

# DSCI 304.02 - Operations Management

Fall 2021 Syllabus

## Faculty

Dr. Jose V. Gavidia

**SAP**<sup>®</sup> Certified  
Associate

email: gavidiaj@cofc.edu



**CRN: 11786 - 3 credit hours**

## Class Schedule:

Course duration: Aug 24, 2021 - Dec 13, 2021

Classroom: T130

Class time: MWF 1:00 pm - 1:50 pm

## Office Hours:

Face to face: MWF 2-4 pm by appointment.

Online: Contact me via email, and be ready for a scheduled Zoom meeting with me.

I will reply all emails within 24 hours during weekdays.

Zoom Meetings: <https://cofc.zoom.us/j/7519497615>

Meeting ID: 751 949 7615

## Technical requirements:

Daily use to a computer.

A reliable internet connection in a quiet location suitable for study.

Access to email and an internet browser.

Zoom meetings client from <https://zoom.us/download>.

Microsoft Excel, latest version, must have data analysis tools.

In this class, I will give you instructions to download the SAP graphic user interface.

## Course Materials

I will provide you with notes for each topic covered in this class, and they are posted on Oaks. My notes contain theory and problems which will enhance your knowledge of global operations and technology, and allow you to succeed in exams.

## Course Description

The planning and control of production and service operations with emphasis on Total Quality Management, demand forecasting, design of production systems, aggregate planning, and inventory management. Additional topics will include just-in-time production, cellular manufacturing, flexible manufacturing systems, robotics, computer-aided design and manufacturing and quality circles. Students will use appropriate computer software to gain experience with several decision techniques.

## Pre-requisites

Junior standing; DSCI 232. Prerequisites imply that students are able to work with standard deviations, z-scores, probability distributions, statistical tests of means and proportions, and regressions before they start taking this class.

## Course Goals and Objectives

The central objective is for students to develop knowledge and skills related to managing operations in a global, technologically enabled environment. This course integrates operations management, and information technology to provide the student with an understanding of the increasing importance of the management of processes, information and knowledge. *This is an SAP University Alliance course, and SAP ERP software will be used to illustrate business processes in operations and supply chain management.*

### Specific learning objectives of the course are:

- Understand the historical development of the field of operations and technology management, within the framework of management theory and history.
- Understand the use of Enterprise Resource Planning (ERP) software in business operations. Perform basic Supply Chain Management in SAP ERP.
- Describe dimensions of quality and quality management philosophies and terms, and apply them to specific situations in global business.
- Generate and use quality control charts and capability ratios for production processes.
- Demonstrate understanding the concepts and technologies associated with supply chain management and coordination.

- Use a variety of quantitative and qualitative forecasting methods.
- Use basic independent demand inventory models under uncertainty conditions, including economic order quantities, continuous review systems, periodic review systems, single period model.
- Describe perform dependent demand inventory systems and calculations, including basic material requirement planning and scheduling.
- Demonstrate the execution of production activities, their scheduling and control from logistic and financial perspectives.
- Demonstrate knowledge of information systems that facilitate operational problems of global firms, such as e-commerce, customer relationship management, enterprise resource planning, and project management tools. Specifically, in this class we will use SAP ERP software used to execute business operations.

### School of Business Learning Goals

- **COMMUNICATION SKILLS:** Students demonstrate the ability, via both written and spoken word, to effectively present, critique, and defend ideas in a cogent, persuasive manner.
- **QUANTITATIVE FLUENCY:** Students demonstrate competency in logical reasoning and data analysis skills.
- **GLOBAL AND CIVIC RESPONSIBILITY:** Students identify and define social, ethical, environmental and economic challenges at local, national and international levels. Students integrate knowledge and skills in addressing these issues.
- **INTELLECTUAL INNOVATION AND CREATIVITY:** Students demonstrate their resourcefulness and originality in addressing extemporaneous problems.
- **SYNTHESIS:** Students demonstrate the ability to integrate knowledge from multiple disciplines incorporating learning from both classroom and non-classroom settings in the completion of complex and comprehensive tasks.

## Class and Exam Schedule

Meeting	% elapsed	Date	Day	Topic
1	2%	8/25/21	W	Presentation, Intro to OM
2	5%	8/27/21	F	History of Operations, SCM
3	7%	8/30/21	M	Concepts of Enterprise Resource Planning
4	10%	9/1/21	W	ERP system and Data Structure
5	12%	9/3/21	F	Quality Management
6	14%	9/6/21	M	Statistical Process Control
7	17%	9/8/21	W	Process Capability
8	19%	9/10/21	F	Control Charts: Variables
9	21%	9/13/21	M	Control Charts: Attributes
10	24%	9/15/21	W	Review
11	26%	9/17/21	F	<b>EXAM 1</b>
12	29%	9/20/21	M	SAP navigation, Master Data Exercises
13	31%	9/22/21	W	Sales forecasting
14	33%	9/24/21	F	Time series decompositon
15	36%	9/27/21	M	Short term forecasting models
16	38%	9/29/21	W	Measuring forecast model accuracy
17	40%	10/1/21	F	Forecasting, SAP master data
18	43%	10/4/21	M	Forecasting problems
19	45%	10/6/21	W	Review
20	48%	10/8/21	F	<b>EXAM 2</b>
21	50%	10/11/21	M	Sales and Distribution
22	52%	10/13/21	W	SAP SD exercises
23	55%	10/15/21	F	Inventory and Materials management
		10/18/21	M	Fall Break
24	57%	10/20/21	W	Economic Order Quantities
25	60%	10/22/21	F	Reorder Point model
26	62%	10/25/21	M	Fixed time period model
27	64%	10/27/21	W	Single Period model
28	67%	10/29/21	F	Review
29	69%	11/1/21	M	<b>EXAM 3</b>
30	71%	11/3/21	W	Sales and Operations Planning
31	74%	11/5/21	F	SOP strategies problem
32	76%	11/8/21	M	Demand Disaggregation and Management
33	79%	11/10/21	W	Material Requirements Planning
34	81%	11/12/21	F	MRP calculations
35	83%	11/15/21	M	Production Management and Execution
36	86%	11/17/21	W	SAP Production exercises
37	88%	11/19/21	F	Review
38	90%	11/22/21	M	<b>EXAM 4</b>
		11/24/21	W	Thanksgiving
		11/26/21	F	Thanksgiving
39	93%	11/29/21	M	FINAL PROJECT
40	95%	12/1/21	W	FINAL PROJECT
41	98%	12/3/21	F	FINAL PROJECT
42	100%	12/6/21	M	FINAL PROJECT

## **Class Policies**

### Continuity of Learning

Due to social distancing requirements, this class will include a variety of online and technology enhanced components to reinforce continuity of learning for all enrolled students. Before the drop/add deadline, students should decide whether the course plan on the syllabus matches their own circumstances. During the course of class, in response to the development of COVID-19, the course delivery mode could be switched among face-to-face, online, or hybrid. The students need to make sure that their study will not be interrupted by the change of the delivery mode.

Inclement Weather, Pandemic or Substantial Interruption of Instruction: If in-person classes are suspended, faculty will announce to their students a detailed plan for a change in modality to ensure the continuity of learning. All students must have access to a computer equipped with a web camera, microphone, and Internet access. Resources are available to provide students with these essential tools.

### **Attendance Policy**

The schedule requires your presence and activity every class meeting. Should you have any problems to complete your daily assignments you should contact me immediately through email or during my office hours.

### **Performance Expectations**

Daily preparation and participation in discussion will be essential for learning and for excelling in the course. Student preparation and participation will be evaluated based upon their sustained efforts to participate in the discussion, to learn from the cases and readings, and to contribute to the learning of the group. A problem solving approach will be taken to teach quantitative aspects of operations management. The textbook will provide students with the main concepts of operations and technology management.

### **Exam Policy**

All exams will be given in the classroom on the assigned dates and times. Exams must be completed within allocated time.

### **Studying Tips**

I will attempt to conduct this class with the rigor expected from a prestigious institution of higher education. This course covers a substantial amount of material and will be conducted at a demanding pace. Your goal and personal *responsibility* is to meet the learning objectives of this class. My role is to *help* you achieve your goal. Remember, I am your friend, not your adversary. If you don't understand, it's not my fault, but I will do my best to help you.

You are expected to keep current with all readings and homework assignments. Do not postpone studying until before the exam. You should plan to spend on average 3 hours of studying outside the class for every hour spent in class. You are advised to take great care in compiling a detailed, clear set of notes on each topic covered in class and the assigned homework.

Like in real life, theory (*understanding*) comes before practice (*doing*). Your goal is to understand, not to do. The correct question is not “how to”, but “what is”. Do not skip understanding! The only way to *understand* and retain the material is through proactive intellectual engagement, materialized in complete notes of lectures and assignments, and doing the examples and exercises.

Learning from and with peers is an integral part of the collegiate learning process. You are encouraged to discuss the topics covered in this class and the homework with class colleagues. I strongly advise students to form study groups whenever possible.

## Honor Code and Academic Integrity

Lying, cheating, attempted cheating, and plagiarism are violations of our Honor Code that, when identified, are investigated. Each incident will be examined to determine the degree of deception involved.

Incidents where the instructor determines the student’s actions are related more to a misunderstanding will handled by the instructor. A written intervention designed to help prevent the student from repeating the error will be given to the student. The intervention, submitted by form and signed both by the instructor and the student, will be forwarded to the Dean of Students and placed in the student’s file.

Cases of suspected academic dishonesty will be reported directly by the instructor and/or others having knowledge of the incident to the Dean of Students. A student found responsible by the Honor Board for academic dishonesty will receive a XF in the course, indicating failure of the course due to academic dishonesty. This grade will appear on the student’s transcript for two years after which the student may petition for the X to be expunged. The F is permanent. The student may also be placed on disciplinary probation, suspended (temporary removal) or expelled (permanent removal) from the College by the Honor Board.

Students should be aware that unauthorized collaboration—working together without permission—is a form of cheating. Unless the instructor specifies that students can work together on an assignment, quiz and/or test, no collaboration during the completion of the assignment is permitted. Other forms of cheating include possessing or using an unauthorized study aid (which could include accessing information via a cell phone or computer), copying from others’ exams, fabricating data, and giving unauthorized assistance.

Research conducted and/or papers written for other classes cannot be used in whole or in part for any assignment in this class without obtaining prior permission from the instructor.

Students can find the complete Honor Code and all related processes in the Student Handbook at <http://studentaffairs.cofc.edu/honor-system/studenthandbook/index.php>

## Grading

There will be 4 exams on the scheduled dates, during class time. Each exam will have a weight of 22.5%.

In addition, there is a final project on SAP, with a weight of 10%.

Final grades will be assigned according to the following grading scale:

Percentage	Grade	Points
>94%	A	4
90-93.99%	A-	3.7
86-89.99%	B+	3.3
83-85.99%	B	3
80-82.99%	B-	2.7
76-79.99%	C+	2.3
73-75.99%	C	2
70-72.99%	C-	1.7
66-69.99%	D+	1.3
63-65.99%	D	1
60-62.99%	D-	0.7
<60%	F	0
	WA	0
	XF	0

## Students with disabilities

Any student eligible for and needing accommodations because of a disability is requested to speak with the professor during the first two weeks of class or as soon as the student has been approved for services so that reasonable accommodations can be arranged.

## Center for Student Learning:

The Center for Student Learning's (CSL) academic support services provide assistance in study strategies, speaking & writing skills, and course content. Services include tutoring, Supplemental Instruction, study skills appointments, and workshops. Students of all abilities have become more successful using these programs throughout their academic career and the services are available to you at no additional cost. For more information regarding these services please visit the CSL website at <http://cs1.cofc.edu> or call (843) 953-5635.

## Mental & Physical Wellbeing:

At the college, we take every students' mental and physical wellbeing seriously. If you find yourself experiencing physical illnesses, please reach out to student health services (843.953.5520). And if you

find yourself experiencing any mental health challenges (for example, anxiety, depression, stressful life events, sleep deprivation, and/or loneliness/homesickness) please consider contacting either the Counseling Center (professional counselors at <http://counseling.cofc.edu> or 843.953.5640 3rd Robert Scott Small Building) or the Students 4 Support (certified volunteers through texting "4support" to 839863, visit <http://counseling.cofc.edu/cct/index.php>, or meet with them in person 3rd Floor Stern Center). These services are there for you to help you cope with difficulties you may be experiencing and to maintain optimal physical and mental health.

### **Food & Housing Resources:**

Many CofC students report experiencing food and housing insecurity. If you are facing challenges in securing food (such as not being able to afford groceries or get sufficient food to eat every day) and housing (such as lacking a safe and stable place to live), please contact the Dean of Students for support (<http://studentaffairs.cofc.edu/about/salt.php>). Also, you can go to <http://studentaffairs.cofc.edu/student-food-housing-insecurity/index.php> to learn about food and housing assistance that is available to you. In addition, there are several resources on and off campus to help. You can visit the Cougar Pantry in the Stern Center (2nd floor), a student-run food pantry that provides dry-goods and hygiene products at no charge to any student in need.

### **Inclusion:**

The College of Charleston offers many resources for LGBTQ+ students, faculty and staff along with their allies.