FERMENTATION SCIENCE (FRM)

FRM 100 (1 credit hours)
Fundamentals of Fermentation
Introduces students to the fundamentals of fermentation. Emphasizes the minimum stages required to produce a fermented product, basic equipment requirements, organization of equipment and supplies, and the fundamentals of sanitization, boiling, cooling, and bottling. Lecture: 0.5 credits (7.5 contact hours). Laboratory: 0.5 credits (15 contact hours).
Pre-requisite: Students must be 21 years of age.
Attributes: Technical
Components: LAB: Laboratory, LEC: Lecture

FRM 110 (3 credit hours)
Principles of Fermentation Science
Introduces students to the basic methodologies used in fermentation. Emphasizes the production of fermented products including ingredients, fermentation best practices, fermentation management, packaging, and sanitation. Lecture: 2 credits (30 contact hours). Laboratory: 1 credit (30 contact hours).
Pre-requisite: Students must be 21 years of age, and FRM 100 or consent of instructor.
Attributes: Technical
Components: LAB: Laboratory, LEC: Lecture

FRM 120 (4 credit hours)
Brewery Facilities and Operational Management
Introduces the knowledge and skill sets required to successfully commission, maintain, manage, operate, troubleshoot, and repair the specialized equipment and facilities found in commercial breweries with an emphasis on industrial safety. Lecture: 3 credits (45 contact hours). Laboratory: 1 credit (30 contact hours).
Pre-requisite: Students must be 21 years of age & FRM 100.
Attributes: Technical
Components: LAB: Laboratory, LEC: Lecture

FRM 130 (3 credit hours)
Sensory Analysis
Evaluates visual, olfactory, taste, and texture characteristics of beer and its raw ingredients using the five senses. Contextualizes materials used in the formulation of recipes while discerning off-flavors at various steps in the brewing process. Lecture: 2 credits (30 contact hours). Laboratory: 1 credit (30 contact hours).
Pre-requisite: Students must be 21 years of age, FRM 100 & FRM 110.
Attributes: Technical
Components: LAB: Laboratory, LEC: Lecture

FRM 140 (3 credit hours)
Materials Evaluation
Evaluates visual, olfactory, taste, texture characteristics, and scientific analysis of raw materials while contextualizing the materials used in the fermentation process. Lecture: 2 credits (30 contact hours). Laboratory: 1 credit (30 contact hours).
Pre-requisite: Students must be 21 years of age, FRM 100 & FRM 110.
Attributes: Technical
Components: LAB: Laboratory, LEC: Lecture

FRM 150 (3 credit hours)
Recipe Formulation
Prepares students to formulate beers based upon desired profile, character, and style using knowledge acquired from Sensory Analysis (FMR 130) and Materials Evaluation (FRM 140) classes respectively. Pre-requisite or Lecture: 2 credits (30 contact hours). Laboratory: 1 credit (30 contact hours).
Pre-requisite: Students must be 21 years of age, FRM 100 & FRM 110.
Co-requisite: FRM 130 & FRM 140.
Attributes: Technical
Components: LAB: Laboratory, LEC: Lecture

FRM 160 (2 credit hours)
Beverage Packaging
Prepares students in all aspects of packaging of fermented beverages to include kegging, canning, and bottling operations in a brewery. Lecture: 1 credit (15 contact hours). Laboratory: 1 credit (30 contact hours).
Pre-requisite: Students must be 21 years of age, FRM 100 & FRM 110.
Attributes: Technical
Components: LAB: Laboratory, LEC: Lecture