

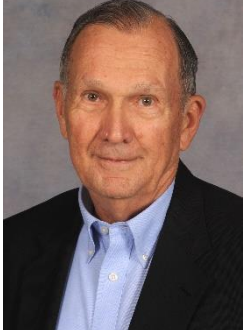
FOOD SCIENCE & TECHNOLOGY –Autumn '18 Semester Syllabus

FST 5330 - ESSENTIALS of FOOD PLANT OPERATION

(FOOD INDUSTRY OPERATIONS)

M/W 1:50 – 2:45 Room Parker 118

FACULTY

	RON HARRIS	
	EMAIL	harris.568@osu.edu , HiYoRon@aol.com
	OFFICE LOCATION	211 Parker
	614-246-0438 OFFICE HOURS	M/W after class until 14:30, T 3:00 – 4:00, and by appointment

BIOGRAPHY

Ron Harris is an Adjunct Professor in Food Science & Technology, and has been at Ohio State since 1997. In Food Science & Technology, he teaches Essentials of Food Plant Management and New Product development. He also gives lectures in food processing differences and business ethics in the Chemical Engineering Department. In the Fisher College of Business, he had taught Operations Management, Statistics and Decision Sciences. He has also established an endowed Lectureship intended to increase the stature, academic reputation and scientific excellence of the FS&T department.

Before coming to Ohio State, Ron was the Executive Vice President for Research and Development for Nabisco, Vice President of Technology for Kraft USA, Vice President of R&D and Quality for Anderson Clayton Foods before its acquisition by Kraft, Director of R&D for Clorox and a group leader at Procter & Gamble. He is a Fellow of the Institute of Food Technologists. He was named a Distinguished Graduate and given a Meritorious Service to Students award by the College of Engineering. He was also given a Meritorious Service award by the CFAES.

Ron has B.Ch.E and M.Sc. degrees in chemical engineering from Ohio State and an MBA from the University of Cincinnati.

David Calvin

Director – Quality and Food Safety
Starkist Company

david.calvin@starkist.com



David Calvin is Director – Quality and Food Safety at Starkist. His responsibilities include Quality Risk Management, Quality System implementation, Food Safety, and Seafood HACCP Compliance.

David joined Starkist in 2014 and has over 28 years of quality and operational experience in the food industry. Prior to joining Starkist, he has held management positions with Heinz, Gerber, Stella Foods, Vlasic Foods, and Campbell Soup Company.

David is an active member of National Fisheries Institute Tuna Council, International Association of Food Protection, American Society of Quality, and the Association of Food and Drug Officials. David is also an advisor to the Ohio State University Food Science department as well as a guest lecturer on statistical process control.

David received a Bachelor Science degree in Food Technology from The Ohio State University in 1986.


Prerequisite: Basic Statistics

References:

1. ***Operations Management: Processes and Supply Chains, 11th Edition:***
Krajewski, Ritzman & Malhotra, 3 options:
 - a. Hardbound text (ISBN 9780134110202)
 - b. Binder-ready text (ISBN 97801134111056)
 - c. E-book (ISBN 9780133885583)

Purchase Option: The Less Expensive Option – Direct from Pearson, the Publisher

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Students might wish to buy the MyOMLab Access + a three ring binder version of the textbook.

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 - Click Course Home
 - Click Textbook Purchase Option

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You will now be given the option to the binder version of the text book for an additional \$60.00.

3. Power Point Discussions from Instructors (on Carmen)

COURSE LEARNING ENVIRONMENT

FST 5330 is designed to “flip the classroom” to maximize active learning. Active learning engages students in the sharing of knowledge and the demonstration of acquired understanding of knowledge.

What Happens in the Classroom?

You are required to have carefully read and acquired basic understanding of factual materials from assigned textbook readings before coming to a class session. There will be Power Points. Class time will, in addition, be devoted to learning through:

- Discussions about video materials
- Analyses of business cases
- Working problems
- Hands-on simulations

1. COURSE OBJECTIVES

Students completing the course should:

1. Understand the primary responsibilities of a food plant manager required in the operation of a modern food product, food service or restaurant operation.
2. Know the role of operations (purchasing, manufacturing and distribution) in a food or agribusiness company.
3. Have been exposed to the basics of process design and analysis, production planning, forecasting and scheduling, capacity decisions, project management, inventory management, and financial analysis..

2. TOPIC OUTLINE:

Session	Day	Date	In-class Topics	Assignment
1	W	22 Aug	Course Administration <ul style="list-style-type: none"> • Syllabus • MyOMLab • Team Formation • Introductions 	
2	M	27 Aug	VIDEOS – What is Supply Chain Management, Manufacturing	Complete team formation Complete enrollment in MyOMLab
3	W	29 Aug	Roles and Responsibilities of a Food Plant Manager VIDEO – Cadbury Operations and Supply Chain Strategy	Read KRM Ch1, p.1-22 before class
	M	3 Sep	NO CLASS – LABOR DAY	
4	W	6 Sep	Using Operations to Create Value <ul style="list-style-type: none"> • Value Chain • Strategy • Competitive Priorities VIDEO – Noodles and Company	Read KRM Chap 2, p.1-16 Case 1: Pizza Wars Come to Campus. (Due 10 Sep) On-line QUIZ 1 –Chap 1 (Due before class)
5	M	10 Sep	Review Pizza Wars Case Productivity PROBLEM DEMO_- KRM -1 Prob 7 (P 26)	On-line Homework 1: Prob 1.5 (p 25. Due 12 Sep)
6	M	12 Sep	Decision Making Break-even analysis	Read KRM Supplement A, p. 29-33 before class On-line Homework 2: Prob A.8 (p 44. Due 17 Sep)

7	M	17 Sep	<p>Process Strategy and Analysis</p> <p>Process Design</p> <p>VIDEO – King Soopers</p>	<p>Read KRM Ch 2, p.49-64 before class</p> <p>On-line QUIZ 2- Chap 2 (Due before class)</p>
8	W	19 Sep	<p>Process Strategy and Analysis (cont)</p> <p>Data Analysis Tools</p> <p>Total Quality Management</p>	<p>Read KRM Chap 2, p.70-82</p> <p>Read KRM Chap 3,p.95-102</p> <p>Simulation – Quality (Due 24 Sep)</p> <p>Case 2: Jose’s Authentic Mexican Restaurant (p.94 Due 24 Sep)</p> <p>On-line QUIZ 3 – Chap 4 (Due before class)</p>
9	M	24 Sep	<p>Review Jose’s Authentic Mexican Restaurant</p> <p>Process & Quality Management – Statistical Quality Control; Six Sigma</p> <p>Guest Lecturer: David Calvin, Director, Starkist</p>	<p>Read KRM Ch 3, p. 103 – 114 before class</p> <p>Individual Homework: StarKist Example (handout)(Due 26 Sep)</p> <p>On-line Quiz 4 – Chap 3 (Due before class)</p>
10	W	26 Sep	<p>Process & Quality Management</p> <p>Guest Lecturer: David Calvin</p>	<p>Case 3: Handout Optimum Fill Weight Case (Due 1 Oct)</p>
11	M	1 Oct	<p>Process Capability</p> <p>In class Exercise : M&Ms</p>	<p>Read KRL Ch 3,p 114 – 118 before class</p> <p>On-line Homework 3: Prob 3.24 p 129 (Due 3 Oct)</p>

12	W	3 Oct	Discuss Case 3. Capacity & Constraint Management	On-line Homework 4: Prob 4.9 (p 152 Due 8 Oct)
13	M	8 Oct	Capacity & Constraint Management (Cont) VIDEO – The Goal	Read KRM Ch 4 p.135-144, 148-149 before class Read KRM Ch 5 p.177-180 before calass On-line QUIZ 5 - Chap 4 (Due before class)
14	W	10 Oct	IN-CLASS TEST 1 (S1-13)	
15	M	15 Oct	Lean Enterprise Video – Lean Production Skit	Read KRM Ch 6, p. 207 - 218 before class On-line QUIZ 6 – Chap 6 (Due before class)
16	W	17 Oct	Value Stream Mapping Current State	Case 4. Yummy Good Future State (Due 22 Oct)
17	M	22 Oct	Value Stream Mapping Review Yummy Good Futuer State Future State	On-line Homework 5: (Prob 6.4 (p.231, Due 24 Oct)
18	W	24 Oct	Project Management	Read KRM Ch 7 , p 237-247 before class On-line QUIZ 7 – Chap 7 (due before class)
19	M	29 Oct	Procject Management (Continued)	On-line Homework 6: Prob 7.1 (p 264 Due 5 Nov)
20	W	31 Oct	Forecasting	Read KRM CH 8, p.275-288 before class On-line Homework 7: Prob 8.6 (p.307 Due 26 Nov) Simulation – Forecasting (Due before class) On-ine Quiz 8 – Chap 8 (due before class)
21	M	5 Nov	IN-CLASS TEST 2 (S15-20)	

22	W	7 Nov	Financial Analysis- Income Statements, Balance Sheets, Budgets, Calculations-=: break even, payback, Internal rate of return In-class hand out exercise: Puzzle Co	Case 5. Hand out Warm Delights Case. (Due 24 Nov)
23	M	12 Nov	Inventory Management	Read KRM Ch 9, p 317 - 326 before class On-line Homework 8: Prob 9.7 (p 349 Due 14 Nov) On-line QUIZ 9 – p317-326 (Due before class)
24	W	14 Nov	Inventory Management (Cont)	Read KRM Ch 9, p 327 - 348 before class Simulation – Inventory (Due before class) On-line Homework 9: Prob. 9.15 (p351 Due 19 Nov) On-line QUIZ 10 – p 327-348 (Due before class)
25	M	19 Nov	Planning and Scheduling Workforce Strategies	Read KRM CH 10, p 373-380
	W	21 Nov	NO CLASS – THANKSGIVING BREAK	
26	M	26 Nov	Supply Chain Management VIDEO: Clif Bar- Supply chain	Read KRM Ch 12, p.483 - 490, 491 -502 before class (Skip financial measures) Simulation – Supply Chain Management (Due 28 Nov) On-line Homework 10: Prob. 12.5 (p 503 due 28 Nov)

27	W	28 Nov	Supply Chain Management (Continued)	On-line QUIZ 11 – Chap 12, 14 (Due before class) Read KRM Ch 14, p. 543 – 547, 550 - 554 before class On-line Homework 11: Prob. 14.3 (p 570 due 3 Dec)
28	M	3 Dec	Course Review	
29	W	5 Dec	IN-CLASS TEST 3 (S21-28)	

3. HOMEWORK and QUIZZES: Homework and quizzes will be taken on-line through MyOMLab. The homework problems (11) are to be completed before the beginning of the next class meeting after they are assigned. There is only one problem. You get three tries. Text book assignments are to be read before the each class discussion. The quizzes are intended to insure that you read the material. The quizzes (11) are untimed and open-book and are to be completed just before the class for which they are assigned. There are 5 qualitative and multiple choice questions. You only get one try for quizzes.

4. TESTS: There will be 3 tests given in class. They will not be cumulative. Each will have 12 qualitative questions and 8 problems, with one extra credit question. These will all be multiple choice. There is no final examination.

5. CASES: There are five cases. You are required to work in teams of 4-5 members to complete these. Team-based case assignments are to be submitted as hard copies in memo form, one per team, by the due date (see DETAILED SCHEDULE).

5. SIMULATIONS: There are four on-line simulations. These can be taken at any time and you have unlimited attempts to get a good score.

6. PEER EVALUATIONS

Peer evaluations will be done after each case and become inputs into the grade that a student receives. Generally,

- A student whose peers evaluate as having made significant contributions will receive a grade equivalent to that given to the team-based homework assignment
- A student whose peers evaluate as having made marginal contributions will receive a grade lower than that given to the team-based homework assignment by 25%

- A student whose peers evaluate as having made subpar contributions will receive a grade lower than that given to the team-based homework assignment by 50%

7. **COURSE PARTICIPATION** can take various expressions including:

- Answering questions in class when called upon
- Sharing relevant insights of examples from your experiences
- Asking questions if you do not understand the material.

Because there will be many students taking this course at the same time from me, you should work to help me associate your name to your face in a positive manner.

IF you cannot attend a class session, please let me know.

8. <u>COURSE GRADES</u>	Test 1	13%
	Test 2	13%
	Test 3	13%
	On-line Quizzes (11)	16%
	On-line Homework (11)	16%
	Star Kist SPC Homework	2%
	On-line Simulations (4)	8%
	Team Cases (5)	15%
	Class Participation	<u>4%</u>

TOTAL

100%

Grading will be the standard OSU system: 93% A, 90% A- etc. I will curve up if necessary but not down.

9. **ACADEMIC MISCONDUCT**: Material submitted for course grade credit **must** be your own work. Presentations will be a team effort. Your instructor will report any suspected case to the University Academic Misconduct Committee for investigation. Past cases have typically resulted in the assignment of a grade of E for the course. Academic misconduct is a serious threat to the integrity and value of the Ohio State diploma. Such conduct cannot be tolerated.

10. **DISABILITY ACCOMODATION**: If you need an accommodation based on the impact of a disability, arrange an appointment with me as soon as possible. We need to discuss the course format and explore potential accommodations. I rely on the Office for Disability Services for assistance in verifying need and developing accommodation strategies. You should start the verification process as soon as possible.