GNEG 11003: Introduction to Engineering
University of Arkansas
Fall Semester 2024

Course Syllabus

Welcome! I am that you are a part of Introduction to Engineering this fall! This syllabus serves as a guide to help you navigate through the course, providing you with essential information and setting clear expectations for a successful learning experience. I encourage you to review it thoroughly and refer back to it whenever needed.

Throughout this course, we will explore a wide range of topics and engage in meaningful discussions, creating a collaborative and inclusive learning environment. I am here to support and guide you throughout the semester, so please don't hesitate to reach out if you have any questions or need assistance.

I believe that education is a shared responsibility, and your active participation and dedication are crucial for your growth and success. Let's embrace this opportunity to learn, challenge ourselves, and discover new perspectives together.

Course Instructor:

Mrs. Leslie Massey, MS

Advanced Instructor, FEP

324 White Engineering Hall

Appointments Available through UASuccess

lbmassey@uark.edu

Course Assistant:

Jalal Altal

Office hours online through Blackboard Collaborate

mjaltal@uark.edu

Specific Dates of Interest:

8/19	Class Begins
9/27	"W" drop deadline
10/8	Last Day of Class

Course Description

This introductory course for undergraduates introduces the fields of engineering and many of the modeling and problem-solving techniques used by engineers and computer scientists. It also introduces the students to the engineering profession and some of the computer tools necessary for pursuing a degree in engineering or computer science.

Course Materials

All course materials will be provided through the GNEG 11003 Blackboard page. This Blackboard will contain all general course materials including handouts, electronic files, and course announcements, as well as course grades and assignment submission links. To access Blackboard, you should visit http://learn.uark.edu and login using your uark ID and password.

Course Supplies

You will need the following to be successful in this course:

Laptop must meet or exceed the UA Engineering requirements and have access to desktop applications for Excel, Word, and PowerPoint which are available free to students at software.uark.edu.
Since this is an online course, all assignments will be submitted electronically. However, because this is an engineering course, you should expect to need a notebook/note system to work problems.

A problem with your Internet access may not be used as an excuse for late, missing, or incomplete coursework. If you experience problems with your Internet connection while working on this course, it is your responsibility to find an alternative Internet access point, such as a public library or Wi-Fi hotspot.

Course Communication

Communication for this course will be through email, Blackboard announcements, and Blackboard Discussion posts. Regarding all communications, students are expected to refrain from rude or inappropriate comments and to address individuals using their proper honorifics. The proper honorifics are Dr. for all Ph.D. graduates and Mr./Mrs./Ms. for all others. Students are encouraged to ask questions about course content or grading. If mistakes were made on our part, we would quickly fix those issues. Specific complaints that pertain to the fairness of the way we choose to grade an assignment must be made in person in my office or via video chat through Collaborate. Emails that contain threatening or derogatory language will be forwarded to the Associate Dean of Engineering and the Dean of Students. The **best** way to reach us is by email. We will respond within 24 hours. If the contact occurs after 5:00 PM on Friday, a response should be expected on Monday.

Course Objectives

The goal of this course is to prepare Engineering First Year students for their transition into a discipline-specific College of Engineering undergraduate program. At the end of this course, you should be able to:

- apply a structured, engineering problem solving approach;
- demonstrate an ability to manipulate and present data with spreadsheets;
- develop fundamental skills necessary to solve basic engineering problems;
- utilize the engineering design process to solve open-ended problems;
- differentiate disciplines within the College of Engineering,
- recognize academic requirements and opportunities associated with being a University of Arkansas engineering student
- demonstrate independence, responsibility and effectiveness toward learning with the necessary skills and mindset to succeed academically in future educational endeavors

NACE Career Competencies

The National Academy of Colleges and Employers (NACE) outlines eight career competencies for career readiness. For new college graduates, career readiness is key to ensuring successful entrance into the workforce. Career readiness is the foundation upon which a successful career is launched. Career readiness is, quite simply, the new career currency. By the end of this course, you should be introduced to the following skills:

Career & Self Development: Proactively develop oneself and one's career through continual personal and professional learning, awareness of one's strengths and weaknesses, navigation of career opportunities, and networking to build relationships within and without one's organization.

Communication: Clearly and effectively exchange information, ideas, facts, and perspectives with persons inside and outside of an organization.

Critical Thinking: Identify and respond to needs based upon an understanding of situational context and logical analysis of relevant information.

Equity & Inclusion: Demonstrate the awareness, attitude, knowledge, and skills required to equitably engage and include people from different local and global cultures. Engage in anti-racist practices that actively challenge the systems, structures, and policies of racism.

Leadership: Recognize and capitalize on personal and team strengths to achieve organizational goals.

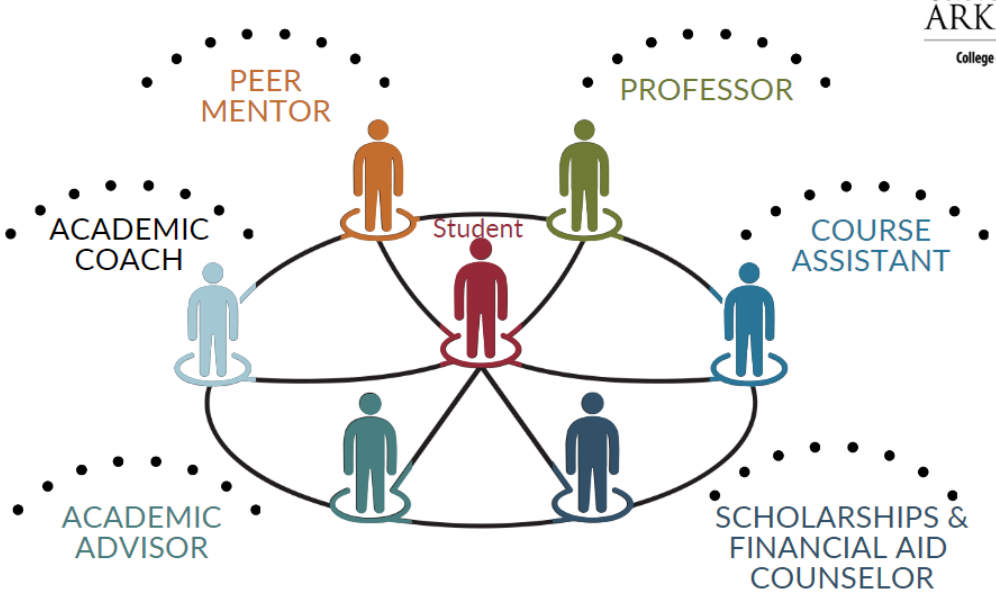
Professionalism: Knowing work environments differ greatly, understand and demonstrate effective work habits, and act in the interest of the larger community and workplace.

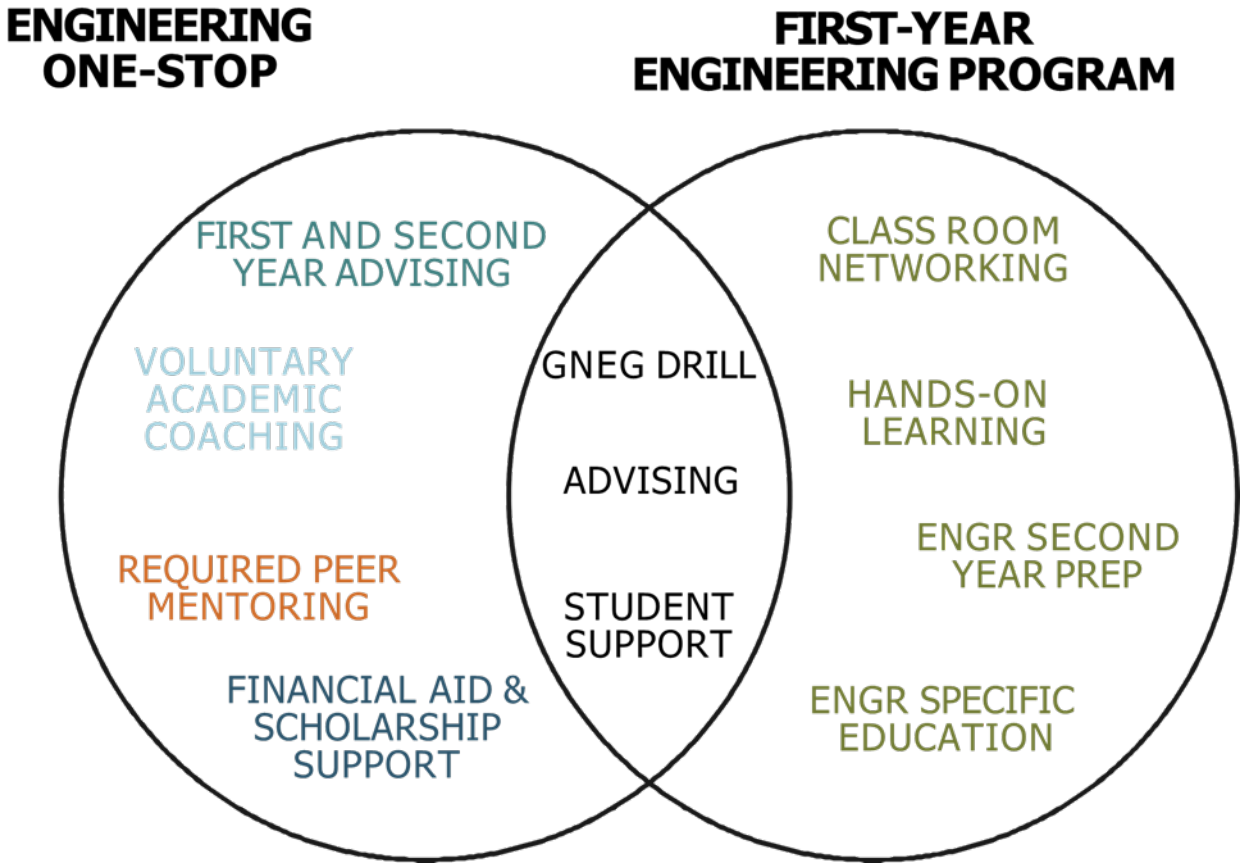
Technology: Understand and leverage technologies ethically to enhance efficiencies, complete tasks, and accomplish goals.

Belonging

We are committed to continuously fostering an environment where everyone feels a deep sense of belonging and can thrive as part of our diverse community. By centering our diversity and inclusion efforts around belonging, we aim to create an environment where every individual feels valued, supported, and included. We believe that a sense of belonging enhances learning, creativity, and overall well-being. Together, we can foster a community that celebrates diversity, embraces inclusivity, and empowers each person to reach their full potential as engineers and global citizens.

THE FIRST-YEAR ENGINEERING STUDENT LEARNING COMMUNITY





Engineering One Stop

Engineering One-Stop (EOS) enhances student access to academic coaching, peer mentoring, academic advising, scholarship, and financial aid counseling for all engineering students.

Academic Advising

How we can help:

- Understanding requirements for major
- Planning courses for future semesters
- Making changes to schedule like dropping a class
- Learning about minors

Academic Coaching

How we can help:

- Developing & improving college-level study habits
- Learning study strategies
- Building a game plan for exams and finals
- Managing stress

Peer Mentoring

How we can help:

- Transitioning to college
- Understanding campus resources
- Getting involved on campus
- Succeeding as an engineering student

https://engineering-one-stop.uark.edu/index.php

Making an Appointment with Someone in your Success Network

UASuccess is one way the campus community builds connections between students, their professors and their support networks. Identify your support network and schedule appointments.

Access UASuccess via one of the following:

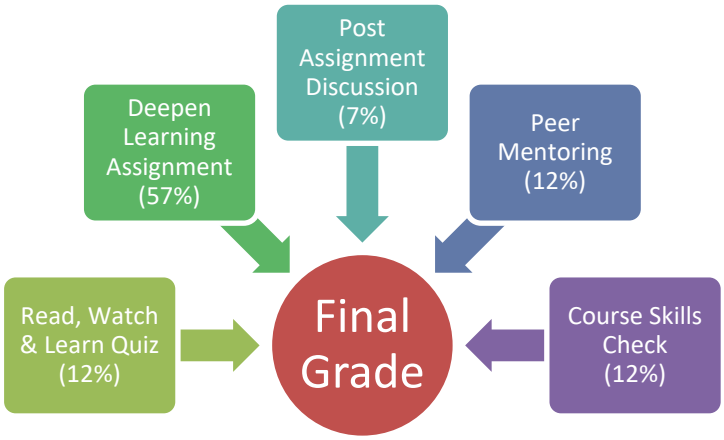
- Within Blackboard, use the navigation panel and select 'Assist.' From there, click the UASuccess 'Try it out' button.
- Visit MyApps.Microsoft.com and select the UASuccess tile.
- Go to UASLogin.uark.edu

To Find your Success Network:

- Click My Success Network in the navigation pane to display your personalized network.
- If available, schedule an appointment with the appropriate resource.

Grading

Throughout the course, you will be required to complete a series of assignments. Grades will be assigned by the instructor or course assistant. Each graded item (assignment or peer mentoring participation) in this course is allocated a certain number of points. The total points are expected to be 2460. The specific details associated with course activities and assignments are detailed in the Assignment Learning Modules on Blackboard and summarized below.



Course Schedule

		Points					
Week	**Lesson**	**Read, Watch & Learn Quiz**	**Deepen Learning Assignment**	**Post Assignment Discussion**	**Lesson Total**	**Peer Mentoring**	**Week Total**
1	Course Orientation	20	100	30	150		
	What is Engineering	20	100	30	150		300
2	Numbers	20	100		120		
	Unit Conversion	20	100	30	150	50	320
3	Dimensional Analysis	20	100		120		
	Intro to Excel	20	100		120	50	290
4	Charts, Graphs Stats	20	100	30	150		
	Intro to AI	20	100	30	150	50	350
5	Excel Logic	20	100		120		
	Library Resources	20	100		120	50	290
6	Data Analysis	20	100		120		
	Career Development	20	100		120	50	290
7	Robotics	20	100		120		
	Self-Awareness	20	100	30	150	50	320
8	Skills Check		300		300		300
					Course Total		**2460**

Peer Mentoring

As part of this course, you are required to participate in the First Year Engineering (FEP) Peer Mentoring Program. To ease the transition from your former major/school to the College of Engineering at UA, you will be paired with an upper-class engineering student who helps with academic, professional, and personal development. Peer Mentors can share their first-hand experience to answer questions

regarding topics such as academics, extracurricular activities, school/life balance, and more. Peer Mentors are a great resource for students to share their ideas or discuss problems or frustrations.

While your mentor will have suggested topics of the week to cover, ultimately these meetings are for you and any needs and questions you currently have. Peer Mentors are here to be a resource and guide for you. You will have 30-minute meetings with your assigned Peer Mentor once a week during Weeks 2-7 of this course. You will decide if the meetings will be in-person or virtual with your Peer Mentor. You will receive an email from your assigned Peer Mentor during Week 1 with further instructions.

Disability Related Accommodations

University of Arkansas Academic Policy Series 1520.10 requires that students with disabilities are provided reasonable accommodations to ensure their equal access to course content. If you have a documented disability and require accommodations, please contact me privately at the beginning of the semester to plan for necessary classroom adjustments. Please note, you must first verify your eligibility for these through the Center for Educational Access (contact 479–575–3104 or visit cea.uark.edu for more information on registration procedures).

Inclement Weather or Technical Problems

In case of inclement weather or technological problems that prevent the University from providing access to course materials you may send your instructor an email inquiry. In addition, the instructor will notify students as soon as possible in such instances and provide instructions on how the course will proceed.

Blackboard occasionally schedules "down time"; users will be notified in advance through a system-wide announcement so schedule your online work accordingly. If you are experiencing difficulties with the operation or navigation of Blackboard you can visit the UA Blackboard Help website. Please note that personal technical issues (i.e. computer crashes or lack of knowledge of Blackboard) are considered to be the responsibility of the student and will not excuse the student from assignments or other course responsibilities. While we will do our best to provide technical assistance, it is highly recommended that the student develop a local back-up plan to assist in the event that technical difficulties are experienced during the course.

Technical Support

Students will require access to a computer and the Internet throughout the semester to investigate and review suggested sites and to utilize the Blackboard Course Management System (CMS). You are expected to regularly check your UARK email and Blackboard for course updates. All students must use MSOffice Suite software for all assignments.

If you have any questions about Blackboard contact Blackboard Support. Phone: 479-575-6804. The current support hours are listed on the Blackboard Support Page or in the Software & Support tab in Blackboard. If Blackboard is not responding, or there are problems with the system after business hours, please call the number below. The appropriate personnel will be notified. Phone: 479-575-6804

Professional Conduct

Students are required to abide by the FEP Conduct Policy, as well as the University of Arkansas Code of Student Life.

Academic Integrity

As a core part of its mission, the University of Arkansas provides you with the opportunity to further your educational goals through programs of study and research in an environment that promotes freedom of inquiry and academic responsibility. Accomplishing this mission is only possible when intellectual honesty and individual integrity prevail. Each University of Arkansas student is required to be familiar with and abide by the University's 'Academic Integrity Policy' at Academic Integrity Policy. If you have questions about how these policies apply to our course, please contact me.

Search Engine (Bing, Google) and Generative AI Tools (ChatGPT, Bard) Usage

[Note: this was created with assistance from Bing's AI-powered copilot.]

When using search engines like Bing and generative AI tools like ChatGPT for academic work, it is important to use them responsibly and in accordance with their respective usage policies. These tools can be valuable resources for research and idea generation, but it is important to properly cite any information or content obtained from them. Additionally, using these tools to generate content that is passed off as one's own original work (plagiarism) is prohibited. It is also important to critically evaluate the accuracy and reliability of information obtained from these tools, as they may not always provide accurate or up-to-date information.

Evaluating the accuracy of information obtained from search engines and AI tools can be challenging, but there are some steps you can take to help ensure that the information you obtain is reliable. Here are some suggestions:

- **Check multiple sources:** When using a search engines (Bing, Google, etc.,) you should check multiple sources to verify the accuracy of the information you find. This can help you identify any inconsistencies or discrepancies in information and determine which sources are reliable.
- **Evaluate the source:** It is important to evaluate the credibility of the sources you find through search engines and AI tools. Consider factors such as the author's credentials, the publisher, and the date of publication. For example, information from a reputable news organization or academic institution is more reliable than information from an unknown blog or forum.
- **Use fact-checking tools:** There are several AI fact-checking tools available that can help you verify the accuracy of information. These tools use advanced algorithms to cross-reference information against reliable sources and provide an assessment of its accuracy.
- **Understand the limitations:** It is important to understand the limitations of search engines and AI tools when it comes to providing accurate information. These tools are fallible and may not always provide up-to-date or accurate information. You should always use your own critical thinking skills to evaluate the information you find.

In summary, evaluating the accuracy of information obtained from search engines and AI tools requires a combination of critical thinking, cross-referencing with multiple sources, and using additional tools such as fact-checkers. By following these steps, you can increase your confidence in the accuracy of the information you obtain.

Additional Campus Resources

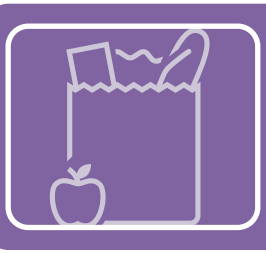
Student Success Center: Student Success at the CORD is here to support you with outreach, programs, and resources to help overcome barriers on your path to success from your first day until graduation. Find your success here by engaging with our Academic Initiatives Programs, such as Tutoring, Writing Studio, Supplemental Instruction, and Peer Academic Coaching, and learn more about our first-year programs and courses that can kick-start your academic achievements. 479-575-3174 or email success@uark.edu

Student Technology Support/IT Services: At the University of Arkansas, you can expect a high level of IT support. IT Services provides help and support for services including network connection for personal computing devices, campuswide telephony, software, printing and more.

Center for Education Access: The Center for Educational Access (CEA) serves as the central campus resource for the University community in regards to students with disabilities and accommodations to remove barriers to access. Call 479-575-3104 or email ada@uark.edu. 209 Arkansas Union, or visit their website.

Counseling and Psychological Services: The staff of Counseling and Psychological Services (CAPS) works with members of the University to help solve problems, understand themselves, grow personally, develop more satisfying relationships with friends and family and help with other mental health issues. Services are provided by licensed psychologists, counselors, and social workers.Call 479-575-5276 to make an appointment, or visit their website. 24 hour emergency service available, Call (479) 575-5276.

Research Librarians: Ask a Librarian! Text: 479-385-0803, Call: 479-575-6645, email: refer@uark.edu, or live chat! Visit their website.



Full Circle Pantry: The Jane B. Gearhart Full Circle Food Pantry is available as a free grocery assistance center for all U of A students, staff, and faculty. Full Circle is located on the backside of Walton Residence Hall and is open Mondays from 11a-3p, Wednesdays from 3p-5p, and Thursdays from 10a-2p. If you need assistance outside of these hours, please email pantry@uark.edu to set up an alternate time. For more information visit fullcircle.uark.edu or email pantry2@uark.edu.