

MSYM 262 | Problem Solving in Mechanized Systems Management

The Basics:

Credits:	1 hour
Prerequisites:	MATH 102 or higher, MSYM 109 or PHYS 141, 151, 211
Time and place:	Mondays, 2:00 – 2:50 pm, 116 Chase Hall
Course website:	Available on https://canvas.unl.edu/

Your instructor: Dr. Deepak R. Keshwani
 212 Chase Hall
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 (402) 472-6714

How can you connect with me?

Email is a great way for general questions. You'll typically get a response within 24 hours. My regular office hours are posted on MyPLAN. You can sign up on MyPLAN to meet with me during these times. If these times don't work for you, feel free to talk to me during class or send me an email. We can find a time to meet.

Course goals:

1. Identify and implement strategies to analyze and professionally communicate technical information (maps to outcome 4)
2. Develop skills in project planning and execution (maps to outcome 1)
3. Examine the dynamics of team-work in a professional context and demonstrate behaviors of an effective team member at the expected level (more on this in class) (currently doesn't map to a program outcome)
4. Critically evaluate an emerging issue relevant to your professional interest. (maps to outcome 1 and 2)

Relevance to program outcomes:

This course helps achieve the following program learning outcomes:

Outcome 1. Apply hands-on technical skills and knowledge from the natural and social sciences, technology, engineering, and mathematics to analyze and manage mechanized systems relevant to agriculture, food, energy, and water.

Outcome 2. Identify the structure, layout and function of mechanized systems including the relationships between individual components of a system.

Outcome 4. Develop professional written and oral reports to describe a mechanized system and communicate an analysis of the system that includes objectives, methods, results and recommendations.

This is how your grade will be determined:

Individual assignments	35%
Team project	30%
Individual project	30%
Peer and self-evaluation	5%

Final letter grades based on the final weighted percentage will tentatively be distributed as follows:

100- 97.0: A+	96.9-93.0: A	92.9-90.0: A-	
89.9-87.0: B+	86.9-83.0: B	82.9-80.0: B-	
79.9-77.0: C+	76.9-73.0: C	72.9-70.0: C-	
69.9-67.0: D+	66.9-63.0: D	62.9-60.0: D-	59.9 & below: F

For Pass/No Pass (PNP) grading option, students must receive a grade of C or better to pass the course.

Things you need to have:

There is no required textbook. When appropriate, we will use hand-outs that will be available on canvas. Lecture materials (or versions of it) will be posted on canvas as needed. You are strongly encouraged to take notes during class as I will emphasize important things. You will need access to a laptop with word processing, spreadsheets, and presentation software (eg. PowerPoint) that you should bring to class every week.

Homework and assignments:

Homework which will be typically due one week after being assigned. Late submissions for any assignment will incur a penalty of 25% per day. In-class assignments will be due in-class unless otherwise mentioned.

Individual project:

You will work on an individual research and critical analysis project that will be due in early March. The goal of this project is to collect analyze data from multiple sources on a topic that is relevant to your professional interests. More information about this project will provided in class later in the semester.

Team project:

You will work on a team project that applies the project planning skills. More information about this project will provided in class later in the semester. The project is at the end of the semester.

Peer and self-evaluation:

During the semester you will be working in teams. At the end of the semester, each student will evaluate their peers and themselves.

General course policies:

Some collective values that we will be embrace in this course:

- Never compromise our integrity
- Respect each other
- Share responsibility for our learning

Make-up assignments at my discretion and typically are reserved for extenuating personal or professional circumstances. I typically use the [UNL Class Attendance Policy](#) as a guide for these decisions.

Attendance and engagement: Attendance and participation in all class activities is expected. You are expected to comply with the [class attendance policy](#) of the University. We recognize that personal and professional commitments may sometimes conflict with class activities (i.e. life happens). Engage with instructors when you anticipate such conflicts so we can work together to resolve them. UNL has also published specific [course attendance and engagement requirements for Spring 2022](#)

Instructional continuity: If in-person classes are cancelled, you will be notified of the instructional continuity plan for this class via an announcement on Canvas. More information on instructional continuity can be found at: <https://executivevc.unl.edu/academic-excellence/teaching-resources/instructional-continuity-guidance>.

UNL COVID-19 information: All faculty, staff, and students on campus are expected to follow all campus policies and procedures related to Covid-19 which can be found at <https://covid19.unl.edu/>. Please visit this website which includes information about testing, vaccinations, face coverings, and use of the Safer Community App. If you have questions, please let me know.

Students who have medical documentation of a health risk that cannot be mitigated through vaccination should submit a [COVID-19 Academic Flexibility Request](#). Those with a disability and/or chronic health condition that makes them high risk for the virus should seek support via [Services for Students with Disabilities](#). International students should contact the [International Student and Scholar Office](#) to discuss their options.

I expect us to adhere to guidelines concerning academic integrity outlined in Section 4.2 of the [University's Student Code of Conduct](#). The BSE Department has some resources related to [academic integrity](#) and our [appeals process](#). Contact me if you have questions or need clarification.

The University strives to make all learning experiences as accessible as possible. If you anticipate or experience barriers based on your disability (including mental health, chronic or temporary medical conditions), please let me know immediately so that we can discuss options privately. To establish reasonable accommodations, I may request that you register with Services for Students with Disabilities (SSD). If you are eligible for services and register with their office, make arrangements with me as soon as possible to discuss your accommodations so they can be implemented in a timely manner. SSD contact information: 117 Louise Pound Hall; 402-472-3787

Tips to succeed in this class:

- Show up! And participate. We meet once a week. So missing a week will really set you back.
- Take good notes during class. Your notes combined with the course content on Canvas will be helpful to you.
- Stay organized with your course materials. Keep a physical or electronic binder with course notes, graded assignments, quizzes, handouts etc.
- Engage with your team. It is your responsibility to learn from each other when working on team-based assignments.
- Since professional communication is an important part of this class, all your work will be graded for both content and how the content is presented. Pay attention to the assignment guidelines on formatting, etc.

Tentative class schedule:

Week of	Topic
17-Jan	Class Intro and Expectations - No Class - Watch Video Online
24-Jan	Creating effective spreadsheets
31-Jan	Data to information - using charts/figures effectively
7-Feb	Data analysis and visualization
14-Feb	Prep for Career Fair - Telling your story
21-Feb	Working in Teams
28-Feb	Tools/techniques for collaboration
7-Mar	Team-based project management
14-Mar	Spring Break - no class
21-Mar	Team-based project management - Case Studies
28-Mar	Launch of Team Project
4-Apr	In-class Team Time
11-Apr	In-class Team Time
18-Apr	In-class Team Time
25-Apr	In-class Team Time
2-May	In-class Team Time
9-May	Finals Week - Team Project Due

Classroom Emergency Preparedness and Response Information:

- Fire Alarm (or other evacuation): In the event of a fire alarm: Gather belongings (Purse, keys, cellphone, N-Card, etc.) and use the nearest exit to leave the building. Do not use the elevators. After exiting notify emergency personnel of the location of persons unable to exit the building. Do not return to building unless told to do so by emergency personnel.
- Tornado Warning: When sirens sound, move to the lowest interior area of building or designated shelter. Stay away from windows and stay near an inside wall when possible.
- Active Shooter
 - Evacuate: if there is a safe escape path, leave belongings behind, keep hands visible and follow police officer instructions.
 - Hide out: If evacuation is impossible secure yourself in your space by turning out lights, closing blinds and barricading doors if possible.
 - Take action: As a last resort, and only when your life is in imminent danger, attempt to disrupt and/or incapacitate the active shooter.
- UNL Alert: Notifications about serious incidents on campus are sent via text message, email, unl.edu website, and social media. For more information go to: unlalert.unl.edu.
- Additional Emergency Procedures can be found here: <https://emergency.unl.edu/>