

**ORIGINATOR'S SECTION:**

1. College:  CHABSS  CoBA  CoEHHS  CSM  
 Desired Term and Year of Implementation (e.g., Fall 2008): Summer 2017

2. Course is to be considered for G.E.? (If yes, also fill out appropriate GE form\*)  Yes  No

3. Course will be a variable-topics (generic) course?  Yes  No  
 ("generic" is a placeholder for topics)

4. Course abbreviation and Number:\* ENGB 301

5. Title: (Titles using jargon, slang, copyrighted names, trade names, or any non-essential punctuation may not be used.)  
Craft Beer Recipe Development Lab

6. Abbreviated Title for PeopleSoft:  
 (no more than 25 characters, including spaces)  
Craft Beer Lab

7. Number of Units: 1

8. Catalog Description: (Not to exceed 80 words; language should conform to catalog copy. Please consult the catalog for models of style and format; include all necessary information regarding consent for enrollment, pre- and/or corequisites, repeated enrollment, crosslisting, as detailed below. Such information does not count toward the 80-word limit.)  
 Introduces the ingredients and materials needed to brew beer on a small scale. Includes introduction to hops, grain, and yeast and how they are used in the brewing process. Students will learn about the entire brewing process and which ingredients are used at each stage. *Must be 21 or older to enroll.*

9. Why is this course being proposed?  
 This course is one of the core courses of the Engineering™ Certificates of Specialized Study program.

10. Mode of Instruction\*  
 For definitions of the Course Classification Numbers:  
[http://www.csusm.edu/academic\\_programs/curriculumsschedu ling/catalogcurricula/DOCUMENTS/Curricular\\_Forms\\_Tab/Instructional%20Mode%20Conventions.pdf](http://www.csusm.edu/academic_programs/curriculumsschedu ling/catalogcurricula/DOCUMENTS/Curricular_Forms_Tab/Instructional%20Mode%20Conventions.pdf)

Type of Instruction	Number of Credit Units	Instructional Mode (Course Classification Number)
Lecture	1	C-16
Activity		
Lab		

11. Grading Method:\*  
 Normal (N) (Allows Letter Grade +/-, and Credit/No Credit)  
 Normal Plus Report-in-Progress (NP) (Allows Letter Grade +/-, Credit/No Credit, and Report-in-Progress)  
 Credit/No Credit Only (C)  
 Credit/No Credit or Report-in-Progress Only (CP)

12. If the (NP) or (CP) grading system was selected, please explain the need for this grade option.

13. Course Requires Consent for Enrollment?  Yes  No  
 Faculty  Credential Analyst  Dean  Program/Department - Director/Chair

14. Course Can be Taken for Credit More than Once?  Yes  No  
 If yes, how many times? 2 (including first offering)

15. Is Course Crosslisted:  Yes  No  
 If yes, indicate which course \_\_\_\_\_ and check "yes" in item #22 below.

16. Prerequisite(s):  Yes  No

17. Corequisite(s):  Yes  No

18. Documentation attached:  
 Syllabus  Detailed Course Outline

\* If Originator is uncertain of this entry, please consult with Program/Department Director/Chair.



19. If this course has been offered as a topic, please enter topic abbreviation, number, and suffix:\* Not offered as a topic course.

20. How often will this course be offered once established? Twice per year or as demand supports.

**PROGRAM DIRECTOR/CHAIR - COLLEGE CURRICULUM COMMITTEE SECTION:**  
(Mandatory information – all items in this section must be completed.)

21. Does this course fulfill a requirement for any major (i.e., core course or elective for a major, majors in other departments, minors in other departments)?  Yes  No

If yes, please specify:  
Required in the Certificate of Specialized Study in Basic EngiBeering™.

22. Does this course impact other discipline(s)? (If there is any uncertainty as to whether a particular discipline is affected, check "yes" and obtain signature.)  Yes  No

If yes, obtain signature(s). Any objections should be stated in writing and attached to this form.

Discipline \_\_\_\_\_ Support \_\_\_\_\_ Oppose \_\_\_\_\_  
Signature \_\_\_\_\_ Date \_\_\_\_\_

Discipline \_\_\_\_\_ Support \_\_\_\_\_ Oppose \_\_\_\_\_  
Signature \_\_\_\_\_ Date \_\_\_\_\_

**SIGNATURES : (COLLEGE LEVEL) :**

**(UNIVERSITY LEVEL)**

1. Jacqueline A. Trischman 3/3/17  
Originator (please print or type name) Date

JAT 3/3/17

2. Bill Krout 4/18/17  
Program Director/Chair Date

3. MumbDK 4/18/17  
College Curriculum Committee Date

4. \_\_\_\_\_  
College Dean (or Designee) Date

5. \_\_\_\_\_  
UCC Committee Chair Date

6. \_\_\_\_\_  
Vice President for Academic Affairs (or Designee) Date

7. \_\_\_\_\_  
President (or Designee) Date

Tracker ✓

\* If Originator is uncertain of this entry, please consult with Program/Department Director/Chair.

RP \_\_\_\_\_

**Engibeering 301**  
**Craft Beer Recipe Development Lab**  
**1 unit**

Instructor: TBD  
Office Hours: TBD  
Contact info: TBD (email is preferred)

**Course Description:** Introduces the ingredients and materials needed to brew beer on a small scale. Includes introduction to hops, grain, and yeast and how they are used in the brewing process. Students will learn about the entire brewing process and which ingredients are used at each stage.

This is a 1-unit laboratory course that meets three hours per week for the semester, including introductory lectures followed by hands-on brewing of beer.

**Student Learning Objectives:**

By the end of this course, students will be able to:

- Recognize different types of grains and their purpose in brewing
- Describe and demonstrate the Mashing Process
- Differentiate types of hops and their purpose in brewing
- Describe and demonstrate the Boiling Process
- Demonstrate introductory knowledge of yeast as it relates to the Brewing Process, including recognition of when yeast is active or inactive
- Carry out the steps needed in the Fermentation Process
- Identify which ingredients are needed / used in each stage of the Brewing Process
- Estimate the time and temperatures needed at each stage of the Brewing Process
- Demonstrate the Brewing Process in its entirety

**CLASS REQUIREMENTS**

**Attendance and Participation:** Both are expected, and will be assessed with a class sign in sheet and contributions to class discussion. 10% of the grade

**Text:** As a laboratory class, most work will be completed in class with little outside assignments. No text is required, though web addresses of useful material will be provided.

**In-class quizzes (2):** Each quiz will contain 15-30 multiple choice or True/False questions, based on pre-lab lectures.

**Exam (1):** To be given at approximately week 11, this exam will primarily include 50-75 multiple choice questions with some short answer questions. The remainder of the semester will be lab work only followed by a presentation of the recipe and process used to brew a batch of beer.

**Presentation:** Given at the end of the semester over two class periods. Each presentation should be less than 15 mins. During this time, each small group of students should explain the recipe they have developed and demonstrate knowledge of the brewing process, using the brewing equipment provided. The grading rubric will be apportioned as follows:

- Ingredients – 20 pts.
- The Mashing Process – 20 pts.
- The Boiling Process – 20 pts.
- The Fermentation Process – 20 pts.
- Demonstration of knowledge of fluid transfer between each stage – 20 pts.

**Assignments:**

**Classwork** – Class participation will be a vital factor in students' success. Since the majority of this class is hands-on, student punctuality and attendance will be a priority. Participation will be worth 30 pts. at approximately 2 pts. per day.

**Homework** – There will be (3) homework assignments. Each assignment will be worth 30 points. Each homework assignment will be a one page, typed, double spaced, description of the process learned during that lecture, as applied to a certain type of beer brewing. This is designed to reinforce lecture material.

Homework Assignment #1 The Mashing Process

Homework Assignment #2 The Boiling Process

Homework Assignment #3 The Fermentation Process.

**Grading:**

Out of 340 Points

- 2 Quizzes at 35 points each = 70 pts.
- 3 Outside class Homework assignments 30 points each = 90 pts.
- Class participation – 2 pts. per day for 15 days = 30 pts.
- 1 Mid-Term at 50 pts. = 50 pts
- 1 Final Presentation at 100 points = 100 pts.

**Grading Scale:**

306 – 340 = A

272 – 305 = B

238 – 271 = C

204 – 237 = D

<204 = F

## **COURSE POLICIES**

### **Academic Honesty and Integrity:**

Plagiarism includes: (a) quoting another person's actual words or copying a web page verbatim without acknowledgement; (b) paraphrasing another person's words without acknowledgement; (c) using another person's idea, opinion, or theory without acknowledgement; or (d) borrowing of facts, statistics, or other material, unless the information is common knowledge, or (e) copying from another person's exams, homework, quizzes, etc. Consequences will include failing the assignment and/or failing the course at the instructor's discretion. Additional consequences may include, extra work, probation, suspension, or expulsion.

### **ADA:**

Students authorized by the Office of Disabled Student Services (DSS) to receive reasonable accommodations should meet with the instructor during office hours in order to ensure confidentiality. Students with disabilities who require reasonable accommodations must be approved for services by providing appropriate and recent documentation to DSS. This office is located in Craven Hall 5205, and can be contacted by phone at (760) 750-4905, or TTY (760) 750-4909.

### **Phones in Class**

If you need to make a call, answer or send a text for some reason, please step outside of class so you do not distract other students or the instructor.

### **Late work:**

Should there be late work, acceptance will be at the instructor's discretion.

### **Other issues:**

Any other special needs/questions/situations should be directed to the instructor the first week of class. If any other issues arise (because they sometimes do), notify your instructor as soon as possible.

## **COURSE SCHEDULE (Subject to change, especially based on facility where taught)**

**Week 1: Course introduction - What to expect and what experience do students have.**

**Week 2: Grains and The Mashing Process (HW 1)**

**Week 3: Hops and The Boiling Process (HW 2)**

**Week 4: Quiz 1 and Demonstration of Mashing and Boiling**

**Week 5: Yeast and the Fermentation Process**

**Week 6: Recipes – Development and Recordkeeping**

**Week 7: Quiz 2 and Bottling**

**Week 8: Working out Recipes, Planning Group Brewing Projects**

**Week 9: First Set of Groups Begins Brewing, Other Groups Work on HW 3**

**Week 10: Second Set of Groups Begins Brewing, Other Groups Work on HW 3**

**Week 11: Exam**

**Weeks 12-13: Bottling and Assessment**

**Weeks 14-15: Presentations**