



# Wayne County Community College District

## COURSE SYLLABUS

### BRW 240 Recipe Formulation

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**CREDIT HOURS:** 5.00

**CONTACT HOURS:** 75.00

**COURSE DESCRIPTION:**

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.

**PREREQUISITES:** BRW 200

**EXPECTED COMPETENCIES:**

Upon successful completion of the course, the student will:

- Be able to use algebra and dimensional analysis for factor conversions.
- Understand what factor conversions are and how to use them.
- Understand how to do volume analysis and flow rate calculations.
- Be able to perform basic water chemistry calculations.
- Develop an appropriate know-how on accurate record keeping with Malt, Mixing, Mashing, Wort boiling, and Hops calculations.
- Understand yeast-pitching rates.
- Understand the difference of stovetop, batch, and controller-based systems.
- Have a grasp on the layout of the different types of equipment used in each system.
- Understand refrigeration and its uses in brewing.
- Discuss clarification, filtration, and finishing operations.
- Understand various quality control practices, including inspection, material storage, and fermentation cellaring.
- Learn on-site production; line bottling procedures, and packaging operations.
- Discuss and understand safety in the brewery.
- Create a recipe from wort and specific yeast strains.
- Understand the effects of time in each of the brewing stages.
- Understand the effects of different adjuncts along with when they are used.
- Be able to discuss the reasons behind using certain malts, yeasts, water, and hops.
- Be able to calculate bitterness, pH, alcohol, and other concentrations.
- Be able to calculate the amount of raw materials needed.

**ASSESSMENT METHODS:**

Student performance may be assessed by examination, quizzes, case studies, oral conversation, group discussion, oral presentations. The instructor reserves the option to employ one or more of these assessment methods during the course.

**GRADING SCALE:**

90%-100% = A  
80%-89.9% = B  
70%-79.9% = C  
60%-69.9% = D  
<60% = E