

## 1 Course Number and Name

- a. **ENGR 1201:** Introduction to Engineering, Fall 2021
- b. Lecture: Sec 030 1:00 pm - 2:50 pm, Friday

## 2 Credits and Contact Hours

- a. **Credits:** 2
- b. **Contact Hours:** 3 hours/week (Classroom)

## 3 Instructor Information

- a. **Course Coordinator:** William Kitch
- b. **Instructors:**
  - i. Andrea Robledo, 325-486-5503, [andrea.robledo@angelo.edu](mailto:andrea.robledo@angelo.edu), Office: VIN 283. For office hours see [faculty homepage](#).
  - ii. Anthony Battistini, 325-486-5511, [anthony.battistini@angelo.edu](mailto:anthony.battistini@angelo.edu), Office: VIN 271. For office hours see [faculty homepage](#).

## 4 Required Course Materials

- a. **Textbook:** *Studying Engineering, 5<sup>th</sup> Ed.*, Landis 2011, (ISBN 9780979348723).
- b. Top Hat Join Code 890999
- c. Other supplemental materials posted on Blackboard® Learning Management System

## 5 Technology Requirements

This course requires internet access and the ability to use the following online tools: Blackboard, Top Hat, Gradescope, Blackboard Collaborate, Adobe Acrobat (or another pdf maker), and YouTube. Additionally, access to Office products is also necessary for completing reports in Word and Excel. No specific hardware is required, but access to a computer with webcam is highly encouraged.

## 6 Specific Course Information

- a. **Catalog Description:** An introduction to the engineering profession with an emphasis on technical communication and team-based engineering design.
- c. **Prerequisites:** None
- b. **Required or Elective Course:** Required

## 7 Specific Goals for the Course

- a. Course Learning Outcomes:
  1. Work effectively in teams to accomplish course assignments.
  2. Create a personalized curriculum plan to graduate with your engineering degree and describe the licensing processes for practicing engineers.
  3. Prepare technical engineering reports formatted according to professional standards.
  4. Follow the engineering design process to solve engineering challenge.
  5. Apply basic engineering tools to solve simple problems.
  6. Evaluate multiple learning strategies and select the strategies best suited to the content and context of the material/course based on your preferred learning style.
  7. Demonstrate use of time management strategies to complete long and short-term projects/assignments on a team or as an individual.

b. Course Learning Outcome Mapping to ABET Criterion 3 Student Outcomes:

**Table 1: Course Learning Outcomes mapped to ABET Student Outcomes**

ABET Student Outcomes	1	2	3	4	5	6	7
1. Solve Problems				X	X		
2. Design				X			
3. Communication			X		X		
4. Ethics & Professionalism			X				
5. Teamwork	X						X
6. Experimentation					X		
7. Acquire New Knowledge		X	X			X	

## 8 Topics Covered

1. Defining Success & Goal Setting
2. Time Management & Project Management
3. Learning Styles & Teaching Styles
4. Study Cycle
5. Reading for Comprehension & Reading for Analysis
6. Engineering Design Process
7. Teamwork
8. Technical Writing
9. Professional Engineering Presentations
10. Unit Analysis and Dimensional Analysis
11. MS Office Product Automation (Word/Excel)
12. Engineering Grand Challenges

## 9 Course Delivery and Communications

### 9.1 Delivery Method

This is a face-to-face course with learning resources and supplemental materials posted in [Blackboard](#)<sup>1</sup>. Accommodations will be made for students who are in quarantine or isolation and are unable to attend.

### 9.2 Communications

Communication between students and professors is key to success in any course, but planning ahead and connecting in effective ways can be a challenge for us both. I can be reached via Blackboard discussion board, email, phone, or via GroupMe text. Send me a GroupMe message with your name, hometown and section number or class meeting day once you read this, by clicking on the QR code below.

Join my group on GroupMe!



**Figure 1: QR Code for GroupMe- Use a QR code reader to snap a picture of the QR code. It will allow you to join the GroupMe group for ENGR 1201.**

I will respond to GroupMe, email or telephone messages within 24 hours during working hours Monday through Friday. Weekend messages may not be returned until Monday.

Written communication via email: All private/official communication will be done exclusively through your ASU email address. Check frequently for announcements and policy changes. For the quickest response, include the course name and section number in your subject line of your email.

Office hours are another great way to connect. I will host my office hours in the Engineering Hub located in VIN 254. I am also happy to make arrangements to meet with you online via scheduled Blackboard Collaborate, Zoom, or other web meeting platforms.

## **10 Professionalism**

Professional engineering standards apply in this class. You are expected to demonstrate a behavior consistent with the conduct of an individual practicing in the engineering profession. You are expected to: (1) come prepared for class; (2) respect faculty and peers; (3) demonstrate responsibility and accountability for your own actions; (4) demonstrate sensitivity and appreciation for diverse cultures, backgrounds, and life experiences; (5) offer and accept constructive criticism in a productive manner; (6) demonstrate an attitude that fosters professional behavior among peers and faculty; (7) be punctual to class meetings; (8) maintain a good work ethic and integrity; and (9) recognize the classroom as a professional workplace.

## **11 Graded Material**

### **11.1 Class Attendance, Participation, Timeliness and Teamwork**

You are expected to attend every class meeting on time and prepared. Attendance will be taken at each class meeting. Should you find it necessary to miss a class for any reason, you are expected to notify your instructor as early as the absence is known—preferably before the absence.

Your assignments will all be submitted online with specific due dates posted on Blackboard. Life can get overwhelming at times causing us to miss deadlines. Deadlines are provided as a guide to help you complete all of the course requirements and ensure your teams can successfully complete course projects. While team projects have strict deadlines, other assignments in the course may be more flexible. Late work will be eligible for a percentage of the original points based on the submission date.

Nearly all worthwhile accomplishments from raising a family to launching the space shuttle are the work of teams. Engineering is no exception. All engineering projects are completed by teams. The purpose of the teams are to give you practice working together and to provide a support group for you within the class. Your team depends on you to complete your portion of the projects on-time and to the best of your abilities.

### **11.2 Quizzes**

There may be in-class quizzes. The quizzes will be unannounced and unscheduled. The quizzes are intended to determine whether or not you have completed the pre-class work and are prepared for class.

### **11.3 Reading Reviews**

Before nearly every lecture there will be an online reading review. This is designed to a) help you prepare for class and b) let your instructor know what parts of the material are most difficult and need to be covered in the lecture. You can take these “quizzes” as many times as you wish to achieve the score you wish.

#### 11.4 Journal

Each week, for the first 12 weeks of the semester, you will be given a prompt to journal. Journals must be at least 200 words each, answer ALL of the questions posed, and written grammatically correct and in a professional tone.

#### 11.5 Homework

There are 6 homework assignments over the course of the semester. These assignments are meant to help you prepare for the following class meeting. Completing the assignments is critical to your class participation in the upcoming class. Your lowest homework grade will be dropped.

#### 11.6 Site Visit Report

In teams, you will be assigned an engineering company or entity to visit. The assignment will require coordinating your team's availability with the company and professional communication with the contact person at each site. Teams are expected to complete a preparation protocol prior to the visit and submit a professional Site Visit Report documenting the visit within a week of the visit.

#### 11.7 K'Nex Bridge Design Project

Your team will be challenged to build a K'NEX bridge to meet specific design requirements. Teams will be required to complete 7 deliverables as a part of the project. Bridges will be tested in class in the Hunter Strain Engineering Lab Lobby.

#### 11.8 Engineering Design Challenge

This is the culminating project for the course. Your team will select an engineering design project, use the engineering design process to build and test your prototype according to the given design requirements. Teams will be required to complete 7 deliverables as a part of the project and designs will be tested in class at the Hunter Strain Engineering Lab.

#### 11.9 Grades: Weighting and Letter Grades

The weighting system shown in Table 2 will be used in determining final grades for the course.

**Table 2: Grade Weighting**

Item	Count	Pts Each	Total Pts	Percent
Class Attendance & Participation (1 free pass)	16	10	150	17%
Reading Reviews	6	5	30	3%
Homework	6	20	120	10%
Journals (lowest 2 dropped)	12	10	100	10%
SMART Goals	2	50	100	11%
Site Visit Report	1	100	100	12%
K'Nex Bridge Project	1	100	100	12%
Engineering Design Challenge Project	1	200	200	25%
Total			900	100%

The instructor will determine letter grades for the course using his professional judgment, and the following standards as described in the University Catalog:

A = excellent work      B = good work      C = average work      D = poor work      F = failing work

### **11.10 Incomplete Grade Policy**

It is policy that incomplete grades be reserved for student illness or personal misfortune. Please contact faculty if you have serious illness or a personal misfortune that would keep you from completing course work. Documentation may be required. See ASU Operating Policy 10.11 [Grading Procedures](#)<sup>2</sup> for more information.

## **12 Classroom and University Policies and Student Support**

All students are required to follow the policies and procedures presented in the [Angelo State University Student Handbook](#)<sup>3</sup> and [Angelo State University Catalog](#)<sup>4</sup>.

### **12.1 Accommodations for Students with Disabilities**

ASU is committed to the principle that no qualified individual with a disability shall, on the basis of disability, be excluded from participation in or be denied the benefits of the services, programs or activities of the university, or be subjected to discrimination by the university, as provided by the Americans with Disabilities Act of 1990 (ADA), the Americans with Disabilities Act Amendments of 2008 (ADAAA) and subsequent legislation.

Student Disability Services is located in the Office of Student Affairs, and is the designated campus department charged with the responsibility of reviewing and authorizing requests for reasonable accommodations based on a disability. It is the student's responsibility to initiate such a request by contacting an employee of the Office of Student Affairs, in the Houston Harte University Center, Room 112, or contacting the department via email at [ADA@angelo.edu](mailto:ADA@angelo.edu). For more information about the application process and requirements, visit the [Student Disability Services website](#).<sup>5</sup> The employee charged with the responsibility of reviewing and authorizing accommodation requests is:

Dr. Dallas Swafford  
Director of Student Disability Services  
Office of Student Affairs  
325-942-2047  
[dallas.swafford@angelo.edu](mailto:dallas.swafford@angelo.edu)  
Houston Harte University Center, Room 112

### **12.2 Title IX at Angelo State University**

Angelo State University is committed to providing and strengthening an educational, working, and living environment where students, faculty, staff, and visitors are free from sex discrimination of any kind. In accordance with Title VII, Title IX, the Violence Against Women Act (VAWA), the Campus Sexual Violence Elimination Act (SaVE), and other federal and state laws, the University prohibits discrimination based on sex, which includes pregnancy, and other types of Sexual Misconduct. Sexual Misconduct is a broad term encompassing all forms of gender-based harassment or discrimination and unwelcome behavior of a sexual nature. The term includes sexual harassment, nonconsensual sexual contact, nonconsensual sexual intercourse, sexual assault, sexual exploitation, stalking, public indecency, interpersonal violence (domestic violence or dating violence), sexual violence, and any other misconduct based on sex.

You are encouraged to report any incidents involving sexual misconduct to the Office of Title IX Compliance and the Director of Title IX Compliance/Title IX Coordinator, Michelle Miller, J.D. You may submit reports in the following manner:

Online: [Incident Reporting Form](#)<sup>6</sup>

Face to Face: Mayer Administration Building, Room 210

Phone: 325-942-2022

Email: [michelle.miller@angelo.edu](mailto:michelle.miller@angelo.edu)

Note, as a faculty member at Angelo State, I am a mandatory reporter and must report incidents involving sexual misconduct to the Title IX Coordinator. Should you wish to speak to someone in confidence about an issue, you may contact the University Counseling Center (325-942-2371), the 24-Hour Crisis Helpline (325-486-6345), or the University Health Clinic (325-942-2171).

For more information about resources related to sexual misconduct, Title IX, or Angelo State's policy please visit the [Title IX website](#).<sup>7</sup>

### **12.3 Student Absence for Observance of Religious Holy Days**

A student who intends to observe a religious holy day should make that intention known in writing to the instructor prior to the absence. See ASU Operating Policy 10.19 Student Absence for [Observance of Religious Holy Day](#)<sup>8</sup> for more information.

### **12.4 Information About COVID-19**

Please refer to ASU's [COVID-19 \(Coronavirus\) Updates](#)<sup>9</sup> web page for current information about campus guidelines and safety standards as they relate to the COVID-19 pandemic.

### **12.5 Student Conduct Policies**

#### ***12.5.1 Academic Integrity***

Students are expected to maintain complete honesty and integrity in all work. Any student found guilty of any form of dishonesty in academic work is subject of disciplinary action and possible expulsion from ASU.

#### ***12.5.2 Plagiarism***

Plagiarism is a serious topic covered in ASU's [Academic Integrity policy](#)<sup>10</sup> in the Student Handbook. Plagiarism is the action or practice of taking someone else's work, idea, etc., and passing it off as one's own. Plagiarism is literary theft.

In your discussions and/or your papers, it is unacceptable to copy word-for-word without quotation marks and the source of the quotation. It is expected that you will summarize or paraphrase ideas giving appropriate credit to the source both in the body of your paper and the reference list.

Papers are subject to be evaluated for originality via Turnitin or SafeAssign. Resources to help you understand this policy better are available at the [ASU Writing Center](#)<sup>11</sup>.

#### ***12.5.3 Copyright Policy***

Students officially enrolled in this course should make only one printed copy of the given articles and/or chapters. You are expressly prohibited from distributing or reproducing any portion of course readings in printed or electronic form without written permission from the copyright holders or publishers.

### 13 Course Outline

The lecture lesson outline is presented in Table 3. Detailed reading and homework assignments along with updates to this schedule will be provided via Blackboard. The schedules may be modified as the semester progresses.

**Table 3: Lecture Lesson Outline**

Lsn	Date	Topic	Reading†	Assignment Due
1	Fri, Aug 27	Course Introduction & SMART Goals	Text pp. 1-31	RR01, HW01, Video
2	Fri, Sept 3	Teaching & Learning Styles	3.2-3.7 4.2-4.5, 5.1-5.4, pp.194-196 Felder & Solomon	RR02, HW02AB, J02
3	Fri, Sept 10	Engineering Design Process Pt 1	2.1-2.3, 6.4-6.7	RR03, SMART Goals Essay, J03
4	Fri, Sept 17	Engineering Design Process Pt 2		KB 1&2, J04, SV 1
5	Fri, Sept 24	Build Day		HW03, J05
6	Fri, Oct 1	K'Nex Bridge Testing		KB 3,4,5, J06
7	Fri, Oct 8	Grand Challenges & Unit Analysis		KB 6&7, J07
8	Fri, Oct 15	Derived Units & Dimensional Analysis		HW04, J08
9	Fri, Oct 22	Technical Writing in Engineering	6.1-6.5	RR04, HW05, J09
10	Fri, Oct 29	Professional Development	Ch 2.4-2.11, 8.3-8.9	RR05, SMART Goals Reflection, SV 2, J10
11	Fri, Nov 5	Personal Development & Campus Resources	Ch 7	RR06, EDC 1&2, J11
12	Fri, Nov 12	Materials Testing & Data Collection		J12
13	Fri, Nov 19	Design Selection & Testing		
14	Fri, Nov 26	Design Iteration		Last Day to Submit Late Assignments
15	Fri, Dec 3	Engineering Design Challenge Testing		EDC 3,4,5
16	Fri, Dec 10	No Class, No Final		EDC 6&7

RR = Reading Review, HW = Homework, KB= K'Nex Bridge Project, EDC= Engineering Design Challenge Project, J=Journal

### End Notes

<sup>1</sup> [angelo.blackboard.com](http://angelo.blackboard.com)

<sup>2</sup> <https://www.angelo.edu/content/files/14197-op-1011-grading-procedures>

<sup>3</sup> <http://www.angelo.edu/student-handbook/>

<sup>4</sup> <https://www.angelo.edu/academics/catalog/>

<sup>5</sup> <https://www.angelo.edu/current-students/disability-services/>

<sup>6</sup> <https://www.angelo.edu/incident-form>

<sup>7</sup> <https://www.angelo.edu/title-ix>

<sup>8</sup> <http://www.angelo.edu/content/files/14206-op-1019-student-absence-for-observance-of>

<sup>9</sup> <https://www.angelo.edu/covid-19/>

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<sup>10</sup> <http://www.angelo.edu/student-handbook/community-policies/academic-integrity.php>

<sup>11</sup> [http://www.angelo.edu/dept/writing\\_center/academic\\_honesty.php](http://www.angelo.edu/dept/writing_center/academic_honesty.php)