**BREWING SCIENCE AND OPERATIONS (BREW)**

**BREW 1000 - Brewing Essentials**  
**Credit(s): 3 Credits**  
Brewing Essentials introduces students to the beer brewing process. Through a hands-on approach, students will learn how to brew a five-gallon batch of beer. This course includes brewing theory, brewing terminology, equipment overview, sanitation, raw material selection, malting, wort production, fermentation and bottling.  
**Restrictions:**  
Enrollment limited to students in the Schl for Professional Studies college.  

Students in the Madrid, Spain campus may **not** enroll.

**BREW 1500 - Brewing & Beer Styles**  
**Credit(s): 3 Credits**  
Brewing & Beer Styles provides comprehensive coverage on how to brew beer in a small- to medium-size brewery. Students will learn how to apply science-based brewing principles to brew beer in a scalable brewery. This course includes an overview of the all grain brewing, engineering of brewing systems, sanitation and cleaning systems, malt, hops, yeast, fermentation, recipes development, experimenting and troubleshooting.  
**Prerequisite(s):** BREW 1000  
**Restrictions:**  
Enrollment limited to students in the Schl for Professional Studies college.  

Students in the Madrid, Spain campus may **not** enroll.

**BREW 1750 - Conditioning, Packaging & Distribution**  
**Credit(s): 3 Credits**  
Conditioning, Packaging & Distribution introduces students to the process of getting your beer stabilized and ready for market. This course will teach Brewing Managers about the process around conditioning, handling, processing, packaging, and the service of beer to the customer. This course includes beer conditioning and stabilization, laboratory analysis of beer, labeling and packaging, distribution of beer in bottles, cans, growlers, kegs, tap and point of sale.  
**Prerequisite(s):** BREW 1000  
**Restrictions:**  
Enrollment limited to students in the Schl for Professional Studies college.  

Students in the Madrid, Spain campus may **not** enroll.

**BREW 2000 - Biochemistry of Brewing**  
**Credit(s): 3 Credits**  
Biochemistry of Brewing introduces students to the chemical and biological foundational knowledge needed to successfully brew beer. Students will learn the science behind how starch is broken down into fermentable sugars for brewing. This course includes ingredient analysis, biology of yeast metabolism, biochemistry of fermentation, controlling microbiological threats, principles of sanitation, chemical storage and processing procedures, enzymes interactions, and pH analysis.  
**Prerequisite(s):** BREW 1000  
**Restrictions:**  
Enrollment limited to students in the Schl for Professional Studies college.  

Students in the Madrid, Spain campus may **not** enroll.

**BREW 2500 - Flavor, Quality Control & Eval**  
**Credit(s): 3 Credits**  
Flavor, Quality Control & Sensory Evaluation develops the skills needed to brew great tasting beers! The course correspondingly introduces the chemical and microbiological elements of beer that are associated with aromatic expression and sensory evaluation. This course includes the selection, evaluation and handling of beer ingredients (water, grains, hops, yeast), beer style recipes, aromas, flavors, serving beer and tasting beer.  
**Prerequisite(s):** BREW 1000  
**Restrictions:**  
Enrollment limited to students in the Schl for Professional Studies college.  

Students in the Madrid, Spain campus may **not** enroll.

**BREW 2750 - Brewery Operations and Accounting**  
**Credit(s): 3 Credits**  
Brewery Operations & Accounting introduces students to the different business related components required to start and run a brewery from the quality control and financial perspective. This course includes the legal procedures and policies of a brewery, the development of a limited liability corporation, establishing a network of resources, Federal and State paperwork, daily and tracking/variances, production (scheduling, product mix), branding, distribution, sales and marketing.  
**Prerequisite(s):** BREW 1000  
**Restrictions:**  
Enrollment limited to students in the Schl for Professional Studies college.  

Students in the Madrid, Spain campus may **not** enroll.