

BUSN312

STUDENT WARNING: This course syllabus is from a previous semester archive and serves only as a preparatory reference. Please use this syllabus as a reference only until the professor opens the classroom and you have access to the updated course syllabus. Please do NOT purchase any books or start any work based on this syllabus; this syllabus may NOT be the one that your individual instructor uses for a course that has not yet started. If you need to verify course textbooks, please refer to the online course description through your student portal. This syllabus is proprietary material of APUS.

Course Summary

Course : BUSN312 **Title :** Operations Research

Length of Course : 8

Prerequisites : MATH110, MATH111, MATH225 **Credit Hours :** 3

Description

Course Description: This course introduces Operations Research and includes the application of operations research and management science techniques to management decision problems. Operations research techniques and methods can be applied to problems in virtually all-functional areas of business including accounting, finance, marketing, production and human resources. Examples from each of these areas will be covered during the course. A feature of the course is that Microsoft Excel is used to implement some of the techniques covered. This means that you will become proficient in using Excel; the most widely used electronic spreadsheet in business today. (Prerequisites: MATH110, MATH111, or MATH225)

Course Scope:

This course will introduce the student to concepts, practices, and procedures used in a service or manufacturing organization. Learning will be focused on creating on how a business operation creates a range of outputs (products and/or services) in the correct quantity, configuration, quality, and time-frame. Management has the organizational responsibility to coordinate value-adding services, both inside and outside of the company, to the end result of supply finished products and/or value-added services in a timely manner and to customer expectations. The management activities involved in producing products and services are known as production management. Students will learn the value of production- and service-related management and how responsibilities extend to controlling both inputs and outputs.

(Note to Students: The course materials, assignments, learning outcomes, and expectations in this upper-level undergraduate course assume that the student has completed all lower-level general education and career planning coursework necessary to develop research, writing, and critical thinking skills. Students who have not fulfilled all general education requirements through courses or awarded transfer credit should strongly consider completing these requirements prior to registering for this course.)

Objectives

After successfully completing this course, you will be able to:

CO1: Describe the basic concepts involved in Operations Management including the Classification of production systems, Objectives and strategies, concepts of productivity

CO2: Identify the factors, variables, risks and uncertainties, economic models, and analytics involved in operations decision making

CO3: Identify the various manufacturing and service system designs and capacity planning methods

CO4: Identify facility and location factors, theories, and models, and plant layouts important to an efficient, cost-effective, and sustainable production and/or service organization

CO5: Describe the various forecasting qualitative and quantitative methods and models available to operations managers

CO6: Identify and describe the functions of a functioning supply chain (materials) management system from the standpoint of purchasing, inventory and logistics controls, and JIT manufacturing concepts

CO7: Summarize in detail the concepts of aggregate planning and master scheduling

CO8: Describe the activities involved with initiating and controlling production activities including measuring performance, flow-shop scheduling, job-shop challenges, and machine scheduling

Outline

Week 1:

Topic

Operations Management Concepts

Course Objectives

CO1: Describe the basic concepts involved in Operations Management including the Classification of production systems, Objectives and strategies, concepts of productivity

Learning Materials:

Kumar, A. S. & Suresh, N. (2009). Operations Management. ISBN : 978-81-224-2883-4 (Chapter 1)

YouTube Videos:

<https://www.youtube.com/watch?v=leMOReAE2hk>

<https://www.youtube.com/watch?v=SCwZA53Mg7E>

<https://www.youtube.com/watch?v=leMOReAE2hk&t=84s>

<https://www.youtube.com/watch?v=nG5-52a5lRo>

Activities & Assessments:

Introduction Discussion

Assignment

Week 2:

Topic

Operations Decision-making

Course Objectives

CO2: Identify the factors, variables, risks and uncertainties, economic models, and analytics involved in operations decision making

Learning Materials:

Kumar, A. S. & Suresh, N. (2009). Operations Management. ISBN : 978-81-224-2883-4 (Chapter 2)

YouTube Videos:

<https://www.youtube.com/watch?v=bCpAWW2ZESs>

<https://www.youtube.com/watch?v=iIDAYBR5sQ>

<https://www.youtube.com/watch?v=sFWrmpXPVJw>

Activities and Assessments

Discussion

Assignment

Week 3:

Systems Design and Capacity

System Design and Capacity

Course Objectives

CO3: Identify the various manufacturing and service system designs and capacity planning methods.

Learning Materials:

Kumar, A. S. & Suresh, N. (2009). Operations Management. ISBN : 978-81-224-2883-4 (Chapter 3)

YouTube Videos:

<https://www.youtube.com/watch?v=cAUXHJBB5CM>

<https://www.youtube.com/watch?v=duneRB3tN7E>

<https://www.youtube.com/watch?v=eG9JouxQD-l>

Activities and Assessments:

Discussion

No assignment

Week 4:

Topic

Facility Location and Layout

Course Objectives

CO4: Identify facility and location factors, theories, and models, and plant layouts important to an efficient, cost-effective, and sustainable production and/or service organization

Learning Materials:

Kumar, A. S. & Suresh, N. (2009). Operations Management. ISBN : 978-81-224-2883-4 (Chapter 4)

YouTube Videos:

https://www.youtube.com/watch?v=qec9L_uMqH0

<https://www.youtube.com/watch?v=RzxT9pVniPY>

<https://www.youtube.com/watch?v=dAXdeqcHBp4>

<https://www.youtube.com/watch?v=OCG7ScRP1ws>

Activities and Assesments

Discussion

Assignment

Week 5:

Topic

Forecasting Demand

Course Objectives

CO5: Describe the various forecasting qualitative and quantitative methods and models available to operations managers

Learning Materials:

Kumar, A. S. & Suresh, N. (2009). Operations Management. ISBN : 978-81-224-2883-4 (Chapter 5)

YouTube Videos: Forecasting Methods Resource

<https://www.youtube.com/watch?v=2OUtRu7jb6M>

<https://www.youtube.com/watch?v=OCG7ScRP1ws>

Activities And Assessments

Discussion

No homework assignment

Week 6:

Topic

Materials Management

Course Objectives

CO6: Identify and describe the functions of a functioning supply chain (materials) management system from the standpoint of purchasing, inventory and logistics controls, and JIT manufacturing concepts

Learning Materials:

Kumar, A. S. & Suresh, N. (2009). Operations Management. ISBN : 978-81-224-2883-4 (Chapter 7)

YouTube Videos:

https://www.youtube.com/watch?v=JOuGWA3Q_sY

Activities and Assessments

Discussion

Assignment

Week 7:

Topic

Aggregate Planning and Master Scheduling

Course Objectives

CO6: Summarize in detail the concepts of aggregate planning and master scheduling

Learning Materials:

Kumar, A. S. & Suresh, N. (2009). Operations Management. ISBN : 978-81-224-2883-4 (Chapter 8)

YouTube & URL Resources:

<https://www.youtube.com/watch?v=eYe7CJywsC4>

<https://www.youtube.com/watch?v=ElfU43OKqYw>

<https://www.thomasnet.com/insights/big-data-and-supply-chain-risk-management/>

Activities and Assessments

Discussion

No homework assignment

Week 8:

Topic

Scheduling and Controlling Production Activities

Course Objectives

CO8: Describe the activities involved with initiating and controlling production activities including measuring performance, flow-shop scheduling, job-shop challenges, and machine scheduling

Learning Materials:

Operations Management: Chapter 8

YouTube Videos

Activities and Assessments

Discussion

Assignment

Evaluation

Week	Homework	Discussion
1	10%	5%
2	10%	5%
3	-	5%
4	10%	5%
5	-	5%
Peregrine	10%	-
6	10%	5%
7	-	5%
8	10%	5%
Total	60%	40%

Grading:

Name	Grade %
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Materials

Book Title: Operations Management - the VitalSource e-book & Connect access is provided inside the classroom

Author: Stevenson, William

Publication Info: VS-McGraw-Hill

ISBN: 9780078024108

Book Title: You must validate your cart to get access to your VitalSource e-book(s). If needed, instructions are available here - <http://apus.libguides.com/bookstore/undergraduate>

Author: N/A

Publication Info: N/A

ISBN: N/A

Book Title: Kumar, A. S. & Suresh, N. (2009). Operations Management.

ISBN: 978-81-224-2883-4

Course Guidelines

Citation and Reference Style

- Students will follow APA format as the sole citation and reference style used in written assignments submitted as part of coursework to the School of Business.
- Please note that no formal citation style is required on forum assignments in the School of Business—only attribution of sources (please see details regarding forum communication below).

Tutoring

- [Tutor.com](https://www.tutor.com) offers online homework help and learning resources by connecting students to certified tutors for one-on-one help. AMU and APU students are eligible for 10 free hours of tutoring provided by APUS. Tutors are available 24/7 unless otherwise noted. Tutor.com also has a SkillCenter Resource Library offering educational resources, worksheets, videos, websites and career help. Accessing these resources does not count against tutoring hours and is also available 24/7. Please visit the APUS Library and search for 'Tutor' to create an account.

Late Assignments

- Students are expected to submit classroom assignments by the posted due date and to complete the course according to the published class schedule. The due date for each assignment is listed under each assignment.
- Generally speaking, if arrangements are not made in advance, a late penalty of 10% will be assessed for any assignment submitted 1-7 days past the due date. Assignments will not be accepted after the 7th day. No work will be accepted past the final day of class, unless prior arraignments have been made with the instructor.
- As a working adult, your time is limited and often out of your control. Faculty may be more flexible if they know ahead of time of any potential late assignments.

Turn It In

- Faculty may require assignments be submitted to Turnitin.com. Turnitin.com will analyze an assignment submission and report a similarity score. Your assignment submission is automatically processed through the assignments area of the course when you submit your work.

Academic Dishonesty

- Academic Dishonesty incorporates more than plagiarism, which is using the work of others without citation. Academic dishonesty includes any use of content purchased or retrieved from web services such as CourseHero.com or Scribd. Additionally, allowing your work to be placed on such web services is academic dishonesty, as it is enabling the dishonesty of others. The copy and pasting of content from any web page, without citation as a direct quote, is academic dishonesty. When in doubt, do not copy/paste, and always cite.

Submission Guidelines

- Some assignments may have very specific requirements for formatting (such as font, margins, etc) and submission file type (such as .docx, .pdf, etc). See the assignment instructions for details. In general, standard file types such as those associated with Microsoft Office are preferred, unless otherwise specified.
- It is the student's responsibility to ensure the all submitted work can be accessed and opened by the instructor.

Disclaimer Statement

- Course content may vary from the outline to meet the needs of a particular group or class.

Communicating on the Forum

- Forums are the heart of the interaction in this course. The more engaged and lively the exchanges, the more interesting and fun the course will be. Only substantive comments will receive credit. Although there is a final posting day/time after which the instructor will grade and provide feedback, it is not sufficient to wait until the last day to contribute your comments/questions on the forum. The purpose of the forums is to actively participate in an on-going discussion about the assigned content.
- “Substantive” means comments that contribute something new and important to the discussion. Thus a message that simply says “I agree” is not substantive. A substantive comment contributes a new idea or perspective, a good follow-up question to a point made, offers a response to a question, provides an example or illustration of a key point, points out an inconsistency in an argument, etc.
- As a class, if we run into conflicting view points, we must respect each individual's own opinion. Hateful and hurtful comments towards other individuals, students, groups, peoples, and/or societies will not be tolerated.
- Students must post a response to the weekly forums prompt and post the required number of replies to other students – refer to the grading rubric and/or forum instructions for specific expectations on number of replies and word count requirements.
- The main response to the forum need to be provided mid-week – refer to the grading rubric and/or forum instructions for specific expectations. Late main response posts to a forum will not be accepted without prior instructor approval.
- Replies must be posted in the week due and replies after the end of the each week will not be graded.

Quizzes and Exams

- Quizzes and exams may consist of true/false, multiple choice, and short essay questions. Each quiz/exam is accessible only once. Once a quiz/exam is accessed, you will not be able to access it again if you disconnect. Therefore, allocate time to complete your quiz. Weekly quizzes must be submitted by midnight Eastern Time, Day 7 of the assigned week. Late quizzes or exams will not be accepted without prior instructor approval.

University Policies

[Student Handbook](#)

- [Drop/Withdrawal policy](#)
- [Extension Requests](#)
- [Academic Probation](#)
- [Appeals](#)
- [Disability Accommodations](#)

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