply Chain Management
Prerequisites: LOG 101, LOG 103
This course is a study of global logistics with an emphasis on looking at the whole world as one potential market. Additionally, an analysis of the global supply chain and current issues such as import/export regulations will also be reviewed.

HEATING, VENTILATION AND AIR CONDITIONING (HVA)

HVA 100 **5 C/75 CH**
Introduction to HVAC and Hermetic Systems
This course covers theories, application and principles of refrigeration and hermetic (sealed) systems with an emphasis on refrigeration cycles, components, and accessories. Topics include thermodynamics, common refrigerants and their chemical make-up, as well as chemical properties of refrigerants and the resulting conditions. This course covers application, installation and servicing of hermetic systems including domestic refrigerators, freezers, room coolers, water coolers and humidifiers. The use of heat pump (reverse refrigeration effect), direct, centrifugal, rotary compression and absorption methods along with their mechanical construction of same will also be discussed.

HVA 103 **4 C/60 CH**
Commercial Refrigeration
Prerequisite: HVA 100
Corequisite: HVA 108
This course covers application, installation and servicing of commercial-industrial refrigeration, including operating and testing of low, medium and high temperature systems and the types of refrigeration equipment needed to obtain large cooling requirements. In addition, emphasis is placed on dehydration, refrigerant, charging, recovery, recycling and reclamation procedures, as well as techniques using a multi-user recovery/recycling machine. This course provides training necessary for the EPA certification exam.

HVA 104 **4 C/60 CH**
Air Conditioning I
Prerequisite: HVA 100
Corequisite: HVA 105
This course covers all the heating, ventilation, and air conditioning (HVAC) equipment needed to maintain conditions that equate to healthy standards of human comfort. Also, heating and cooling load calculations factoring in degree/day measurements as used by utility companies will be reviewed. This course is offered in a Fast-Track format with HVA105.

HVA 105 **4 C/60 CH**
Air Conditioning II
Prerequisites: HVA 100
Corequisite: HVA 104
This course covers advanced design, application installation and servicing of commercial air conditioning units. In this course, emphasis will be including testing, starting, balancing and troubleshooting cooling systems, as well as the use and chemical properties of all refrigerants.This course is offered in a Fast-Track format with HVA104.

HVA 106 **5 C/75 CH**
Basic Heating and Heating Controls
This course covers the fundamentals of heat energy, the laws of thermal dynamics, and all conditions necessary for complete combustion using oil and natural gas. Topics include the safe design, construction, installation, venting, alteration, service and testing of heating equipment needed to maintain state comfort standards, as well as how heating controls operate and how they are wired. This course will also review reading and understanding of ladder, schematic diagrams, pictorial diagrams and control operations.

HVA 108 **4 C/60 CH**
Refrigeration Controls
Prerequisite: HVA 100
Corequisite: HVA 103
This course covers commercial refrigeration controls, and needed safety devices - how they operate, how they are wired and their uses. Also included are the use and functions of schematics diagrams, pictorial diagrams and control operations. This course provides training necessary for the EPA certification exam.

HVA 109 **5 C/75 CH**
Ventilation and Duct Fabrication
Prerequisite: HVA 106
This course covers sheet metal design, layout, and construction. Sizing and installation of air handling systems based on selected blueprints is included in this course, as well as construction of common ducts and sheet metal components.

HVA 110 **4 C/60 CH**
Force Air and Hydronic Heating
Prerequisite: HVA 106
This course covers application, installation and service of steam and Hydronic heating systems, including equipment selection, layout, construction, testing, adjusting and troubleshooting. Radiant Heating Systems are also studied.

HVA 111 **3 C/45 CH**
Applied Electricity in Air Conditioning and Heating
Prerequisites: HVA 100 or HVA 106
In this course, the student will learn the fundamentals of electricity as applied to air conditioning, heating and refrigeration, electrical symbols, circuits, electric meters, alternating current, single 3-phase motors, testing, motor protection and troubleshooting.

HVA 115 **5 C/75 CH**
Physical Properties of Air and Duct Design
Prerequisite: HVA 109
This course covers advanced commercial, industrial and architectural sheet metal duct design, layout, fabrication and installation. Custom duct work for difficult installation will be discussed, designed and fabricated in this course.

HVA 118 **3 C/45 CH**
Codes and Regulations
Prerequisites: HVA 100, HVA 106
This course provides the student with the Heating and Refrigeration Safety Code of the American Standard Association as approved by the American Society of Heating, Refrigerating and Air Conditioning Engineers and the cities of Detroit and Dearborn. This course covers scope and purpose, derivation, refrigerant, classification, systems required for various establishments, installation requirements, piping valves, fittings and related parts and safety devices.

HVA 120 **3 C/45 CH**
Advanced Heating and Heating Controls
Prerequisite: HVA 106
This course covers state-of-the-art heating units as well as the basics of geothermal and passive solar equipment used to assist in heating residential and commercial establishments. In addition, principles of sustainable construction and sustainable mechanical systems are discussed.

HVA 200 **3 C/45 CH**
Introduction to Boiler Plant Maintenance
Prerequisite: HVA 106
This course examines low pressure boilers found in residential and light commercial applications. Topics covered include boiler construction, boiler fittings, steam tables, steam cycles, feed water systems, fuel systems, draft systems, boiler water treatment, and principles of boiler operation and boiler operator procedures.

HVA 205 **3 C/45 CH**
Steam I
Prerequisite: HVA 200
This course examines high pressure fire tube and water tube boilers along with their various applications. Topics covered include boiler design and construction, boiler fittings, steam and water auxiliaries, fuel burning equipment, draft, instrumentation and combustion controls, boiler water treatment, steam boiler operation and licensing.

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HVAC (HVA) continued

HVA 210 **3 C/45 CH**
Steam II
Prerequisite: HVA 205
This course introduces students to the field of Stationary Engineering as it relates to the operation of fossil fuel based power plants. Topics covered include the steam plant cycle, coal fired boilers, oil and gas fired boilers, industrial and small power plants, super heat steam temperature control, furnace design, boiler settings, boiler accessories, combustion of fuels, pumps, steam turbines, super heaters, condensers, cooling towers, and waste to energy plants.

HVA 215 **3 C/45 CH**
Boiler Plant Accessories
Prerequisite: HVA 200
This course covers boiler foundations and supports, safety devices, water walls, headers drum materials, laying up of boilers, heat absorption rates of contamination of various water surfaces, pumps, injectors, regulators, turbines, collectors and various traps, separators and draft regulators. The use of make-up air heat exchangers will be examined. This course provides training necessary for the High Pressure Boiler Operators licensure exam.

HEMODIALYSIS (HMD)

HMD 110 **3 C/45 CH**
Hemodialysis Terms and Principle
This course provides students the introduction to the terminology of the Hemodialysis patient care. Usage, definition, pronunciation and spelling of terms common to the renal anatomy and physiology, chronic kidney disease, Hemodialysis devices, vascular access and Hemodialysis procedure and complications will be discussed. Computerized study guide audio cassette tapes are used to enhance students' learning. This course also defines the basic principles of diffusion, filtration, ultrafiltration, convection, and osmosis. Explains how diffusion, filtration, ultrafiltration, convection and osmosis relate to solute transport and fluid movement during dialysis. Describes the principles of fluid dynamics and how they relate to dialysis.

HMD 120 **3 C/45 CH**
Anatomy and Physiology of Kidney and Urinary System
This course identifies the structures and functions of the normal kidney; describes acute vs. chronic kidney disease; list symptoms of uremia and conditions that often occur due to the kidney failure.

HMD 130 **3 C/45 CH**
Surgical Principles of Peritoneal and Vascular Access
This course describes the three main types of vascular access. It presents to students basic anatomy of human systemic, pulmonary, and portal circulation systems; identify the predialysis assessments for all types of vascular access, describe the methods of needle insertion for AVFs and grafts; accessing procedure, exit site care, and monitoring of vascular catheters. Also presents to students basic principles of surgical sterile technique, surgical instruments, medical devices, and step-by-step surgical techniques for AVFs and AV graft placement.

HMD 140 **3 C/45 CH**
Hemodialysis Patient Care Management
This course describes at least four conditions that often occur due to kidney failure. Students will discuss the treatment options for kidney failure. They will identify members of the care team and discuss the communication skills dialysis team members use while working with the patients. Also describe the goal of rehabilitation and the Hemodialysis Patient care Specialist's role in it.

Hemodialysis patients' nutrition, patients' cope and education including patient self-management and the importance of hope will be discussed.

HMD 150 **3 C/45 CH**
Hemodialysis Machine Set-up
This course will identify the purpose and characteristics of dialyzers; describe the purpose and chemical composition of dialysate; describe dialysate preparation and the three monitoring functions of the dialysate delivery subsystem and the extracorporeal blood circuit functions and monitoring systems. Students will discuss the purpose of water treatment for dialysis, the advantages and disadvantages of water softeners, carbon tanks, reverse osmosis, deionization, and ultraviolet irradiation in the treatment of water for dialysis. The method for microbiological testing of the water treatment system will be examined in the HMD Lab. The course also will identify the dialyzer reprocessing: history, reasons, and step-by-step procedures.

HMD 160 **3 C/45 CH**
Hemodialysis Clinical Pharmacy
This course is an introduction to medications used in the Hemodialysis procedure. It emphasizes classification, administration, forms, methods, interaction, and desired effects of pre-, intra-, and post-hemodialysis medications. The Hemodialysis Patient Care Specialists¿ legal responsibilities are included.

HMD 170 **3 C/60 CH**
Hemodialysis Clinical Practicum
This is supervised clinical course (under direct supervision of clinical preceptor in dialysis setting), and a continuation of HMD 150 - Hemodialysis Machine Setup and Maintenance - Laboratory course. Students perform in the role of the Hemodialysis Patient Care Specialists on various stages of Hemodialysis procedure. This clinical setting involves two days per week, 8.5 hrs per day. Training series and students evaluation are based on the eight core modules. Each module is a self-sufficient topic, containing objectives, suggested practice areas with relevant informational background, and evaluation material. In addition, there is a separate reference module, which includes a glossary of terms. Students are responsible for their own transportation.

HISTORY (HIS)

HIS 151 **3 C/45 CH**
World Civilization I Pre-History – 1500 CE
This course is a Global History studying the development of civilizations from the end of the Pleistocene Epoch through the European Renaissance. The course focuses upon the political, economic, and cultural development and achievements of, and the connections and networking between, various civilizations and societies of the world.

HIS 152 **3 C/45 CH**
World Civilization II 1500 CE - Present
This course is a Global History surveying major civilizations of the world in the post-European Renaissance period featuring the development of politics, economics, science, and culture. Emphasis is placed on the increasing interdependence of all Earth's societies.

HIS 220 **3 C/45 CH**
History of Michigan
This course covers the historical development of Michigan from the period of the French exploration to the present. The major political, social and economic developments of the state. Emphasis on southeastern Michigan, especially the metropolitan Detroit area.

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History (HIS) continued

HIS 230 **3 C/45 CH**
Patterns of American Life: A Cultural History of 17th to 19th Century America
This course traces the growth of American society from colonial days through the nineteenth century. Influences such as immigration, religion, frontier settlement, technology, the family, and education are explored.

HIS 249 **3 C/45 CH**
U.S. History I 1607 - 1865
This course covers the political, social and economic development of the United States from colonization through the Civil War. Emphasis is placed on colonial America, the Revolutionary War, the Constitution, the slavery question and the Civil War.

HIS 250 **3 C/45 CH**
History of the United States II 1865 to Present
This course covers the rise of the United States as an industrial leader and world power. Emphasis on the transition from slavery to freedom, the growth of big business, the Great Depression, postwar America and America's wars.

HIS 255 **3 C/45 CH**
History of American Labor
This course covers the growth of organized labor from early craft unions, through the struggles of the industrial revolution, to the present multi-organizational federations. Analysis of current problems, organizational forms and activities of organized labor.

HIS 261 **3 C/45 CH**
African-American History I
This course is an American history course that focuses on the role the African-American has played in American history up to 1865. A survey of the African background, the Colonial period and the African-American experience from the American Revolution to the Civil War. This course provides students with a general background on the development of the American nation and the significant role played by African-Americans prior to the Civil War.

HIS 262 **3 C/45 CH**
African-American History II
This course is an American history course from 1865 to the present. The course focuses upon the African- American during the Reconstruction period and the thoughts and actions of African-Americans during the Twentieth Century as expressed through various leaders and organizations. This course provides students with a general background on the development of the American nation and the significant role played by African Americans from the period of the Civil War to the present.

HOME HEALTH CARE (HHA)

HHA 200 **4 C/60 CH**
Home Health Aide Skills
This course covers basic theory and skills needed for a Home Health Aide to assist patients in the home care and assisted living settings. Topics include client observation, ambulation, transfer, transport, personal grooming and assistance. Safety of patient and caregiver are stressed throughout the course. Skills and techniques learned are demonstrated in the lab hours imbedded in the course.

HOMELAND SECURITY (HLS)

HLS 100 **3 C/45 CH**
Introduction to Homeland Security
This course is designed to introduce the audience to fundamental components and concepts of homeland security. Topics that will be discussed are: History and origins of terrorism, critical infrastructure-identify and protect, national security strategies and organizations and an introduction to weapons of mass destruction.

HLS 101 **3 C/45 CH**
Introduction to Understanding Terrorism
Prerequisite: HLS 100
This course is designed to provide a history of terrorism both foreign and domestic. It will explore terrorism, both foreign and domestic. It will explore topics such as new adversaries, motivation, and tactics for global terrorism to include the exploration of domestic acts occurring in the U.S.

HLS 102 **3 C/45 CH**
Business and Industry Crisis Management
This course is designed for business and industry. Topics include: contingency planning, business area impact analysis, risk communication and management, crisis management, disaster recovery and organizational continuity.

HLS 103 **3 C/45 CH**
Emergency Management Principles
This course is designed for tourism, hospitality and travel management industries. Topics include: overview of disaster threats to tourists, industry managerial experiences, assessing tourist business vulnerabilities, industry disaster planning and customer and employee expectations.

HLS 104 **3 C/45 CH**
Terrorism and Emergency Management
This course is designed for emergency response personnel. Topics include: history of terrorism in the United States, domestic and international terrorism, law enforcement/national security aspects, applying emergency management framework, the structure of antiterrorism programs, preparing and responding to major events.

HLS 105 **3 C/45 CH**
Hazards Risk Management
This course is designed for emergency response personnel. Topics include: contribute to the reduction of growing toll of disasters in the United States by providing an understanding of a process that provides a framework that may be applied at all levels of communities and governments, to identify, analyze, consider, implement and monitor a wide range of measures that contribute to their well-being.

HLS 201 **3 C/ 45 CH**
Introduction to Intelligence
Prerequisite; HLS 100
This course is designed to introduce the student to the intelligence community of the U.S. government. The student will learn the importance of information sharing between the intelligence community and local law enforcement agencies. Topics will include: the history of intelligence, sources of intelligence, the various steps in gathering intelligence, and how intelligence applies to Homeland Security.

HLS 202 **3 C/ 45 CH**
Homeland Security Emergency Management
Prerequisite: HLS 100
This course is designed for emergency response personnel and will survey emergency and disaster management. Topics include: the history of domestic and international terrorism; natural and technological hazards and risk assessment; and the emergency management disciplines of mitigation, response, recovery, preparedness and planning.

Continued on next page.

Homeland Security (HLS) continued

HLS 203 **3 C/ 45 CH**
Counterterrorism for First Responders
Prerequisite: HLS 100
This course is designed for the first responders that are first on the scene of terrorism incidents whether they are foreign or domestic. The must provide security to the site, give aide to the wounded and literally put out the fire. The first responders will be prepared to handle all types of hazardous materials and effectively deal with chemical and biological events. The course provides step-by-step procedures for recognition and identification procedures for handle terrorist events.

HOTEL MANAGEMENT (HTM)

HTM 105 **3 C/45 CH**
Introduction to Hotel and Restaurant Management
The focus of this course is on analysis and understanding of the interdependent nature of major departments within a hotel operation. Emphasis will be placed on food and beverage, front office and rooms division, sales, human resources and facility management.

HTM 106 **3 C/45 CH**
Hotel and Restaurant Management
This course is designed to provide students with an in-depth study of Hotel and Restaurant Management. Special attention will be paid to supervision, procurement, computer systems, and the international hotel and restaurant management market.

HTM 200 **3 C/45 CH**
Hotel and Restaurant Operations
The focus of this course is on analysis and understanding of food, beverage service and controls for hotel dining rooms, restaurants, banquets, and cafeterias. Emphasis will be placed on food and beverage management, menu planning, personnel, merchandising, operational reports, and equipment. The course will also cover operational regulations pertaining to safety, health, taxes, and licenses. The course will teach students how to successfully manage food and beverage operations found in lodging properties including coffee shops, gourmet dining rooms, room service, banquets, lounges, and entertainment/show rooms.

HTM 210 **3 C/45 CH**
Customer Service Management
This course will introduce you to the rewarding careers available in the hotel front desk management. Hotel general managers are required to meet the challenges of day to day operations while practicing solid future planning. This course will present the technological advantages today's hotel manager have at their disposal and the challenges of hiring, training, scheduling and empowering workers to achieve top quality results. This course is specifically designed to train students to enter front desk in an assistant or supervisory role. The hotel's front desk is the control center for the property and workers at the supervisory level, and above must be well trained and motivated in order to achieve business objectives of a high yield, high occupancy rate, and above all top quality service.

HTM 225 **3 C/45 CH**
Special Events and Catering Management
The focus of this course will be on management and operations of conventions, meetings, banquets, trade shows, and exhibition for both profit and nonprofit organizations. Emphasizes on programs, planning, budgeting, contracts, marketing, facility selection, and exhibit and convention planning. Special emphases will be put on catering sales and management

HTM 299 **3 C/45 CH**
Hotel Management Practicum
This course provides a forum where students can acquire entry level knowledge and skills in the hospitality industry while in a performance setting. Students apply the knowledge and skills acquired at WCCCD in an appropriate hospitality establishment approved by the instructor

HUMANITIES (HUM)

HUM 101 **3 C/45 CH**
Introduction to the Visual Arts
This course provides an overview of the visual arts and its importance in our lives. The course covers the visual arts in regards to basic elements, such as line, space, color and light. Through a global lens, it also delves into specific art forms, such as painting, sculpture, film and architecture. The course is designed for those desiring to become a better informed and appreciative audience member of the visual arts. Field trips may be required to enhance the student's learning process and experience.

HUM 102 **3 C/45 CH**
Introduction to the Performing Arts
This course covers the importance of music, dance, poetry and drama in contemporary life. This question is examined in relation to the individual and society with emphasis on HOW to listen to the music and the words. The course is designed for people who make up audiences and for the student who would like to be a more creative person and a better informed consumer.

HUM 103 **3 C/45 CH**
The Art of Humanities
This course uses a thematic approach in examining philosophy, literature, drama, art and music.

HUM 126 **3 C/45 CH**
Foundations of African-American Art
This course covers a survey of African American visual arts and artists from 1900 to the present. Particular emphasis will be given to the artists of the Harlem Renaissance. Major artists such as Tanner, Heyden, Lawrence, VanDerZee, Polk, Bearden, Catlett, White, and Hunt will be studied. The influence of traditional African art on contemporary African American Art will also be explored.

HUM 141 **3 C/45 CH**
Introduction to the Theater
The course is designed to increase the student's understanding of theatre through a study of the fundamental principles and techniques of playwriting, acting, directing, technical theatre, and production. The course is designed for those desiring to become a better informed and appreciative audience member of the theatre. Field trips may be required to enhance the student's learning process and experience.

HUM 211 **3 C/45 CH**
Music Appreciation
This is an intensive study of music with emphasis on perception and style. Musical composition and performance styles are emphasized with examples of listening that range from early symphonies to contemporary music of today. The course is designed for those desiring to become a better informed and appreciative audience member of music. Field trips may be required to enhance the student's learning process and experience..

HUM 212 **3 C/45 CH**
Music History
This is a study of the historical development of music.

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Humanities (HUM) continued

HUM 221 **3 C/45 CH**
Art Appreciation
Consumerism and aesthetics are stressed in this intensive study of visual arts. The course includes theories of color, design and current views on the educational value of children's art and recommendations for collecting art for home and office.

HUM 222 **3 C/45 CH**
Art History
A chronological survey, the course focuses on the subjects, stories and symbols of visual art. Diverse cultures and styles are studied with examples that include Biblical scenes, African legends and contemporary American trends.

HUM 231 **3 C/45 CH**
Introduction to Film
This course covers a general approach to film, offering a comprehensive view of motion pictures as a communications medium, an industry, and an art form. This class includes historical highlights, aesthetic approaches and criticism and fundamentals of production. Students will be expected to view, identify and critique movies in the context of basic filmmaking principles and techniques.

HUM 232 **3 C/45 CH**
Film History
This course covers a historical approach to motion pictures from the early experimenters and pioneers. It includes the major trends in U.S. and world film production, the relation of film to society and film as communications medium and art form.

HUMAN SERVICES (HUS)

HUS 105 **3 C/45 CH**
Group Expression for Self Growth I
The focus of this course is student development of self-perception, self-understanding and self-growth through group interactions with other students in interpersonal competence acquisition groups. Students will examine their personal values, beliefs, motivations and goals.

All students pursuing certificates and degrees in Child Care Training, Corrections, Law Enforcement Administration, Mental Health Worker, Pre-Social Work, Registered Social Work Technician, and Substance Abuse Counseling are required to complete this course.

HUS 135 **3 C/45 CH**
Professionalism in Human Services
Prerequisite: HUS 105
This course covers professional ethics, values, behaviors and communication skills are addressed. This course prepares the student for a field-site situation through community placement, and fulfillment of the student's field-site role in a professional and responsible manner. Instructor and students locate and finalize individual student community placement arrangements.

By the end of the semester, students know the field site where they will work. CCT students will be assisted in identifying their CCT 103, CCT 104, CCT 105 and CCT 106 practicum sites. CCT students' placement will not be finalized.

HUS 246 **3 C/45 CH**
Independent Study: Human Services
In this course students explore questions of special interest through research under the direction of a faculty advisor. Basic research methodology is introduced; written reports are required. It's a substitute for an unavailable required course in the last semester when graduation requirements are not met.

INDUSTRIAL COMPUTER GRAPHICS TECHNOLOGY (CAD)

CAD 101 **4 C/60 CH**
Fundamentals of Computer Aid Drafting
This is an introductory computer aided drawing and design course. As an elementary course, it will provide the student with an overview of drawings produced with the use of the computer. Students will explore software capability by generating various configurations and develop operational skills to include among others: input of graphic commands, editing, filing, imaging, rotating and copying, plotting and printing for drawings. Auto CAD software will be used in this class.

CAD 102 **4 C/60 CH**
Advanced Computer Aided Drafting
Lab fee
Prerequisite: CAD 101
An advanced computer aided drafting course that focuses on developing those competencies necessary to produce exacting and precise detail 3-D engineering drawings. The course included three-dimensional data base manipulation and is enhanced with menu creation and advanced editing. Auto CAD software will be used in this class.

CAD 110 **4 C/60 CH**
Introduction to Unigraphics CAD/CAM
Lab fee
Prerequisite: DRT 102 or MAT 121
An introduction to two-dimensional drawing using the Unigraphics modeler. Other topics include UNIX operating system and Visual User Environment (VUE); File Management; Two-dimensional drawing, construction, and editing; view manipulation; layout; and a brief introduction to three-dimensional principles and concepts.

CAD 121 **4 C/90 CH**
Tool and Fixture Detailing
Lab fee
Prerequisite: CAD 102 or CAD 222
Study of the systems used in preparing detail drawings of assemblies. Includes detailing of blocks, pins, turned details, elements and castings

CAD 200 **4 C/60 CH**
UG Free Form Modeling
Lab fee
Prerequisites: CAD 102, CAD 222
Definition of complex surfaces and their intersections. Includes cylinder, convolutes and double curved surfaces of all types.

CAD 203 **4 C/60 CH**
CAD Applications
Lab fee
Prerequisite: CAD 222
This NX class introduces the student to the use of reference features and expressions to create and constrain sketch geometry in NX.

CAD 211 **4 C/90 CH**
Die Design and Panel Tipping
Lab fee
Prerequisite: CAD 102 or CAD 222
Die design methods used for cutting dies. Use of standard components for dies employing standard die sets, punches, retainers, springs, and stripper bolts.

CAD 222 **4 C/60 CH**
Unigraphics Solids Modeling
Lab fee
Prerequisite: CAD 110
An introduction to the fundamental three dimensional models in Unigraphics. Other Topics include Boolean Operations; solid and surface base modeling; create and edit features; analyze, move and hybrid models.

Continued on next page.

Industrial Computer Graphics Technology (CAD) continued

CAD 224 **4 C/60 CH**
UG/Assembly/Components/Drafting
Lab fee
Prerequisite: CAD 222
Provides students with fundamentals of three dimensional drafting, geometric dimension and tolerances; and an introduction to organization of several different part files which share common data and components, subassemblies and assemblies.

CAD 226 **4 C/60 CH**
Advanced Unigraphics Solid Modeling
Lab fee
Prerequisite: CAD 222
An advanced Unigraphics solid modeling course that provides students with the ability to model complex free-form surface parts applied to the automotive industry for component engine and sheet metal design.

JAPANESE (JPN)

JPN 101 **4 C/60 CH**
Elementary Japanese I
This course is an introduction to Japanese language and development of Japanese culture and its characteristics. This course is recommended for educators and others who require or desire an intensive overview of the language.

JPN 102 **4 C/60 CH**
Elementary Japanese II
Prerequisite: JPN 101
This course is a continuation of JPN 101 and is designed to provide basic knowledge of Japanese language for practical communication. It is designed to develop skills in reading, writing, speaking and listening. It also provides information about everyday life and culture in Japan. Students learn more advanced sentence structures and expressions.

LANGUAGE ARTS (LA)

LA 100 **6 C/90 CH**
Language Arts
This is a reading course offered to students who score between 0 to 4 grade level equivalency on a standardized reading assessment. Intensive reading skill development through an individualized, mastery learning delivery system which permits students to begin at their personal level and progress at their own pace.

LAW ENFORCEMENT ADMINISTRATION (LEA)

LEA 201 **3 C/45 CH**
Introduction to Law Enforcement
Prerequisite: CJS 100
This course introduces the student to the field of law enforcement and explores its historical, philosophical and operational development in the United States. It exposes the student to the different perspectives of the police role and familiarizes students with the concept of discretion as it applies to policing and law enforcement. This course also examines the constitutional limits imposed on the police in their use of excessive and/or deadly force.

LEA 210 **3 C/45 CH**
Highway and Traffic Control
Prerequisites: CJS 100, LEA 201
This course covers the basic law enforcement practices and responsibilities for the safe and efficient movement of vehicles and pedestrians. It also examines law enforcement's relationship with city planners, engineers, court personnel and the judiciary in encouraging safe commuting habits and adherence to the law.

LEA 225 **2 C/30 CH**
Law Enforcement Administration: Seminar I
Prerequisites: CJS 100, LEA 201
Corequisite: LEA 226
This course is an overview of law enforcement administration in both theory and practice. Case studies will be employed to help students understand and resolve the many problems facing law enforcement officers and administrators. Students will be invited to share their life experiences and to offer their own unique perspectives during class.

LEA 226 **4 C/60 CH**
Law Enforcement Administration: Practicum
Prerequisite: CJS 100, LEA 201
Corequisite: LEA 225
This course provides an internship experience for students in a supervised law enforcement setting. Students will engage in administrative and community policing work and may possibly accompany law enforcement officers on patrol. Students will be required to maintain an activity logbook and/or make written reports on their daily duties and field activities.

LEA 230 **3 C/45 CH**
Fundamentals of Criminal Investigation
Prerequisites: CJS 100, LEA 201
This course teaches the basic principles of criminal investigation. The course will examine, among other things, the following major subjects: surveillance techniques, crime scene investigation, the collection and preservation of evidence, the use of informants, and interview and interrogation techniques.

Continued on next page.

LEA 231 **3 C/45 CH**
Criminal Law and Justice I
Prerequisite: LEA 230
This course examines the substantive content of the criminal law and court processes. It explores the historical development of the law and traces the origins of American jurisprudence to the English common law. The course also examines the limitations on government power and the protections afforded the accused in a criminal prosecution.

LEA 232 **3 C/45 CH**
Criminal Law and Justice II
Prerequisite: LEA 231
This course is a continuation of LEA 231 which includes the laws of arrest, search and seizure, the rights of the accused, duties of police officers, laws of evidence and criminal trials, survey and examinations of the roles of the police officer, the judge, jury, defense counsel and prosecution in the judicial process.

LEA 235 **3 C/45 CH**
Race Relations For Law Enforcement
Prerequisites: CJS 100, LEA 201
This course covers racial and cultural tensions as they relate to law enforcement. Techniques which consist of case histories, psychological confrontations, attitude changes, economic oppression, education deprivation and social injustices.

LEA 250 **3 C/45 CH**
Social Problems in Law Enforcement
Prerequisites: CJS 100, LEA 201
This course covers the role of today's police officer in a multicultural society. It includes examination of the problems and causes of tension in social interactions and techniques in alleviating them.

Law Enforcement Administration (LEA) continued

LEA 253 **3 C/45 CH**
Law Enforcement Administration: Sem. II
Prerequisites: LEA 225, LEA 226
This course is a capstone seminary where each student must demonstrate substantial appreciation of the learning objectives established by the college and the Department of Criminal Justice. By performing various assignments, students are expected to review and verify such objectives and to demonstrate that they are ready to work/ matriculate in careers. Moreover, the student will demonstrate appreciation for the integration of knowledge's concerning the criminal justice system, and criminal law as it relates to the role of the Police in society.

LIBRARY TECHNOLOGY (LBT)

LBT 100 **3 C/45 CH**
Introduction to Libraries and Service
This course is designed to give the students a broad overview of the various types of libraries and library services offered to its users. A historical survey of libraries, from its beginnings in pre-history to the dynamic institutions they are today. Students are introduced to the functional and organizational structure; philosophy, and terminology are emphasized. Students will understand the roles that library technicians play as members of library staff. Issues in the library field which includes ethics, censorship, etc will be explored.

LBT 105 **3 C/45 CH**
Library Technical Services and Acquisitions
Introduces basic tenets of descriptive and subject cataloging, Library of congress and Dewey Decimal classification systems. Provides practical skills necessary to catalog and classify a variety of materials in MARC format, using cataloging tools online. Discuss the various aspects of technical service operations in the context of overall library services.

LBT 200 **3 C/45 CH**
Evaluating Information Sources
This course is designed to introduce students to the world of reference and information service. Core abilities will include the evaluation of print and electronic information sources, basic research methodology, search strategies, and standard bibliographic formats for determining the authority, currency and overall quality of resources.

LBT 210 **3 C/45 CH**
Library Technology
This course is designed to give the students practical skills in basic library technologies. An overview of integrated library management systems and its impact on circulation, patron registration, and cataloging procedures. Covers statistics, inventory and shelving operations, circulation, serials, online public access catalogs, interlibrary loan services, theft detection systems, and bibliographic checking through OCLC. Student will explore advances in recent years: RSS, open source, blogs, networking and pod casting. Core abilities will include defining technology needs for institutions and balancing that with maintenance, training and obsolescence costs. Course will include tours and guest speakers.

LBT 215 **3 C/45 CH**
Introduction to Media Management and Service
This course is designed to give the students core skills for the complex management of media in libraries. Time will be taken to explore all of media in the past, present and future. Core abilities will include asserting preferred formats based on usability and longevity as well as budget. An understanding of preservation, storage, cataloging and presentation of media will be developed. Overview of the future trends of media management will also be covered. Course will include tours and guest speakers.

LBT 220
Library Internship
Prerequisites: ENG 110, BUS 225 and LBT 100
This course is designed to apply theory learned in the classroom and provide job experience. It will also allow the students to see first-hand the library's role in community and their role in the profession. Several seminar discussions will be included to analyze their position with the assistance of their instructor. The student will evaluate this experience and have the opportunity to offer their insight.

LIGHT RAIL ENGINEERING TECHNOLOGY (LRT)

LRT 101 **3 C/45 CH**
Rail Transportation and Railroad Careers
This introductory course covers the history of rail development and operations in North America and an exploration of railroad careers to assist students in choosing a suitable career path. Included in the course are discussions of the economic impact of rail transportation, the various modes of rail transportation (passenger and freight), and the political reality of the industry. Local field trips to rail and light rail settings are an important part of the class structure.

LRT 102 **3C/45 CH**
Railroad Rules, Regulations, Standards and Practices
Prerequisite: LRT 101
This course provides an overall understanding of governmental rules, regulations, standards and practices as they apply to railroad operations. The class includes a review of the Code of Federal Requirements – Title 49 (Transportation Standards), Railroad Standards and Practices Manual (AREMA) and the NORAC Operating Rules (Northeast Operating Rules Advisory Committee). Students are required to take the NORAC Rules Exam during the class and will learn to write rail orders, timetables and rules.

LRT 201 **3C/45 CH**
Safety in the Railroad Workplace
Prerequisite: LRT 102
This course covers the principles, policies and regulations governing safe work practices in the rail industry. The learner will be guided through an understanding of how "Safety Culture" gets established in all work settings. The meaning of track signs and signals will be covered as well as working with telemetry devices, getting on and off static and moving equipment, crossing over static equipment, using radios, providing flag protection, and troubleshooting. Railway safety inspections pre-departure and in route will be covered.

LRT 202 **3C/45 CH**
Reading and Interpreting Railroad Diagrams
Prerequisites: LRT 102, EE 101, EE 102
This course provides an overall understanding of how to read and interpret electrical diagrams commonly used in the rail industry. The course will include a review and discussion of the following topics: Ladder Diagrams, Contactors, Motor Starters, Motors, Programmable Logic Controller, and other related railroad electrical symbols.

LRT 210 **3C/45 CH**
Railroad Pneumatics and Hydraulic Controls
Prerequisites: LRT 102, EE 101, EE 102
This course introduces the basic components, controls and functions of railroad pneumatics and hydraulics. The course will include a review and discussion of the following topics: standard symbols, pumps, control valves, control assemblies, actuators, as well as maintenance procedures and

Continued on next page.

control and switching devices. Basic railroad employee responsibilities and procedures for performing brake tests (pre-departure and en route) in accordance with federal and regional regulations are covered.

LRT 220 **4C/60 CH**
Railroad HVAC Systems
Prerequisites: LRT 210, MCT 203, PHY 235
This course provides an overview of HVAC systems used on railcars. The use of basic hand and specialty tools will be covered as well as the basic laws of heat transfer, thermo-dynamics and heat load. The study of the basic refrigeration cycle and its components will be introduced. In addition, students can qualify to obtain EPA certification on the proper handling of refrigerants.

LRT 230 **4C/60 CH**
Railroad Electromechanical Troubleshooting
Prerequisites: LRT 202, MCT 203
This course introduces students to the tools, methods and techniques for troubleshooting electromechanical problems in railroad machines, machinery and various types of railcars.

LRT 240 **4C/60 CH**
Railroad Signaling and Switching
Prerequisite: LRT 102
This course provides a basic understanding of a railroad signal system, including track circuits and all applicable federal laws and guidelines. Included is the basic concept of marshalling (making sure the railcars are arranged in the correct sequence) and efficient, effective switching procedures.

LRT 242 **4C/60 CH**
Railroad Communications
Prerequisites: LRT 240
This course introduces students to a basic understanding of railroad communications. Course topics include: frequency and pulse modulation, AM and FM transmitters and receivers, electromagnetic radiation, digital data communication, and all applicable laws and regulations.

LRT 250 **4C/60 CH**
Railroad Maintenance, Troubleshooting and Repair
Prerequisites: MCT 203
This course introduces students to the tools, methods and techniques for troubleshooting signal and communication problems in switch machines and railroad communication equipment.

MANAGEMENT (MGT)

MGT 205 **3 C/45 CH**
Management Principles
Prerequisite: BUS 150
A presentation of the basic organizational concepts in light of the general framework of planning, organizing, coordinating and controlling. Case studies will be used to explain the relationship of the functional areas of an organization to the company's overall objective.

MGT 210 **3 C/45 CH**
International Management
Prerequisite: BUS 150
This course covers international management strategies and lays a foundation for studying the global business environment – varying political, economic and legal environments, globalization, international organizations and regional integration. Topics include, but are not limited to, formulating and implementing strategy and strategic alliances, developing a global management cadre, motivating and leading, staffing, training, and compensation for global operations. Students explore the cross-cultural environment – the dimensions of culture and cross-cultural communication. Emphasis is placed on the management role of these functions.

MANUFACTURING TECHNOLOGY (MAN)

MAN 101 **3 C/45 CH**
Manufacturing Process I
An introduction to precision measuring tools used in tooling and manufacturing processes. In the shop, emphasis is placed on exercised and projects that embody the process and operation of using hand tools, layout tools, and machine tools, such as hack saws, belt and disc sanders, drill press, vertical mill machines and surface grinders. Classroom emphasis is placed on related information that is essential to the set up and operations of machine tools, and to perform basic processes and operations in the shop.

MAN 105 **3 C/45 CH**
Basic Metrology
In this course students will be introduced to the concepts and practices of dimensional metrology and the modern processes, software and equipment used to ensure a high level of precision, accuracy and repeatability.

MAN 110 **3 C/45 CH**
Manufacturing Processes
Lab fee
Prerequisite: MAN 100
A theoretical and practical introduction to conventional precision machine tools, including drill presses, engine and turret lathes, shape milling and grinding machines. Emphasis will be given on turning, threading, drilling, honing, shaping, and broaching.

MAN 115 **3 C/45 CH**
Manufacturing Processes II
Prerequisite: MAN 101
This course is a further study in manual machining exposing the students to additional hands-on machining processes utilizing lathes, and surface grinders with hands-on lab projects required.

MAN 120 **3 C/45 CH**
Survey of Material Science
Lab fee
Prerequisite: MAN 100
This is a study of the atomic structure, bonding, crystallization, and physical and mechanical properties of metals. The classification and selection of materials as well as heat-treating and hardness testing will be examined.

MAN 205 **3 C/45 CH**
Advanced Metrology
Prerequisite: MAN 105
In this course students will continue their study of dimensional metrology and utilize start-of-the-art surfacing software in conjunction with point-to-point measuring tools and 3D scanning equipment.

MAN 215 **3 C/45 CH**
Quality and Inspection
Prerequisite: MAN 105
This course is designed to give students a background in precision techniques of part measurement and testing procedures. Emphasis is placed on modern tools and techniques to track accuracy of manufactured parts.

MAN 220 **3 C/45 CH**
Fixture Design and Construction
Prerequisites: MAN 115, CNC 234
In this course students will gain knowledge and understanding of proper construction and utilization of fixtures in clamping and holding irregular shaped parts within modern CNC equipment.

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Manufacturing Technology (MAN) continued

MAN225 **3 C/45 CH**
Introduction to Hard Machining
Prerequisite: CNC 235
In this course students will study strategies and techniques for hard part machining including risks, rewards, tooling considerations and impact of hard machining on tool life and cycle times in a modern manufacturing facility.

MARKETING (MKT)

MKT 200 **3 C/45 CH**
Principles of Marketing
Prerequisite: BUS 150
A basic course with direct application to marketing functions and policies. Course includes consumer and industrial marketing concepts, service marketing, standardization and grading, pricing and government regulations.

MATHEMATICS (MAT)

MAT 100 **3 C/45 CH**
Basic Mathematics
This course covers solving problems with arithmetic. Building skills in using whole numbers, fractions, decimals. No calculators will be used for this class.

MAT 105 **3 C/45 CH**
Pre-Algebra
This course is an introduction to variables in building mathematical and problem solving skills. Strong emphasis will be placed on operations with signed numbers.

MAT 110 **3 C/45 CH**
Business Mathematics
Prerequisite: MAT 100 or MAT 105
This course covers solving problems relating to bank and sales records, percentages in business, financial charges and statements, payrolls and taxes, insurance, bonds, stocks and annuities.

MAT 112 **3 C/45 CH**
Elementary Algebra
Prerequisite: MAT 100 or MAT 105
This course covers topics which include solving first and second degree equations, operations on polynomials, operations on rational expressions, word problems, graphing and solving linear equations and systems of linear equations and inequalities.

MAT 113 **3 C/45 CH**
Intermediate Algebra
Prerequisite: MAT 112
The emphasis of this course is on extending introductory concepts. New concepts presented are absolute value equations and inequalities, rational exponents, complex numbers, quadratic equations and inequalities, the slope of a line, conic sections, functions and logarithms.

MAT 111 **3 C/45 CH**
Pre-College Mathematics
This course covers solving problems with arithmetic, building skills in using whole numbers, fractions, decimals, and introduction to variables in building mathematical and problem solving skills. Strong emphasis will be placed on operations with signed numbers as well as solving first and second degree equations, operations on polynomials, operations on rational expressions, word problems, graphing, solving linear equations and systems of linear equations, and inequalities. Introductory concepts will be extended to include absolute value equations, rational exponents, complex numbers, quadratic equations, slope of a line, conic sections, functions and logarithms. Students will use customized software that includes videos, homework assignments, quizzes and tests available via internet to extend time on task.

With the guidance of instructors and time tasks in a math lab, students accelerate through math competencies on a progressive and individual basis.

MAT 121 **3 C/45 CH**
Technical Mathematics I
Prerequisite: MAT 100 or MAT 105
This course covers application of arithmetic and basic algebra in technical problems, applying rules in arithmetic (whole numbers, fractions, decimals, percentage) to solve technical problems.

MAT 122 **3 C/45 CH**
Technical Mathematics II
Prerequisite: MAT 121 or placement test
This course is a continuation of MAT 121, using algebra to solve technical problems through the applications of equations, exponents and graphing methods in industrial work.

MAT 128 **3 C/45 CH**
Math for Elementary Teachers I
Prerequisite: MAT 112
The course provides the future elementary school teacher with a perspective for understanding mathematics taught in the elementary school. Topics include the study of problem solving techniques, fundamental concepts and structure of number systems, sets, numeration systems, integers, number theory and rational numbers.

MAT 129 **3 C/45 CH**
Math for Elementary Teacher II
Prerequisite: MAT 128
This course is a continuation of MAT 128 which provides the future elementary teacher with background for understanding mathematics taught in the elementary school. Topics include probability, statistics, geometry, motion geometry, coordinate geometry and concept of measurement.

MAT 131 **3 C/45 CH**
Descriptive Statistics
Prerequisite: MAT 113 or placement test
This course is a basic course for students in business administration, education, psychology, and/or economics. It is a preparation for inferential statistics, providing a definition of statistics, measurements, working out distributions, frequency polygons, measuring central tendency and variability and finding correlation and regression.

MAT 135 **4 C/60 CH**
Quantitative Reasoning
Prerequisite: MAT 113
This course in Quantitative Reasoning surveys the way that mathematics is used in business and industry. As our society grows more technologically complex, the ability to interpret and analyze quantitative information has become an increasingly essential skill. The topics in this course are intended to develop analytic reasoning and the ability to solve quantitative problems. Topics include: the construction and interpretation of graphs, spatial visualization and geometry, descriptive statistics, math of business and finance, functions and modeling, probability and logic. Emphasis will be placed on the appropriate use of units and dimensions, estimates, and mathematical notation.

MAT 155 **4 C/60 CH**
College Algebra
Prerequisite: MAT 113, or by placement
This course includes the solution of linear, quadratic and fractional equations and inequalities, lines, parabolas and circles are studied. The concept of function is presented and polynomial, rational,

Continued on next page.

Mathematics (MAT) continued

inverse, exponential and logarithmic functions are studied and graphed. The use of graphing technology or a computer algebra system is required.

MAT 156 **4 C/60 CH**
Trigonometry
Prerequisite: MAT 155 or by placement
In this course the translation of functions is reviewed. New topics include the study and graphing of trigonometric functions, inverse trigonometric functions, right triangle trigonometry, trigonometric identities and equations, the Laws of Sines and Cosines with applications, and Polar Coordinates are introduced.

MAT 171 **4 C/60 CH**
Analytic Geometry and Calculus I
Prerequisite: MAT 156 or by placement
In this course the functions and their graphs are reviewed. The concepts presented include limits, derivatives, differentiation of algebraic and trigonometric functions, applications of the derivative, definite and indefinite integrals.

MAT 172 **4 C/60 CH**
Analytic Geometry and Calculus II
Prerequisite: MAT 171
This course covers the study of integration techniques, applications and integrals, limits and indeterminate forms, infinite sequence and series, improper integrals and an introduction to parametric and polar coordinates. The use of graphing technology or a computer algebra system is required.

MAT 271 **4 C/60 CH**
Analytic Geometry and Calculus III
Prerequisite: MAT 172
In this course the concepts presented include plane curves, polar coordinates, vectors, surfaces, vector-valued functions, partial differentiation and multiple integration with applications. The study of vector calculus includes line and surface integrals with applications.

MAT 272 **4 C/60 CH**
Linear Algebra
Prerequisite: MAT 271
This course covers core materials, vectors, spaces, linear transformations and matrices, systems of linear equations, determinants and digitalization.

MAT 273 **4 C/60 CH**
Differential Equations
Prerequisite: MAT 272
This course covers the following topics: the study of first order equations, higher order equations, linear systems of differential equations, power series solutions, and the Laplace transform. The use of a computer algebra system is required.

MECHATRONICS (MCT)

MCT 202 **3 C/60 CH**
Introduction to Robotics
This course is an introduction to the field of robotics technology. It will provide the student with a historical overview of the use and development of robotics. It will also include a discussion of the different types of robots (e.g., point-to-point, continuous path, electric, hydraulic, pneumatic, etc.) and introduction to robotics programming.

MCT 203 **3 C/60 CH**
Electrical Machinery and Controls
Prerequisite: EE 102
This course covers the principles involved in the function of DC and AC motors and generators and their connection, operation and load characteristics. Study of different types of speed controls and starters, characteristics of single phase motors and ployphase machines including synchronous and induction motors, transformer characteristics such as losses, efficiencies, paralleling transformers and transformer testing are included. Laboratory experiments to examine the characteristics of the various DC and AC motors and generators, using various speed controllers and starters.

MCT 207 **2 C/45 CH**
Hydraulics and Pneumatics
Survey of basic industrial hydraulics and pneumatics, including hydraulic laws and principles, necessary calculations, ANSI symbols, drawing of complete schematic diagrams of circuits studied, controls and motors used in hydraulic and pneumatic systems measuring devices and complete hydraulic and pneumatic systems. Lab coat is required.

MCT 208 **3 C/60 CH**
Programmable Logics Controller
Programmable controller hardware, ladder logic programming, timers, counters, arithmetic functions, process control, data communication, and PLC installation and troubleshooting systems will be covered. Allen-Bradley SLC 500 and ControlLogix 5000 series programmable controllers will be used in the lab.

MCT 212 **3 C/60 CH**
Advanced Robotics
Prerequisite: MCT 202
This is an advanced course in robotic programming for automated material handling. Also include flexible manufacturing, sensors, concept of machine vision, troubleshooting of hardware and software. Emphasis will be on ABB robotics hardware, software and programming.

MCT 215 **3 C/60 CH**
Advanced Programmable Logic Controllers
Prerequisite: MCT 208
This is an advanced course in PLC programming and hardware. Ladder logic programming, structured text programming, sequential function chart programming, function block diagram programming, and PLC installation and maintenance will be covered. Allen-Bradley ControlLogix 5000 PLC series will be used in the lab.

MEDICAL ADMINISTRATIVE SPECIALIST (MAS)

MBS 108 **3 C/45 CH**
Medical Coding
This course is designed to give students an overview of the medical insurance industry, and teach basic CPT and ICD-9 and 10 coding as used in medical insurance billing. It is part of the preparation for entry-level jobs in a doctor's office or other medical facility.

MBS 112 **3 C/45 CH**
Medical Billing
This course is designed to give students the information and skills necessary to file and collect health insurance claims and use related software. Skills to manage the financial functions of a physician's office are included such as Front Office Management, Filing CMS 1500 and CMS 1450 forms, and patient record keeping. Information is also provided on starting a medical billing business from home.

MBS 122 **3 C/45 CH**
Advanced Coding
This course is designed for the student with prior billing and coding training or experience. Students

Continued on next page.

Medical Administrative Specialist (MAS) continued

will gain advanced knowledge and skill in coding more complex cases through a review of major body systems and solving real life problems. Compliance and reimbursement issues are included.

MBS 124 **3 C/45 CH**
Advance Coding CPT
This course is designed to give students advanced knowledge and skill in coding for medical insurance claims, and improved collection techniques to ensure successful claims reimbursement. It is organized according to the sections in the CPT book and answers frequently asked questions from real life situations.

MBS 126 **4 C/60 CH**
Practicum Experience
Practicum experience is 200 hours in a medical office setting receiving hands on experience in areas of medical administration which may include but not limited to medical records, scheduling, process of payments, follow-up, professional agencies and patient communication.

MOS 150 **5 C/75 CH**
Practicum Experience
Practicum experience is 240 hours in a medical office setting receiving hands-on experience in areas of medical records, medical billing, scheduling, and other general duties and responsibilities.

MEDICAL OFFICE SPECIALIST (MOS)

MOS 120 **3 C/45 CH**
Medical Office Management
Prerequisites: ALH 110, BUS 225
This course provides an in-depth look and examination of the role and functions of a Medical Office Specialist in today's Health Care settings. Topics include customer service skills, medical report preparation, data management, appointment system management, and other similar medical office systems tasks.

MOS 140 **3 C/45 CH**
Patient Care Management
Prerequisites: ALH 110, ALH 115
This course outlines the role of the Medical Office Specialist as it relates to Patient Case Management. Concepts of interacting within a Healthcare team or system, multiculturalism, and maintenance of patient care records will be thoroughly discussed in this class.

MENTAL HEALTH (MEH)

MEH 100 **3 C/45 CH**
Introduction to Mental Health
This course is an introduction to community mental health. This will provide students with the principles, values, attitude and skills needed to provide quality care in a community mental health setting. This is a foundation course with the intent to provide students with readily understandable set of principles that will enable them to talk with, engage, understand, and develop collaborative goals with mentally ill persons.

MEH 120 **3 C/45 CH**
Direct Care Services in Community Settings
Prerequisite: MEH 100
This course is for persons who provide direct care services in the behavioral health field to include persons with disabilities in the home and community settings. This course is highly experiential and involves the exploration of a wide-range of situations you will face in your role as a direct care provider.

MEH 135 **3 C/45 CH**
Mental Health in Criminal Justice
Prerequisite: MEH 100
This course imparts the philosophies, practices, policies, and outcomes of the most generally accepted and scientifically supported models of treatment, recovery, relapse prevention, and continuing care for individuals in recovery transitioning from a justice facility.

MEH 240 **3 C/45 CH**
Psychopathology and Behavior I
Prerequisite: MEH 100
This course is a study and review of psychopathology with emphasis upon the etiology, symptomatology, treatment and prognosis of mental disorders.

MEH 250 **3 C/45 CH**
Applied Behavioral Analysis
Corequisite: MEH 251
In this course students will learn about the many different behaviorally-based teaching strategies used for children with Autism Spectrum Disorders. This course will focus on using behavior analysis and how it is used with autism and other special needs populations. Although this course focuses on the treatment of autism it is directly applicable to many therapeutic situations with many different populations.

MEH 251 **3 C/45 CH**
Field Experience in Applied Behavioral Analysis
Corequisite: MEH 250
This course provides students the opportunity to spend supervised time in the field practicing skills learned in the behavioral interventions for autism and related disabilities courses. Students will work directly with multiple children using a variety of Applied Behavior Analysis techniques. Students will then learn to implement behavior plans under the supervision of experienced Early Intervention staff and Board Certified Behavior Analysts (BCBA).

MUSIC (MUS)

MUS 100 **3 C/45 CH**
Introduction to the Fundamentals of Music
This course is an introduction to the vocabulary of music, basic terms, notation and appreciation. No credit for music majors.

MUS 101 **3 C/45 CH**
Fundamentals of Music I
This course is a basic class in the discipline of music, musical elements, theory, notation, scale formation, terminology and ear training.

MUS 102 **3 C/45 CH**
Fundamental of Music II
Prerequisite: MUS 101
This course is a continuation of MUS 101 with increased emphasis on ear training.

MUS 110 **3 C/45 CH**
Class Piano I
This course is a study of the fundamentals of piano, including keyboard techniques.

MUS 111 **3 C/45 CH**
Class Piano II
Prerequisite: MUS 110
This course is a continuation study of the fundamentals of piano, including keyboard techniques.

MUS 121 **3 C/45 CH**
History of Jazz I
This course provides an introduction to the history of jazz theory, technique, innovators and contributors.

MUSLIM WORLD STUDIES (MWS)

MWS 101 **3 C/45 CH**
Muslim World Ideologies and Culture
This course covers Islamic precepts, values and concepts as a way of life for the Muslim individual, family, society and world order.

MWS 102 **3 C/45 CH**
Muslim World Civilization
This course covers aspects of Muslim world civilization, including art, music, philosophy, literature, science and architecture.

MWS 103 **3 C/45 CH**
Muslim World Historical Survey
This course covers the history of the Muslim world from the rise of Islam to the present. Emphasis is placed on events which have a bearing on the contemporary Muslim world.

MWS 106 **3 C/45 CH**
Muslim World International Relations
This course covers the dynamics of Muslim world international relations, emphasizing their effects on the interests and security of the super powers.

MWS 107 **3 C/45 CH**
Muslim World Contemporary Issues
This course covers the problems and issues facing the contemporary Muslim world, stressing their relevance to United States welfare.

MWS 112 **3 C/45 CH**
Muhammad, Life of the Prophet
This course is designed to provide an understanding of the Prophet Muhammad's life and career; to see that the history and development of Islam is a complex and multi-faceted process and the subsequent development and spread of Arab-Muslim civilization as it relates to the Prophet Muhammad's life. The course also emphasizes analysis about the life and times of the Prophet Muhammad and revelations contained in the Koran.

MWS 114 **3 C/45 CH**
Islam in America
This course surveys the history of Islam in America from the earliest years of the African slave population, the antebellum period through the successive waves of immigration from the Muslim world, post 1965 and the aftermath of September 11, 2001. It will include the study of historical and ideological developments of various Islam movements and Muslim groups. Finally, it will study relations between Muslims and non-Muslims and the prospects for the future of Islam in America.

NURSING (NUR)

NUR 110 **4 C/120 CH 30 L/90 LAB**
Nursing Foundations
Prerequisites: ENG 119, BIO 240, BIO 250, BIO 295, PSY 101, Admission to the Nursing Program
Corequisites: NUR 112, NUR 118, NUR 119
This first year course explores historical and contemporary nursing practice and health care delivery systems. Emphasis is on the nursing student as a caregiver and the responsibilities this entails in the clinical setting. The laboratory component has a focus on the acquisition of the nursing skills necessary for progression to clinical sites in subsequent courses. Students have an opportunity to practice skills on a simulation model and peers. The course is organized according to the associate degree graduate outcomes of Human Flourishing, Nursing Judgment, Professional Identity, and Spirit of Inquiry with supporting integrating concepts and core values described by the National League for Nursing (NLN). Additionally, Quality and Safety Education for Nurses (QSEN) competencies are addressed. Students are introduced to the nursing process and the skills necessary for application of the nursing process in managing care of the patient in today's changing health care environment.

NUR 112 **4 C/120 CH 30 L/90 CL**
Medical Surgical Nursing 1
Prerequisites: ENG 119, BIO 240, BIO 250, BIO 295, PSY 101, Admission to the Nursing Program
Corequisites: NUR 110, NUR 118, NUR 119
This first year course focuses on the nursing care of the peri-operative patient and the patient with diabetes mellitus. Concepts and management of intravenous therapy, blood component administration, fluid and electrolyte/acid-base balance are also emphasized. Emphasis is on the nursing student as a caregiver and the responsibilities this entails. The course is organized according to the associate degree graduate outcomes of Human Flourishing, Nursing Judgment, Professional Identity, and Spirit of Inquiry with supporting integrating concepts and core values described by the National League for Nursing (NLN). Additionally, Quality and Safety Education for Nurses (QSEN) competencies are addressed. Students participate in high fidelity simulated patient care scenarios reinforcing knowledge and refining critical thinking skills. Students are concurrently enrolled in the clinical component of NUR 112 where skills in the application of the nursing process are further developed in managing care of the adult patient.

NUR 114 **3 C/90 CH 22.5 L/67.5 CL**
Obstetric Nursing
Prerequisites: ENG 119, BIO 240, BIO 250, BIO 295, PSY 101, NUR 110, NUR 112, NUR 118, NUR 119, Admission to the Nursing Program
Corequisites: NUR 116, DT 130
This first year course focuses on the nursing care of the obstetric patient, the newborn and the family unit. The course also explores women's health across the life span. Emphasis is on the nursing student as a caregiver and the responsibilities this entails. The course is organized according to the associate degree graduate outcomes of Human Flourishing, Nursing Judgment, Professional Identity, and Spirit of Inquiry with supporting integrating concepts and core values described by the National League for Nursing (NLN). Additionally, Quality and Safety Education for Nurses (QSEN) competencies are addressed. Students participate in high fidelity simulated patient care scenarios reinforcing knowledge and refining critical thinking skills. Students are concurrently enrolled in the clinical component of NUR 114 where skills in the application of the nursing process are further developed in managing the health of women and the childbearing family.

NUR 116 **4 C/120 CH 30 L/90 CL**
Medical Surgical Nursing II
Prerequisites: ENG 119, BIO 240, BIO 250, BIO 295, PSY 101, NUR 110, NUR 112, NUR 118, NUR 119, Admission to the Nursing Program
Corequisite: NUR 114, DT 130
This first year course focuses on the nursing care of the patient with alteration in respiratory, cardiac/cardiovascular status and hematologic disorders. Emphasis is on the nursing student as a caregiver and the responsibilities this entails. The course is organized according to the associate degree graduate outcomes of Human Flourishing, Nursing Judgment, Professional Identity, and Spirit of Inquiry with supporting integrating concepts and core values described by the National League for Nursing (NLN). Additionally, Quality and Safety Education for Nurses (QSEN) competencies are addressed. Students participate in high fidelity simulated patient care scenarios reinforcing knowledge and refining critical thinking skills. Nursing students are concurrently enrolled in the

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clinical component of NUR 116. Students continue to further develop skills in the application of the nursing process in managing care of the adult patient.

NUR 118 **2 C/30 CH**
Physical Assessment
Prerequisites: ENG 119, BIO 240, BIO 250, BIO 295, PSY 101, Admission to the Nursing Program
Corequisites: NUR 110, NUR 112, NUR 118
This first year course focuses on nursing knowledge and skills necessary to conduct an adult physical assessment and document assessment findings on a healthy adult. Deviations from normal adult physical assessment and geriatric assessment findings will also be identified. The level of skill to be attained is comparable to the nursing assessment in an acute care setting. The course is organized according to the associate degree graduate outcomes of Human Flourishing, Nursing Judgment, Professional Identity, and Spirit of Inquiry with supporting integrating concepts and core values described by the National League for Nursing (NLN). Additionally, Quality and Safety Education for Nurses (QSEN) competencies are addressed. Emphasis is on the nursing student as a care giver and the responsibilities this entails. NUR 118 includes an embedded laboratory component. Students are introduced to the nursing process and the skills necessary for application of the nursing process in managing care of the patient in today's changing health care environment.

NUR 119 **2 C/30 CH**
Pharmacology
Prerequisites: ENG 119, BIO 240, BIO 250, BIO 295, PSY 101, Admission to the Nursing Program
Corequisites: NUR 112, NUR 110, NUR 118
This course incorporates the mathematical calculation for safe medication administration with a focus on utilizing the nursing process approach as medications are examined by drug classification and prototype. Pharmacokinetics and pharmacodynamics, lifespan considerations, client teaching, and herbal therapies are also discussed in each nursing course as the student progresses through the program. The course is organized according to the associate degree graduate outcomes of Human Flourishing, Nursing Judgment, Professional Identity, and Spirit of Inquiry with supporting integrating concepts and core values described by the National League for Nursing (NLN). Additionally, Quality and Safety Education for Nurses (QSEN) competencies are addressed. Emphasis is on the nursing student as a caregiver and the responsibility involved in safe administration of medication. Students continue to further develop skills in the application of the nursing process in managing care of the adult patient.

NUR 210 **3 C/90 CH 22.5 L/67.5 CL**
Psychiatric Nursing
Prerequisites: ENG 119, BIO 240, BIO 250, BIO 295, PSY 101, DT 130, NUR 110, NUR 112, NUR 114, NUR 116, NUR 118, NUR 119, Admission to the Nursing Program
Corequisites: NUR 212, SOC 100
This second year course focuses on the dynamics of human behavior during psychiatric illness. Principles and concepts of mental health, medication and non-medication interventions, group interventions and therapeutic environments are explored. The course is organized according to the associate degree graduate outcomes of Human Flourishing, Nursing Judgment, Professional Identity, and Spirit of Inquiry with supporting integrating concepts and core values described by the National League for Nursing (NLN). Additionally, Quality and Safety Education for Nurses (QSEN) competencies are addressed. Students participate in high fidelity simulated patient care scenarios synthesizing knowledge and refining critical thinking skills. Students are concurrently enrolled in the clinical component of NUR 210 where skills in the application of the nursing process are sharpened in managing care of the psychiatric patient and family.

NUR 212 **4 C/120 CH 30 L/90 CL**
Medical Surgical Nursing III
Prerequisites: ENG 119, BIO 240, BIO 250, BIO 295, PSY 101, DT 130, NUR 110, NUR 112, NUR 114, NUR 116, NUR 118, NUR 119, Admission to the Nursing Program
Corequisites: NUR 210, SOC 100
This second year course focuses on the nursing care of patients with endocrine, gastrointestinal, genitourinary, renal, and immune disorders. The course is organized according to the associate degree graduate outcomes of Human Flourishing, Nursing Judgment, Professional Identity, and Spirit of Inquiry with supporting integrating concepts and core values described by the National League for Nursing (NLN). Additionally, Quality and Safety Education for Nurses (QSEN) competencies are addressed. Students participate in high fidelity simulated patient care scenarios synthesizing knowledge and refining critical thinking skills. Emphasis is on the nursing student evolving into the role of professional nurse and the responsibilities this entails. Students are concurrently enrolled in the clinical component of NUR 212 where skills in the application of the nursing process are sharpened in managing care of the adult patient.

NUR 214 **3 C/90 CH 22.5 L/67.5 CL**
Pediatric Nursing
Prerequisites: ENG 119, BIO 240, BIO 250, BIO 295, PSY 101, DT 130, NUR 110, NUR 112, NUR 114, NUR116, NUR 118, NUR 119, NUR 210, NUR 212, SOC 100, Admission to the Nursing Program
Corequisites: NUR 216, NUR 218
This second year course focuses on the nursing care of the pediatric patient and family unit. The concepts of growth and development related to the pediatric patient will be examined. The course is organized according to the associate degree graduate outcomes of Human Flourishing, Nursing Judgment, Professional Identity, and Spirit of Inquiry with supporting integrating concepts and core values described by the National League for Nursing (NLN). Additionally, Quality and Safety Education for Nurses (QSEN) competencies are addressed. Students participate in high fidelity simulated patient care scenarios synthesizing knowledge and refining critical thinking skills. Emphasis is on the nursing student evolving to the role of the professional nurse and the responsibilities this entails. Students are concurrently enrolled in the clinical component of NUR 214 where skills in the application of the nursing process are sharpened in managing care of the pediatric patient and family unit.

NUR 216 **4 C/120 CH 30 L/90 CL**
Medical Surgical Nursing IV
Prerequisites: ENG 119, BIO 240, BIO 250, BIO 295, PSY 101, DT 130, NUR 110, NUR 112, NUR 114, NUR116, NUR 118, NUR 119, NUR 210, NUR 212, SOC 100, Admission to the Nursing Program
Corequisites: NUR 214, NUR 218
This second year course focuses on the nursing care of patients with neurologic, musculoskeletal, connective tissue, eye and ear disorders, and rehabilitation. Emphasis is on the nursing student evolving into the role of the professional nurse. The course is organized according to the associate degree graduate outcomes of Human Flourishing, Nursing Judgment, Professional Identity, and Spirit of Inquiry with supporting integrating concepts and core values described by the National League for Nursing (NLN). Additionally, Quality and Safety Education for Nurses (QSEN) competencies are addressed. Students participate in high fidelity simulated patient care scenarios synthesizing

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knowledge and refining critical thinking skills. Students are concurrently enrolled in the clinical component of NUR 216 where skills in the application of the nursing process and leadership are sharpened in managing care of the adult patient.

NUR 218 **2 C/30 CH**
Nursing Issues, Transitions and Leadership
Prerequisites: ENG 119, BIO 240, BIO 250, BIO 295, PSY 101, DT 130, NUR 110, NUR 112, NUR 114, NUR 116, NUR 118, NUR 119, NUR 210, NUR 212, SOC 100, Admission to the Nursing Program
Corequisites: NUR 214, NUR 216
This second year course focuses on the transition from a student role to the professional nurse with a stress on workplace and emergency issues, time management, organizational skills, understanding the impact of history and nursing theories, and the primary aspects of obtaining employment. Management and leadership issues are highlighted, such as the economics of healthcare delivery, delegation, team building, ethical, and legal concerns facing today's nurse. Emphasis is on the student evolving into the role of professional nurse with responsibility for prioritizing nursing actions and judgments related to the delivery of safe and effective client care in a variety of settings. The course is organized according to the associate degree graduate outcomes of Human Flourishing, Nursing Judgment, Professional Identity, and Spirit of Inquiry with supporting integrating concepts and core values described by the National League for Nursing (NLN). Additionally, Quality and Safety Education for Nurses (QSEN) competencies are addressed.

NURSING ASSISTANT TRAINING (NHS)

NHS 100 **10 C/94 CH**
Nursing Assistant
This course provides the theory and skills necessary to assist professional health care providers in providing direct patient are. Candidates will receive training to provide care in the classroom, lab and long-term facility settings. The curriculum is modeled according to the State of Michigan guidelines. Nurse aide students taking this course will be expected to adhere to guidelines and standards that will help them to be successful in the workplace setting.

Upon successful completion of the course, students are eligible to take the Michigan Nurse Aide Examination for CNA Certification.

OFFICE INFORMATION SYSTEMS (OIS)

OIS 100 **3 C/45 CH**
Keyboarding
This course is designed to enable the student to learn basic keyboarding and computer literacy skills on microcomputers, using a word processing software package. This course will enable the student to keyboard a variety of data when using a computer. A minimum of three hours of lab per week and a lab fee required.

OIS 101 **3 C/45 CH**
Keyboarding Fundamentals
Recommended: OIS 100
The student will master the microcomputer keyboard using the touch method. The student will type horizontal/vertical documents, memos, tables, postal cards, personal letters, business letters and manuscripts. The student will type from printed script and rough draft copies. When this course is completed, the student will type a minimum of 30 words per minute on straight-copy material with no more than five errors on a five-minute timing. A minimum of three hours of lab per week and a lab fee required.

OIS 102 **3 C/45 CH**
Intermediate Keyboarding
Prerequisite: OIS 101
The student will continue to develop higher levels of typing speed and accuracy while producing business letters in a variety of styles, common business forms, more complex tabulation problems, formal and informal manuscripts and other common business typing problems. The student will type a minimum of 40 words per minute with no more than four errors on a five-minute timing. A minimum of three hours of lab per week and a lab fee required.

OIS 227 **3 C/45 CH**
Desktop Publishing I
Recommended: OIS 102
This course provides a basic step-by-step introduction to industry specific desktop publishing software. Coverage in the class includes the creation of a publication, working with styles and graphics, and working with tables and templates.

OIS 228 **3 C/45 CH**
Desktop Publishing II
Prerequisite: OIS 227
A hands-on class using industry specific desktop publishing software with emphasis on the design aspect of Desktop Publishing. This hands-on approach to learning includes developing a balanced layout, developing graphics, importing text, the use of paper color, type, size and styles, framing techniques, and the use of grids, kerning, and leading. Maximizing eye appeal and readability is stressed as several multi-page documents will be created for actual publication or use. Emphasis will be placed on layout and design of the page for the best advertising, marketing, and user appeal.

OIS 251 **3 C/45 CH**
Microsoft Word Specialist
Prerequisite: BUS 225
Recommended: OIS 102
This course is designed for those students interested in using a full-featured word processing computer program to create a professional looking documents and modifying them easily. Also this course is designed to assist the students preparing to take the Microsoft Office Specialist (MOS) certification for expert level.

OIS 252 **3 C/45 CH**
Microsoft Excel Specialist
Prerequisite: BUS 225
Recommended: OIS 102
This course is designed for those students interested in using a full-featured excel spreadsheet to organize data, complete calculations, make decisions, graph data, develop professional looking reports, publish organized data on the Web and access real-time data from Web sites. Also this course is designed to assist the students preparing to take the Microsoft Office Specialist (MOS) Excel certification for expert level

OIS 253 **3 C/45 CH**
Microsoft PowerPoint Specialist
Prerequisite: BUS 225
Recommended: OIS 102
This course is designed for those students interested in improve their skills to create, present, and collaborate on computer presentations. This class is using Microsoft PowerPoint software, as a visual communication tool, to create remarkable presentations with enhanced multimedia

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Office Information Systems (OIS) continued

capabilities. Also this course is designed to assist the students preparing to take the Microsoft Office Specialist (MOS) PowerPoint certification for expert level. MOS PowerPoint certification recognizes individuals who have achieve a certain level of mastery with Microsoft PowerPoint product.

OIS 254 **3 C/45 CH**
Microsoft Access Specialist
Prerequisite: BUS 225
Recommended: OIS 102
This course is designed for those students who want to improve their skills to create or make use of a robust database solution. This class uses Microsoft Access software, as a powerful database management system, that allows you to organize, access, and share information in databases in a very easy way. Also this course is designed to assist the students preparing to take the Microsoft Office Specialist (MOS) Access certification for standard level. MOS Access certification recognizes individuals who have achieve a certain level of mastery with Microsoft Access product.

OIS 280 **3 C/45 CH**
Office Administration and Professional Development
The student will develop a personal plan of action leading to completion of short and long range goals, apply principles leading to success, enhance interpersonal relationship skills and analyze the corporate structure and its mechanisms. Emphasis will be on developing positive work attitudes, time management, interpersonal style, professional growth and stress management.

PARALEGAL TECHNOLOGY (PLT)

PLT 105 **3 C/45 CH**
Legal Interviews and Investigations
Prerequisite: Program Admission
This course reviews interviewing techniques and investigation methods from the perspective of the legal assistant. It covers fact gathering from both public and private sources and reporting of data in a form suitable for law office use.

PLT 120 **3 C/45 CH**
Legal Research Writing I
Prerequisite: Program Admission
Co-Prerequisites: PLT 105, PLT 135
This course is an introduction to the American legal system, legal research and writing skills. Students are introduced to printed and online resources available through the law library and the Internet.

PLT 130 **3 C/45 CH**
Law Office Procedures and Management
Prerequisite: Program Admission
This course will provide students with an understanding of the role of the paralegal in the law office. Students will examine the structure of a law office, time and records management, billing methods, technology and computers, administrative procedures, client relations, office operating procedures, and professionalism in the workplace.

PLT 135 **3 C/45 CH**
Professional Responsibility/Legal Ethics
Prerequisite: Program Admission
This course examines the various issues of professional responsibility and legal ethics that a paralegal encounters. The course will assist the student in developing an awareness and understanding of the professional codes of ethics

that govern the legal profession and impact those codes have on the daily responsibilities of the paralegal. Topics covered include client interviews and form preparation, as well as substantive and procedural aspects of the process from the paralegal's perspective.

PLT 140 **3 C/45 CH**
Business Organization and Corporation Law I
Prerequisite: Program Admission
This course is a survey of the various types of business organizations operating in the United States. The course will assist the student in developing an awareness and understanding of the fundamental legal issues arising from the selection, formation, and implementation of a business entity. Topics covered include an overview of sole proprietorships, partnerships, and other unincorporated entities as well as various types of corporations.

PLT 150 **3 C/45 CH**
Legal Composition and Research II
Prerequisite: Program Admission
This course is a continuation of Legal Research and Writing I. Students will participate in supervised library based research projects, including a mock legal problem, preparation of a legal memorandum, reports, and draft pleadings.

PLT 160 **3 C/45 CH**
General Practice Survey
Prerequisite: Program Admission
This course is an introduction to common areas of legal practice undertaken by sole practitioners and small firms. Students will examine civil and criminal litigation, as well as transactional matters.

PLT 170 **3 C/45 CH**
Probate Law and Practice
Prerequisite: Program Admission
This course is an introduction to probate law and procedure with an emphasis on adult and minor guardianships, conservatorships, decedent's estates and involuntary commitments. Students will also acquire knowledge in probate jurisdictional issues.

PLT 180 **3 C/45 CH**
Civil Litigation Practice and Procedure
Prerequisite: Program Admission
This course covers the necessary preparation required to assist attorneys in the pre-trial, trial, and an appeal process. Substantive legal areas discussed include tort and contract matters.

PLT 200 **3 C/45 CH**
Survey of Property Law
Prerequisite: Program Admission
This course is an introduction to the law of personal property and real property. Topics covered include: title to personal property, gifts, estates in land, future interests, mortgages and landlord/tenant matters.

PLT 210 **3 C/45 CH**
Administrative Law and Procedures
Prerequisite: Program Admission
The course reviews applicable evidence and procedural requirements for workers compensation and social security laws, civil rights and EEOC.

PLT 220 **3 C/45 CH**
Criminal Law Practice and Procedures
Prerequisite: Program Admission
This course covers the study of substantive criminal law, classifications of crimes and principles of criminal liability.

PLT 230 **3 C/45 CH**
Family Law
Prerequisite: Program Admission
This course introduces the student to child custody issues, divorce matters, and domestic relations. Related issues include the role of the police

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Paralegal Technology (PLT) continued

department, social services, the Probate Code and Friend of the Court issues. Students will gain a working knowledge of Michigan family law.

PLT 245 **3 C/45 CH**
Debtor Relief and Creditor Rights
Prerequisite: Program Admission
The course will assist the students in developing an awareness and understanding of the fundamental legal issues regarding creditor rights, debtor relief and responsibility and trustee activities. Topics covered include client interviews and form preparation, as well as substantive and procedural aspects of the process from the paralegal's perspective. Creditor Rights and Debtor Relief explores the process of consumer and commercial bankruptcy will be examined.

PLT 255 **3 C/45 CH**
Credentialing Exam Preparation
Prerequisite: Program Admission
This course is a comprehensive review of the subjects covered on the Certified Legal Assistant (CLA) examination. Topics include: communication, ethics, American legal system, as well as several substantive areas of law.

PLT 260 **3 C/45 CH**
Immigration Law
Prerequisite: Program Admission
This is a course dealing with the rights and responsibilities of aliens and issues involved in representing them before the INS and in the courts. Emphasis on federal immigration law and policy.

PLT 265 **3 C/45 CH**
Paralegal Practicum
Prerequisite: Program Admission
This is an academic internship opportunity for students to gain practical legal experience in a structured professional environment. Students meet periodically with the course instructor for orientation and evaluation.

PATIENT CARE TECHNOLOGY (PCT)

PCT 200 **5 C/75 CH**
Introduction to Patient Care
Prerequisites: ALH 110, ALH 115, PLB 100, EMT 105
This course provides the student with the principles and techniques to provide patient care within the hospital, urgent care, and/or home health care environment. Students will learn to work under the supervision of nursing or medical staff in the role of the Patient Care Technician. This Involves multi-skilled direct and in-direct patient care responsibilities including but not limited to diagnostic procedures such as 12-lead electrocardiography, phlebotomy and specimen collections. Emphasis will be placed on safety, documentation, standard precautions, legal and ethical considerations and OSHA standards.

PCT 202 **5 C/80 CH**
Patient Care Clinical
Prerequisite: PCT200
This course provides the student with clinical experience in applying the principles and techniques of patient care within the hospital, urgent care, and/or home health care environment.

PHARMACY TECHNOLOGY

PHT 100 **3 C/45 CH**
Introduction to Pharmacy Technology
Introduction to Pharmacy Technology will provide students with an overview of the role of a Pharmacy Technician in today's health care setting. Ethical and legal aspects of the pharmacy practice will be discussed. A review of the necessary math skills to perform the duties of a pharmacy technician will be emphasized. Drug classification, drug processes and development will be introduced as well.

PHT 105 **5 C/100 CH**
Orientation to Pharmacy Technology
Lab fee
Prerequisite: PHT 100
Corequisite: PHT 115
This course provides an overview of the scope, philosophy, roles and responsibilities of a pharmacy practitioner, pharmacy delivery system, ethical and legal considerations, the team approach in pharmacy, and explains how pharmacy technicians can assist pharmacists by being certified as Basic Life Support (BLS) Healthcare Providers. Field trips, guest lecturers, laboratory and teleconferences are included. This course will focus on the role of pharmacy technicians in various work settings, medical and Pharmaceutical terminology, prefixes, suffixes, symbols, abbreviations used to interpret prescription orders, and the legal and ethical issues specific to pharmacy, and exploration of computer systems used in the modern pharmacy. Procedures for national certification are introduced as well.

PHT 115 **5 C/80 CH**
Pharmaceutical Interpretations and Calculations
Lab fee
Prerequisite: PHT 100
Corequisite: PHT 105
This course applies basic mathematics in the calculations required for determination of proper dosages, conversion operations, as well as in preparation of parenteral solutions for injection (IVs, chemotherapy, etc.). Detailed instruction in the techniques used in dosage preparation (aseptic technique, safe handling of chemotherapy, etc.) exploration of computer systems used in the modern pharmacy for processing orders will be provided. This course will provide students the skills needed to correctly fill medication orders. Students will learn to interpret medication orders, understand manufacturers' labels, calculate drug dosages, and translate prescriptions. Laboratory included.

PHT 120 **5 C/100 CH**
Drug Distribution Systems and Pharmacology
Lab fee
Prerequisites: PHT 105, PHT 115
Corequisite: PHT 135
This course provides detailed instruction in the systems used and dosage forms used for the distribution of medications including unit dose, traditional, and ward stock systems used in inpatient facilities, as well as parenterals, and exploration of computer systems used in the modern pharmacy. It includes discussion of drug storage requirements, an introduction to inventory control, and methods of dispensing prescriptions to ambulatory patients will be addressed. Emphasis will be placed on technician responsibilities in each of these systems. Explains the use and side effects of prescription, non-prescription medications, and alternative therapies (e.g., herbal products, dietary supplements, homeopathy, life style modification) used to treat common disease states, including those that affect different body systems. Laboratory included.

PHT 135 **5 C/100 CH**
Pharmacy Practice Settings
Lab fee
Prerequisite: PHT 105, PHT 115
Corequisites: PHT 120
This course provides an overview of the organization, functions, and services provided by both institutional and community pharmacies. The role of the pharmacist and the pharmacy technician in each of these settings will be studied. Discussion topics include ethical, legal, and

Continued on next page.

Pharmacy Technology (PHT) continued

professional issues. Emphasis is placed on pharmacy standards and on hospital and organizational (as in the case of health maintenance organizations and community pharmacies) policy and procedures. Areas of focus include demonstrating proper aseptic techniques in the preparation of parenterals, using the computer for pharmaceutical calculations, processing, information, and inventory management, accurately maintaining medication inventory within the hospital pharmacy and other units associated with the hospital, understanding correct procedures for receiving inventory into the hospital pharmacy, using automated dispensing and replenishment systems used in pharmacy settings, accurately interpreting and filling medication orders, applying safety protocols and standards appropriate to the hospital setting, the technicians' role when they are responding to emergency situations, communicating effectively with health care professionals in a culturally diverse society, interpreting, analyzing, and translating the abbreviations, symbols, and terms used in medication orders, preventing calculation errors, and performing calculations needed for preparation of mixtures, compounds, and oral dosages. Laboratory included.

PHT 155 **7 C/ 320 CH**
Pharmacy Technology Practicum
Prerequisites: PHT 120, PHT 135
Corequisite: PHT 220
Supervised practice in an ambulatory and institutional pharmacy setting. This course is designed for students to demonstrate skills learned in the classroom and to be evaluated by a preceptor.

PHT 220 **5 C/60 CH**
Pharmacy Capstone Course
Lab fee
Prerequisites: PHT 120, PHT 135
Corequisites: PHT 155
This course is an overview of all pharmacy technician program courses and concepts, with a comprehensive review of the Pharmacy Technician curriculum, and an emphasis on the reviewing and preparation of materials which comprise the Pharmacy Technician Certification Board examination. The student must also develop a capstone project proposal, to be approved by the instructor. The proposed project may be a case study, research paper, portfolio of work with written explanation, etc. The student will learn test taking skills, review pharmacology, math calculations, and prescription processing. Continuing education will be discussed as well as registration for pharmacy technicians based on state board of pharmacy regulations.

PHILOSOPHY (PHL)

PHL 101 **3 C/45 CH**
Comparative Religions I
This course covers the development of traditional religions and it explores world concepts with an emphasis on Judaism, Christianity and Islam.

PHL 102 **3 C/45 CH**
Comparative Religions II
Prerequisite: PHL 101
This course focuses on contemporary styles in religions, with an examination of movements, forces and problems shaping the new religious consciousness. An analysis of the structure and relationships of the various movements and their impact on the American scene is provided.

PHL 201 **3 C/45 CH**
Introduction to Philosophy
This course cover basic problems in philosophy. Readings encompass ethics, politics, science and metaphysics to give students experience in critical thinking to promote objectivity.

PHL 211 **3 C/45 CH**
Introduction to Logic
This is a course designed to impact principles of clear and consistent thinking through the techniques of logic to avoid fallacies and eliminate ambiguous ideas.

PHL 221 **3 C/45 CH**
Ethics
This course is a survey of ethical theories which have characterized human beings, with practical applications to current problems in human values.

PHLEBOTOMY (PLB)

PLB 100 **3 C/45 CH**
Introduction to Phlebotomy
Study basic phlebotomy concepts such as skin punctures, venipunctures, arterial punctures, and bleeding times. Master specimen collection, preservation of specimens from various sources, and specimen processing. Explores concepts of professionalism in health care.

PLB 105 **3 C/110 CH**
Phlebotomy Practicum
Prerequisite: ALH 110, ALH 115; Complete PLB 100 and PLB 110 with a "B" or better.
Students will be given the opportunity to practice specimen collection from a variety of sources while in a clinical setting. Students will also receive both classroom and laboratory review in order to sit for the National Certification offered at the end of this course. Students must successfully pass the college designated background check and drug screen to be placed in a clinical setting.

PLB 110 **3 C/45 CH**
Pediatric Phlebotomy
Become familiar with various pediatric blood collection procedures and equipment. Use hands-on, simulated classroom exercises and observe practices in a clinical setting.

PHYSICS (PHY)

PHY 101 **4 C/90 CH**
Physics for Elementary School Teachers
Lab fee
Lecture and laboratory course dealing with physics concepts and strategies for teaching these concepts in elementary [K-8] schools. Current State of Michigan physics teaching objectives and associated learning activities will be emphasized. Using such community resources as the Detroit Science Center, playgrounds, and amusement parks to teach physics will be emphasized. In addition, opportunities are provided for WCCCD students to teach physics to a small group of children (under teacher supervision) in local elementary schools.

PHY 115 **4 C/90 CH**
Fundamentals of Physics
Lab fee
This course covers fundamental principles, theories and problems of physics, and should be taken by students who have not had a course in high school physics, those with an inadequate background for PHY 235 and by those students whose curriculum requires four credit hours of physics. (Meets for six hours - four hours lecture, two hours lab)

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Physics (PHY) continued

PHY 235 **4 C/60 CH**
General Physics I
Lab fee
Prerequisite: PHY 115
This non-calculus based physics course and it is designed partially to fulfill the physics requirement in pre-medicine, pre-dentistry, pharmacy, electronics, teaching and law. The sequence PHY 235 and PHY 245 is not intended for engineering students. (Meets for six hours - four hours lecture, two hours lab)

PHY 245 **4 C/90 CH**
General Physics II
Lab fee
Prerequisite: PHY 235
This course is a continuation of PHY 235. Topics include electricity, magnetism, light and atomic physics. (Meets for six hours - four hours lecture, two hours lab)

PHY 265 **4 C/90 CH**
Physics for Scientists and Engineers I
Lab fee
Prerequisite: MAT 171
This course is a general calculus based course designed to meet the requirements of engineering students and scientists. Topics include, mechanics, wave motion and thermodynamics. (Meets for six hours - four hours lecture, two hours lab)

PHY 275 **4 C/90 CH**
Physics for Scientists and Engineers II
Lab fee
Prerequisites: PHY 265, MAT 172 or concurrent enrollment in MAT 172
This course is a continuation of PHY 265. Topics include electricity, magnetism, physical and geometrical optics and elementary quantum mechanics. (Meets for six hours - four hours lecture, two hours lab)

PHYSICAL SCIENCE (PSC)

PSC 110 **4 C/60 CH**
Physical Science-Physics, Chemistry and Geology
A course for non-science majors covering topics in chemistry, physics and environmental science to develop an understanding of how science, technology and society influence each other, and how to use this knowledge in every day decision-making.

POLITICAL SCIENCE (PS)

PS 101 **3 C/45 CH**
American Government
This course is an examination of America's democracy, its principles, processes and political institutions. Emphasis is placed on the functioning of the national government and the making of public policy.

PS 104 **3 C/45 CH**
Introduction to Political Science
Introduction to Political Science describes the nature of political science, explains the ways in which political scientists study politics and offers introductory treatment of all major topics normally thought of as constituting political science. This course emphasizes a comparative approach to political systems and institutions. The U.S. role as an actor in a global setting will be emphasized.

PS 160 **3 C/45 CH**
International Politics
Prerequisite: PS 101
This course covers the dynamics of the basic factors motivating the behavior of nations and an analysis of the major areas of global political concern.

PS 235 **3 C/45 CH**
State and Local Government
Prerequisite: PS 101
This course is a survey of state and local government, including structure, institutions and processes. The course stresses intergovernmental relations.

PS 275 **3 C/45 CH**
Public Administration Internship
Prerequisite: PS 101
A course designed to give students the opportunity to experience the activities of an agency or institution related to government and public administration. Internships are available in a U.S. representative's office, political party offices assisting a candidate for public office, a nonpartisan community office, or an interest group office.

PRINT TECHNOLOGY (PRN)

PRN 101 **3 C/45 CH**
Introduction to Print Technology
This course offers students an opportunity to refine their skills with the process of offset lithography. Projects provide opportunities to apply their skill and to understand image concept and design, image assembly, film conversion, platemaking, duplicator, presswork and bindery operations.

PRODUCT DEVELOPMENT PROTOTYPING (PDP)

PDP 100 **3 C/45 CH**
Introduction to Rapid Prototyping
This course introduces students to the fundamental principles of rapid prototyping including materials, processes and equipment consideration. Emphasis will be placed on part preparation, file format types, as well as basic components and maintenance of modern rapid prototyping equipment.

PDP 105 **3 C/45 CH**
Product Development Process
This course will cover the principles of the product design process from concept to feasibility including functionality and manufacturability. The entire design through prototyping and testing process will be discussed.

PDP 110 **3 C/45 CH**
Design Concepts I – 2D Graphics
This introductory class in 2D design will teach the basics of 2D drawing creation utilizing state-of-the-art computer graphics systems and software leading to a broad understanding of the tools and techniques necessary to accurately design parts in a modern manufacturing environment.

PDP 115 **3 C/45 CH**
Introduction to 3D Printing
Prerequisite: PDP 100
In this course students will learn proper setup and operating processes to generate basic 3D prototype models utilizing state-of-the-art rapid prototyping equipment.

PDP 120 **3 C/45 CH**
Introduction to Model Surfacing
Prerequisite: PDP 100
In this course students will gain a fundamental understanding of 3D surface capture, processing, and editing using state-of-the-art surfacing software.

PDP 150 **3 C/45 CH**
Design Concepts II – 3D Graphics
Prerequisite: PDP 110
In this class students will learn the basics of 3D solid model creation utilizing state-of-the-art

Continued on next page.

Product Development Prototyping (PDP) continued

computer graphics systems and software leading to a broad understanding of the tools and techniques necessary to accurately design parts in a modern manufacturing environment.

PDP 200 **3 C/45 CH**
Advanced Rapid Prototyping
Prerequisite: PDP 100
In this course students will expand upon their knowledge of rapid prototyping including printer optimization, high resolution and large models.

PDP 205 **3 C/45 CH**
3D Surface Scanning
Prerequisite: PDP 100, PDP 120
In this course students will be introduced to state-of-the-art surface scanning equipment, as well as setup, calibration and project processing techniques.

PDP 210 **3 C/45 CH**
Design Concepts III – Assembly
Prerequisite: PDP 150
In this course students will be introduced to the assembly structure including top-down and bottom-up assemblies as well as assembly clearance analysis.

PDP 225 **3 C/45 CH**
Surface – Quality Control
Prerequisite: PDP 100, PDP 205
In this class students will use modern surfacing software to perform surface analysis, set up deviation gauges, and generate reports.

PDP 250 **3 C/45 CH**
Reverse Engineering
Prerequisite: PDP 100, PDP 150
In this course students will develop proper techniques and processes for re-creation of an existing product or part (reverse engineer).

PROJECT MANAGEMENT (PRM)

PRM 101 **3 C/45 CH**
Introduction to Project Management
An overview of the key concepts of project management including the history, practices and methods common to project management will be covered. Students will learn the basics of project management using Project Management Institutes™ approach. This course satisfies the education requirement for project management professional certification. It is not a PMP test preparation course.

PRM 105 **3 C/45 CH**
Project Management Tools
Prerequisite: PRM 101
An overview of project management tools will be provided. Students will learn Microsoft Project to develop project schedules, assign resources, and learn the features and functions of the software including enterprise (web) functionality.

PRM 210 **3 C/45 CH**
Intermediate Project Management
This course will provide in depth coverage of the 9 knowledge areas of project management and integration with other project management models and business practice. The role of the project/program manager will be explored in relation to day to day management of a project.

PRM 215 **3 C/45 CH**
IT Project Management
IT projects have unique requirements. This course will cover the different methods of IT project management including waterfall, phase gate, spiral planning and management. Students will understand the key issues and risks in IT projects including requirements gathering test methods and the need to balance product requirements with project timing.

PRM 220 **3 C/45 CH**
Advanced Project Management
Prerequisite: PRM 105 or PRM 215
Students will be able to develop a clear project management schedule including communication plan, issue and risk management plan, resource management using project management principles and methods.

PSYCHOLOGY (PSY)

PSY 101 **3 C/45 CH**
Introductory Psychology
This course introduces students to theories, principles, concepts and research in psychology. Topics include biological foundations of behavior and mental processes, learning and cognition, personality and social behavior, mental health and mental disorders and lifespan development. PSY 101 is the foundational course in psychology. It is a prerequisite for all other psychology courses.

PSY 200 **3 C/45 CH**
Lifespan Development (Formerly HSC 200)
Prerequisite: PSY 101
This course is an introduction to lifespan development - the scientific study of human development from conception until death. Students will be introduced to major theories, important research, and basic processes of development with an emphasis on biological, psychological, social, and cultural factors that shape human development across the lifespan.

PSY 202 **3 C/45 CH**
Human Sexuality
Prerequisite: PSY 101
This course focuses on the physiological, psychological, personal and interpersonal aspects of human sexual behavior. It examines changing sex roles and patterns, personal beliefs and value systems.

PSY 220 **3 C/45 CH**
Child Growth and Development
Prerequisite: PSY 101
This course covers the developmental sequence from conception to adolescence, with specific emphasis on the normal child. Examines psychological, social and biological factors that influence the developing child. Students will not receive credit for both PSY 220 and 225. Recommended for students who wish to meet State of Michigan requirements to administrate in child care settings.

PSY 225 **5 C/75 CH**
Child Growth and Development Practicum
Prerequisite: PSY 101
This practicum will include supervised experiences working with children (this course also includes lecture material from PSY 220). Child care centers, day care nurseries, psychology clinics for children and Children's Hospital are the various settings where students will have opportunities to utilize practical methodology as well as develop new techniques in child growth and development training. Students will not receive credit for both PSY 220 and 225.

PSY 230 **3 C/45 CH**
Psychology of Adjustment
Prerequisite: PSY 101
This course covers the evaluation of human effectiveness, psychopathology, the healthy personality and systematic research on problems of adjustment. Students will not receive credit for both PSY 230 and 235.

PSY 235 **5 C/ 75 CH**
Psych of Adjustment Practicum
Prerequisite: PSY 101
This practicum includes supervised experiences working directly with youth and adults in settings such as group homes, learning disabilities centers and day care centers.

Continued on next page.

Psychology (PSY) continued

PSY 250 **3 C/45 CH**
Psychology of Personality
Prerequisite: PSY 101
This course covers major personality theories and other personality assessments. It explores various aspects of personality development and change.

PSY 260 **3 C/45 CH**
Social Psychology
Prerequisite: PSY 101
This course is an introduction to social psychology. It includes social influence processes, group dynamics, attitude formation interpersonal attraction, intimacy, aggression and discrimination.

PSY 265 **3 C/45 CH**
Intimate Relationships
Prerequisite: PSY 101
This course covers the impact of intimate relationships on our emotional and social well-being. It examines ways intimate relationships are formed, maintained and end. Gender is a central organizing construct.

PSY 285 **6 C/90 CH**
Transpersonal Psychology with Practicum
Prerequisites: six hours of Psychology, ENG 120 and consent of instructor
In a seminar setting, students study the branch of wisdom and science that concerns itself with psychological and well-being. Inquiry will be expanding to include Africa and a worldview. The practicum will include a supervised two week trip to Africa or another country.

PSY 299 **3 C/45 CH**
Psychology Seminar
Students will explore special topics in psychology in a seminar setting. Topics will vary each year. The course is designed for students who wish to participate in advanced study of theories, concepts and research in a particular topic.

RADIO/TELEVISION (RTV)

RTV 101 **3 C/45 CH**
Writing for Radio/TV
Corequisite: RTV 102
This course will provide students with a thorough, up-to-date coverage of the principles and techniques for, and approaches to writing for television, radio and the internet. Topics include writing for a variety of formats such as commercials, news, sports talk shows, interviews and music shows.

RTV 102 **3 C/45 CH**
Advanced Writing for Radio/TV
Corequisite: RTV 101
This course will provide students with the theory and practice of voice-overs and audio production, as well as the relationship of audio work to other aspects of media production. Through this course students will be exposed to: basic audio terminology and concepts, appropriate microphone usage and placement, and recording and editing single and multiple audio tracks and how to work comfortably in a recording studio environment.

RECREATIONAL LEADERSHIP (RL)

RL 110 **3 C/45 CH**
Recreational Leadership Techniques
This course covers the theories, principles and practice of planning, organizing and conducting effective recreational programs for various groups, with emphasis on group involvement.

RENEWABLE ENERGY TECHNOLOGY (RET)

RET 100 **4 C/60 CH**
Renewable Energy/Alternative Energy Principles
This course will cover basic principles and history of alternative energy sources. Industry and government status of geothermal, wind, solar, biomass, fuel cells and other energy sources will be highlighted. Alternative and traditional energies will be defined and compared in terms of today's use. The evolving energy career areas will be discussed.

RET 120 **3 C/45 CH**
Conventional Energy Sources and Application
The focus of this course will be on the history of traditional energy sources and reason why government, business, and industry are turning to alternative and renewable energy sources. Topic include how to reduce fossil fuel usage and how to convert from traditional energy sources to alternative and renewable energy sources.

RET 140 **3 C/45 CH**
Energy and Electricity
Prerequisite: MAT 121
In this course, students will learn the fundamentals of energy and electricity and how they are utilized in renewable energy sources. Students will examine the power generation process, transmission techniques, and networks. Topics to be explored during this course include: prime energy sources, metering electricity, and disbursement of energy and electricity.

RET 142 **3 C/45 CH**
Wind Power
In this course, students will analyze the historical concepts, modern applications, and future utilization of wind power. The usages of small, medium, and large wind turbines in urban, rural and industrial settings will be examined. Students will gain general knowledge on the economic and environmental issues associated with wind energy sources and they will also become familiar with site assessments for project planning.

RET 144 **3 C/45 CH**
Solar Power
Prerequisite: RET 100
This course encompasses several different aspects of solar power. Students will explore the basics of solar energy which includes radiation, heat transfer, flat-plate collectors, thermal energy storage, and solar thermal applications. In this course, students will also become knowledgeable of passive solar building and photovoltaic systems. Topics to be explored include: solar radiation, building heating and cooling loads, energy efficient design and construction, passive solar heating, proper implementation of thermal mass, passive cooling, cell physics, types of PV cells, PV system components, and PV energy storage.

RET 146 **3 C/45 CH**
Geothermal and Hydropower
Prerequisite: RET 100
In this course, students will examine the historical aspects and principles of geothermal power and small scale hydropower. Students will also analyze the financial and environmental effects associated with the utilization of these renewable energy sources.

SECURITY (SEC)

SEC 100 **3 C/45 CH**
Introduction to Security
This overview course will explore essential elements of security providing a sound foundation for participation in the field. Topics include security functions, physical security measures, information security, risk assessments, investigations, homeland security, and career opportunities. This course will facilitate knowledge of the discipline. The practical considerations addressed will enable the student to understand and explain the relationship between security and policing, compare and contrast crime causation theories, and identify specialization opportunities within the discipline.

SEC 103 **3 C/45 CH**
Legal Guidelines for Security
Prerequisite: CJS 100
This course is designed to develop a fundamental understanding of criminal law, tort law, regulations, privacy laws, employment laws, contract law, and liability issues. Knowledge of these elements will enable students to identify and modify behaviors that are in violation of regulations and laws and to develop and implement policies and procedures that reduce the risk of litigation.

SEC 204 **3 C/45 CH**
Physical Security
Prerequisite: CJS 100
This course addresses major elements of physical security – protective equipment, site surveys, building schematics, security systems, illumination, target hardening, access control, and principles of Crime Prevention Through Environmental Design (CPTED). Based upon this knowledge, students explore how these factors relate to various environments such as with corporate, hospital, transportation, school, retail, residential and industrial settings. Students will be able to prepare a basic site survey, detect physical security vulnerabilities, evaluate physical security needs based on the needs of the client, promote the principles and foundations of physical security, and formulate and defend assertions.

SEC 205 **3 C/45 CH**
Asset Protection and Incident Response
Prerequisite: CJS 100
This course explores various aspects of asset protection involving both personnel and property. The course addresses investigative techniques, personnel training for asset protection, threat assessments, travel security protocols, and emergency plans and protocols. Students will develop skills for determining risk assessments, critique and evaluate executive and asset protection plans, emergency plans, and emergency operations. The course will enable students to develop and create sound security plans for personnel safety and asset protection during normal and emergency situations.

SEC 207 **3 C/45 CH**
Security Administration
Prerequisite: CJS 100
This course focuses upon the systemic application of security principles and measures for a campus, department, and/or program; it focuses upon the administration and management dynamics of security operations. Topics include policy development, fiscal management, training techniques and strategies, organizational productivity, hiring practices, performance reviews, ethics, public relations, internal relations, and media relations. Students will develop proficiency in describing management principles and operations regarding these topics related to security administration.

SEC 208 **3 C/45 CH**
Security Capstone Course
Prerequisites: CJS 100, SEC 100, SEC 103, SEC 204, SEC 205, LEA 230, HLS 100, CIS 110
This Capstone course is intended for students who are in the last semester of the Criminal Justice: Public/Private Security program. This course is intended to assess the cumulative abilities of the student as learned in all previous classes in the program. It may involve a field placement for a maximum of 50% of the class time. The field placement will involve evaluation by the assigned faculty member and a carefully chosen "field supervisor." It may also involve the production of a portfolio and/or writing assignments.

SOCIAL WORK (SW)

SW 101 **5 C/105 CH**
Introduction to FLD Practice of SW/Practicum
Students will explore the history of social work, employment, qualifications and opportunities, employment tasks and methods of working with a diverse population. Three shadowing practica are included in this course to expand the students knowledge of various employment opportunities.

SW 102 **3 C/45 CH**
Exploring Human Behavior in the Environment
Prerequisite: SW 101
This course introduces students to the notion that individuals are a function of their interaction with the bio-psycho-social contexts. Students will explore theory and knowledge of human psychosocial development, behavior, and functioning, from infancy through death within a framework of culture, ethnicity, social class, race, gender, and sexual orientation. The interplay between and among micro, mezzo, and macro systems of individuals, groups, families, and communities as they influence human growth and development will be explored. Special emphasis on understanding the impact of poverty, oppression, discrimination, exploitation, and violence.

SW 104 **3 C/45 CH**
Introduction to Child Welfare
This course is designed as an introductory level exploration of child welfare issues of neglect and abuse. Students will review historical problems experienced by children and examines violence against and maltreatment and welfare laws and programs. Focus on special practice problems in public child welfare, protective services, assessment of at risk children, in home family centered practice and implementation of the Child Welfare Act. Students will be introduced to various levels of prevention and policy formulation.

SW 105 **4 C/60 CH**
SW Field Instruction I
The field education is an integral part of the Registered Social Work Technician Program. It will provide opportunities for students to acquire knowledge and skills needed for the competent practice in human service settings. Students will have an opportunity through practice and experience to apply concepts, theories and principles learned in the classroom. 180 Contact Hours in field placement

SW 106 **4 C/60 CH**
SW Field Instruction II
Prerequisite: SW 105
This is a continuation of Field Instruction I, students will expand the knowledge acquired in SW 105. The courses of instruction that students receive in this area are essential to the acquisition of the knowledge and skills needed for the competent practice in human service settings. 185 Contact Hours in field placement

SOCIOLOGY (SOC)

SOC 100 **3 C/45 CH**
Introduction to Sociology
In this course students will examine basic sociological concepts such as theories of social organization research, methods of research, culture, society and social groups, the socialization process, social class and social mobility, race and ethnic relations. Social institutions such as education, family, religion and government will also be discussed.

SOC 103 **3 C/45 CH**
Social Problems
Prerequisite: SOC 100
This course is a study of current social issues including crime, poverty, domestic abuse, drug addiction, environment, urbanization, racism, sexism, family issues and unemployment. This course provides an overview of the origins, existing policies and proposed solutions to social problems. Course content includes both theory and practice.

SOC 104 **3 C/45 CH**
American Studies
This course follows an established model of critical inquiry based on an inter-disciplinary study of American culture and national identity. Through a wide range of approaches, students will explore how the American experience and identity are produced by language, representations and the construction of cultural discourse. This course provides a critical understanding of how social identities of race, class, gender and nationalism function to define the evolving state of the American condition.

SOC 120 **3 C/45 CH**
Death and Dying
Prerequisite: SOC 100
This course is a survey and analysis of concepts, theories and contemporary issues related to death and dying. Among the areas to be studied are bereavement, grief, suicide and funeral service practices.

SOC 144 **4 C/60 CH**
Field Work I: Community Placement and Seminar
The purpose of the seminar is to promote the integration of social work concepts and theories learned in the classroom with social work practice and skills learned in the field experience.

SOC 225 **3 C/45 CH**
Sociology of Work
In this course students will examine the study of work in American society. There will be an analysis of the structure of the American workforce, the impact of technology, automation, alienation, job enrichment, problems and changing patterns in the workforce with a focus on pressures associated with constant societal changes.

SOC 226 **4 C/60 CH**
Field Work II: Community Placement and Seminar
Field Work II Community Placement and Seminar is a continuation of the integration of social work concepts and theories and its practical application towards field work experience.

SOC 230 **3 C/45 CH**
Ethnic Minorities
Prerequisite: One course in ANT or SOC, Early Childhood students do not need a Prerequisite
This course covers the contributions of ethnic minorities which give our society a unique cultural diversity. Local ethnic differences and problems and multiethnic cooperation is viewed through sociological, anthropological, historical perspectives.

SOC 245 **3 C/45 CH**
Marriage and Family
Prerequisite: SOC 100
In this course the family is studied cross culturally with emphasis on the contemporary American Family. Topics include gender role socialization, mate selection, alternatives to marriage, the multi-ethnic family and intergenerational issues.

SOC 250 **3 C/45 CH**
Juvenile Delinquency
Prerequisite: SOC 100
In this course students will examine the problem of juvenile delinquency as it exists in the United States. An analysis of the various forms of delinquency will be highlighted. There will be an overview of the societal implications of juvenile delinquency ranging from the individual, the family and the community. Juvenile delinquency will be evaluated from a macro perspective by examining the role of schools, court systems, and legal implications with an overview of prevention initiatives and rehabilitation programs.

SPANISH (SPA)

SPA 101 **4 C/60 CH**
Elementary Spanish I
This course covers grammatical constructions, vocabulary, basic idioms, basic phonetics and oral drill.

SPA 102 **4 C/60 CH**
Elementary Spanish II
Prerequisite: SPA 101
This course covers completion of fundamental constructions, vocabulary, emphasis on spoken language. Further training in reading, writing, Spanish conversation and the use of idiomatic constructions.

SPA 201 **4 C/60 CH**
Intermediate Spanish I
Prerequisite: SPA 102
This course covers a review of essential grammatical principles and further development of reading skills and idiomatic usage.

SPA 202 **4 C/60 CH**
Intermediate Spanish II
Prerequisite: SPA 201
Reading on more advanced levels. Continued emphasis on writing and spoken Spanish.

SPEECH (SPH)

SPH 100 **3 C/45 CH**
Interpersonal Communication
In this course there will be the study of the application of the basic skills necessary for interpersonal communication with emphasis on group discussion.

SPH 101 **3 C/45 CH**
Fundamentals of Speech
In this course there will be the study and application of basic principles underlying effective oral communication with emphasis on public speaking.

SPH 105 **3 C/45 CH**
Improving the Speaking Voice
Prerequisite: SPH 101
This course covers the study of the underlying principles and actions pertinent to the development of appropriate vocal and articulatory skills: breath control, voice production, vocal resonance and inflection.

SPH 131 **3 C/45 CH**
Introduction to Radio, TV and Mass Communication
This course is the study of growth and development of radio, television and other forms of mass communication.

SPH 201 **3 C/45 CH**
Advanced Public Speaking
Prerequisite: SPH 101
This covers an advanced study, preparation and delivery of informative and persuasive speeches.

SURGICAL FIRST ASSISTANT (SFA)

SFA 200 **3 C/45 CH**
Fundamentals of Surgical First Assisting-Lecture
Prerequisite: Admission to the Surgical First Assistant Program
This course is designed for Certified Surgical Technologists who intend to develop their competencies in the fundamentals of the theory and practice of a First Surgical Assistant. The course teaches the responsibilities of a First Surgical Assistant on how to use peri-operative monitoring equipment, conduct diagnostic tests, and execute surgical procedures.

SFA 210 **3 C/45 CH**
Advance Surgical Pharmacology - Lecture
Prerequisite: Admission to the Surgical First Assistant Program
This course is a continuation of Surgical Pharmacology (SUR 140) and teaches what medications the surgical first assistant will most frequently use in surgical and anesthetic procedures.

The course will examine anesthesia as a complex and specialized area of pharmacology. Another focus will be on local and general anesthetics, neuromuscular blocking agents, analgesics, antibiotics, drugs that affect blood coagulation, and drugs used to manage circulatory disorders. Safe handling of anti-neoplastic drugs will also be taught.

SFA 220 **3 C/45 CH**
Surgical Management of Patients – Lecture
Prerequisites: BIO 252, SFA 200, SFA 210
This is an introductory course on the theory and practice of caring for the surgical patient by the surgical first assistant during the pre-operative, intra-operative, and post-operative phases of a surgery.

The student will also learn the role of the first assistant during the pathological and physiological processes and when the first assistant must apply intervention techniques.

SFA 230 **3 C/45 CH**
Surgical First Assistant Techniques – Lab
Prerequisites: BIO 252, SFA 200, SFA 210
SFA 230 is intended for certified surgical technologists, OR nurses, and certified surgical first assistants so that they can develop their competencies in the fundamentals of the surgical skills and surgical techniques of a first surgical assistant.

The course focuses on the surgical first assistant's moral and legal responsibility for performing manipulative clinical procedures, whether for diagnosis, monitoring, or treatment, and includes the theoretical knowledge and practical techniques necessary to assist the surgeon before, during, and after surgery in the use of equipment, hemostasis, instruments, material and suturing.

SFA 235 **8 C/360 CH**
Clinical Preceptorship – Clinical
Prerequisites: BIO 252, SFA 200, SFA 210, SFA 220, SFA 230, SFA 253
This course is a clinical practice of basic surgical skills for surgical first assistant students. A student enrolled in the course is assignment to a qualified preceptor – a surgeon who provides direct supervision and guidance during each rotation. Each student in the course is required to complete a specified number of cases - 115 to 135 cases (approximately 300 hours) with 100 percent skill competency.

SFA 245 **8 C/360 CH**
Clinical Preceptorship II – Clinical
Prerequisites: BIO 252, SFA 200, SFA 210, SFA 220, SFA 230, SFA 253, SFA 235
This course is a clinical practice, part II, of basic surgical skills for surgical first assistant students. A student enrolled in the course is assignment to a qualified preceptor – a surgeon who provides direct supervision and guidance during each rotation. Each student in the course is required to complete a specified number of cases - 115 to 125 135 cases (approximately 300 hours) with 100 percent skill competency.

SFA 253 **4 C/60 CH**
Surgical Anatomy Lecture and Lab
Prerequisites: BIO 252, SFA 200, SFA 210
SFA 253 is an introductory course that systematically investigating the structure and organization of the human body. This course has been specifically prepared for the surgical first assistant certificate program.

SURGICAL TECHNOLOGY (SUR)

SUR 100 **3 C/45 CH**
Orientation to Surgical Technology - Lecture
This is an introductory course to the career world of surgical technology and peri-operative environment. The role and responsibilities of the circulating and scrub technologists, as well as other surgical team members, are explored. Also studied are work strategies for success as a surgical technologist including managing pressure, time management, and achieving personal excellence.

SUR 101 **3 C/45 CH**
Central Service Technician - Lecture
Prerequisite: Admission to Central Service Tech Program
This course provides the fundamentals of central processing supply, processing, and distribution (CSD). Instruction and practice is given in aseptic technique, patient centered practices and theories, customer service, and overall policies and practices of central service supply departments. Students who complete this program are eligible to take the American Society for Healthcare Central Service Personnel (ASHCSP) National Certifying Examination.

SUR 102 **4 C/180 CH**
Central Service Lab and Clinical
Prerequisites: SUR 100, SUR 101
In this course, students will be taught and tests on the following skills required for certification of a central service technicians: cleaning; decontamination; processing (inspection, assembling, and packaging and sterilization of reusable patient care central services supplies and equipment; and distribution of these supplies and equipment to the units that require them. Students will be in the laboratory setting for the first four weeks of the course. In the final 11 weeks of the course, students will be placed at a clinical site working eight hours a day, two days a week. Students are responsible for their own transportation to the clinical sites.

SUR 110 **3 C/45 CH**
Surgical Technology Principles – Lecture
Prerequisites: Admission to the Surgical Technology Program, ENG 119, ENG 120, BIO 240, BIO 250, BIO 295, PSY 101, ALH 110
This course provides the fundamentals of surgical concepts and techniques. The course covers methods of sterilization, disinfection, surgical instrumentation, equipment, supplies, wound closure and management, and preparation of the patient for surgical intervention. The perioperative care of the patient is emphasized.

SUR 120 **4 C/60 CH**
Surgical Specialties and Techniques I – Lecture
Prerequisites: Admission to the Surgical Technology Program, ENG 119, ENG 120, BIO 240, BIO 250, BIO 295, PSY 101, ALH 110
This course is designed to focus on the perioperative care of the surgical patients during

Continued on next page.

Surgical Technology (SUR) continued

endoscopic, general, obstetric and gynecologic, genitourinary, ophthalmic, orthopedic, ENT, and peripheral vascular procedures. Students will become familiar with the diagnostic, procedural considerations, operative procedures and instrumentation for the specialties. Concentration will also be given to OR principles related to physics, surgical robotics, and electricity.

SUR 125 **4 C/240 CH**
Surgical Technology Clinical I – Lab
Prerequisites: Admission to the Surgical Technology Program, ENG 119, ENG 120, BIO 240, BIO 250, BIO 295, PSY 101, ALH 110
This course gives an introduction to the activities and procedures performed by the scrub and circulating surgical technologists. Students are guided in activities that will assist them in performing as a member of the surgical team. Patient care, selection of the proper items, practice, and maintaining aseptic technique are emphasized. Students will practice techniques in lab sessions. The last five weeks, tour of various facilities is required. Students are responsible for their own transportation.

SUR 130 **4 C/ 60 CH**
Surgical Specialties and Techniques II – Lecture
Prerequisites: Program, ENG 119, ENG 120, BIO 240, BIO 250, BIO 295, PSY 101, ALH 110, SUR 110, SUR 120, SUR 125
A continuation of surgical specialties and techniques, this course is designed to focus on the perioperative care of surgical patients during cardiac, endoscopic, geriatric, oral, pediatric, plastic and reconstruction, thoracic and neurosurgery specialties. Students will become familiar with the diagnostic, procedural considerations, operative procedures, and instrumentation for the specialties.

SUR 140 **3 C/45 CH**
Surgical Pharmacology Lecture
Prerequisites: Program, ENG 119, ENG 120, BIO 240, BIO 250, BIO 295, PSY 101, ALH 110, SUR 110, SUR 120, SUR 125
This course gives an introduction to medications used in the operating room. It emphasizes classification, administration, forms, methods, interactions, and desired effects of peri-operative medications. Surgical technologists' legal responsibilities are also covered.

SUR 145 **4 C/ 240 CH**
Surgical Technology Clinical II – Clinical
Prerequisites: Program, ENG 119, ENG 120, BIO 240, BIO 250, BIO 295, PSY 101, ALH 110, SUR 110, SUR 120, SUR 125
This supervised clinical course is a continuation of SUR 125. Students perform in the role of scrub person, second assistant, and assistant to the circulating person on various surgical procedures. This clinical meets two days per week, and students are responsible for their own transportation to their assigned clinic.

SUR 155 **6 C/360 CH**
Surgical Technology Clinical III – Clinical
Prerequisites: Program, ENG 119, ENG 120, BIO 240, BIO 250, BIO 295, PSY 101, ALH 110, SUR 110, SUR 120, SUR 125, SUR 130, SUR 140, SUR 145
Further develops clinical skills of students to anticipate the surgeon's needs during the schemes of various surgical procedures. Students practice their role responsibilities as a scrubs person, second assistant, and assistant to the circulating person on various surgical procedures. The clinical assignment meets three days a week. Students are responsible for their own transportation to their clinical assignments.

SUR 160 **4 C/60 CH**
Surgical Seminar and Certification Preparatory – Lecture
Prerequisites: ENG 119, ENG 120, BIO 240, BIO 250, BIO 295, PSY 101, ALH 110, SUR 110, SUR 120, SUR 125, SUR 130, SUR 140, SUR 145
This course includes student presentations and discussions as well as an overview of Surgical Technology in preparation for the National Certifying Examination. It also uses techniques and exercises in successful writing standardize test.

Students will take the practice LCC-ST CST Self-Assessment Exam during the fourth week of class.

SUSTAINABLE ENVIRONMENTAL DESIGN (SED)

SED 100 **3 C/45 CH**
Principles of Sustainable Environmental Design
This course will provide a broad-based introduction to sustainability that is applicable to all majors. This course examines the historical context and advancement of sustainability as a concept in society. The ethical and scientific basis for sustainable design in the built environment will be examined. Topics to be explored include: Renewable Energy, Sustainable Building and Site Design and the development of Sustainable Communities. Students will analyze how these technologies are utilized in rural, urban and industrial settings. They will also gain general knowledge on how to shape the consumer culture in applying more sustainable practices in design.

SED 120 **3 C/45 CH**
Residential and Commercial Design
This course will explore the holistic theory of sustainable design practices in residential and commercial dwellings. Students will assess the ecological advantages of producing sustainably designed and high efficiency buildings. During this course students will be introduced to green practices as well as LEED rating systems.

SED 140 **3 C/45 CH**
Sustainable Materials
This course will discuss the historical concepts of traditional building and how is has affected the environment. Students will become familiar with renewable materials and they will also learn how to maximize the efficient use of natural resources. This course will also assess the sustainable design principles as it relates to the salvaging of existing structural materials. Students will analyze the environmental impacts associated with utilizing renewable and recycled materials.

SED 142 **3 C/45 CH**
Sustainable Sites
In this course, students will gain knowledge on how to properly evaluate project sites that will minimize the harmful effects on the environment. Students will learn the skills necessary to redevelop damaged and Brownfield sites. During this course, students will survey storm water retention, water irrigation and the use of passive solar. They will also analyze the methods utilized to reduce pollution and reduce the disturbance and heat island effects on ecosystems.

SED 144 **3 C/45 CH**
Ecologically Aware Interiors
This course will explore the basic principles of energy consumption, indoor air quality and contentment in the home. Students will assess the need for comfort and accommodations as well as the physics of heat transfer and loss calculations. Students will also assess bioclimatic design, passive solar design, natural cooling and day lighting as it relates to an ecologically aware interior.

Continued on next page.

Sustainable Environmental Design (SED) continued

SED 146 **3 C/45 CH**
Sustainable Project Management
In this course, students will assess the basic principles of management, administration and planning of sustainable design projects. Students will analyze the basic concepts of sustainable development and ethical issues related to construction and management of projects. During this course, students will also examine sustainability characteristics and environmental safety throughout the duration of a project. The concept of strategic planning in the construction sector for sustainable development and the fundamentals of quality control and environmental management systems will also be explored throughout the course.

SED 148 **3 C/45 CH**
Sustainable Systems
Prerequisite: SED 100, RET 100
This course will assess concepts that are utilized in sustainable design to design, construct and retrofit commercial and residential building systems. During this course, the following topics will be explored: electricity, water systems, HVAC systems and connective systems for monitoring commercial and residential energy use.

SED 160 **3 C/45 CH**
Sustainable Community Principles
The course will cover the principles of sustainable community design as well as the historical and political aspects of land use, urban design, regulation and investments. Topics that will be explored during this course include: economical housing, economic development, urban renewal, land usage, water technology and transportation sustainability.

SED 200 **3 C / 45 CH**
LEED Certification Exam Preparation
This course will prepare students for the LEED-NC Professional Certification Exam. Students will reexamine sustainable design principles and concepts as well as the green building industry. During this course, students will analyze all of the components of the LEED –NC rating system and they will be required to review case studies and complete a practice exam.

SED 220 **6 C / 120 CH**
Sustainable Environmental Design Capstone
Prerequisites: All courses in certificate
This is a special course designed by the student and guided by the instructor to start the development of a sustainable capstone project. Students will work together in interdisciplinary teams to develop and build a project based upon the knowledge that they have obtained throughout the program.

SUSTAINABLE TECHNOLOGY (ST)

ST 101 **3C/45 CH**
Sales Skills for Sustainable Products and Services
This course in sustainable sales practices will prepare students for the wide array of jobs in technical sales of sustainable products and services. The course will also cover the technical presentation principles necessary for technicians, managers and business owners to communicate well in the language of sustainability. Students apply principles learned to real world sustainability issues and will create technical presentation solutions for businesses, non-profits, governmental agencies and neighborhoods.

ST 102 **4C/60 CH**
Applications of Sustainable Technologies
Corequisite: ST 101
This course is designed for persons who are interested in researching and/or designing and implementing a specific project in sustainable business, sustainable energy, or the social/economic implications of following a set of sustainability related principles in business. Examples of projects may include: Conducting technical and economic analysis of a product or service, creating a business plan based on sustainable principles; conducting an energy analysis or creation of a management plan for a sustainable energy project at a specific project location.

TEACHER EDUCATION (ED)

ED 110 **4 C/60 CH**
Introduction to Education
Lecture and laboratory course dealing with life science concepts and the variety of strategies used to teach these concepts in elementary schools. Current State of Michigan life science teaching objectives and associated learning activities will be emphasized. In addition, students will develop a life science lesson and teach it to children in an elementary (K-8) school.

ED 111 **4 C/60 CH**
Introduction to Education II
Prerequisite: ED 110
This course is a continuation of ED 110. The major focus is on school curricula and instruction (teaching methods). Student participation in four school-based assignments (field experiences) based on integral parts of the course. Opportunities are also provided for students to gain understandings of the State of Michigan approved Entry-Level Standards for Michigan Teachers (ELSMT), Michigan Curriculum Framework (MCF), and Grade Level Content Expectations (GLCE).

ED 202 **5 C/75 CH**
Earth Science for the Elementary Teacher and Practicum
Prerequisite: ED 110, Program Admission
This is a lecture and practicum course dealing with earth science concepts and teaching methods in the teaching of grades K-8. The National Science Teachers Association (2003), Standards for Science Teachers Preparation guidelines (B3) will acquaint the student with techniques of teaching basic earth science concepts. Students will participate in school based assignments (field experiences) based on integral parts of the course. Emphasis is on the pedagogical approaches widely used in elementary classrooms. The science specialist should have all of the competencies describe for the elementary generalist, but also should be prepared in earth and space science to lead students to understandings. This class requires 30 hours of lecture and 45 hours of practicum per semester.

TELECOMMUNICATIONS (TCM)

TCM 200 **3 C/45 CH**
Introduction to Telecommunications
Prerequisite: EE 101 or CIS 112
History of voice data communications, basic services/systems, regulatory agencies and laws, opportunities and overview of technical tasks. Also, introduction to networking concepts, installation of networking software and their maintenance will be covered. Various types of networks will be implemented in the lab. Emphasis on mastering technical terminology.

Continued on next page.

Telecommunications (TCM) continued

TCM 203 **3 C/60 CH**
Communications I
Lab fee
Prerequisite: EE 111
A study of the fundamental concepts of communications systems and techniques. Topics covered include amplitude, frequency, phase and pulse modulation concepts, two way systems, basic TV systems and noise and information theory. Introduction to the circuitry of the A-M and F-M superheterodyne receiver, with emphasis on amplifier coupling, AM and FM detectors and similarities and differences between the AM and FM systems.

VETERINARY TECHNOLOGY (VTP)

VTP 103 **2 C/30 CH**
Laboratory Animal Medicine – Lecture
This course is an initial learning experience which stresses medical terminology, basic humane animal handling, animal husbandry and supportive care with emphasis on common laboratory animal species.

VTP 104 **2 C/60 CH**
Laboratory Animal Medicine – Lab
Corequisite: VTP 103
This laboratory course provides information on the skills needed to work in a research setting. Students will be introduced to operations of a research facility including the rules and regulations required to handle animals in this environment. The student will also learn basic handling techniques for laboratory animals. Emphasis will be placed on safety, handling of animals and general animal care and assessment.

VTP 105 **2 C/30 CH**
Small Animal Technology I: Lecture
Prerequisites: VTP 103, VTP 104
Corequisite: VTP 106
This course is a study of the physiology and anatomy of the dog and cat and introduces the general principles of pharmacology and calculations of drug dosages. It prepares the student to perform the basic skills necessary for working in a small animal hospital.

VTP 106 **2 C/60 CH**
Small Animal Technology I: Lab
Prerequisites: VTP 103, VTP 104
Corequisite: VTP 105
This laboratory course introduces students to handling and restraining techniques, small animal care and assessment and medicating small animals. This lab will help to prepare students to seek entry level employment in a veterinary clinic. Emphasis will continue on the topics of safety and ethical issues in the handling of animals. Students will perform blood draws, physical exams; administer drugs under the supervision of an Licensed Veterinary Technician. Proper bathing and use of shampoos for dogs and cats will also be covered.

VTP 107 **3 C/45 CH**
Small Animal Disease
Prerequisites: VTP 103, VTP 104
This course covers the study of common small animal diseases.

VTP 108 **2 C/30 CH**
Veterinary Clinical Pathology
Prerequisites: VTP 103, VTP 104
This course covers the performance of clinical pathology procedures used to aid veterinarians in the diagnosis and treatment of disease.

VTP 123 **4 C/105 CH**
Veterinary Tech Practicum I
Prerequisite: Program Approval
This practicum is for students enrolled in the VTP and involves hands-on experience with practical skills utilized in a biomedical setting.

VTP 201 **2 C/30 CH**
Small Animal Technology II: Lecture
Prerequisites: VTP 105, VTP 106
This course discusses specialized small animal techniques with emphasis on anesthesiology, surgical assisting and diagnostic imaging.

VTP 202 **2 C/90 CH**
Small Animal Technology II: Lab
Prerequisites: VTP 105, VTP 106
Corequisite: VTP 201
This laboratory course provides students with hands-on experience in a mock clinic setting. The students will learn how to monitor anesthesia and prepare the patient for surgery including making surgical and gown packs. The students will learn how to identify surgical instruments that are used in surgical procedures. Students will learn how to take, develop and read x-rays correctly. Special emphasis is placed on anesthesiology, surgical assisting and diagnostic imaging.

VTP 209 **2 C/30 CH**
Large Animal Medicine: Lecture
Prerequisites: VTP 201, VTP 202
Corequisite: VTP 210
This course is an overview of large animal anatomy and physiology, handling, nursing care, husbandry, pharmacology, clinical pathology, surgery, and diagnostic imaging.

VTP 210 **2 C/150 CH**
Large Animal Medicine: Lab
Prerequisites: VTP 201, VTP 202
Corequisite: VTP 209
Laboratory sessions include handling restraint and techniques associated with horses, cattle, sheep, goats and swine. Sessions are held at various large animal facilities.

VTP 211 **3 C/45 CH**
Regulatory Veterinary Medicine
Corequisites: VTP 201, VTP 202
This is an interactive course which discusses conditions that determine the fitness of animal products for human consumption and zoonotic implications.

VTP 212 **3 C/45 CH**
Issues in Veterinary Technology
Prerequisites: VTP 201, VTP 202
This seminar course is presented by various specialists in the veterinary field.

VTP 233 **4 C/152 CH**
Veterinary Tech Practicum II
Prerequisite: VTP 105, VTP 123
This practicum is for students enrolled in the VTP involving mastery of clinical pathology techniques used in veterinary medicine.

VTP 243 **2 C/30 CH**
Veterinary Tech Practicum III
Prerequisite: VTP 233
This practicum in a veterinary hospital and/or biomedical setting is for the mastery of advanced technical skills. Must have the director's approval of site required.

XVT 300 **1 C/15 CH**
VT Practicum IV (Optional)
This is an optional practicum for a limited number of students involving zoo animal medicine (Special selection process by the Detroit Zoo).

VIDEO GAME DESIGN AND ANIMATION (VGD)

VGD 268 **3 C/45 CH**
Computer Games Foundations
This course is designed as a first course for computer Game Design and Development Concentrations which will introduce the vocabulary and concepts of game development. This course is a very comprehensive overview electronic game development process and underlines the historical context, content creation strategies, and future trends in the industry. The student will learn how games are produced, tested and released. The game industry is the fastest growing segment of the entertainment market and an excellent field for career advancement.

VGD 269 **4 C/60 CH**
Introduction to 3D Graphic and Animation
Prerequisites: CIS110, CIS 266
Students will learn fundamental and beginner knowledge that is essential for further exploration of 3D graphics. Also they will learn methods and techniques involved with the designing and construction of 3D related objects that are suited for games, movies, and or TV broadcast. After completing this course, students will have a basic knowledge set of a high-end, industrial strength 3D graphics package. Students should be able to begin developing their own 3D content using the tools and techniques and their own creativity. This course will cover topics such as 3D concepts and terminology, 3D modeling techniques, UV mapping, texturing, lighting, rendering, animation and rigging.

VGD 270 **4 C/60 CH**
3D Character Development and Animation
Prerequisites: CIS 110, VGD 269
Students will become familiar with a variety of three-dimensional digital character animation techniques and applications. The student will learn the basic principles of character animation and development and they will work with meshes to effect different action, such us walking, running or manipulating other meshes. Then they will produce a final short 3D digital character animation of their own design.

VGD 271 **4 C/60 CH**
Introduction to 3D Design
Prerequisites: CIS 110, VGD 270
This class is an introduction to 3D modeling

VGD 272 **4 C/60 CH**
Texturing Fundamentals
Prerequisites: CIS 110, VGD 269
This class teaches how to create an emotional atmosphere that will make the photo-realistic and fantasy designs look realistic. This course will cover topics such as materials, shaders, light and surfaces, more complex materials, the use of image maps and procedural maps, mapping and unwrapping, image editing and rendering.

VGD 999 **2 C/30 CH**
Video Game Project
Students will develop a Computer Game concept, turn it into a design, implement the programming and art required and produce it on the committed schedule. Go/no go milestones and final "publisher" acceptance reviews will mimic the Industry. The students will have a deliverable for their portfolio that can be used for employment purposes.

WATER AND ENVIRONMENTAL TECHNOLOGY (WET)

WET 101 **3 C/45 CH**
Water Treatment Technologies
This course will cover the conventional water treatment processes. Topics to be explored will include: preliminary treatment, coagulation and flocculation, sedimentation and clarification, filtration, and disinfection.

WET 102 **3 C/45 CH**
Waste Water Treatment Technologies
This course will provide an introduction to the cause of water pollution, the reason for treating polluted waters and the fundamentals of Wastewater treatment. Students will study the basic principles of treatment plant operation and the processes commonly used in pollution control facilities.

WET 210 **3 C/45 CH**
Advanced Waste Water Treatment Technologies
Discusses wastewater treatment technologies beyond conventional processes. Includes the processes and techniques commonly used for advanced wastewater treatment, disinfection, solids stabilization and disposal, nutrient reduction and toxics removal. Includes field tours and discussion of safety and health, sampling procedures, record keeping, data preparation and report writing, and analytical procedures used to determine optimal plant operation and compliance with regulatory requirement

WET 212 **3 C/45 CH**
Advance Water Treatment
Considers drinking water treatment technologies beyond conventional processes. Includes softening, ion exchange, activated carbon absorption, aeration, air stripping, and membrane processes. Includes participation in field tours and discussions on safety and health, sampling procedures, record keeping, data preparation, report writing and the analytical procedures used to determine and measure drinking water quality.

WET 215 **3 C/45 CH**
Water Quality Analysis and WET Instrumentation
Investigates conventional water and wastewater laboratory test procedures, with particular emphasis on those analytical techniques that require an understanding and practical use of laboratory instrumentation. Water Quality Lab tests include BOD, TSS, temperature, DO, pH, conductivity, TDS, total and volatile solids, alkalinity, TRC, and others common to the daily operation of both drinking water and wastewater plants; includes discussions of basic stream ecology and applied environmental science principles. Instrumentation Lab includes the use of pH, millivolt and specific ion meters and probes and an introduction to Spectrophotometry, atomic absorption (AA), and gas chromatography/mass spectrometry (GC/MS). Includes field tours of municipal water, wastewater treatment facility labs and related field study discussions.

WET 220 **3 C/45 CH**
Water Quality Analysis and Microbiology
Investigates more advanced water quality analytical techniques and the microbiology of water, including microscopic examination and identification of microorganisms commonly found in water supplies, water and wastewater treatment processes and polluted bodies of water. Water Quality Analysis lab work involves more advanced analytical procedures to determine nutrients, heavy metals and toxic materials. Focuses on lab health and safety, proper lab technique, representative sampling procedures, record keeping, data preparation and handling and report writing. Continues field studies and analysis using Atomic Absorption and/or Gas Chromatography/ Mass Spectrometer instruments. Includes lab work involving organisms commonly found in water and wastewater samples with specific bacteriological analytical techniques.

Continued on next page.

Water and Environmental Technology (WET) continued

WET 224 **2 C/30 CH**
Water/Wastewater Utility Equipment Maintenance
Provides the student with basic knowledge of mechanical equipment and repair techniques used in both water and wastewater facilities. Uses shop drawings and blueprints during disassembly and reassembly of a variety of mechanical devices. Studies pumps, valves, piping systems, and chlorination equipment

WET 265 **3 C/45 CH**
Practicum in Water/Wastewater Treatment
Must be taken during final semester with permission of program director. Provides opportunities to perform technical procedures through structured field experience in water and wastewater treatment plants. Emphasizes gaining experience under plant managers and operating personnel with goal of developing organizational skills and responsibility necessary for entry-level employment. Uses rotation through assigned areas of experience in water treatment.

WELDING (WLT)

WLT 101 **5 C/75 CH**
Arc/Oxygen – Acetylene Welding
This introductory course in arc welding covers theory and practice, and proper procedures for various welding positions. Topics include AC and DC welding, electrode identification, classification and proper applications to typical operations. This course is also designed for students who need knowledge of oxy-acetylene welding and a degree of skill required by the industry. Also, an introduction into CNC plasma cutting (programming), silver soldering, plastic and spot welding is presented.

WLT 102 **5 C/75 CH**
Arc Welding
Prerequisite: WLT 101
Instruction is provided in arc welding using both AC and DC arc welding equipment. Emphasis is on out-of-position welded joints in mild steel, testing procedures, and beveling and fabricating various welded joints. Related theory, codes and standards are included.

WLT 103 **5C/75 CH**
Gas Tungsten Arc Welding (GTAW)
Prerequisite: WLT 101
This course provides instruction on Gas Tungsten Arc Welding (GTAW). Students will be able to identify high quality welds in ferrous and non-ferrous metals and apply them to the five basic welding joints.

WLT 104 **5C/75 CH**
Tungsten Inert Gas Welding (TIG)
Prerequisites: WLT 101, WLT 103
This course is designed for advanced gas tungsten arc welding (GTAW). This process of metal fusion is capable of producing high quality welds in cold rolled, stainless and aluminum. Emphasis will be on out-of-position welding, where students will be able to perform out-of-position welds using ferrous and non-ferrous metals.

WLT 105 **5 C/75 CH**
MIG/Flux-Core/Plasma Welding
Prerequisite: WLT 101
This course involves MIG welding/flux-core welding with plasma torch cutting and manual programming. Technical theory directly related to MIG welding, including the composition and properties of metals is included; MIG and Flux-core welding for production or fabrication intent are also covered.

WLT 106 **3 C/45 CH**
Welding Fabrication
Prerequisites: WLT 101, WLT 103, WLT 104, WLT 105
In this course, emphasis will be on the development of fabrication techniques, including design, mock-ups, material selection, layout, grid, material preparation and use of fixtures. Welding skills developed in WLT101, WLT103, WLT104 and WLT105 will be applied. There will be an opportunity for students to further investigate other industrial welding processes.

WLT 107 **3 C/45 CH**
Welding Fabrication ll
Prerequisite: WLT 106
Building on the techniques and processes learned in WLT 106, this class offers additional instruction on fabrication and the opportunity for advanced fabrication techniques to be explored.

WLT 110 **4 C/60 CH**
Introduction to Metal Sculpture
This course is designed for the artistic development through metal sculpture. Students will learn basic safety, set-up and operation of Oxy-Acetylene cutting, MIG welding, TIG welding as well as Plasma cutting and fabrication equipment. Artistic development will be encouraged through fabrication techniques, critiques and lectures.

WLT 111 **4 C/60 CH**
Advanced Metal Sculpture
Prerequisite: WLT 110
This course is designed as a capstone class for the Artistic Welding program. Emphasis will be on the development of metal sculpture through different welding and fabrication techniques. Students will develop a body of work that is cohesive in concept, material and/or subject. An Artist statement and presentation of work during critiques will help the student become confident and prepared to display or sell work.

WLT 112 **3 C/45 CH**
Troubleshooting and Repair
Corequisites: WLT 101, WLT 103, WLT 104, WLT 105
This course covers basic mechanical troubleshooting and repair of welding equipment. Included in the course is a business start-up plan covering tools, materials and equipment needed for a successful welding business.

WLT 201 **3 C/45 CH**
Specialized Welding Process
Prerequisite: WLT 101
This introductory course in various weld processes covers theory and practice, as well as proper procedures for various welding processes. Topics include sweat soldering, silver soldering, brazing, plastic, PVC and spot welding.

WLT 202 **3 C/45 CH**
Quality Testing – Welding
Prerequisites: WLT 101, WLT 102, WLT 103, WLT 104, WLT 105
Welding quality and inspection procedures form the basis of this course. Students are exposed to equipment used for weld quality testing and procedures for determining a proper weld.

WLT 208 **5 C/75 CH**
Pipe Welding
Lab fee
Prerequisites: WLT 101, WLT 102, WLT 103, WLT 104, WLT 105
This course covers the advanced processes utilized in the modern industry. Pipe joint welding in accordance with American Welding Society codes and specifications, including processed metallic inert gas, tungsten inert gas, shielded metal arc and soldering.

Continued on next page.

Welding (WLT) continued

WLT 209 **5 C/75 CH**
Advanced Pipe Welding
Prerequisite: WLT 208
This course is an advanced pipe welding class with topics involving welding of pipe using the shielded metal arc welding (SMAW) process. Topics include Multi-pass/hot-pass/cover-pass and out-of-position welding to finish weld coupons from WLT208. Samples will be taken for face and root bending with dependable safety practices understood.

WLT 210 **5 C/75 CH**
Welding Certification
Lab fee
Prerequisites: WLT 101, WLT 102, WLT 103, WLT 104, WLT 105
This course covers advanced theory and hands-on application of skills necessary to pass American Welding Society procedures. Practice and theory in shielded metal arc, tungsten inert, metallic inert gas welding in piping, tubing and plate in common alloy metals.

LOCATIONS

DOWNRIVER CAMPUS
21000 Northline
Taylor, MI 48180
734-946-3500
Voice/TDD 734-374-3206

DOWNTOWN CAMPUS
1001 W. Fort St.
Detroit, MI 48226
313-496-2758
Voice/TDD 313-496-2708

EASTERN CAMPUS
5901 Conner
Detroit, MI 48213
313-922-3311
Voice/TDD 313-579-6923

NORTHWEST CAMPUS
8200 W. Outer Drive
Detroit, MI 48219
313-943-4000
Voice/TDD 313-943-4073

WESTERN CAMPUS
9555 Haggerty
Belleville, MI 48111
734-699-7008

MARY ELLEN STEMPFLE UNIVERSITY CENTER
19305 Vernier Rd., Harper Woods, MI 48225
313-962-7150

MARY ELLEN STEMPFLE UNIVERSITY CENTER WEST
9555 Haggerty, Belleville, MI 48111
734-699-7008

MARY ELLEN STEMPFLE UNIVERSITY CENTER CENTER FOR DISTANCE LEARNING
19191 Vernier Rd., Harper Woods, MI 48225
313-962-7155

FULL-TIME FACULTY

Arnett, Amy, R.N., BSN, MSN, Nursing

Bagchi, Bhawatosh, B.S., M.S., Ph.D, Physics

Bassett, Josh, B.A., M.A., English

Brem, Antonia, B.S., M.S., Ph.D., Biology

Brown, York Melvin, B.S., MBA, CPA, Accounting

Byrd, Bertha, B.S., M.S., Biology

Caddy, David, B.A., M.A., LPC, Counselor

Cato, Deorphia, B.S., M.S., Dental Hygiene

Cintron, Esperanza, B.A., M.A., D.A., English

Conklin, Laura, MSN, MSA, RN, CNE, ONC, CWS, LNCC, FCCWS, Dip, AAWM, Nursing

Cook, Gwendolyn, BSN, MS, Ph.D., RN, Nursing

Cook-Cogburn, Lonia, B.S., M.Ed., Office Information Systems

Darnell Venetra, BSN, MSN, Ph.D., R.N., Nursing

Davis, Ella Jean, B.S., M.A., (Speech), M.A., D.A., English

Diedo, Madeline, R.N., BSN, MSN, Nursing

Dolphus, Lynda, B.A., MSN, Nursing

Elzein, Raja, M.S., Computer Aided Drafting

Evans, Warren, J.D., Criminal Justice

Ewen, Bruce, B.A., M.A., Economics

Fairbanks, Douglas, B.A., M.A., Ph.D., Business Studies

Franco, J. Thomas, B.A., BBA., MBA., J.D., LI.M., Business Studies

Gafford, Andrea, R.N., BSN, MSN, Nursing

Glotfelty, Gerald, AGS, Paramedic I/C, Emergency Medical Technology

Golida, Damus, AAS, Surgical Technology

Golshan, Rahmatollah, B.S., M.S., Ph.D., Electronics/Manufacturing

Greene, Curtis, B.S., M.S., Ph.D., Biology

Haynes, Mary, B.S., M.Ed., Office Information Systems

Howard, Thomas, B.A., M.A., Ph.D., English

Jackson, James, B.A., M.S., Criminal Justice

Jenkins, Lillian, B.S., M.A., Mathematics

Jensen, Beth, B.S., M.S., Environmental and Natural Resources, Biology

Jordan, Josephus, B.S., M.Ed., Social Science

FULL-TIME FACULTY

Kennedy, LaDawn, R.N., BSN, MSN, Nursing

Lakkis, George, B.S., M.S., Electronics

Lawson, Kevin, B.S., M.Ed., M.S., Mathematics

Marquardt, Patricia, B.S., M.S., Biology

Matthew, William, B.S., Pharmacy Technology

Meyers, Desiree, B.S., M.S., Ph.D., Biology

Mitseff, Emily. B.A., M.A., English

Muyia, Harrison, A.B., M.A., Ph.D., Political Science

Nwamba, Christian, B.S., M.S., Ph.D., Biology

Nyquist, Jo Ann, B.S., M.A., Ed.S., Dental Hygiene

Olatunji, Nomathembi, BSN, MSN, R.N., Nursing

Payne, Douglas, A.A.S., Computer Graphics Technology

Peace, Wallace, B.A., M.A., Ph.D., LPC, Counselor

Peltz, Caroline, BSN, MSN, Ph.D., Nursing

Pequinot, Mary, B.A., M.A., LPC., Counselor

Perlman, Mary, B.A., M.A., LPC, English

Pradatsurdarasur, Sukhta, R.N., BSN, MSN, Nursing

Quick, Alida, B.S., M.A., Ph.D., Psychology

Riley, Janice, R.N., BSN, MSN, Nursing

Samuelson, Norman, B.S., M.S., Chemistry

Shakoor, Adam Adib, B.S., M.Ed., J.D., Criminal Justice

Shikhman, Mark, B.S., Ph.D., Surgical Technology

Sietz, Richard, B.A., M.A., Mathematics

Skidmore, Lynnda, B.S., M.A., Biology

Stanley, Mathew, R.N., BSN, MSN, Nursing

Thomas, Sheryl, R.N., BSN, MSN, Nursing

Tinsley Jr., Clifford, B.A., MSW, Human Services

Trice, Ronald, B.A., MFA, Humanities

Varner, Beverly, A.B., M.A., M.Ed., Psychology

Waters, Thomas, B.S., M.Ed., Ph.D., J.D., Business Studies

Williams, Mary, R.N., BSN, MSN, Nursing

Wittbrodt, Joanne, B.S., M.S., Ph.D., Chemistry

Zarb, Pamela, RDH, B.S., M.A., Dental Assisting, Dental Hygiene

PART-TIME FACULTY

Abani, Kaveh, M.A.

Abbas, Mohammed, Ph.D.

Abbo, John, B.A.

Abdel-Salam, Ahmed, M.A.

Abdollahi, Javad, Ph.D.

Abinojar, Charmica, M.A.

Abraham, Laurence, MBA.

Abubakari, Nina D., M.A.

Abulu, Egerton, Ph.D.

Acosta, Hugh, M.A.

Adams, Jon, M.A.

Adams, Kimberly, Ph.D.

Adeyina, Olusegun, M.A.

Ahmed, Muhammad, Ph.D.

Ajaero, Conrad, M.A.

Ajaero, Uchenna, Ph.D.

Akbarian, Fathali, M.S.

Alansari, Huda, Ph.D.

Alawuru, Precious Ojor, MD

Alexander, De'Angelo, M.A.

Alexander, Nirmal, M.A.

Alexander, Renita, M.A.

Algiery, Ahmed, Ph.D

Aljawad, Najwa, Ph.D.

Alkatib, Shatha, Ph.D.

Allen Jr., Eddie B., B.A.

Allen, Angela, M.A.

Allen, Betty, B.A.

Allen, Deolis, M.A.

Allen, Robert, Ph.D.

Allen, Tshombe, M.A.

Allen-Bradfield, Kimberly, M.A.

Al-Saadi, Fadhil, Ph.D.

Al-Shemeri, Furat Ali, Ph.D.

Alyass, Kussiy, Ph.D.

Amer, Usama, M.A.

Amirsadr, Roya, M.A.

Anderson, Addell, Ph.D.

Anderson, Cheri, Ph.D.

Anderson, Gary, M.A.

Anderson, Lisa, M.A.

Andrade, Moses, M.A.

Andrews, Gwendolyn, M.A.

Anene, Edward, MBA.

Anglin-Poindexter, Kelly, M.A.

Ansare, Inamul, Ph.D.

Anthony, Bart, Ph.D.

Anthony, George, JD

Anyanetu, Patrick, Ph.D.

Anyanwu, Ngozi, M.S.

Armes, Donna, MBA.

Arminiak, Ann

Armstrong, Sheila, Ph.D.

Armstrong-Hudgins, Jennifer, M.A.

Asabigi, Kanzoni, Ph.D.

Ashley, Duane, Ph.D.

Askew, Rasheedah, M.A.

Atlas, Courtney, BSN, RD

Attard, Tracey, B.A.

Awrahem, Mahir, M.A.

Ayyad, Hani, BSN

Backaitis, Algis, M.A.

Badry, Peter, M.A.

Bah-Deh, Pewu, M.A.

Bailey, Amelia, MD

Bains, Amarjit, M.A.

Bajon, Bronislaw, Ph.D.

Baker, Anwar, M.A.

Banister, Noor, M.A.

Barker, Jerry, M.A.

Barnes, Patricia, M.A.

Barnes, Terry, M.A.

Barr, William, M.A.

Barthwell, Patricia, M.A.

Basharat, Ahmed, M.S.

Bashir, Aarif, B.A.

Bates, Karen, M.A.

Baul, Parnella, M.A.

Baum, Linda, M.A.

Bays, Andrew, M.A.

Beach, Bruce

Bean, Erik, M.A.

Beattie, Lauren, M.A.

Bednarz, Heidi, Ph.D.

Beidoun, Nasser, M.A.

Bell, Ronald, M.A.

Bell, Sharmane, Ph.D.

Benson, Candace, M.A.

Berry, Gerry, MBA.

Bertram, Pamela, M.A.

Bethel, Robert, M.A.

Beydoun, Ghada S., M.S.

Beydoun, Housain, M.Ed

Beydoun, Housain, M.A.

Beyers, Mary, M.A.

Bhavra, Barinder, M.A.

Blair-Franklin, Angela, B.A.

Blake, Morris, B.A.

PART-TIME FACULTY

Blue, Kimberly, B.A.
Boards, Tiffany, Ph.D.
Boer, Rajitha, M.S.
Boikai, Jerome, Ph.D.
Bolden, James, B.A.
Boman, Scott, M.A.
Bonkoski, Jeffrey
Bonnay-Lewis, Chrys, B.A.
Bonner, Derrick, M.A.
Boron, James, M.A.
Boudreau, Mary, Ph.D.
Boykin, Peter, M.A.
Bradford, Aundrea, M.A.
Bramson, Jill, M.A.
Brandt, Michael, B.A.
Breger, William, M.A.
Brescoll, Mary, B.A.
Briske, Debra, M.A.
Britton,, Marcus, B.A.
Brogdon, Marsha, M.A.
Brohl, Gerald, B.A.
Broner Hall, Sandra, Ph.D.
Brooks, Charles, Ph.D.
Brooks, Gaylon, M.A.
Brooks, Rhonda, BSN
Brown, Althea, Ph.D.
Brown, Apryl, Ph.D.
Brown, Arthur, M.A.
Brown, Charles, M.A.
Brown, Charles, Ph.D.
Brown, Jeffrey, Ph.D.
Brown, Patricia Ann, MBA.
Brown, Sherry, MSW
Brown, Verna, M.A.
Browner, Jeanette, M.A.
Browner, Sr., Henry, B.S.
Bryant, Antoinette, M.A.
Bryant, Joyce, MHSA
Bryant, Mark, M.A.
Bryant, Marvin, JD
Brzezicki, Vivian, BSN
Buchheister, JoAnn, M.A.
Buchheister, John, Ph.D.
Buckley, Martha, M.A.
Buehler, Todd, B.A.
Bull, James, Ph.D.
Burin, Dennis, Ph.D.
Burkett, Glen, M.A.
Burleson, Leslie, M.A.
Burnett, John Benjamin, M.A.
Burns, Ethel, DDS
Burston, Yvonne, B.A.
Butler, Stanley, MSN
Butler, William,
Cain, Kanika, M.A.
Caldwell, Jerry, Ph.D.
Campbell, Henry, Ph.D.
Campbell, Raymond, Ph.D.
Campbell, Robert, M.A.
Campbell, William, Ph.D.
Careathers, Christie, Ph.D.
Careathers, Timothy, D.Div.
Carey, Elma, M.A.
Carpenter, Raymond, B.S.
Carr, Juanita, M.A.
Carroll, Liam, B.A.
Carter, Eugene, M.S.
Carter, Jemica, M.A.
Carter, Theresa, M.A.
Caruso, William David
Casey, William, M.S.
Cavacini, Amanda, B.S.
Chambers, Emanuel, Ph.D.
Chambers, James, M.A.
Chapman, Yolanda, M.A.
Chappell-Fuquay, Shirley, M.A.
Charles, Joy, M.A.
Chatman, Marvin, M.A.
Chaundery, Virinder, Ph.D.
Cheeks, Walter, M.A.
Cheeramvelil, Kuriakose, M.S.
Cheetham, Marta, B.A.
Childers, Enid, M.A.
Chizick, John, B.A.
Chowdhury, Ershad M, MBA.
Christmas, Charles, Ph.D.
Chuku, Chile, M.A.
Church, Willard, M.A.
Clark, Mary, MSN
Clarke, Delores, M.S.
Clay, Jaurice, M.A.
Clemons, Theophilus, JD
Climer, Steven L., Ph.D.
Clover, Ernest, M.A.
Coates, Karry, B.A.
Cobb, Lois, M.A.
Coello Tissert, Juana Lidia, Ph.D.
Cole, Henry, Ph.D.

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Cole, Richard, M.A.
Coleman, Roselyn, M.A.
Coleman, Shannon, B.A.
Coleman-Settles, Denise, Ph.D.
Colston, Ervin, MBA.
Combs, Edith, M.A.
Cone, Kimberly, M.A.
Conner, Marrci, Renee, M.S.
Constance, Valerie Marie, M.A.
Cook, Caaron, Ph.D.
Cook, Joseph, M.A.
Cooper, Rodney, M.A.
Costantino, Cheryl, M.A.
Covington, Anita, M.A.
Cox, Kimberly, M.A.
Cox, Lisa, M.S.
Craft, Barbara, Ph.D.
Craig, Lillian Darlene, M.A.
Craig, Saumel, Ph.D.
Crawford, Juantia, Ph.D.
Crews, Lloyd, Ph.D.
Crim, Haven, MBA.
Crittendon, Denise, B.A.
Crockett, Brandi, M.A.
Crockett, Sandra, M.A.
Cross, Mildred, M.A.
Cummings, Lynn, M.A.
Cummings, Rodney A., B.A.
Cunningham, Bernice, M.S.
Cunningham, Larry, M.A.
Czochara, Christopher, M.A.
Czopek, Sheryl, M.A.
Daily, Kevin, M.A.
Daily, Paul, B.S.
Dance, Tonie, M.A.
Dandridge, Henry, M.A.
Daniel, Eric, M.A.
Daniels, Anthony, M.A.
Danquah, Rochelle, M.A.
Davis, Devin, M.A.
Davis, Felecia, M.A.
Davis, Lourie Ann, M.Ed
Davis-Dandridge, Davina, M.A.
Davis-Kennedy, Tonya, M.A.
Deberry, Shawntuan, Ph.D.
DeJongh, Stanley, Ph.D.
Demitrish, Deborah, M.A.
Demonbruen, Tonya, M.A.
Dennis, Anne, M.A.
DePetro, Alexander, Ph.D.
Depowski, Martin, AAS
DeSouza, Olivian, M.A.
Deutsch-Keahey, Diane, Ph.D.
Dewyer, Stephen, M.A.
Dickerson, Waneta, M.A.
Diggs, John, M.A.
Dinkins, Baynard, M.A.
Diop, Seydou, Ph.D.
Dloski, Ryan, M.A.
Donahoo, Mechelle, M.A.
Douglas, Andrew, M.A.
Douglas, Janet, M.A.
Dozier, Marva, M.Ed
Drake, Gloria, M.A.
Dryovage, Henry, M.A.
DuBose, Carolyn, M.A.
Dunbar, Pamela, BSN, MSN
Dunne, Joseph, M.S.
Dupree-Murrain, Michelle, M.A.
Easley, Margaret, BSN
Easterling, Monica, M.S.
Edevbie, Onoawarie, M.A.
Edwards, Paul, B.A.
Ellis, Mary, MBA.
Entershary-Najafabady, A, Ph.D.
Eskridge, Ann, M.A.
Esquivel-Ramos, Beatriz, M.A.
Esters, Jacqueline, M.Ed
Evans-Duhart, Ladonna, M.A.
Evans-Ebio, Belinda, M.A.
Evans, Rachel, Ph.D.
Fahrenkrug, Steven, M.A.
Falandino, Michael, M.S.
Farney, Michelle, M.A.
Farrehi, Khashayar, M.A.
Farrell Singleton, Piper A., M.A.
Faulk, Latoya, M.A.
Favero, Holly, MSN
Feichtner, John, Ph.D.
Ferdon, David, M.A.
Fields, Audrina, M.A.
Firnschild, Martha, B.A.
Fisher, Abigail, M.A.
Fisher, Wyatt, M.A.
Floyd, Stacha, M.A.
Ford, Margaret, M.A.
Ford, Sheila, AAS
Foster, Gregory, M.Ed

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Foulkes, Allen, B.A.
Fowler, Crystal, M.A.
Fox, Janice, M.A.
Foxworth II, Edward, M.A.
Fradi, Reda, M.A.
Franklin, Deborah, M.A.
Franklin, Fredrick, M.A.
Freed, Sharon E., M.A.
Friley III, Grant Alexander, Ph.D.
Fuciarelli, Larry, B.A.
Gaddis, Mildred, B.A.
Gadson, Jacqueline, M.A.
Gaines, Thomas, M.A.
Gaither, Chastity, M.A.
Galvan, Donna, M.A.
Gardenhire, Andre
Gardner, Michael, M.A.
Gardner-Foster, Evelyn, B.A.
Garfinkel, Morris, M.A.
Garrison, George, B.A.
Geiss, Erika, M.A.
Geist, Shin-Mey, Ph.D.
Gelinas, Paul, M.A.
Gellci, Diana, M.A.
George, Marcia, M.A.
George-Sturges, Cassandra, Ph.D.
Ghazizadeh, Saeid, M.A.
Gibson, Jerome, M.A.
Gilmore, Johnie Mae, M.Ed
Glass, Derrick, JD
Glowacki, David, M.A.
Gmerek, Greg, M.A.
Godbee, Ralph, B.A.
Goff, George, M.A.
Goins, Diane, M.A.
Goldberg, Steve, M.A.
Golliday, III, George, M.A.
Goodell, John, M.A.
Grabowski, Susan, Ph.D.
Graham, Deborah, M.S.
Graham, Yvonne, Ph.D.
Granderson, George, Ph.D.
Grant, Keith, Ph.D.
Gray, Nettie, M.A.
Gray, Stephanie, M.A.
Gray, Tabitha, M.A.
Green, Beverly, M.Ed
Green, Iris, Ph.D.
Griffin-Collins, Ranae, MBA.
Griggs, Michael, M.A.
Gunasekera, Thilak, Ph.D.
Gwinwell, William Scott, M.A.
Haas, Valerie, M.A.
Hafner, Mikehl Sebastian, Ph.D.
Haidar, Fadia, M.S.
Hailat, Mohammad, Ph.D.
Haines, David Robert, BSN
Hall-Rayford, Mary M, M.A.
Hamady, Susan, M.A.
Hammond, Mark, B.A.
Hanson, Aloysius, Ph.D.
Hardaway, Cynthia, B.A.
Hardin, John, M.A.
Hardrick, LaToya, B.A.
Harris, Barbara, M.A.
Harris, Christopher, M.A.
Harris, Claudine, MBA.
Harris, Marcus D., MBA.
Harris, Pamela, Ph.D.
Harrison, Dempsey, M.A.
Harrison, Robert L., M.A.
Hatcher, Georgia, M.A.
Hatcher, Linda, M.A.
Hawkins, Ronald, M.A.
Henderson, Carla, M.A.
Henderson, Dale, M.A.
Henderson, Joyce, MSW
Hendrix, Gwen, M.S.
Henry, Ediwina, M.A.
Herbert, Terry, M.A.
Herrada, Elena, M.A.
Herrera, Jose, MBA.
Herron, Sunday, M.A.
Herschfus, Marc, Ph.D.
Hickman, LaSandra, M.A.
Hightower, Gerard, B.A.
Hightower, Gracie, M.A.
Hill, Betty J., M.A.
Hobson, Anita, M.A.
Hobson, Michele, M.A.
Hoffa, Donna K., M.A.
Hoffman, Mark, M.A.
Hollis, Veronica, M.A.
Hollman, Kyle, Ph.D.
Holmes, Edwin, Ph.D.
Hopkins, David, M.A.
Howard, Christopher, M.A.

PART-TIME FACULTY

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Howard, Priscilla, MSN
Howard-McGee, Saundra, M.A.
Howell, Janice, MSW
Howson, Christine, M.A.
Hubbard, Marion, M.A.
Hudson, Keith, M.A.
Hudson, Nora, B.A.
Hudson, Robin, M.A.
Hudson, Truman, Ph.D.
Huff, Gary, B.A.
Huff, Kimberly, MBA.
Hughes, Mildretta, Ph.D.
Humbles, Michelle, BSN
Hunt, Gloria, M.A.
Hunter, Joseph, M.A.
Hurt-Dorty, Mercede, M.A.
Hussain, Mohammed, Ph.D.
Hutcherson, Diane, Ph.D.
Hyrila, Maureen, B.S.
Ibe, Frank, Ph.D.
Ikeri, Chinaza, Ph.D.
Ingram, Anthony, Ph.D.
Irowa, Michael, MD
Israel, Issa, JD
Ivery-Hall, Brenda, M.A.
Ivory, Ellis, M.A.
Jablonski, Tiffany, M.A.
Jackson, Carlson, Ph.D.
Jackson, Deirdre, M.A.
Jackson, Michelle, M.A.
Jackson, Stacy, M.A.
Jackson-Smith, Maria, M.A.
Jacob, Robert, M.A.
Jacques, William, M.S.
Jadoun, Naela, M.A.
James, Linda, MPH
James, Sharon Linda, M.A.
James, Stephanie, M.A.
Jannot, Kenneth, M.A.
Jarvis, Miles Phillip
Javarinis, Tom, Ph.D.
Jawad, Ali, M.S.
Jawad, Lina, M.A.
Jenkins, Dorothy, MSN
Jenkins, Tonia, M.A.
Jerido, Cassandra, M.A.
Johnson, Angela Nicole, B.S.
Johnson, Charmaine, Ph.D.
Johnson, Daisy, M.A.
Johnson, Dale Marie, M.S.
Johnson, Doris, M.S.
Johnson, Freda, M.A.
Johnson, Linda, M.A.
Johnson, Netyla, M.A.
Johnson, Stephen, B.A.
Johnson, Tracy, M.A.
Johnston, Evelyn, M.A.
Jones, Barbara, M.A.
Jones, Camilla, BSN
Jones, Charles, M.A.
Jones, Cleo, Ph.D.
Jones, Darlene, MPA
Jones, Dawn Yvette, M.A.
Jones, Jacqueline, MSN
Jones, Kenyuano, M.A.
Jones, Malisa Ann, M.A.
Jones, Marcus, M.A.
Jones, Michon, M.A.
Jordan, Brian, Ph.D.
Jordan, Tammy, M.S.
Jordon, Devon, B.S.
Justice, Binta, Ph.D.
Kaazaku, Kokulo, M.A.
Kaby-Cavally, Brice, M.A.
Kaczmarek, Karen, MFA
Kah, Omar, M.A.
Kantzler, Carolynn, MFA
Karamo, Kristina, B.A.
Karva, Abraham, M.Ed
Kazanjian, John, M.A.
Keen, Jeffrey, B.A.
Keleman, Cynthia Ann, M.A.
Kelley, Patrick, Ph.D.
Kelly, Catherine, M.A.
Kelly, Renee, M.A.
Kelly, Sherry Lynn, M.A.
Kennedy, Lela Vernice, M.S.
Kennedy, Linda, M.A.
Kimbrough, Valorie, M.A.
King, Kyle, BS. MD, MPH
Kirkby, Carol D., M.A.
Kirkland, Nakisha, M.A.
Knight, Derek, B.A.
Knight-McKinney, Norie, M.A.
Knox, Clint, M.S.
Koska, Leslie, M.A.
Kowalski, Gregory
Kriebel, Jesse, B.A.
Kristy, Joseph, M.A.

PART-TIME FACULTY

Kroll, Michael, B.A.
Kronk, James, M.A.
Kulick, Robert Allen
Kuschinsky, Alice, B.A.
Kyles, Kevin, M.A.
Lagina, Sharon, M.S.
Lai, Angela, M.A.
Lanza, JoAnn, Ph.D.
Larkins Norwood, Ka-Sandra, M.A.
Larsen, Wendy, ASN
Lassiter, Ivan, M.A.
Lathers, Kendall, M.A.
Lawson, Lisa, B.A.
Leavell, Bonita, Ph.D.
Leavell, Chiquita, M.A.
LeBlanc, Michelle, M.A.
Lee, Charles, MBA.
Lee, Michael, M.A.
Leese, Loretta B., M.S.
Leftwich, Harry, M.A.
Leitch, Leslie, M.Ed
Lenk, Joshua, B.A.
Lepard, Eric, B.A.
LePlatte, Geoffrey Ewart, Ph.D.
Lester, Gloria, MAT
Levi, Ronald, B.A.
Lewis, Duane, M.S.
Lewis, Lyn Etta, Ph.D.
Lile, Erika, M.A.
Little, Patricia, M.A.
Liu, Xiangdong, Ph.D.
Livingston, Burt, M.A.
Logan, Kim, M.A.
Long, A'Kena, M.A.
Love, Leslie, M.A.
Lucas, Joann, MD
Lumpkin, Fred, M.A.
Lumpkin, L, M.A.
Lundy, Michael, M.A.
Luo, Ronghua, M.A.
Lupercio, Alfred, MSW
Lynum, Carmen, M.A.
MacDonald, Martine, M.A.
Machenee, Melissa, M.A.
MacIntosh, Wayne, M.A.
Macki, Zinab, M.A.
Madison, Cheree, Ph.D.
Madison, Norma, Ph.D.
Madrigal, Aaron, M.A.
Manciel, Carol, Ph.D.
Manigualt, Katrina, MSW
Mann, Corin, M.A.
Marang, Boitshoko, Ph.D.
Marcinkowski, James, JD
Mardoyan, Michael, M.A.
Martin III, George, M.A.
Martin, Eileen, M.A.
Martin, Jacquelyn, M.A.
Martin, Juanita, Ed.D
Martin, Roland, M.A.
Mason, Catina, M.A.
Mason-Mathews, Wendy, M.A.
Matthews, Jennifer, B.A.
Maxie, Cleo, M.Ed
May, Angela,, Ph.D.
Mayberry, Marie Victoria, M.A.
Mays, Dexter, M.A.
Mays, Helena, M.A.
Mays, James, B.A.
McAllister, John
McConico, William, JD
McCray, Larry, B.A.
McDaniel, Felecia, M.A.
McGee, Marilyn, M.A.
McGraw, David, Ph.D.
McGuire-Lloyd, Rachiel, M.A.
McHugh, Stephen, M.A.
McMahon, George, Ph.D.
McMonagle, Colin, M.A.
McNeal, Yohonn, B.A.
McNeary, Daphne, M.A.
Melikan, Christopher, M.A.
Mengistu, Haile, Ph.D.
Merchant, Cheryl, M.A.
Merriwether, Valerie, M.Ed
Metcalf, Amy Lyn, M.Ed
Mickens, McArthur, M.A.
Miller, April, M.A.
Miller, Cynthia, Ph.D.
Miller, Deborah, M.A.
Miller, Gregory, Ph.D.
Miller, Theresa, M.A.
Milton, Joyce, M.A.
Milton-Ramsey, Sandra, M.A.
Mitchell, Keitha Toni, Ph.D.
Mitchell, Richard, M.A.
Montilus, Guerin, Ph.D.
Moore, Angelique, BSN

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Moore, Dawnita, M.A.
Morgan, Rashida, M.A.
Morgan, Tezonia, M.A.
Morrison, Crystal, Ph.D.
Morrow, Kathy, Ph.D.
Mosby-Lewis, Denise, M.A.
Moseley, Lakina, M.A.
Moseley, Lynne M, DDS
Moses, Belinda, Ph.D.
Mosley, Nathalie, M.A.
Moultrie, Valencia, B.A.
Mucaria, Joseph, M.A.
Muhammad, Lawrence
Muhsin, Nadir, M.A.
Mukkamala, Pradeep, Ph.D.
Murphy, Jeanette, M.A.
Murray, Aqua-Raven, M.A.
Muwzea, Adwoa, M.A.
Mwila, Appollinaris, Ph.D.
Myers, Macell L., M.A.
Myers, Tiana, M.A.
Myles, Leah Ann, M.Ed
N'Namdi, Kemba, MBA.
Naizghi, Almaz, M.A.
Nash, Joan, M.A.
Neal, Joann, Ph.D.
Needham, Charles, Ph.D.
Neumann, Jeffery, M.A.
Newell, Scott Hasson, B.S.
Newman, Brian, B.A.
Newsome, Christina, B.A.
Ngala, Eugene, B.A.
Ngare, Geoffrey, B.A.
Nichols, Jefferson, M.A.
Northern, Michael, M.A.
Norwood, Mimi, Ph.D.
Ntiri, Daphne, M.S.
Nwankwo, Oliver, M.A.
O'Hagan, David, Ph.D.
O'Mara, Erin W., M.A.
O'Reilly, Daniel, JD
Obi, Lawrence, Ph.D.
O'Doherty, Rachel, M.A.
Ofei, Joye, B.A.
Oh, Ekeho, Ph.D.
Okafor, Joseph, M.A.
Olafioye, Salewa, Ph.D.
Olden, Ruby, M.A.
Olojo, Olubusayo, M.A.
Onuigbo, Henri, M.S.
Onyegbado, Christiana, M.A.
Opalinski, Bob, Ph.D.
Orlando, Russell, M.A.
Osueke, Immaculata, M.A.
Ott, Gary L., M.A.
Palajac, Stephen James, D.PM
Palermo, James, M.A.
Parizon, Michael, M.A.
Parker, Brandon, M.A.
Parker, Meredith
Parkman, William, M.A.
Patterson, Kelly, M.A.
Paul, Rhonda, Ph.D.
Peart, Joslyn, M.A.
Peek, Eunice, M.A.
Peete, Theressa, M.A.
Pehote, Michael, M.A.
Perez, Maria, M.Ed
Perkins, David, Ph.D.
Perry, Bruce, M.A.
Perry, Chantel, M.A.
Peterson, Eujay, B.A.
Pettis, Erica, M.A.
Pettway, Quill, Ph.D.
Petty, Artemus, M.A.
Petway, Gail, M.A.
Pichan, Cameron Charles, B.A.
Pitts, Cornelius, JD
Plungis, Cayce, B.A.
Poindexter, Yolanda, M.S.
Pope, India, M.A.
Porter, Beverly, B.S.
Porter, Otiz, Ph.D.
Powell, Cary, MBA.
Powell, Helen, Ph.D.
Premo, Carol, M.A.
Price, Jerome, MBA.
Price, Lawrence, M.Ed
Pulford, Barbarose, M.S.
Pullumbi, Ervin, M.A.
Quenum, Jean-Claude, Ph.D.
Quigley, William, M.A.
Raeck, William, M.A.
Rahbarnoohi, Hamid, M.S.
Raines III, Frank, M.A.
Raman, Jyothi, Ph.D.
Ramey, Ronnie Aaron, M.S.
Ramsey, Mary, M.A.
Rashid, Harun ur, Ph.D.

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Ratliff, Carl, JD
Readous, Wendy, MBA.
Reed, Carolyn, M.A.
Reed, Lisa, M.A.
Reese, Margaret, M.A.
Reynolds, Wetonia, B.A.
Ri'chard, Michael, M.A.
Rice, William, MSW
Richardson, Earl, M.A.
Riggs, LaTanya, M.A.
Rivera, Jose, M.A.
Roberts, Bruce Eugene, M.A.
Robinson, Deborah, M.A.
Robinson, Earl, M.A.
Robinson, Edwin, D.Chiro.
Robinson, Johnny, Ph.D.
Rodriguez-Lopez, Maria, M.A.
Roebuck, Kyion, M.A.
Rogers, Jerry, B.A.
Rogers, Phyllis, M.A.
Roland, Arthur, M.A.
Rose, Lisa, M.A.
Rosen, Michael, M.A.
Ross, Phyllis, M.A.
Ross, Sonya, MFA
Rouleau, Francine, M.A.
Rowley, Cathy, M.A.
Rudolph, Erika, M.A.
Ruetz, Carl, B.A.
Ruetz, Nancy, M.A.
Ruffin, Ronald, Ph.D.
Russell, Joyce A., MSN
Ruthkowski, Beth, Ph.D.
Rutkowski, Cynthia, M.A.
Saab, Dib, Ed.D
Saab, Lahouaria, Ph.D.
Saffronoff, John, M.A.
Salehi, Mohammad, AA
Samaddar, Sunanda, M.A.
Sanborn, Judy, M.A.
Sanderfield, Tamara, M.A.
Sanders, William, M.A.
Santiz, Jose, M.A.
Saulter, Barbara, M.A.
Scafidi, Glen, B.A.
Schaecher, Manon, M.A.
Schaefer, James, M.A.
Schaefer, Maria, M.A.
Schaifer, Elizabeth, MSN
Schmidt, Ann, Ph.D.
Schultz, Karen, M.A.
Scott, Andrea, AAS
Scott, Michael, M.S.
Scott, Regina, M.S.
Scott, Tasha, MSN
Seal II, Jerry, M.A.
Settles, Jamelle, M.A.
Shalan, Salah, M.A.
Sharma, Vinod, M.A.
Sharmeen, Lamia, Ph.D.
Shaw, Eric, M.A.
Shaw, Mary, M.A.
Shefke, Megan, B.A.
Shelton, Jennifer, M.Ed
Shepherd, Dolores, M.S.
Shepherd, Kenneth, M.A.
Shepherd, Ravelle, M.A.
Sherwood, Donald, M.A.
Shikhman, Maksim, M.A.
Shimko, Joan, B.A.
Short, Ida, M.A.
Short, Jeffrey
Short, Roger, M.A.
Siddiqua, Siddiqui, Ph.D.
Siemens, Holly, B.A.
Simmons, Charles E., JD
Simmons, Meverette, M.A.
Simmons, Phillip Adonis, M.A.
Simms, Frederick, Ph.D.
Simon, Keith, B.A.
Simpson, Sheabra, Ph.D.
Simpson, V. Gail, Ph.D.
Sims-Hilson, Terri, M.A.
Simuel Jackson, Brenda, Ph.D.
Singleton, Willie, M.A.
Sinha, Rajendra, M.A.
Sledge, Gennea Nickole, M.A.
Smiley, Harriet, M.A.
Smith, Brian, Ph.D.
Smith, Bruce, M.A.
Smith, Donna, B.A.
Smith, Gregory, DO
Smith, I H., B.A.
Smith, India, B.A.
Smith, Jacob, Ph.D.
Smith, Jameson, M.A.
Smith, Kirby, M.A.
Smith, Leola, M.A.
Smith, Lisa, M.A.

PART-TIME FACULTY

PART-TIME FACULTY

Smith, Lorraine, Ph.D.
Smith, Mary L., MPA
Smith, Michell Sandra, MSW
Smith, Nicole, M.A.
Smith, Pinara, M.A.
Smith-Owens, Mary Ann, Ph.D.
Softley, Linda Susan, M.A.
Sole, David, M.A.
Solis, Gilbert
Solomons, Zelda, M.A.
Sommerville, Jerold C., M.A.
Spooner Jr., Frank, Ph.D.
Spratling, Reginald, M.A.
Spratling-Odetoyinbo, Cassandra, M.A.
Steffensky, Mark, MSW
Steingold, Jacqueline, MBA.
Stelmasiewicz, Anna, MBA.
Sterbenz, Karen, M.A.
Stevens, Randolph, B.A.
Stewart, Mark, M.A.
Stovall, Clarice, M.A.
Strassner, Jamie
Streeter, Kimberly, Ph.D.
Stribley, John, Ph.D.
Stroughter Jr., Lawrence, Ph.D.
Styles, Glen,
Sullivan, Daniel, Ph.D.
Sullivan, Timothy, Ph.D.
Surma, Constance, B.A.
Surowitz, Marvin, M.A.
Sutliff, Peter, Ph.D.
Sutton, Jamie, M.A.
Swain-Gant, Acynieth, MSW
Swain-Gant, Justin, B.A.
Swasey, Christina, M.A.
Swift, Joseph, M.A.
Swope, Michael, M.A.
Syed, Jameel, B.A.
Syed, Shagufta, M.A.
Sykes, Clifton, M.A.
Syrkett, Keith, M.A.
Tallerico, Benjamin, M.A.
Tamburi, Ariana, Ph.D.
Tamburi, Jonia, M.A.
Tamburi, Titi, Ph.D.
Tarrance, Larry, M.A.
Tatum, James, M.A.
Taylor, Charlotte, M.A.
Taylor, Leland, B.A.
Taylor, Matthew, M.A.
Taylor-Walker, Donna, MSN
Temple, Katherine, M.A.
Tewari, Kewal, Ph.D.
Thomas, Chenanda, M.A.
Thomas, Myron, M.A.
Thomas, Reny Maria, M.A.
Thomas-Singleton, Lori, M.A.
Thompson, Kelly, M.A.
Thompson, Lillian, M.A.
Thompson, Margaret, M.A.
Thompson, Ramone, M.A.
Thorpe, Pamela, M.A.
Threat Jr, Carl, M.A.
Torres, Roberto, B.A.
Toth, Judith, MFA
Townley, Jr. William, M.A.
Tranumn, Howard, Ph.D.
Trent, Vincent, Ph.D.
Tres, Gheorghita, Ph.D.
Tucker, Norma, MSW
Tucker, Steven, M.A.
Tunstull, Barbara, M.A.
Turanova, Zulfiya, Ph.D.
Turfe, Atallah, Ph.D.
Tyson, Asha, M.A.
Uduma, Amos Okorie, M.A.
Uduma, Kalu, Ph.D.
Um, Ikchul, Ph.D.
Underwood, Asim, M.A.
Underwood, Joyce, Ph.D.
Vanburen, Kellie, M.A.
Vanderlin, William, MBA.
VanDusen, Jerry, Ph.D.
Vannilam, George, M.A.
Veres Jr., Steve, M.A.
Vettor, Carolyn, B.A.
Vierling, Lou, B.S.
Vincent, Angela, M.A.
Walker, Paul, Ph.D.
Walker, Steven, M.A.
Walker, Theresa, M.A.
Walker-Miller, Carla, B.A.
Wallace, Denise, M.S.
Wallace, Jack, M.A.
Wallace, Kimberly, M.A.
Wallace, Sharon, M.A.
Waller, Rayfield, M.A.
Ward, Laura, M.A.

PART-TIME FACULTY

Ward, Sarah, M.S.
Warren, Andrew, B.A.
Warren, Mattie, M.A.
Waters, Mary, B.A.
Watkins, Lydia, M.A.
Watkins, Rolanda, M.A.
Watkins, Valunda, M.A.
Watson, Jo Ann, B.A.
Watts, Adrienne, JD
Waymreen-Salhi, Cynthia, Ph.D.
Weaver, Frederick, Ph.D.
Weaver, Vivian, M.Ed
Weberman, Linda, DDS
Webster, Stella, Ph.D.
Weiss, Mark, M.A.
Weldon, Nicole, M.A.
Wells Smith, Deidra, Ph.D.
Werdlow, Pamela Elizabeth, DDS
West Gonzalez, Gwendolyn Denise, M.A.
White, Marlene, M.A.
White, Mechelle, M.A.
Wielechowski, Benjamin, M.A.
Wilks, Mary Elon-Eloni, M.A.
Williams, Alicia, M.Ed
Williams, Arthur, M.S.
Williams, Bonita, M.A.
Williams, Carla, M.A.
Williams, Cheryl, B.A.
Williams, David, M.S.
Williams, Felecia, M.A.
Williams, Freida, M.A.
Williams, Glenn, Ph.D.
Williams, Jeremy, M.A.
Williams, Joyce, M.S.
Williams, Keith, M.A.
Williams, Lauren, M.A.
Williams, Linda, M.A.
Williams, Lucy, M.A.
Williams, Sherie, M.A.
Williams, Tasha Lyntrice, MSW
Williams, Tony, M.A.
Wilson, Carmen, Ph.D.
Wilson, Cynthia, M.A.
Wilson, Earnestine, M.A.
Wilson, Eileen, M.A.
Wilson, Frieda, M.A.
Wilson, Julie, M.A.
Wilson, William, B.A.
Wilson-Smith, Leslie, M.A.
Wise, Patrick, M.A.
Woodley Williams, Angela, MBA.
Woods, Allayne R., M.A.
Woods, Dawnita, M.A.
Woods, Ian, M.A.
Woodson, Rosalind, M.A.
Wori, Okechukwu, M.A.
Worsham, Conley, M.S.
Wren, Stephanie, M.A.
Wright, Donna, M.A.
Wright, Michael, Ph.D.
Wright, Robert
Wright, Tamara, B.A.
Wyatt, Esther, M.A.
Wynn, Junetta, M.A.
Yee, Sally, M.A.
Younger, James, M.Ed
Zabitz, Barbara, M.S.
Zelaya, Oscar, M.A.
Zorkot, Mohamed F., M.A.

ADMINISTRATIVE STAFF

Chancellor's Office

CURTIS L. IVERY, ED.D.
Chancellor

District Vice Chancellors

STEPHANIE BULGER, PH.D.
District Vice Chancellor of Educational Affairs

BRIAN SINGLETON, M.B.A.
District Vice Chancellor of Student Services

PROGRAM DEGREE NAMES

1.	Accounting	AAS
2.	Anesthesia Technology	AAS
3.	Associate of Arts	AA
4.	Associate of General Studies	AGS
5.	Associate of Science	AS
6.	Auto Body Technology	AAS
7.	Automotive Service Technology (NATEF) Accredited	AAS
8.	Aviation Mechanics: Airframe	AAS
9.	Aviation Mechanics: Powerplant	AAS
10.	Bio-Medical Equipment Repair Technology	AAS
11.	Business Administration	AA
12.	Business Administration	AAS
13.	Computer Information Systems	AAS
14.	Computer Numerical Control	AAS
15.	Criminal Justice: Corrections	AAS
16.	Criminal Justice: Law Enforcement Administration	AAS
17.	Dental Hygiene	AS
18.	Digital Media Production	AAS
19.	Early Childhood Education	AAS
20.	Electrical Electronics Engineering Technology	AAS
21.	EEE: Computer Technology	AAS
22.	Emergency Medical Technology	AAS
23.	Emergency Room Multi-Skill Healthcare Technology	AAS
24.	Facility Maintenance	AAS
25.	Fire Protection Technology: Fire Administration	AAS
26.	Fire Protection Technology: Fire Suppression	AAS
27.	Foodservice Systems Management	AAS
28.	Heating, Ventilation, Air Conditioning (HVAC)	AAS
29.	Industrial Computer Graphics Technology	AAS
30.	International Business	AAS
31.	Light Rail Engineering Technology: Electromechanical	AAS
32.	Light Rail Engineering Technology: Signaling and Communication	AAS
33.	Medical Administrative Specialist	AAS
34.	Nursing	AAS
35.	Office Information Systems: E-Business	AAS
36.	Office Information Systems: Office Specialist	AAS
37.	Paralegal Technology	AAS
38.	Pharmacy Technology	AAS
39.	Pre-Engineering	AS
40.	Pre-Mortuary Science	AAS
41.	Pre-Physician Assistant	AAS
42.	Pre-Social Work	AA
43.	Product Development Prototyping	AAS
44.	Surgical Technology	AAS
45.	Teacher Education: Elementary Education	AA
46.	Veterinary Technology	AAS
47.	Welding Technology	AAS

PROGRAM CERTIFICATE NAMES

1.	Accounting	CERT
2.	Addiction Studies	CERT
3.	Alternative Fuels Technology	CERT
4	Auto Body Technology	CERT
5.	Automotive Service Technology (NATEF) Accredited	CERT
6.	Aviation Mechanics: Airframe	CERT
7.	Aviation Mechanics: Powerplant	CERT
8.	Computer Information Systems: Business Analytics	CERT
9.	Computer Information Systems: Network Administrator	CERT
10.	Computer Information Systems: Video Game Design and Animation	CERT
11.	Computer Information Systems: Web Site Developer	CERT
12	Craft Brewing	CERT
13.	Criminal Justice: Public/Private Security	CERT
14.	Dental Assisting	CERT
15.	Digital Media Production	CERT
16.	Digital Photography Technology	CERT
17.	Electrical Electronics Engineering Technology	CERT
18.	EEE: Programmable Logic Controllers	CERT
19.	Emergency Medical Technology	CERT
20.	Emergency Medical Technology: Paramedic	CERT
21.	Emergency Room Multi-Skill Healthcare Technology	CERT
22.	Entrepreneurship	CERT
23.	Facility Maintenance	CERT
24.	Fire Protection Technology	CERT
25.	Foodservice Systems Management	CERT
26.	Gerontology	CERT
27.	Global Supply Chain Management	CERT
28.	Graphic Design Technology	CERT
29.	Heating Ventilation, Air Conditioning (HVAC)	CERT
30.	HVAC: Geothermal Technology	CERT
31.	HVAC: High Pressure Steam	CERT
32.	HVAC: Sheet Metal Design and Fabrication	CERT
33.	Hemodialysis Patient Care Specialist	CERT
34.	Homeland Security	CERT
35.	Hotel and Restaurant Management	CERT
36.	Industrial Computer Graphics	CERT
37.	Library Technology	CERT
38.	Manufacturing Technology	CERT
39.	Mechatronics	CERT
40.	Medical Administrative Specialist	CERT
41.	Mental Health	CERT
42.	Office Information Systems: Office Specialist	CERT
43.	Pharmacy Technology	CERT
44.	Project Management	CERT
45.	Surgical Technology: Surgical First Assistant	CERT
46.	Sustainable Environmental Design (SED): Sustainable Building and Sites	CERT
47.	Water and Environmental Technology	CERT
48.	Welding Technology: General - Level 1	CERT
49.	Welding Technology: Artistic	CERT

SHORT-TERM CERTIFICATES

Short-Term Certificate Requirements (SCERT)

The short-term certificate programs are designed for students who are seeking job-entry skills and for those who wish to improve their performance on their present job or who wish to qualify for advancement. In order to receive a short-term certificate, students must have a minimum grade point average of 2.0 in the short-term certificate upon completion.

• Short-Term Certificate: Minimum 10 credits, Maximum 29 credits*

1. American Sign Language (SCERT-ASL) — 20 credit hours
2. Automotive Technology: Automotive Transmission and Transaxle Exam (SCERT-AUTO) — 19 credit hours
3. Automotive Technology: Brakes Exam (SCERT-BRKS) — 18 credit hours
4. Automotive Technology: Electrical/Electronics Systems Exam (SCERT-EES) — 12 credit hours
5. Automotive Technology: Engine Performance Exam (SCERT-EP) — 24 credit hours
6. Automotive Technology: Engine Repair Exam (SCERT-E/REP) — 19 credit hours
7. Automotive Technology: Heating and Air Condition Exam (SCERT-HAC) — 17 credit hours
8. Automotive Technology: Manual Drive Train and Axle Exam — 17 credit hours
9. Automotive Technology: Suspension and Steering Exam (SCERT-SUSP) — 17 credit hours
10. Bookkeeping (SCERT-BOK) — 20 credit hours
11. Computer Information Systems: Computer Support Specialist (SCERT-CSS) — 29 credit hours
12. Computer Information Systems: Database Administrator (SCERT-DBA) — 29 credit hours
13. Computer Numerical Control: Programming and Operation (CNC-SCERT) — 24 credit hours
14. Craft Brewing: Advanced Craft Brewing (BRW-SCERT) — 27 credit hours
15. Dental: Local Anesthesia Certification: (SCERT-DLA) — 22 credit hours
16. Early Childhood Education: Childcare Training (CDA) — 28 credit hours
17. Heating Ventilation, Air Conditioning (HVAC): 3rd Class Refrigeration (SCERT-HVAC-TCR) — 28 credit hours
18. Home Health Care Aide (SCERT-HHA) — 18 credit hours
19. Information Systems: CISCO CCNA Exam (SCERT-CISCO) — 14 credit hours
20. Information Systems: CompTIA A+ Exam 1 and 2 Preparation (SCERT-A+2) — 14 credit hours
21. Information Systems: Microsoft Certified Technology Specialist (MCTS) Exam Preparations (SCERT-MCTS) — 20 credit hours
22. Information Systems: Microsoft Office Specialist Exam (SCERT-OIS) — 15 credit hours
23. International Business (SCERT-IBU) — 27 credit hours
24. Light Rail Technology: Railroad Rules and Safety (SCERT-RRS) — 16 credit hours
25. Manufacturing Technology: Metrology (SCERT-MANT) — 18 credit hours
26. Medical Office Specialist (SCERT-MES) — 27 credit hours
27. Nursing Assistant Training (SCERT-CNA) — 10 credit hours
28. Office Information Systems: E-Business (SCERT-EUS) — 27 credit hours
29. Patient Care Technology (SCERT-PCT) — 25 credit hours
30. Phlebotomy Technician (SCERT-PLT) — 22 credit hours
31. Product Development Prototyping: Introduction to Rapid Prototyping (PDP-SCERT) — 24 credit hours
32. Product Development Prototyping: Advanced Rapid Prototyping (PDP-SCERT) — 21 credit hours
33. Renewable Energy (SCERT-RNW) — 25 credit hours
34. Surgical Technology: Accelerated Alternate Delivery (SCERT-SAAD) — 22 credit hours
35. Surgical Technology: Central Service Technician (SCERT-SURT) — 10 credit hours
36. Sustainable Technology Specialist: Alternative Fuels — 10 credit hours
37. Sustainable Technology Specialist: Geothermal Energy — 10-11 credit hours
38. Sustainable Technology Specialist: Renewable Energy — 10-11 credit hours
39. Sustainable Technology Specialist: Sustainable Buildings and Sites — 10 credit hours
40. Sustainable Technology Specialist: Water Environmental Technology — 10 credit hours
41. Welding Technology: Advanced - Level 2 (SCERT-WLTAW) — 29 credit hours
42. Welding Technology: Specialized - Level 3 (SCERT-WLTSW) — 28 credit hours

COMPLIANCE STATEMENTS

EQUAL OPPORTUNITY/ NONDISCRIMINATION POLICY

In compliance with relevant federal and state laws, including Title VI of the Civil Rights Act of 1964, Title IX of the Education Amendments of 1972, Section 504 of the Rehabilitation Act of 1973, the Age Discrimination Act of 1975, the Age Discrimination in Employment Act of 1967, the Vietnam-Era Veterans Readjustment Act of 1974, the Americans for Disabilities Act of 1990, the Elliot-Larsen Civil Rights Act, and the Persons with Disabilities Act, it is the policy of Wayne County Community College District that no person, on the basis of race, color, religion, national origin, age, sex, height, weight, marital status, disability, or political affiliation or belief, shall be discriminated against, excluded from participation in, denied the benefits of, or otherwise be subjected to discrimination in employment or in any program or activity for which it is responsible or for which it receives financial assistance from the U.S. Department of Education.

Questions or concerns regarding the above should be directed to the Equal Employment/Nondiscrimination Coordinator at:

Director of Human Resources
801 W. Fort Street
Detroit, MI 48226
Telephone: (313) 496-2765

SEXUAL HARASSMENT POLICY

Sexual harassment is an infringement on an employee's right to work and a student's right to learn in an environment free from unlawful sexual pressure. It is the policy of Wayne County Community College District to prohibit unlawful sexual harassment of employees and students.

Sexual harassment consists of overt activity of a sexual nature, which has a substantial adverse effect on a person in both the workplace and in the academic setting.It may include, but is not limited to, the following:

1. Demands for sexual favors accompanied by threats concerning an individual's employment or academic status;
2. Demands for sexual favors accompanied by promises of preferential treatment concerning an individual's employment or academic status;
3. Verbal, written or graphic communication of a sexual nature;
4. Patting, pinching, or other unnecessary body contact with another employee or student.

Any employee or student should report, in writing or orally, any and all incidents of such activity. Complaints may be directed to the employee's supervisor or the Director of Human Resources. Student complainants should report, in writing, or orally, any and all incidents to the appropriate Campus Provost.

There will be no retaliation against an employee or student for making a complaint or taking part in the investigation of a complaint under this policy. To the extent it can, the College will keep matters confidential. The Director of Human Resources shall promptly investigate all incidents of sexual harassment and direct a report with recommendations to the Board of Trustees following the report of an employee. The Campus Provost shall promptly investigate all incidents of sexual harassment and direct a report with recommendations to the Vice President for Educational Affairs following the report of a student. Violation of this policy shall subject the offending party to appropriate disciplinary action up to and including discharge from employment.(Policy adopted by the Wayne County Community College District Board of Trustees 03/25/87, revised 03/27/91, 03/25/92)

GRIEVANCE PROCEDURES

If any student believes that Wayne County Community College District or any part of the school organization has not applied the principles and/or regulations of (1) Title VI of the Civil Rights Act of 1964 (2) Title IX of the Education Amendment of 1972; (3) Section 504 of the Rehabilitation Act of 1973, the student may bring forward a complaint, (which shall be referred to as a grievance through this text) to the local Equal Opportunity Compliance Coordinator at the following address:

Director of Human Resources
Wayne County Community College District
Human Resources Department
801 W. Fort Street
Detroit, MI 48226

The appropriate grievance procedures must be followed by the student in order for his/her complaint to be thoroughly reviewed for merit. The full grievance procedure is provided in the Student Handbook, which available online at www.wcccd.edu, or at any campus.

DRUG-FREE WORKPLACE POLICY

Wayne County Community College District will make every reasonable effort to provide a drug-free workplace and environment. The College expressly prohibits the unlawful manufacture, distribution, dispensation, possession, or use of any controlled substance in the workplace. The term "controlled substance" shall mean a controlled substance in schedules I through V, of Section 202 of the Controlled Substance Act (21 U.S.C. 812).

Any individual found to be in violation of this policy is engaged in gross misconduct and subject to disciplinary action, up to and including termination.

All employees will, as a condition of their employment, abide by the terms in this policy. In addition, employees engaged in the performance of a federal grant or contract will notify their supervisor and/or personnel department of any criminal drug statute conviction occurring in the workplace no later than five (5) days after such conviction. (Policy adopted by the Wayne County Community College District Board of Trustees 06/28/89, revised 09/23/92)

SMOKE-FREE WORKPLACE POLICY

Wayne County Community College District and its facilities are smoke-free in compliance with the Dr. Ron Davis Law. (Policy adopted by the Wayne County Community College District Board of Trustees 05/26/93)

WORKPLACE VIOLENCE

It shall be the policy of the Board of Trustees that the College will provide a safe environment for its employees. Threats, threatening behavior, or acts of violence against employees, visitors, guests, or other individuals by anyone on Wayne County Community College District's property will not be tolerated. Violations of this policy will lead to disciplinary action which may include dismissal, arrest and prosecution.

Any person who makes substantial threats, exhibits threatening behavior, or engages in violent acts on Wayne County Community College District property shall be removed from the premises as quickly as safety permits, and shall remain off Wayne County Community College District premise pending the outcome of an investigation. Wayne County Community College District will initiate a decisive and appropriate response. This response may include, but is not limited to, suspension and/or termination of employment, and/or seeking arrest and prosecution of the person or persons involved.

In carrying out this policy, it is essential that all personnel understand that no existing College policy, practice or procedure shall be interpreted to prohibit decisions designed to prevent a threat from being carried out, a violent act from occurring or a life threatening situation from developing.

All College personnel are responsible for notifying the designated management representative of any threats which they have witnessed, received, or have been told that another person has witnessed or received. Even without an actual threat, personnel should also report any behavior they have witnessed which they regard as threatening or violent when that behavior is job-related or might be carried out on a College-controlled site, or is connected to College employment. Employees are responsible for making this report regardless of the relationship behavior between the individuals who initiated the threat or threatening behavior and the person or persons who were threatened or were the focus of the threatening behavior.

This policy also requires all individuals who apply for, or obtain a protective or restraining order which lists College locations as being protected areas, to provide to the designated management representative a copy of the petition and declarations used to seek the order, a copy of any temporary protective or restraining order which is granted, and a copy of any protective or restraining order which is made permanent. The designated management representative for central administration shall be the Director of Human Resources and the Provost for each campus. (approved: 3/27/96)

GRIEVANCE PROCEDURE:

The person who believes he/she has a valid basis for a grievance shall discuss the grievance informally on a verbal basis with the Equal Opportunity Compliance Coordinator, who shall in turn investigate the complaint and reply with an answer to the grievant.

The student may begin formal procedures according to the following steps.

Step 1

A written statement of the grievance signed by the student shall be submitted to the Equal Opportunity Compliance Coordinator written five (5) business days of receipt of the answers to the informal grievance. The coordinator shall further investigate the matters of grievance and reply in writing to the student within five (5) business days.

Any complaint submitted under this procedure shall be filed at Step 1 within twenty (20) business days after the student became aware, or reasonably should have become aware of the complaint. If the complaint is not served within that time, the complaint will not be considered. Failure by the student to appeal the complaint from Step 1 to Step 2 within the time limit procedure shall also nullify the complaint.

Step 2

If the student wishes to appeal the decision of the Equal Opportunity Compliance Coordinator, the student may submit an appeal to the President of the College within five (5) business days after receipt of the Coordinator's response. The president (or his designee) shall meet with all parties involved within (10) ten business days to formulate a conclusion, and response in writing to the student within ten (10) business days.

Step 3

If at this point the grievance has not been satisfactorily settled further appeal may be made to the Office of Civil Rights, Department of Education, Washington, D.C. 20201.

Any complaint submitted under this procedure shall be filed at Step 1 within twenty (20) business days after the student became aware, or reasonably should have become aware of the complaint. If the complaint is not served within that time, the complaint will not be considered. Failure by the student to appeal the complaint from Step 1 to Step 2 within the time limit procedure shall also nullify the complaint.

CLERY ACT

In compliance with the Student Right-to-Know and Campus Security Act enacted Nov. 8, 1990, later formally renamed the Jeanne Clery Disclosure of Campus Security Policy and Campus Crime Statistics Act, and commonly referred to as simply the Clery Act. The Wayne County Community College District Campus Safety Department collects and publishes specific information on campus crime statistics, security policies and services. The WCCCD Campus Safety Department is service-oriented, trained in professional standards and dedicated to the safety and comfort of our students, faculty, staff and visitors. Our primary concern is to protect life and property and to allow the educational process to evolve safely.

All criminal incidents and emergency situations are to be immediately reported to the campus safety officer located at the security station at each of the District's campus facilities. Depending on the nature of the situation, appropriate police authorities will be contacted. Incident reports are prepared and reviewed by District administrative personnel, and, if warranted, further actions are taken as governed by law, employee labor contracts, and student conduct policies. All staff, faculty, students, and visitors are encouraged to report any suspicious persons, activities, events, as well as actual incidents and emergency situations to the District security personnel immediately.

THE FAMILY EDUCTIONAL RIGHTS AND PRIVACY ACT

The Family Educational Rights and Privacy Act of 1974, FERPA is a federal law that states (a) that a written institutional policy must be established and (b) that a statement of adopted procedures covering the privacy rights of students be made available. The law provides that the institution will maintain the confidentiality of student educational/financial records.

WCCCD accords all the rights under the law to students who are declared independent. No one outside the institution shall have access to, nor will the institution disclose, any information from the student's educational/financial records without the written consent of the student except to personnel within the institution, to officials of other institutions in which the student seeks to enroll, to persons or organizations providing the student with financial aid, to accrediting agencies carrying out their accreditation function, to persons in compliance with a judicial order, and to persons in an emergency in order to protect the health or safety of students or other persons. All these exceptions are permitted under the Act.

Within the WCCCD community, only those members, individually or collectively, acting in the student's educational interest are allowed access to student educational records. These members include personnel in the Offices of Admissions and Records, Student Services, and academic personnel within the limitations of their need to know.

At its discretion, the institution may provide Directory Information in accordance with the provisions of the Act to include: student name, address, telephone number, email address, date and place of birth, major field of study, dates of attendance, degrees and awards received, the most recent previous educational agency or institution attended by the student, participation in officially recognized activities and sports, and weight and height of members of athletic teams. Students may withhold Directory Information by notifying the Vice Chancellor of Student Services in writing within two weeks after the first day of class for the semester.

Requests for nondisclosure will be honored by the institution for only one academic year. Therefore, authorization to withhold Directory Information must be filed annually with the Vice Chancellor of Student Services. Forms utilized to make this request are available in the Office of Admissions and Records at all campus locations.

For additional information regarding the Family Education Rights and Privacy Act please visit our website at www.wcccd.edu and reference the Student Handbook.

SOCIAL SECURITY NUMBER PRIVACY ACT

The State of Michigan has recently enacted the Social Security Number Privacy Act that requires all public and private businesses and institutions to enact a policy regarding the protection and disclosure of

social security numbers. In compliance with this law and in furtherance of Wayne County Community College District's commitment to protect the privacy of its students, a Social Security Number Protection Policy has been adopted by the District.

In accordance with this policy, all students should be aware that their social security number will not be publicly displayed with more than four (4) sequential digits, or used as a primary account number by the District. Furthermore, students will not be required to supply their social security number to gain access to any computer system, internet websites or networks administered by the District.

Additionally, in order to avoid inadvertent disclosure, no document will be mailed or electronically transmitted by the District that contains more then four (4) sequential digits of a student's social security number unless required by state or federal law, a court order or under the other conditions expressly stated in the District's Policy. Also as part of its Social Security Number Protection Policy, the District has adopted disposal procedures that require all documents that contain a student's social security number be either eradicated or destroyed.

If students have any questions about this policy, or need clarification on any of the District's procedures concerning social security numbers, please either consult the District's Policy Manual online at www.wcccd.edu or contact the Administration.

STUDENT RIGHTS AND RESPONSIBILITIES

The District publishes a document – the Student Handbook which includes the Student Code of Conduct and expects that every student will become familiar with this information. This document is designed to help you successfully navigate through the educational process at WCCCD and outlines our expectations for student behavior. It is the student's responsibility to become familiar with this publication and refer to it as needed. You may obtain a copy of the Student Handbook on our website at www.wcccd.edu.

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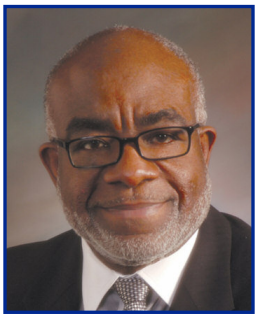

Dr. Curtis L. Ivery
CHANCELLOR

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