Business of Craft Beer 102: Business Operations

The University of Vermont

CDE_BCB102

FACULTY AND COURSE FACILITATOR

Faculty: Pat Greer
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Faculty: Rod Waite
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Faculty: Oralee Corbett
Faculty Contact Information: rod.waite@firstkey.com

This course is designed with three faculty leads: Pat Greer, Rod Waite, and Oralee Corbett, and a number of subject matter experts who offer their wealth of experience.

As faculty co-leads and industry experts, Pat, Rod, and Oralee work with the other experts to review your materials, answer content questions, participate in course discussion, and deliver the online sessions. Pat, Rod, and Oralee are your primary faculty contacts throughout the course.

Course Facilitator, Michelle Jackson

Contact Information: forsterbrewing@gmail.com

As a course facilitator, Michelle, will be your point of contact regarding general class issues, such as, discussion board grades, tech/Bb problems, and other general course questions.

To email Michelle, Pat, Rod, or Oralee directly, use the email link in the Blackboard navigation bar. The course team will strive to answer questions and concerns within twenty-four hours during weekdays. Please note that travel and other commitments may create a delay in response time.
COURSE OVERVIEW

Course Description

In Business Operations, you’ll learn about how the many components of craft brewery operations and supply chain must fit together to build a profitable, efficient, and sustainable business. Students will address key topics such as sourcing and procurement, quality systems, new brewery start-up and capacity planning, forecasting, production planning, inventory, logistics, and environmental sustainability.

UVM has partnered with Ekos Brewmaster, the industry leading software solution for managing the business side of your brewery. Throughout weeks 2-8 of our Operations course, we will integrate the Ekos software into our learning modules, so that you will benefit from using the software in real world case studies. Whether you are looking to be hired by a brewery or start your own brewery, knowledge of how to use Ekos, combined with the practical understanding of brewery operations, will help you to run a more efficient and effective business so that you can be more successful.

Course Objectives

By the end of the course, participants will be able to:

- Demonstrate a broad understanding of craft brewery operations, and how all the steps in the supply chain function together to bring beer to the consumer efficiently and with reliability.
- Outline the overall craft beer production process and the unit operations that must be coordinated to convert raw materials into finished beer, and the pros and cons of different packaging options.
- Describe sourcing and procurement strategies for raw materials, packaging supplies and brewery equipment, and determine best practices for receiving materials into the brewery, including practical ways to verify the quantity and quality of the items being received.
- Describe how orders are fulfilled and beer is shipped from the brewery to the customer, the importance of good information flow from customers back to the brewery, and how to track and schedule returns from the market such as, kegs, pallets and returnable bottles.
- Articulate the importance of making good beer and what systems need to be in place to make this happen reliably, as well as the role of utilities and maintenance and health and safety considerations within a craft brewery.
• Monitor and manage the risks that can occur within a craft brewery operation by examining a number of scenarios relating to materials supplies, production significant disasters, and product quality.

• Articulate the processes and technologies that can make a craft brewery more environmentally sustainable and efficient, and how information technology (IT) systems and standard operating procedures can enable an efficient and stable brewery operation.

• Describe the craft brewery planning processes, along with the time horizons and associated activities at each horizon, and identify key considerations for planning the location, layout and distributor network for a new craft brewery.

• Outline the criteria used to properly size a craft brewery and how to effectively plan for capacity growth in the future, acknowledging the relationship between long term planning and budgeting.

• Determine how to effectively schedule production and outbound finished beer shipments, along with how to manage inventory of raw materials and finished goods.

**Course Duration**

8 Weeks

**Course Flow**

Each module week begins each Friday and goes to the following Thursday night. Each new module will open on Friday at 12:00 am ET.

**Synchronous Sessions**

The class will meet online on **Thursdays at 7:00 pm ET** for one hour. The course meets in [https://uvmcde.adobeconnect.com/business_operations/](https://uvmcde.adobeconnect.com/business_operations/)

**Course Work**

We estimate the student will dedicate at least 8-10 hours a week to course work. This will be a combination of readings, discussion boards, collaborative assignments, etc.
PROGRAM REQUIREMENTS AND GRADING

Program Requirements
This is a non-credit, certificate based, program. At the conclusion of the program students do not receive a letter grade but instead receive a certificate of completion. In order to receive a certificate of completion for the Business of Craft Beer Program, students must successfully complete three Business of Craft Beer courses. Students also have the option of creating a Capstone Project. The Capstone Project takes place following completion of three courses.

Course Grading
All students who earn a 70% or greater will receive a passing grade towards completion of their certificate. Successful completion of this course is determined by the following factors:

- **Peer Review Discussion Boards**: Timely completion and participation in weekly peer review and discussion boards 80%. Students are encouraged to participate every week and are able to pass/miss two weeks without any penalty. Blackboard will automatically drop your lowest two grades. Please notifying the course facilitator if you plan on missing two weeks. There are ten total peer review assignments.

- **Weekly Quizzes**: 20% of your grade is based off of the completion of two of the five module quizzes. You can complete as many of the quizzes as you like and Blackboard will automatically select the two highest grades.

Our goal of dropping your lowest discussion board grades and scoring your two highest quiz grades is to provide you the opportunities to focus on the assignments that are most important to you while balancing your class load. You can complete all of the peer review assignments and quizzes if you choose and Blackboard will automatically score the highest graded assignments.

Late Submissions
Timely participation is an important component of the course, and maximizes both your understanding of the material and the creation of a collaborative learning experience as you offer thoughtful feedback to your peers.

Late submissions will receive the following deductions:
- 1 week late: .25 pts deducted from grade
- 2 weeks late: .5 pts deducted from grade
- 3 weeks late: .75 pts deducted from grade
- 4 weeks late: 1 pt deducted from grade

Feedback on Submissions
The instructors and course facilitators will provide grading and feedback within 7-10 days from an activity's due date.

Discussion Boards
This discussion forum will be an important part of your learning experience. Most students find that participating in discussions helps with the understanding of the course content, and that it also deepens their learning and ability to think critically.

- This course relies on peer review for the submission of assignments. Each week you will be asked to share your assignment in the discussion board and provide at least two pieces of critical feedback and questions on each other's work that grows a conversation around the assigned topics. We are looking for more than positive reinforcement, and “good work” high fives.
- Our main instructors and guest instructors will leave feedback on your work directly in the discussion board.
- Your weekly discussion board grade will be determined by the course facilitator based on the rubric below.
- Your grade will be entered into the system the week after it was assigned. The weekly instructors and course instructors will leave feedback and critiques on your assignment on the discussion board. In this way, everyone can learn from their feedback.
- Please try to have your original post completed by Tuesday, so that your classmates and instructors have time to reply before the week ends on Thursday night.

Each Discussion Board (DB) assignment will be based on the following rubric:

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Master</th>
<th>Adept</th>
<th>Competent</th>
<th>Needs Improvement</th>
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<tbody>
<tr>
<td>Content of original post</td>
<td>6 points</td>
<td>Responds to the assignment in depth, provides insight and application of the week's materials</td>
<td>4 points</td>
<td>Responds to the assignment and provides examples of insight or application</td>
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<td>Content of additional posts</td>
<td>2 points</td>
<td>Includes questions, offers critique, and fosters collaboration</td>
<td>1.5 points</td>
<td>Offers constructive feedback but may not grow the conversation</td>
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<tr>
<td>Quantity</td>
<td>2 points</td>
<td>Submits at least three posts within the timeframe: the original post plus 2 responses</td>
<td>1.5 points</td>
<td>Submits at least two posts within the timeframe: the original plus one response</td>
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**COURSE SCHEDULE**

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<tr>
<th>Module</th>
<th>Dates</th>
<th>Materials</th>
<th>Instructors and Guest Speakers</th>
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<tr>
<td>Brewery Operations and Supply Chain Fundamentals</td>
<td>Week 1: 02/21-03/01</td>
<td>● Course Syllabus  ● Supply Chain Infographic  ● Supply Chain Management presentation  ● Defining Supply Chain Management: A Historical Perspective and Practical Guidelines</td>
<td>Instructor:  Pat Greer  Guests:  Steven Gagner, 14th Star Brewing  Alec Johnson</td>
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<td><strong>Live Session 03/01 at 7:00PM EST</strong></td>
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<tr>
<td>Course</td>
<td>Week</td>
<td>Live Session</td>
<td>Topics</td>
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| Making Craft Beer       | Week 2:    | **03/02-03/08**       | - The Supply Chain Management Processes  
- The Beer Game video  
- Introduction to EKOS-Brewmaster                                                                  | Rod Waite           | Matt Phillips              |
|                         | 03/08 at   | **7:00PM EST**        | - The brewing process, Raw Materials, Packaging and Warehousing  
- Liz L’Etoile – Four Star Farms interview  
- Lamplighter Brewery interview  
- Additional readings and links in the course materials.  
- Students set-up their brewery in EKOS                                                                  |                     |                            |
|                         | Live Session | **03/08 at 7:00PM EST** |                                                                                                                                         |                     |                            |
| Long Term Planning -   | Week 3:    | **03/09-03/15**       | - A Brewer's View on a Modern Brewhouse Project  
- Long Term Planning presentation  
- Additional readings and links in the course materials.  
- EKOS – Assignment                                                                  | Rod Waite           | Mark Benzaquen             |
| Building a Craft Brewery, Considerations, Location, Sizing, and Capacity | 03/15 at | **7:00PM EST**        |                                                                                                                                         |                     |                            |
|                         | Live Session | **03/15 at 7:00PM EST** |                                                                                                                                         |                     |                            |
| Sourcing and Procurement of Materials | Week 4:    | **03/16-03/22**       | - Screamin' Hill Brewery interview  
- Four Star Farms interview  
- Sample Bill of Materials  
- Total Landed Costs  
- Additional readings and links in the course materials.  
- EKOS – Assignment                                                                  | Pat Greer           | Brett Bullock, Screamin' Hill Brewing  
Liz L’Etoile, Four Star Farms |
| Maintenance, Utilities, and Environmental Sustainability | Week 5:    | **03/23-03/29**       | - Maintenance and Utilities  
- Sustainability  
- Q&A Blog: Environmental Sustainability at The Alchemist with Jen Kimmich                                                                  | Rod Waite           | Matt Quinlan               |
|                         | Live Session |                                                                 |                                                                                                                                         |                     |                            |
| **Mid- and Short-Term Planning and Scheduling** | **03/29 at 7:00PM EST** | • Case Study: Water Usage at Long Trail with Matt Quinlan  
• Additional readings and links in the course materials  
• Course wrap-up/Capstone Project instructions | Long Trail Brewing |
|---|---|---|---|
| **Week 6: 03/30-04/05**  
**Live Session 04/05 at 7:00PM EST** | • Production Planning and Scheduling  
• Human Resources & Staffing  
• Key Performance Indicators and Performance Measures  
• EKOS- Assignment | Instructor:  
• Pat Greer  
Guest:  
• Rich Ackerman, Harpoon Brewing |
| **Quality** | **Week 7: 04/06-04/12**  
**Live Session 04/12 at 7:00PM EST** | • Quality management system  
• Policies and roles that support quality  
• Good laboratory practices  
• Developing a quality program  
• Troubleshooting issues and quality auditing  
• Readings and links are in the course materials  
• EKOS - Assignment | Instructor:  
• Oralee Corbett  
Guest:  
• Adam Beauchamp, Creature Comforts Brewing |
| **Demand Management - Forecasting, Inventory: Receiving and Shipping** | **Week 8: 04/13-04/19**  
**Live Session 04/19 at 7:00PM EST** | • Methods of Demand Forecasting  
• Trend Projections Method  
• Steps in Demand Forecasting  
• Demand Forecasting  
• Sales Forecasting  
• The Near Beer Game  
• Additional readings and links in the course materials.  
• EKOS – Assignment | Instructor:  
• Pat Greer  
Guest:  
• Matt McComish, Highland Brewing |

**Student Learning Accommodations:** In keeping with University policy, any student with a documented disability interested in utilizing accommodations should contact ACCESS, the office of Disability Services on campus. ACCESS works with students and faculty in an interactive process to explore reasonable and appropriate
accommodations via an accommodation letter to faculty with approved accommodations as early as possible each semester. All students are strongly encouraged to meet with their faculty to discuss the accommodations they plan to use in each course.

Contact ACCESS: A170 Living/Learning Center; 802-656-7753; access@uvm.edu; www.uvm.edu/access

UVM’s policy on disability certification and student support: www.uvm.edu/~uvmppg/ppg/student/disability.pdf

Religious Holidays: Students have the right to practice the religion of their choice. If you need to miss class to observe a religious holiday, please submit the dates of your absence to me in writing by the end of the second full week of classes. You will be permitted to make up work within a mutually agreed-upon time.


Grade Appeals: If you would like to contest a grade, please follow the procedures outlined in this policy: http://www.uvm.edu/~uvmppg/ppg/student/gradeappeals.pdf

Grading: For information on grading and GPA calculation, go to www.uvm.edu/academics/catalogue and click on Policies for an A-Z listing.


FERPA Rights Disclosure: The purpose of this policy is to communicate the rights of students regarding access to, and privacy of their student educational records as provided for in the Family Educational Rights and Privacy Act (FERPA) of 1974. http://www.uvm.edu/~uvmppg/ppg/student/ferpa.pdf