BREW 122 Course Outline as of Fall 2022

CATALOG INFORMATION

Dept and Nbr: BREW 122 Title: APPLIED FERMENTATION SCI

Full Title: Applied Fermentation Science

Last Reviewed: 5/23/2016

Units		Course Hours per Week	ζ.	Nbr of Weeks	Course Hours Total	
Maximum	3.00	Lecture Scheduled	2.00	17.5	Lecture Scheduled	35.00
Minimum	3.00	Lab Scheduled	3.00	8	Lab Scheduled	52.50
		Contact DHR	0		Contact DHR	0
		Contact Total	5.00		Contact Total	87.50
		Non-contact DHR	0		Non-contact DHR	0

Total Out of Class Hours: 70.00 Total Student Learning Hours: 157.50

Title 5 Category: AA Degree Applicable

Grading: Grade or P/NP

Repeatability: 00 - Two Repeats if Grade was D, F, NC, or NP

Also Listed As:

Formerly:

Catalog Description:

Operation of pilot scale and commercial brewhouse to produce various beer styles from lager to stout to barley wine. Brewing will be preceded by a short lecture on each beer style.

Prerequisites/Corequisites:

Course Completion of BREW 100 and BREW 112;

AND Concurrent Enrollment in BREW 120

Recommended Preparation:

Eligibility for ENGL 100 or ESL 100

Limits on Enrollment:

Must be age 18 or older

Schedule of Classes Information:

Description: Operation of pilot scale and commercial brewhouse to produce various beer styles from lager to stout to barley wine. Brewing will be preceded by a short lecture on each beer

style. (Grade or P/NP)

Prerequisites/Corequisites: Course Completion of BREW 100 and BREW 112;

AND Concurrent Enrollment in BREW 120

Recommended: Eligibility for ENGL 100 or ESL 100

Limits on Enrollment: Must be age 18 or older

Transfer Credit:

Repeatability: Two Repeats if Grade was D, F, NC, or NP

ARTICULATION, MAJOR, and CERTIFICATION INFORMATION:

AS Degree: Area Effective: Inactive: CSU GE: Transfer Area Effective: Inactive:

IGETC: Transfer Area Effective: Inactive:

CSU Transfer: Effective: Inactive:

UC Transfer: Effective: Inactive:

CID:

Certificate/Major Applicable:

Certificate Applicable Course

COURSE CONTENT

Student Learning Outcomes:

At the conclusion of this course, the student should be able to:

1. Students will be able to:

Apply knowledge of brewery systems and equipment to produce beer on a commercial scale.

Objectives:

Upon completion of this course, students will be able to:

- 1. Identify different beer styles and their ingredients.
- 2. Operate both pilot and commercial scale brewhouses.

Topics and Scope:

- I. Brewing styles
 - A. Lager
 - B. Pilsner
 - C. Wheat beer
 - D. Lambic
 - E. Fruit beer
 - F. Saison
 - G. Belgian ale
 - H. American pale ale
 - I. English pale ale
 - J. IPA
 - K. Bitter
 - L. Scottish ale
 - M. Porter
 - N. Stout
 - O. Barley wine
- II. Brewing techniques for each style

Assignment:

- 1. Reading in required text, 20 40 pages per week
- 2. Create a manual of standard operation procedures for operating a small brewhouse
- 3. Create a poster organizing different beers by flavor
- 4. Lab Activities:
- a. Problem solving simulation exercises
- b. Demonstrate brewing of different styles of beer
- c. Group evaluation of product
- 7. Midterm and final exam

Methods of Evaluation/Basis of Grade:

Writing: Assessment tools that demonstrate writing skills and/or require students to select, organize and explain ideas in writing.

Manual of standard operation procedures;

Writing 10 - 20%

Problem Solving: Assessment tools, other than exams, that demonstrate competence in computational or non-computational problem solving skills.

Simulation exercises

Problem solving 20 - 40%

Skill Demonstrations: All skill-based and physical demonstrations used for assessment purposes including skill performance exams.

Brewing and evaluation

Skill Demonstrations 20 - 40%

Exams: All forms of formal testing, other than skill performance exams.

Midterm and final exam: multiple choice, true and false, completion

Exams 20 - 40%

Other: Includes any assessment tools that do not logically fit into the above categories.

Poster

Other Category 5 - 10%

Representative Textbooks and Materials:

Designing Great Beers: The Ultimate Guide to Brewing Classic Beer Styles, by Ray Daniels 1st edition (1998) Classic
Instructor prepared materials