

Course Syllabus
FS 575 Food Quality Management, 3 cr
Fall 2017

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Course Website:
<https://bblearn.uidaho.edu>
Office hours: By appointment (in person)
 or Facebook, TBD

Recommended Course Pre-requisites: STAT 251, FS 302/303 or equivalent

Course Description:

It's much more difficult to make sure 12,000 hamburgers are both safe to eat and still taste great than it is to make sure 12 hamburgers are safe and tasty. This is why quality control is so important in the food industry. In this course, we'll learn about the quality management programs that are used by many industries to maintain and improve the quality of their products and services. We'll also learn how to use statistical tools to monitor and assess quality. These are the same programs and tools used by food companies to monitor food quality, so the information in this course is great to have if you're interested in a career in the food industry.

Student Learning Goals Table

At the end of this course, students should be able to:		Course topics (&dates) that advance these learning goals:	This objective will be assessed primarily by:
LO1	Identify the function and importance of quality control/assurance to food and bioprocessing operations.	All, main focus Weeks 1 and 2	Discussions, case studies, homework assignments, quizzes, exams, group project
LO2	Discuss the basic principles of quality management programs and how they are applied in industrial settings.	All	Discussions, case studies, homework assignments, quizzes, exams, group project
LO3	Apply statistical quality techniques for maintaining safety and quality in food and bioprocessing materials and products.	All, main focus Week 3 and later	Discussions, case studies, homework assignments, quizzes, exams, group project
LO4	Analyze statistical data using statistical analysis software (QIMacros) and interpret the output in terms of quality management.	All, main focus Weeks 10-13	Discussions, case studies, homework assignments, quizzes, exams, group project

Recommended Textbook:

Statistical Process Control by John S. Oakland (ISBN 978-0750669627)
 This book is available at the campus bookstore, and on Amazon.com and Barnes&Noble.com.

Website: <https://bblearn.uidaho.edu>

Course Structure:

This course is a distance education course. All of the course material will be available on the course website. Content will be available from the day the website is open to the end of finals week. There are assignments due each week. You may work through each content block and the associated assignments faster than the course requires, but keep in mind working too far ahead may prevent you from completing assignments that require other students' input to finish. Assignments include discussion posts, case study write-ups homework problems, and quizzes. Since this course is fully online, you will need a stable internet connection and a computer to access the course and submit assignments.

This course includes a course project. The course projects are individual, but you will be divided into project teams of 3-5 members. Each member must provide constructive criticism and feedback on the other member's projects as part of a peer-review process. Broad course project expectations are reviewed in the Grade Determination section of this syllabus, and full project details are given on the Course Project page on Blackboard.

Facebook Group: Food Quality Management

Food Quality Management has a closed Facebook group and only students enrolled in the course may participate. The Facebook group was made for the sole purpose of helping the instructor and students connect on a platform that is relevant to current times. This is an open forum for all students to discuss topics and to ask the instructor questions. The instructor will use the group to post reminders of major course events (for example, assignments, quizzes, exams). You will be removed from the group after final course grades have been posted.

Participation is highly recommended, but not required; declining to participate will not impact your course grade in any way. The group will not appear in Facebook search results until there are at least 10 members. To locate the group please go to the following URL:

<https://www.facebook.com/groups/1625576234140943/>

You must request to join this group. If you request to join the group using a name other than the name that appears on the course roster you will not be added to the group until you communicate this difference with the instructor. You may create a second Facebook account to participate in the group if you do not want to use your primary account.

Please be kind and respectful when posting. All posts deemed offensive will be promptly removed. Bad language will not be tolerated.

Assignment Submission:

All assignments must be submitted through Blackboard. *Please do not turn in hard copies or email assignments to the instructor; you will receive an email stating that your submission will not count unless it is uploaded on Blackboard.* Upload links are provided for each assignment. An explanation of how to use the links is available on the course main page. More detailed instructions are provided in the Blackboard Help files.

You are expected to submit assignments on time. Valid University of Idaho excused absences (e.g. severe illness) are acceptable reasons to submit an assignment late without penalty, provided you submit the appropriate documentation to the instructor. Poor/no

Assignment Submission (continued):

internet connections and busy schedules are not valid excuses for late submission. Bblearn outages are also not valid excuses, as the dates for these outages are posted ahead of time. Please plan accordingly when completing your assignments.

Note that submitting an assignment online is just like turning in a hard copy to the instructor. Once you click "submit", your assignment has been turned in. If you forget to upload a file or upload the wrong file, please contact the instructor BEFORE the assignment is due to have your submission reset. You have three reset opportunities per semester. Once you use up your resets, you will not be able change your submitted files.

When you submit assignments, please make sure every file you submit has your name and a clear title stating what the homework is. For example, "HJoyner Bottle Weight Control Chart" and "JoynerDEFINEVideo" are good titles; "HW6", "ControlChart", and "Workbook1" are not good titles. You need to name your files in this manner so that the instructor can easily tell who submitted what file and what the contents of the file are. If you do not title your files appropriately, a 5% penalty will be given.

There are several ways to turn a physical copy of an assignment into an electronic copy. Instructions for doing so are posted on the course website. Please note that if you do not consolidate your files as much as possible (for example, uploading 8 scanned pages as 8 jpgs instead of putting the images into a single pdf or Word file), a 5% penalty will be given. Also, please make sure any scanned or imported images are clearly legible. If the instructor cannot read your work, you will not receive credit for it.

Grade Determination:

Assessment	Total Possible Points	Points to Letter Grade
Three Midterms (200 points each)	600	A= 1800 - 2000 pts
Comprehensive Final (optional)	400	B= 1600 - 1799 pts
Discussions/Homework	400	C= 1400 - 1599 pts
Course project	600	D= 1200 - 1399 pts
		F= <1400 pts
		(extra credit earns additional points)
Total Points:	2000	

Midterms and Final Exam:

The midterms and final exam are open resource. You may use any resource you like (e.g. text, notes, internet, calculator) to complete the exams. The exam files will be uploaded to Blackboard and you will have several days to complete the exam and upload your work through the provided submission link.

The final exam is optional. If you choose to not take the final exam, your three midterm scores will be averaged, scaled to be out of 400 points, and used as your final exam score. If you do choose to take the final exam, your final exam score will be the higher of 1. the scaled average of your three midterm scores and 2. your final exam score.

Midterm Corrections for Credit:

Each midterm will be graded twice. On the first grading, answers will be marked as right or wrong with no partial credit awarded. Students will have the opportunity to regain points missed during the second grading by resubmitting corrected solutions to the instructor no later than one (1) week after the graded midterms are returned. Credit awarded for correct

Grade Determination (continued):

Midterm Corrections for Credit (continued):

resubmissions will not exceed 50% of the points originally assigned to the problem for a conceptual error and 75% of the points originally assigned to the problem for a calculation error. To obtain maximum points for a missed problem, the error must be identified and classified (conceptual, mathematical, etc.). The problem must be fully reworked/rewritten with the correct solution clearly identified. The final score on the midterm will be the initial score plus the number of points earned back from the corrections, or the score after the second grading.

The opportunity to make up points will not be offered for quizzes, homework, and the final exam. These assessments will have partial credit and will be graded only once.

Discussions/Homework:

Homework assignments may include posting answers to assigned questions on Facebook, creation of figures or graphs, calculation problems, case study questions, or other assignment related to the course. Upload links will be available for each homework assignment. A list of what is due will be provided on Blackboard, although you, the student, have primary responsibility for remembering what is due on what date.

Lecture Assignments:

You are expected to review the assigned lecture material prior to attempting the homework problems or engaging in discussion about the material. Please post any questions you have on the lecture content on the course Facebook page. The instructor will check the page on a regular basis for questions. Students are encouraged to answer each other's questions.

Course Project:

The course project is intended to give you experience using the Six Sigma method for identifying and correcting quality problems. There are two options for the course project:

Option 1: You may select an aspect of your life that you would like to improve (e.g., exercising more, being on time to class/meetings, or reducing sarcastic statements)

Option 2: You may work with a company on an improvement project for a process or product they have. *If you select this option you must have your project approved by the company before starting the project.*

Regardless of which option you choose, your project must be approved by the instructor.

The course projects are individual, although you will be working in groups to receive peer feedback throughout the project process. Several oral and written reports on project progress will be required. A final project report and presentation is due at the end of the semester before the final exam. Guidelines for the report and presentation formats will be

Course Project (continued):

given along with the project instructions. A rubric for each project peer-review will also be given. Both your project group and the instructor will grade your oral and written reports, and your overall grade for each report will be a combination of peer and instructor grades. Your final grade for the group project will be a combination of oral and written report grades. More information on the details of the grading will be included with the grading rubrics.

Grade Determination (continued):

Late Submission and Make-up Policy:

Unless otherwise stated, assignments will be due at 11:59 PM one calendar week from the date of announcement or distribution. Late assignments will be accepted at a cost of 20% off the grade per each late day. Therefore, if an assignment is one (1) day late, the highest attainable grade will be 80%. Assignments missed due to a valid University excuse will not be considered late, provided that proper documentation of the reason the assignment was missed is submitted with the assignment.

Make-up of missed exams is contingent on making arrangements prior to the exam.

Student must notify instructor of any unforeseen circumstance resulting in a missed exam at least 24 hours before the exam. The type of make-up exam will be oral, essay, or a combination of the two and must be completed within one week of scheduled exam time.

Calculator:

A scientific calculator capable of natural logarithms is required for the homework, quizzes and exams. You may use a calculator, computer software, or any other device capable of performing these calculations to complete coursework.

Washington State University Campus Safety:

Classroom and campus safety are of paramount importance at Washington State University, and are the shared responsibility of the entire campus population. WSU urges students to follow the “**Alert, Assess, Act**” protocol for all types of emergencies and the “[Run, Hide, Fight](#)” response for an active shooter incident. Remain **ALERT** (through direct observation or emergency notification), **ASSESS** your specific situation, and **ACT** in the most appropriate way to assure your own safety (and the safety of others if you are able).

Please sign up for emergency alerts on your account at [MyWSU](#). For more information on this subject, campus safety, and related topics, please view the [FBI's Run, Hide, Fight video](#) and visit the [WSU safety portal](#).

Statement of Firearm Regulations:

The University of Idaho bans firearms from its property with only limited exceptions. One exception applies to persons who hold a valid Idaho enhanced concealed carry license, provided those firearms remain concealed at all times. If an enhanced concealed carry license holder's firearm is displayed, other than in necessary self-defense, it is a violation of University policy. Please contact local law enforcement (call 911) to report firearms on University property.

Students With Disabilities:

WSU: Reasonable accommodations are available in online classes for students with a documented disability. All accommodations must be approved through your WSU Disability Services office. If you have a disability and need accommodations, we recommend you begin the process as soon as possible. For more information contact a Disability Specialist by phone (509-335-3417), online (<http://accesscenter.wsu.edu>), or by email (access.center@wsu.edu).

UI: Reasonable accommodations are available for students who have documented temporary or permanent disabilities. All accommodations must be approved through Disability Support Services located in the Idaho Commons Building, Room 306 in order to notify your instructor(s) as soon as possible regarding accommodation(s) needed for the course. Phone: 208-885-6307; email: dss@uidaho.edu; website: www.uidaho.edu/dss

Academic Honesty:

Students who violate WSU's or UI's Standards of Conduct for Students will receive an F as a final grade in this course, will not have the option to withdraw from the course and will be reported to the Office of Student Standards and Accountability. Cheating is defined in the Standards for Student Conduct WAC 504-26-010 (3). It is strongly suggested that you read and understand these standards: <http://conduct.wsu.edu/default.asp?PageID=338>.

Plagiarism:

Plagiarism is defined by Webster's Dictionary as, "*to steal and pass off the ideas or words of another as one's own.*" There are two general forms of plagiarism:

- (a) Unintentional: the use of other writers' words, phrases, sentences, paragraphs as though they were your own *without understanding* the need to cite the original source. Unintentional plagiarism normally occurs when the individual does not understand the conventions of scientific writing and the need to cite sources of information.
- (b) Intentional: the use of another writers' work and claiming it as your own. Intentional plagiarism includes *knowingly copying* or incorporating sections of books, articles, or other sources into your work without citation.

To evade plagiarism, you must acknowledge the source of information. In scientific writing, this can be performed in the text of your work through the use of surnames of authors and the year of publication (e.g., Smith et al., 2003) or by using numbers enclosed by parentheses, which correspond to specific citations in the reference section. In addition to employing citations in the text, plagiarism can be avoided by applying special techniques when writing about information obtained from a source:

- (a) Paraphrase: rewording information in which you accurately present the main ideas from the source but do so using your own organization, words, and sentence structures.
- (b) Summary: a concise statement of the main idea from a section within a source.
- (c) Direct quotation: use of quotes surrounding the passage written by another author.

In general, paraphrasing (a) and the use of summary statements (b) are very common techniques used in scientific writing. Use of quotations (c) in scientific writing is rare and should be avoided.

Plagiarism is dishonest and is **not** tolerated. If caught using all or portions of a current or former classmate's writing or other sources of information (e.g., purchase a paper), a grade of "zero" will be given for the exercise. Additional penalties for plagiarism are possible as outlined in the *Washington State University Student Handbook*.

Course Content and Fundamental Course Concept and Questions

This course focuses on quality management principles and programs used in the food and bioprocessing industries. Quality is a major concern in these industries, as a lack of quality can not only result in a loss of money, but loss of life.

Fundamental course concepts are the main themes underlying the course. All of the material can be related back to this concept. Fundamental course questions are related to the fundamental concept. Learning the information provided in the course should provide the needed information to answer these questions.

The fundamental course concept in this course is *continuous improvement*. This is the goal of every quality management program. Nothing is ever perfect; there is always a way to make a product or service better.

There are two fundamental questions in this course:

1. *How can we tell a product, process, or service needs improvement?*
2. *How do we know the change(s) we made resulted in improvement?*

These questions will be answered by the material covered in the course. The fundamental concept and questions appear in the Course Outline below so you can match the questions with the course content.

Course Outline (may be adjusted to include/exclude topics as time allows)

Week	Date	Topic	Major Assignments
<i>Fundamental Course Concept: Continuous Improvement</i>			
<i>Fundamental Question 1: How can we tell a product, process, or service needs improvement?</i>			
DEFINE Phase			
1	August 21-27	Course intro; Introduction to quality	
2	August 28-September 3	Six Sigma and other quality management programs	Project Topics Due (Aug. 31)
3	September 4-10	Data collection, project management	DEFINE Phase Oral Report Due (Sept. 4) DEFINE Phase Written Report Due (Sept. 10)
MEASURE Phase			
4	September 11-17	Statistics used in quality management: basic concepts, histograms	
5	September 18-24	Statistics used in quality management: probability, and sampling Statistical Process Control tools: sampling plans	Midterm #1 (Sept. 24)
6	September 25-October 1	Statistical Process Control tools: sampling plans	
7	October 2-8	Statistical Process Control tools: control charts for variables and attributes	
8	October 9-15	Statistical Process Control tools: control charts for attributes	MEASURE Phase Oral Report (Oct. 9) MEASURE Phase Written Report (Oct. 15)

<i>Fundamental Question 2: How can we tell the change(s) we made resulted in improvement?</i>			
ANALYZE/IMPROVE Phase			
9	October 16-22	Statistical Process Control tools: quality rating systems Root cause analysis	
10	October 23- October 29	Failure Mode and Effect Analysis, risk assessment	Midterm #2 (Oct. 29)
11	October 30- November 5	Statistics used in quality management: normality, hypothesis testing	
12	November 6-12	Statistics used in quality management: one- and two-factor ANOVA	
13	November 13-19	Statistics used in quality management: variable control charts analysis and revision	
14	November 20-26	Fall Break, no class	
15	November 27- December 3	Synthesis of course material: troubleshooting process issues	ANALYZE/IMPROVE Phase Oral Report (Nov. 27) ANALYZE/IMPROVE Phase Written Report (Dec. 3) Midterm #3 (Dec. 3)
16	December 4-10	Course wrap-up Project presentations	Final Project Presentation (Dec. 10)
		Comprehensive Final Exam (Optional)	Final Project Written Report and Final Exam (Dec. 15)

Exams may include some additional topics from lecture, handouts and/or reading material that may not be covered in the book.

I have read through the FS 575 (Food Quality Management) Fall 2017 syllabus in its entirety and I understand the expectations and policies for this course.

Printed name

Signature Date