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Office Hours: Mr. Yauch- After class or by appointment (email me)

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Materials: ***Operations Management***, Russell & Taylor, 10th Ed. Online text at Wiley Plus

The required materials for this course will be integrated into Canvas and made available to you at a special discounted rate. You have the option to opt out of this program by clicking this link: <https://includedcp.follett.com/1230>, but please be advised that WileyPlus access is required to take this course, and if you do opt out you will need to purchase elsewhere at current market rates, which will be more expensive. The charge for the materials will appear on your student account under the item type BKSTR PUBLISHER NEGOTIATE RATE after drop/add. The WileyPlus code is required, but if you'd like to purchase a discounted print copy to accompany the e-book you can do so through the Bookstore website (<http://bookstore.asu.edu>) by searching for this ISBN: 9781119844907.

Course Description

Introduction to Industrial Engineering concepts, techniques/methods, and their application with an emphasis on manufacturing and operations.

Enrollment Requirements

Prerequisite(s): Fulton Engineering undergraduate student; BME 100, EGR 101, FSE 100 or SES 100 with C or better; MAT 265 or 270 with C or better

Learning Outcomes

At the end of the course, students will:

- Understand the breadth of Industrial Engineering today
- Know what types of functions industrial engineers perform
- Understand what is meant by an industrial process and business process
- Understand what is meant by a system and recognize the behavioral complexity of interconnected components
- Understand what quality and productivity are, why they are important, and how industrial engineers impact these performance measures
- Understand some of the mathematics and techniques used in industrial engineering problem solving
- Know the industrial engineering applications and modeling techniques that will be used in upper division courses

Canvas

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You have all been enrolled to our Canvas page. All lecture slides, readings, homework, class schedules, and other items will be posted there. Important information will be communicated using the announcements feature in Canvas, which may include last-minute schedule or other changes. You **MUST** have a reliable method of receiving Canvas announcements. I highly recommend ensuring that these announcements are delivered to your ASU email and that you check it frequently.

Material

We will do portions of each of these chapters:

- Chapter 1: Introduction to Operations and Supply Chain Management (SCM)
- Chapter 2: Quality Management (QM)
- Chapter 3: Statistical Process Control (SPC)
- Chapter 5: Service Design
- Chapter 7: Capacity and Facilities Design
- Chapter 8s: Operational Decision-Making Tools: Work Measurement
- Chapter 9: Project Management
- Chapter 12: Forecasting
- Chapter 13: Inventory Management
- Chapter 14: Sales and Operations Planning

Calculators

You may not use a TI-Nspire during exams in this course. If you do, you will receive a score of zero on that exam.

Most students use a TI-83, -84, -89. Casio and HP make equivalently good models. You will need one that does probability and statistics functions. You are responsible for learning how to use your own calculator via its manual or online videos. You are also responsible for making sure your calculator is in good working order before each exam. **I do not have any spare calculators for you to borrow.**

Course Delivery

This is an in-person course that will be offered in the time and location listed on your course schedule. However, a live Zoom session will be made available for students who are unable to be physically present in the classroom. **Unless previously arranged with your instructor, attending the Zoom session does NOT count as class attendance for that day.**

In the event that your instructor cannot attend class due to illness, I will communicate via ASU email or Canvas Announcement as soon as possible letting you know the alternative arrangement for class that day. This may involve conversion to a live Zoom format, requiring students to watch a pre-recorded lecture video in lieu of synchronous teaching that day, or having another instructor teach the course that day. I will do my best to communicate this information as soon as possible, but it is your responsibility to actively monitor our Canvas site and your ASU email for any updates or announcements.

Class Expectations:

You are expected to attend the first day of our class. It is mandatory.

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You are also expected to come to every class on time and to stay for/watch the entire class. The slides presented in the class have missing words, formulas and graphs *deliberately*, to help you be an active note taker.

Much of what is presented in class shows up on exams. When you are in our classroom, it is expected that you will

- Take notes
- Refrain from texting and other online activities
- Bring a calculator
- Follow ASU policies related to face coverings

Outside-of-Class Expectations

You will need to spend at least 1 hour a day, 5-6 days a week, reviewing course slides, re-writing your class notes, doing homework and reading the text to be successful in this course.

Schedule

See the weekly schedule posted on Canvas. It is a Word document that contains

- (a) the material we will cover on each day
- (b) the readings and homework are due each day
- (c) exam and quiz dates

You are expected to check the schedule and be responsible for the reading and homework assignments detailed therein. It is your responsibility to attend class and keep track of what is due and when.

Attendance and Class Recording

Attendance and participation in class activities is an essential part of the learning process, and students are expected to attend class regularly. A portion of your final grade will be based on class attendance. Students who arrive late or leave early may not qualify for attendance points that day. Attendance will be recorded at least 10 times, selected by the instructor at random. Each attended session is worth 1/10 of the attendance points available. No extra credit is available, but if more than 10 class sessions are measured, up to 10 attended sessions will be counted towards your grade.

Note that class sessions may be recorded, and recordings provided to enrolled students, instructors or instructional support personnel. If you have concerns about being recorded, please contact the course instructor. Recordings may be used to accommodate student absences and may be posted in Canvas for all students to access for reviewing course materials. **Watching a class recording does not count as attending class, but will help you avoid falling behind in class if you miss a class session.**

Excused absences for classes will be given without penalty to your grade in the case of (1) a university-sanctioned event [[ACD 304-02](#)]; (2) religious holidays [[ACD 304-04](#)]; a list of religious holidays can be found here: [<https://eoss.asu.edu/cora/holidays>]; (3) work performed in the line-of-duty according to [[SSM 201-18](#)]. Students who request an excused absence must follow the proper

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policy/procedure. Excused absences do not relieve students of responsibility for any part of the course work required during the period of absence.

Extra Credit

Any extra credit will be offered at the sole discretion of the instructor and will be offered in such a way as to be equitable to all students. No extra credit opportunities will be granted to individual students. Examples of extra credit MAY include bonus points added to quizzes/exams resulting in >100% performance.

Email and Internet

ASU email is an [official means of communication](#) among students, faculty, and staff. Students are expected to read and act upon an email in a timely fashion. Students bear the responsibility of missed messages and should check their ASU-assigned email regularly.

All individual correspondence will be sent to your ASU email account. If you have it forwarded elsewhere, you may miss important information. I suggest unforwarding your ASU email. Correspondence to the entire class will either be sent to your ASU email account or posted to Canvas Announcements.

Grading

Your final course grade will be calculated using the following weights:

Math Competency Exam	35%
Midterm Exam 1	13%
Midterm Exam 2	13%
Homework (lowest one dropped)	10%
Quizzes (lowest one dropped)	10%
Attendance	5%
Final Exam	14%

There is no curve in this class. You are guaranteed a final grade per below.

<i>Final Average (X)</i>	<i>Course grade</i>
$X \geq 90$	A
$80 \leq X \leq 89$	B
$70 \leq X \leq 79$	C
$60 \leq X \leq 69$	D
$X < 60$	E

Grades are rounded up at 0.50; for example, a 69.5 average is a grade of C. The +/- system may be used at the sole discretion of the instructor. The +/- cut-offs are not published ahead of time.

“Y” grades will NOT be offered in this course. You will be assigned a grade according to the above.

Homework at Wiley Plus

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The homework due dates are in the schedule. Each homework is due on the appointed day **no later than 4:30 pm**. The lowest score will be dropped. Each homework is worth the same weight, regardless of how many problems are on it. For example, a score of 4 out of 5 problems is 80% and a score of 28/35 is also 80%. **You may ignore the total “point” values in Canvas/WileyPlus; points are only used to ensure problems are weighted appropriately within an assignment.**

The online homework, along with your text, is located along with your textbook within the Wiley PLUS module in the course Canvas site.

You need to work on the homework with other students and to do some problems EVERY DAY so that you can retain these sometimes challenging concepts. You are not to simply copy each others' answers. Your ability to do the homework problems on your own is the best predictor of how you will do on the exams.

You may not use Chegg.com or any other sites to find homework answers or solutions. If you do, you will be reported to the dean's office for an Academic Integrity Violation, you will receive a zero on the homework assignment, and there will be a recommendation that your course grade be lowered by a full letter grade.

Quizzes

Quizzes will be taken in-person, at the end of our class session, on the day the quiz is scheduled. You will be allowed to use a calculator and one hand-written cheat sheet for each quiz. The rules for quizzes are the same as those for “Midterms Exam 1 and Midterm Exam 2” posted later in this syllabus.

The quizzes will be based on text readings, text examples, and anything we have done in class from the slides or from other examples or demonstrations.

Each quiz is comprised of 10 questions. You will have 25 minutes to complete the quiz. The lowest quiz score will be dropped. There will not be any make-up quizzes.

Math Competency Exam

The Math Competency exam is comprised of questions identical or similar to those from the math placement exam that freshmen engineering students take to determine which math course they are placed in as freshmen at ASU. This exam is weighted heavily at 35% in this course because upper-division Industrial Engineering courses require proficiency and mastery of many mathematical concepts. A list of topics covered on this exam may be found on our Canvas page.

You will have two opportunities to take this exam: one at the beginning of the semester, and the other towards the end of the semester. The higher of the two scores will be used in the computation of your final course grade.

Math Competency Exam rules:

- **Cell phones must be put completely away, be off, and placed in backpacks or purses on the floor.** If your cell phone is seen on your lap, in a pocket, on your body, or out in any way during this exam, you will be given a zero for the exam and reported for a violation of ASU's Academic Integrity Policy. Really, really.
- The exam is closed book, closed notes. No note sheets are permitted.

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- No calculators are permitted.
- You MUST bring a photo ID to each exam. Get an ASU Sun Card if you don't have one: <https://cfo.asu.edu/cardservices-suncard>
- You may not be on-line.
- You may not wear a smart watch.
- There will be a seating chart.
- You may not leave the room with all or part of the exam at any time.

Some details about specific topics on this exam will be discussed on the first day of class.

Midterm Exam 1, Midterm Exam 2, and Final Exam

Midterm Exam 1 and Midterm Exam 2 rules:

- **Cell phones must be put completely away, be off, and placed in backpacks or purses on the floor.** If your cell phone is seen on your lap, in a pocket, on your body, or out in any way during this exam, you will be given a zero for the exam and reported for a violation of ASU's Academic Integrity Policy. Really, really.
- The quiz/exam is closed book
- You may bring one 8.5" x 11" note sheet. You may write on both sides of this sheet. It must be handwritten; no Word, PowerPoint, or photocopy.
- You will need and be permitted one calculator, but it cannot be a TI Nspire.
- You MUST bring a photo ID to each exam. Get an ASU Sun Card if you don't have one: <https://cfo.asu.edu/cardservices-suncard>
- You may not be on-line.
- There may be a seating chart for these exams

Final Exam rules:

- **Cell phones must be put completely away, be off, and placed in backpacks or purses on the floor.** If your cell phone is seen on your lap, in a pocket, on your body, or out in any way during this exam, you will be given a zero for the exam and reported for a violation of ASU's Academic Integrity Policy. Really, really.
- The exam is closed book
- You may bring three 8.5" x 11" note sheet. You may write on both sides of each sheet. These sheets must be handwritten; no Word, PowerPoint, or photo copy. Note sheets may not be stapled together in any way.
- You will need and be permitted one calculator, but it cannot be a TI Nspire.
- You MUST bring a photo ID to each exam. Get an ASU Sun Card if you don't have one: <https://cfo.asu.edu/cardservices-suncard>
- You may not be on-line.
- There may be a seating chart for this exam

Make-Up Exams

There will be no make-up exam for the Math Competency Exam Attempt 1 and no make-up exam for the Math Competency Exam Attempt 2.

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The opportunity for a make-up quiz or exam will be available in the following situations:

- (1) a university-sanctioned event [ACD 304-02];
- (2) religious holidays [ACD 304-04; a list can be found here <https://eoss.asu.edu/cora/holidays>];
- (3) work performed in the line-of-duty according [SSM 201-18]; and

Anticipated absences for university-sanctioned events, religious holidays, or line-of-duty activity should be communicated to the instructor at least 21 days in advance.

You must provide verifiable documentation for all of the above situations. For (1) and (2), it is your responsibility to notify the Instructor at the beginning of the semester. For (3), please work with Student Advocacy and Assistance for documentation; this will simplify communication with all your faculty.

If you are unable to take a quiz or exam for any other reason, you must

- (a) inform the instructor in an email before the quiz or exam begins.
- (b) produce an authorized, verifiable doctor's excuse no later than five days after the missed quiz or exam

If (a) and (b) are in compliance, your next quiz or exam score will replace the quiz score you missed and in the case of a missed exam, the final exam score will replace the missed exam.

To be clear, here are example situations and outcomes:

Situation 1: You become ill before a quiz or an exam. You email the instructor before the quiz or exam begins, verifying that you correctly entered the instructor's email exactly as listed in this syllabus. You then go to the doctor's the next day to be evaluated and to get a medical excuse. You present the doctor's medical excuse to the instructor no later than 5 days after the missed quiz or exam. The instructor verifies your doctor's appointment there on that day.

Outcome 1: Your missed quiz score will be replaced with your next quiz score or your final exam will be the grade given to the missed exam.

Situation 2: You become ill a day or so before a quiz or an exam. You do not email the instructor. You do not show up to the quiz or exam. After the quiz or exam has begun or is over, you email/phone/tell the instructor in person you were sick and present a doctor's note for your appointment.

Outcome 2: You will receive a zero on the missed quiz or the missed exam because you did not inform the instructor beforehand with an email that you were ill.

Grading Inquiries

If you believe an error was made in grading a quiz or exam, you will have 3 business days in which to request, via instructor ASU e-mail, a review. You must specifically identify any problems you feel were graded incorrectly and why. You must also attach clear, legible images of any disputed questions, including the full question as well as your answer.

Likewise, any errors in adding up an exam or quiz score, or in transferring a score to the Canvas Gradebook, should be reported in a timely manner.

Classroom Behavior

As a student in this class, it is expected that you

1. refrain from loud and unnecessary conversation during lecture
2. are respectful to peers, guest speakers, and faculty
3. keep laptop and phone volume off during lecture

Students persistently neglecting to follow the above will be formally removed from the course with a W (withdrawal) or an E (failing) grade per ASU's policy (Student Manual 602-10).

Students in this class are expected to acknowledge and embrace the FSE student professionalism expectation located at: <https://engineering.asu.edu/professionalism/>

Academic Integrity

Students in this class must adhere to ASU's academic integrity policy, which can be found at <https://provost.asu.edu/academic-integrity/policy>). Students are responsible for reviewing this policy and understanding each of the areas in which academic dishonesty can occur. In addition, all engineering students are expected to adhere to both the ASU Academic Integrity Honor Code and the Fulton Schools of Engineering Honor Code. All academic integrity violations will be reported to the Fulton Schools of Engineering Academic Integrity Office (AIO). The AIO maintains record of all violations and has access to academic integrity violations committed in all other ASU college/schools.

Here are a couple of things you may not realize are violations of the Academic Integrity Policy that can get you into trouble:

- You may not provide old notes, reports, assignments, homework solutions, or exams/quizzes to friends or others who take a class after you do.
- You may not post, sell or provide notes, reports, assignments, homework solutions, or exams/quizzes to online sites such as Chegg.com or CourseHero.com.

If you are not sure if something you are doing is in violation or not, ASK THE INSTRUCTOR.

At Arizona State, the governing phrase about what is allowed and is not allowed during a course is as follows: **Everything is forbidden until the teacher says it is permitted.**

That said, I will detail here what is and is not permitted with respect to homework and quizzes. Specific exam permissions will be detailed before each exam in an announcement and in an email sent to you.

Permitted in IEE 210 regarding homework and quizzes:

1. You may and should work with other students to do the homework problems

Forbidden in IEE 210 regarding homework and quizzes:

1. You may not use Chegg.com or any other online resources to find the answers to homework problems
2. You may not simply copy your friends' answers to homework problems
3. You may not have another person do any part of any homework for you
4. You may not use generative AI on any course assignment or exam

If you violate any of the forbidden items here or on the forbidden items list (forthcoming) for any exam, the following will occur:

1. You will be reported to the dean's office for an academic integrity violation
2. You will receive a zero on the work item
3. Your final course grade will be demoted (dropped down) by one full letter grade
4. You will be suspended or expelled if it is your second academic integrity offense

Copyright

Course content, including lectures, are copyrighted materials and students may not share outside the class, upload to online websites not approved by the instructor, sell, or distribute course content or notes taken during the conduct of the course (see ACD 304-06, "Commercial Note Taking Services" and ABOR Policy 5-308 F.14 for more information).

You must refrain from uploading to any course shell, discussion board, or website used by the course instructor or other course forum, material that is not the student's original work, unless the students first comply with all applicable copyright laws; faculty members reserve the right to delete materials on the grounds of suspected copyright infringement.

Disability Accommodations and Accessibility Statement

In compliance with the Rehabilitation Act of 1973, Section 504, and the Americans with Disabilities Act as amended (ADAAA) of 2008, professional disability specialists and support staff at the Student Accessibility and Inclusive Learning Services (SAILS) facilitate a comprehensive range of academic support services and accommodations for qualified students with disabilities.

Qualified students with disabilities may be eligible to receive academic support services and accommodations. Eligibility is based on qualifying disability documentation and assessment of individual need. Students who believe they have a current and essential need for disability accommodations are responsible for requesting accommodations and providing qualifying documentation to SAILS. Every effort is made to provide reasonable accommodations for qualified students with disabilities. Qualified students who wish to request an accommodation for a disability should contact SAILS by going to <https://eoss.asu.edu/accessibility>, calling (480) 965-1234 or emailing Student.Accessibility@asu.edu. Suitable accommodations are made for students having disabilities and students should notify the instructor as early as possible if they are registered with SAILS. If you are a student registered with SAILS, please see me in the first week of class during office hours so I can explain to you how, when, and where you will take exams in this course.

Harrassment and Sexual Discrimination

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Arizona State University is committed to providing an environment free of discrimination, harassment, or retaliation for the entire university community, including all students, faculty members, staff employees, and guests. ASU expressly prohibits discrimination, harassment, and retaliation by employees, students, contractors, or agents of the university based on any protected status: race, color, religion, sex, national origin, age, disability, veteran status, sexual orientation, gender identity, and genetic information.

Title IX is a federal law that provides that no person be excluded on the basis of sex from participation in, be denied benefits of, or be subjected to discrimination under any education program or activity. Both Title IX and university policy make clear that sexual violence and harassment based on sex is prohibited. An individual who believes they have been subjected to sexual violence or harassed on the basis of sex can seek support, including counseling and academic support, from the university. If you or someone you know has been harassed on the basis of sex or sexually assaulted, you can find information and resources at <https://sexualviolenceprevention.asu.edu/faqs>.

As a mandated reporter, I am obligated to report any information I become aware of regarding alleged acts of sexual discrimination, including sexual violence and dating violence. ASU Counseling Services, <https://eoss.asu.edu/counseling>, is available if you wish to discuss any concerns confidentially and privately.

Copyright

All contents of these lectures, including written materials distributed to the class, are under copyright protection. Notes based on these materials may not be sold or commercialized without the express permission of the instructor. [Note: Based on [ACD 304-06](#).]

Drop and Add Dates/Withdrawals

This course adheres to a compressed schedule and may be part of a sequenced program, therefore, there is a limited timeline to [drop or add the course](#). Consult with your advisor and notify your instructor to add or drop this course. If you are considering a withdrawal, review the following ASU policies: [Withdrawal from Classes](#), [Medical/Compassionate Withdrawal](#), and a [Grade of Incomplete](#).

Grade Appeals

Grade disputes must first be addressed by discussing the situation with the instructor. If the dispute is not resolved with the instructor, the student may appeal to the department chair per the [University Policy for Student Appeal Procedures on Grades](#).

Prohibition of Commercial Note-Taking Services

In accordance with [ACD 304-06 Commercial Note Taking Services](#), written permission must be secured from the official instructor of the class in order to sell the instructor's oral communication in the form of notes. Notes must have the note taker's name as well as the instructor's name, the course number, and the date.

Course Evaluation

Students are expected to complete the course evaluation. The feedback provides valuable information to the instructor and the college and is used to improve student learning. Students are notified when the online evaluation form is available.

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Syllabus Disclaimer

The syllabus is a statement of intent and serves as an implicit agreement between the instructor and the student. Anything in this syllabus (other than grading and absence policies) may be subject to change with reasonable advance notice.

Policy Against Threatening Behavior

Students, faculty, staff, and other individuals do not have an unqualified right of access to university grounds, property, or services. Interfering with the peaceful conduct of university-related business or activities or remaining on campus grounds after a request to leave may be considered a crime. All incidents and allegations of violent or threatening conduct by an ASU student (whether on- or off-campus) must be reported to the ASU Police Department (ASU PD) and the Office of the Dean of Students.