

Production Systems Analysis

Catalog Description: SIE 462 -- *Production systems, quantitative methods for forecasting, aggregate planning, inventory control, materials requirement planning, production scheduling, manpower planning and facility design.*

Prerequisite(s): SIE 305, SIE 340

Instructor: Mike O'Brien, mikeazobrien@email.arizona.edu
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Office Hours: M/W/F 12:30-2:00 PM, or by appointment (email an appointment request)

Website: Desire2Learn will be used for the class website (<http://d2l.arizona.edu>)

Class: MWF 11:00 AM – 11:50 AM

Textbook: Operations Management, 12th Edition by William J. Stevenson. ISBN: 978-0-07-802410-8

Software: Students will use University licensed software including MS Office for a variety of in and out of class projects

Grading: **Regular grades** are awarded for this course: A B C D E.

- 30% Two (2) Exams
- 20% Final Exam
- 30% Homework/Class Participation
- 20% 2 Case Studies /Projects

Course Objectives and Learning Outcomes:

This course is intended to give students background and a foundation in the management and operation of systems that produce goods and services. We will develop a detailed understanding of supply planning, demand forecasting, and process operations with a focus on applying engineering principles. At the end of this course, students should:

- Understand and be able to use common approaches to demand forecasting, strategic capacity planning, facility layout, Aggregate Production Planning and Inventory Management .
- Understand and be able to use the tools and approaches to enable Material Resource Planning (MRP) and Enterprise Resource Planning (ERP) processes.
- Be able to comprehend Operations Management problems in a variety of industries, design and propose integrated solutions leveraging engineering skills that improve the supply chain performance across key operations metrics.

Absence Policy:

On campus students are expected to attend the on-campus classes. All holidays of special events observed by organized religions will be honored for those students who have affiliation with that particular religion. Absences pre-approved by the UA Dean of Students (or Dean's designee) will be honored.

Expected Classroom Behavior:

Students are expected to maintain a professional business-like conduct during class and during all class activities

Policy against plagiarism:

Students are allowed to work and submit group work on group assignments. Students must submit their own individual work on individual assignments, but may consult with peers unless prohibited by the instructor. Evidence of plagiarism will be handled according to the procedures outlined in the **Student Code of Academic Integrity**.

Threatening behavior by students:

Threatening and disruptive behavior is prohibited and will be handled as outlined in **Threatening Behavior by Students** and **Disruptive Behavior in an Instructional Setting**.

Required extracurricular activities:

There are no required extracurricular activities anticipated for this course.

Special materials required for the class:

There are no special materials anticipated for this course

Notification of offensive material policy:

If offensive materials will be presented in class, the instructor will notify students via their university email account prior to class and allow students to opt-out of that class session.

Accessibility and Accommodations:

It is the University's goal that learning experiences be as accessible as possible. If you anticipate or experience physical or academic barriers based on disability or pregnancy, please let me know immediately so that we can discuss options. You are also welcome to contact Disability Resources (520-621-3268) to establish reasonable accommodations.

Please be aware that the accessible table and chairs in this room should remain available for students who find that standard classroom seating is not usable.

Changes to this Syllabus:

The information contained in the course syllabus, other than the grade and absence policies, may be subject to change with reasonable advance notice, as deemed appropriate by the instructor.