



# The University of Suwon

## The Science of Brewing

Fall 2019 - Brett Clark

**Office Location:** International College  
**Email:** brett.suwon@gmail.com  
**Office Hours:** TBA  
**Course Format:** Lecture, Multimedia, Lab

### Course introduction

A course that explores process and science behind the production of beer and other related ethanol products.

This class will be conducted as a 3 hour in-class course with 1 hour of lecture and 2 hours of lab. **Blackboard will be used with this class.**

**Competencies:** specialty / global business / biology / chemistry

### Course objectives

The goal of this course is to give an overview of the technique and biological and chemical processes involved in the creation of beer and related ethanol products as well as its role in society, history, and business.

After the course, students will:

- Understand the process and materials used in brewing
- Understand the biological and chemical processes that take place during brewing
- Understand the differences between types and styles of beers and their history

### Course language

***This course is taught completely in English.*** Students will need to have a good level of English to read and understand the contents and to complete the assignments.

### Course guidelines, requirements and expectations

All students must:

- use the required text/material and download or prepare any other materials required by the teacher
- act respectfully and courteously in class at all times
- place all handphones on **silent** and **do not use them** unless asked to by the teacher
- be on time and be prepared
- attend and participate actively in all classes
- complete all required readings, assignments and exams

## Required texts/materials

*How to Brew* 4<sup>th</sup> ed. by John Palmer

*Brewing Classic Styles* by Zamil Zainasheff and John Palmer

*Yeast: The Practical Guide to Beer Fermentation* by Chris White and Zamil Zainasheff

## Course website

<http://ic.suwon.ac.kr/>

## Course policies

To complete a course, students must attend at least 75% of classes. That is, if students miss a course **more than four times**, they will fail the course.

### **Lateness:**

- 3 times late = 1 absence.

### **Assessment:**

- Assessment will be by class participation, presentations, exams and written essays.
- Cheating is not tolerated and will result in an automatic F.

### **Grading:**

- quizzes (10): 25%
- labs and online discussion participation: 25%
- attendance / attitude / class participation: 25%
- midterm exam: 12.5%
- final exam: 12.5%

**NOTE:** The course will be graded on a curve (relative grading).

## Spring 2019: The Science of Brewing Class Schedule

Date	Topic
Week 1	Introduction and Class Format
Week 2	History of Beer
Week 3	Beer Styles
Week 4	Equipment and Ingredients
Week 5	Overview of the Brewing Process
Week 6	Yeast Microbiology
Week 7	Ingredient Preparation
Week 8	Sanitation
Week 9	Fermentation
Week 10	Bottling and Carbonation
Week 11	Recipe Formulation
Week 12	Production Scaling
Week 13	Advanced Recipes and Techniques
Week 14	Alternative Ethanol Production Methods
Week 15	Conclusion and Debriefing
Week 16	Make-up Week