

**\*\*Disclaimer\*\***

This syllabus is to be used as a guideline only. The information provided is a summary of topics to be covered in the class. Information contained in this document such as assignments, grading scales, due dates, office hours, required books and materials may be from a previous semester and are subject to change. Please refer to your instructor for the most recent version of the syllabus.



### **IEE 369: Work Analysis and Design**

Welcome to IEE 369 – Work Analysis and Design. Here is the plan for the semester:

- All students should have access to the Power Point slides and any additional readings on the Blackboard.
- The course syllabus that follows contains the course description, learning objectives, and recommended timeline for the semester.

### **Course Description**

Planning, analysis, and design of methods of accomplishing work. Emphasizes human factors, work planning, methods analysis and design, and work measurement

This course addresses the modern requirements to design "work".

- Work in this class can be any activity that requires expenditure of effort, mental or physical. So, an office layout is clearly in-scope, an assembly operation is clearly in-scope.
- And this is NOT just about manufacturing, as our service economy grows in Arizona, we will be called upon to support the bank teller, the retail salesclerk, and the computer technician.

**NOTE: THIS COURSE UTILIZES LECTURES PREVIOUSLY RECORDED BY DR. DAN SHUNK. SPECIFIC DATES MENTIONED IN LECTURES DO NOT APPLY TO THIS ONLINE COURSE.**

### **Textbook**

Recommended Reading: The Goal by Eliyahu M. Goldratt

### **Course Delivery Mechanism**

During the semester the fundamental delivery mechanism will be lecture, being captured on-line in an ASU studio. A project will be used throughout the course as a template for the correct application of concepts and the correct usage of tools. A semester project by the students will reinforce this learning by allowing them to apply what they learn.

### **Prerequisite Topics**

We assume you've had the following exposure:

- Analytical thinking capability
- Introduction to Engineering and the principles of a systems approach
- Introduction to Engineering Economy and the principles of economics
- Minor awareness of how a business operates, how things get done!

### **Instructors**

Lecturer: Dr. Dan Shunk

Online Course Instructor: Melissa Dunn  
Office Hours: Email to set up appointment  
Office Location: Brickyard Engineering, Tempe  
Email: [madunn@asu.edu](mailto:madunn@asu.edu)

**\*\*While you will view Dr. Shunk on the videos, all correspondence in this course will be with the instructor, Melissa Dunn. Any problems or questions you have should go to the TA or to the instructor, Melissa Dunn, to be resolved.**

## Learning Objectives

Upon successful completion of the course the student should have mastered the following concepts and capabilities:

- Ability to define and apply the principles of Lean to the Workplace
- Ability to define and apply the rigorous systems approach of RDmaicSI from a lean, time-based perspective
- Ability to define and apply the principles of Work Design including the incorporation of 5S and other principles
- Ability to define and apply a safe, productive, repeatable Work Design Environment
- Ability to define and apply time-based measures to the workplace, including motion and time study principles
- Awareness of the changing demographics of the workforce and the impact Work Design will have on this population

## Student Success Tips

To be successful in this course:

- check the course daily
- read announcements
- read and respond to course email messages as needed
- complete assignments by the due dates specified
- communicate regularly with your instructor and peers
- create a study and/or assignment schedule to stay on track
- email the instructor to review exam and assignment results, ask questions, and ensure full understanding of course concepts and material

## Semester Project

To help the students understand the continuity of the various work analysis/lean concepts and tools, a project is assigned that will require the student to incorporate these tools throughout the semester. The project assignments (deliverables) will be submitted throughout the semester for interim grading. Project topics can be volunteered by the students as long as there is enough complexity in the project to utilize the tools. Topics can also be assigned by the instructor if needed.

## Course Grading Plan

The course grade will be determined based upon the total points each individual student achieves in the following categories:

Semester Project Deliverables	150 points (D1 – 25 points, D2 – 50 points, D3 Final Project Presentation – 75 points)
Special Topics Paper	25 points
SOP Assignment	25 points
Annotated Bibliography	50 points
Discussion Board Posts	50 points

Exam #1	100 points
Exam #2	100 points
<b>Total Available Points for All Students</b>	<b>500 points</b>

## Grading

Grade	Percentage	Points Range
A	90 – 100%	450– 500
B	80 – 89%	400 – 449
C	70 – 79%	350 – 399
D	60 – 69%	300 – 349
E/F	Below 60%	299 and below

## Grading Procedure

Grades reflect your performance on assignments and adherence to deadlines. Graded assignments will be available via the Gradebook.

## Exam Proctoring

In accordance with the Provost's announcement on April 1st, 2020 regarding remote learning for summer sessions, the face-to-face exams originally scheduled for the hybrid course (campus-based students) will be delivered online.

This online course uses online proctoring for exams. Online proctoring records both your computer screen activity and the physical room environment in order to mimic in-person proctoring conditions. The recordings are captured to help ensure academic integrity.

To help ensure that everything will function properly, you must complete a practice exam before the first exam. Additional information about the online proctoring service is posted with class materials. If you need assistance, contact the ASU Help Desk for assistance: access 24/7 live chat, create a case from your My ASU Service Center, or call 855 278 5080.

## Exam Instructions

There are pre-exam preparations that apply to every online exam. In addition, there will be exam-specific instructions for each exam that address exam time, permissible materials, and other exam information. Exam instructions will include, but not be limited to:

- You must have an official ASU ID card (campus student) or approved photo on file (online student) to confirm your identity.
- You must complete a room scan of your testing area that shows the entire work environment (including, but not limited to, a complete 360 degree scan of the test area, scanning the desk/table area top and underneath). Otherwise, you will be in violation of the exam instructions, and you may also be in violation of ASU's Student Academic Integrity Policy. Some or all exam points may be deducted for violating exam instructions.
- You must not have access to a cell phone, smart watch, TI-Nspire calculator, or other internet-capable device during the exam. If a cell phone, smart watch, TI-Nspire calculator, or other internet-capable device is seen out in any way or is accessible during an exam, you will be in violation of the exam instructions, and you may also be in violation of ASU's Student Academic Integrity Policy. Some or all exam points may be deducted for violating exam instructions.
- You must not have any other monitors/computers/tv's/tablets/other technological devices

that have a screen in the test area. All of these items must be removed and/or completely covered and disabled prior to beginning the exam. If any other monitors/computers/tv's/tablets/other technological devices that have a screen is seen out in any way or is accessible during an exam, you will be in violation of the exam instructions, and you may also be in violation of ASU's Student Academic Integrity Policy. Some or all exam points may be deducted for violating exam instructions.

## **Exam Requirements**

Exams and the final assignment must be performed individually; you cannot request help from any other student or resource without written approval from the instructor. Plagiarism/copy verifying tools will be used when grading the exams and the final assignment. Assignments 1 through 6 can be worked on with your team, if you choose to work on a team. Please see the first two lectures for more details.

The exams are closed book and closed notes. You cannot have access to the internet other than to launch the proctoring service and exam. You can have a non-programmable calculator. A non-programmable calculator cannot store any custom functions, formulas or text written by the user. To help improve the quality of education at Arizona State University, and assure that the degrees earned by our engineering students are based on the highest ethical standards, the following requirements for taking an exam are as follows:

- We will be using RPNOW online proctoring service. You will need a web camera on your computer, or connected to your computer. These can be purchased for approximately \$25 from Amazon. You will also need a scanner. These can be purchased for \$50 from Amazon, or you can use a smartphone app such as Genius Scan.
- Do your own work. No teamwork or discussions of any type are acceptable during the exam.
- You can use a non-programmable calculator; no TI-83, TI-84, TI N'spire, or any other programmable calculators allowed. Do not plan to use your phones for calculations.
- Place your cell phone in your backpack, purse, book bag, or pocket. You can NOT use your phone at all during the exam. Any observed phone, for any reason while taking the exam, is a violation. After completing the exam, you can use your smart phone to scan these answer sheets to be uploaded into the class website. Or, you can use a standard scanner (recommended) for scanning and loading the answer sheets.
- You cannot use the internet during the exam, other than access to the proctor and the exam on the class website.
- You cannot have multiple monitors running during the exam. This creates problems for the proctor, so it will be reported as a violation.
- You can have one 8.5 by 11 inch two sided hand written note sheet for the exams. No other materials allowed.
- Any electronic device such as a dictionary or translator must be approved by me prior to starting the exam. No device with transmitting capabilities or a camera will be allowed.
- The exam is the property of Arizona State University and Dan McCarville. It can NOT be copied or distributed. No Screen Shots. Do not give it to a friend. Do not upload it to any internet site.

Violations to these requirements as well as those identified in ASU's Academic Integrity Policy will be processed as required by this policy. The policy can be found at <http://provost.asu.edu/academicintegrity> (Links to an external site.).

From ASU Policy PUR 703: ASU requires all on campus and extended campus students, employees, and qualifying university affiliates to obtain an official ASU ID card. With the

exception of eligible new employees, the ASU ID card is issued for a fee. Online students are required to have an approved photo on file with Sun Devil Card Services. ASU will not ship an ID card internationally. However, you can still have your photo uploaded to the enrollment site for free through the ASU Sun Card site.

I sincerely appreciate your help with my efforts to improve your education experience, and enhance your career opportunities.

### **Assignment Integrity**

The project assignments can be worked in small teams; however, most online students prefer to work these assignments individually. No copying or plagiarizing are allowed in this course. The final assignment is an individual assignment.

### **Course Materials Integrity**

The assignment files, lecture example files, videos, and all other materials used in this course are the property of Daniel R. McCarville, Dan Shunk, and Arizona State University and are copyright protected. They can NOT be copied, given to a friend, uploaded to an internet site, or distributed in any way.

### **Communicating With the Instructor**

This course uses a discussion board called "Discussions" for general questions about the course. Prior to posting a question, please check the syllabus, announcements, and existing posts. If you do not find an answer, post your question. You are encouraged to respond to the questions of your classmates.

Email questions of a personal nature to your instructor or assigned TA. You can expect a response within 48 hours.

### **Online Course**

This is an online course. There are no face-to-face meetings. You can log into your course via MyASU or <https://my.asu.edu> (Links to an external site.). Please email the instructor to schedule office hours to meet virtually.

### **Email and Internet**

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

**\*\*\*All instructor correspondence will be sent to your ASU email account.**

### **Course Time Commitment**

This three-credit course requires approximately 135 hours of work. Please expect to spend around 18 hours each week preparing for and actively participating in this course.

### **Late or Missed Assignments and Exams**

Notify the instructor **BEFORE** an assignment is due if an urgent situation arises and the assignment will not be submitted on time. Published assignment due dates (Arizona Mountain Standard time) are firm. Please follow the appropriate University policies to request an accommodation for religious practices (Links to an external site.) or to accommodate a missed assignment due to University-sanctioned activities (Links to an external site.).

Due dates for classwork are on the class schedule. All work is due on the scheduled date. Late

work will not be graded, and you will receive a score of “0”.

The only excuses accepted for a missed exam or homework assignment are as follows:

1. Religious holiday/event as identified and approved by ASU
2. ASU sanctioned athletic/band event for our athletes and corresponding band students
3. Death of an immediate family member (parent, grand parent, brother, sister, child)
4. Hospitalization
5. US Military deployment

My general process for excused missed exams and assignments will not include a make-up exam. Rather, the final exam will be weighted more to compensate for the missed exam. Missed exams and assignments that are not excused will receive a zero grade.

### **Submitting Assignments**

All assignments, unless otherwise announced, **MUST** be submitted to the designated area of Canvas. Do not submit an assignment via email.

### **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 ([Links to an external site.](#)). 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 ([Links to an external site.](#)), Medical/Compassionate Withdrawal ([Links to an external site.](#)), and a Grade of Incomplete ([Links to an external site.](#)).

### **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 ([Links to an external site.](#)).

### **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> ([Links to an external site.](#)). 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 ([Links to an external site.](#)) and the Fulton Schools of Engineering Honor Code ([Links to an external site.](#)). 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.

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 ([Links to an external site.](#)), “Commercial Note Taking Services” and ABOR Policy 5-308 F.14 ([Links to an external site.](#)) 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.

Students are entitled to receive instruction free from interference ([Links to an external site.](#)) by other members of the class. An instructor may withdraw a student from the course when the student's behavior disrupts the educational process per Instructor Withdrawal of a Student for Disruptive Classroom Behavior ([Links to an external site.](#)).

Appropriate online behavior (also known as netiquette) is defined by the instructor and includes keeping course discussion posts focused on the assigned topics. Students must maintain a cordial atmosphere and use tact in expressing differences of opinion. Inappropriate discussion board posts may be deleted by the instructor.

Students cannot share their assignments with anyone. The assignments cannot be uploaded to websites or given to tutoring services. The assignments are copyright protected.

The Office of Student Rights and Responsibilities accepts incident reports ([Links to an external site.](#)) from students, faculty, staff, or other persons who believe that a student or a student organization may have violated the Student Code of Conduct.

### **Prohibition of Commercial Note Taking Services**

In accordance with ACD 304-06 Commercial Note Taking Services ([Links to an external site.](#)), 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 notetaker's name as well as the instructor's name, the course number, and the date.

### **Policy against threatening behavior, per the Student Services Manual, SSM 104–02**

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.

### **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.

### **Disability Accommodations**

Suitable accommodations will be made for students having disabilities. Students needing accommodations must register with the ASU Disabilities Resource Center and provide documentation of that registration to the instructor. Students should communicate the need for an accommodation in sufficient time for it to be properly arranged.

Qualified students with disabilities may be eligible to receive academic support services and accommodations ([Links to an external site.](#)). 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 ([Links to an external site.](#)) to the DRC. 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 the DRC by going to <https://eoss.asu.edu/drc> ([Links to an external site.](#)), calling (480) 965-1234

(480) 965-1234 or emailing [DRC@asu.edu](mailto:DRC@asu.edu). To speak with a specific office, please use the following information:

**ASU Online and Downtown Phoenix Campus**

University Center Building, Suite 160  
602-496-4321 (Voice)

**Polytechnic Campus**

480-727-1165 (Voice)

**West Campus**

University Center Building (UCB), Room 130  
602-543-8145 (Voice)

**Tempe Campus**

480-965-1234 (Voice)

## **Harassment and Sexual Discrimination**

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> (Links to an external site.).

Mandated sexual harassment reporter: As an employee of the University I am considered a mandated reporter and therefore obligated to report any information regarding alleged acts of sexual discrimination that I am informed of or have a reasonable basis to believe occurred.

ASU Counseling Services, <https://eoss.asu.edu/counseling> (Links to an external site.), is available if you wish to discuss any concerns confidentially and privately.

## **Title IX Federal Law**

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> (Links to an external site.).

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> (Links to an external site.), is available if you wish to discuss any concerns confidentially and privately.



## **Computer Requirements**

This course requires a computer with Internet access and the following:

- Web browsers (Chrome ([Links to an external site.](#)), Internet Explorer ([Links to an external site.](#)), Mozilla Firefox ([Links to an external site.](#)), or Safari ([Links to an external site.](#)))
- Adobe Acrobat Reader ([Links to an external site.](#)) (free)
- Adobe Flash Player ([Links to an external site.](#)) (free)
- Microphone (optional) and speaker

## **Technical Support**

This course uses Blackboard to deliver content. It can be accessed through MyASU at <http://my.asu.edu> ([Links to an external site.](#)) or the Blackboard home page at <https://myasucourses.asu.edu> ([Links to an external site.](#))

To monitor the status of campus networks and services, visit the System Health Portal at <http://syshealth.asu.edu/> ([Links to an external site.](#)).

To contact the help desk call toll-free at 1-855-278-5080.