

UNIV 1301 Seminar/Critical Inquiry
Foundations of Engineering
CRN 16472
Fall 2017 Syllabus
MW 9:00 – 10:20 PM
Quinn Hall 202

*Making a Difference
- Being an Engineer –
Life in the 21st Century*

FOUNDATIONS of ENGINEERING
for
THE PROBLEM SOLVER



A first degree-course – creating the foundation – success through practice-based education

WELCOME TO OUR COURSE! We are glad you are here! We look forward to the semester, academic year, and degree completion ahead. Thanks for being in our class. Let's get started. This syllabus is the contract for our class: consider this a DRAFT until after we meet and gain your input to make it the class that you need and want it to be! It defines our goals (our purpose for undertaking this journey and working together), outcomes (what we want to achieve by the end of the course), and objectives (what we are wanting to achieve in 5-years' time).

What is it that we are engineering? Your education! **Can we be entrepreneurial and innovative about this?**

Education is in some real sense the penultimate creative process in our lives. It is a personal engineering design and production process. It is artistry and science entwined in making magic. And you, my new friends, (if you work hard and persevere) are headed to be the magicians of the 21st Century! **Engineering, Entrepreneurship, Innovation and Leadership are the themes of this class.**

The class is about you changing your attitudes, which lead to behaviors, which become habits - which is who you are. We want to know what you think and how you know what you think. What do you think? Questions and possible answers. Problems and possible solutions. Feels and sounds like engineering! Fun!!!!

Basically, we are helping you to visualize and then act, taking control of your engineering (and whole) education. So then, entrepreneurship, innovation and leadership in engineering is about you making the process of advancing your engineering education with integrity to eventually profit from it. It is a way of being, as opposed to a method, in actuality. If you can do this you will begin to achieve leadership development in profound ways. You are going to CRE@TE YOUR FUTURE!

What is Our Class About?

Creating this actuality is what our class is about. We learn about what it takes to be successful, the skills, qualities and attributes of successful engineers, entrepreneurs, and innovators. Beginning at UTEP, we have a powerful opportunity to change our destinies. What we achieve is in our hands and our hearts. We just have to actualize it. This class is about self-actualization and self-development. To do this requires critical thinking, which is at the heart of our course mine. "Foundations of Engineering" is the gateway to your engineering education at UTEP and to the rewarding profession of engineering.

Goals for this Course

You will have the opportunity to make meaningful connections to the magic of engineering and to contribute to the UTEP legacy of excellence in developing outstanding students and career professionals. The foundations you build will enable you to be a successful student and a successful engineer! The foundations are tools for developing:

- Academic and personal growth skills
- Engineering competency in critical thinking and problem solving
- Mathematic applications skills as they relate to engineering
- Connections with the engineering profession via
- Networks of mentors, practitioners, and future employers/employees
- Opportunities to appreciate the world of engineering.

What You Need: YOU! Wholeheartedly Be You.

Come with an open mind. Be prepared to change your whole way of thinking. Then go on to be successful sustainably! It will take three things:

PASSION - PERSERVERANCE - and PURPOSE

2017 Redesigned UNIV 1301 Description and Goals

The course description and goals of UNIV 1301 have been redesigned and updated in 2017 to reflect the mission and goals of the UTEP Edge Program. [The UTEP Edge](#) has been developed – akin to the updated design of UNIV 1301 – through consultative process engaging students, faculty and administrators. The UTEP EDGE is designed to provide a competitive edge that distinguishes UTEP students from their peers at other institutions and prepares our graduates for leadership and lifelong success.

Following is a description of the new course goals for our new and improved UNIV 1301, whereby:

Entering students will build on their talents, skills, and experiences to successfully transition to UTEP. UNIV 1301 will support students' leadership development, academic excellence, and campus and community engagement, paving the way to success in their educational and professional pursuits.

Goal 1. Students will develop and apply elements of leadership through effective individual participation and meaningful team collaboration to empower them to be agents of change.

- 1.1 Students will assess and reflect on their strengths and leadership skill development.
- 1.2 Students will engage in active learning through individual, team, and class activities that develop their leadership skills.
- 1.3 Students will learn more about collaboration, roles, and facilitation skills through faculty instruction and student practice.
- 1.4 Students will develop effective interpersonal communication skills to include listening, sharing diverse perspectives, and soliciting others' viewpoints
- 1.5 Students will improve their interpersonal conflict management strategies.

Goal 2. Students will examine the roles and responsibilities crucial for their success in college and beyond.

- 2.1 Students will examine personal and social transition issues affecting college success.
- 2.2 Students will become familiar with the importance of participating in high-impact practices identified in the UTEP Edge.
- 2.3 Students will engage in at least one academic and one professional goal-setting activity or exercise.
- 2.4 Students will develop a plan of study by participating in appropriate academic advising.
- 2.5 Students will demonstrate knowledge of the rules of academic integrity and will practice acceptable academic behavior.
- 2.6 Students will become familiar with major UTEP academic policies and requirements in order to remain in good academic standing and graduate in a timely manner
- 2.7 Students will demonstrate regular use of university communication systems, such as email, bulletin broadcasts, websites, and Mobile Campus.

Goal 3. Students will identify, assess, and build on their strengths and experiences to develop academic and transitional strategies necessary for success in their academic, career, and life goals.

- 3.1 Students will reflect on their responsibility for and contribution to their own learning.
- 3.2 Students will work to improve their oral, written, and electronic communication skills.
- 3.3 Students will work to improve their academic success strategies such as note-taking, annotation, active reading, test taking, time management, and stress management.
- 3.4 Students will become familiar with learning management systems such as Blackboard.
- 3.5 Students will examine their academic, career, and life goals by participating in at least one self-assessment activity about their interests, abilities, and values.
- 3.6 Students will participate in at least one activity, exercise, or information session to become familiar with the steps, including post-graduate education, required to prepare for a career.

Goal 4. Students will engage in research and critical thinking activities that demonstrate their ability to effectively integrate their learning within, across, and beyond academic settings.

- 4.1 Students will engage in critical thinking and problem-solving through individual, team, and class activities.
- 4.2 Students will demonstrate the ability to develop an effective research strategy based on the specifications of the research assignment.
- 4.3 Students will engage in library and database research.
- 4.4 Students will locate and critically evaluate the reliability, validity, and accuracy of sources.
- 4.5 Students will develop a project that involves critical evaluation and effective integration of sources.
- 4.6 Students will demonstrate the ethical use of sources such as accurate paraphrasing, quotations, and citations.
- 4.7 Students will reflect on how the research process applies to their learning within, across, and beyond academic settings.

Goal 5. Students will engage in campus and community activities to increase their sense of academic and social belonging.

- 5.1 Students will begin to build networks of faculty, staff, and peers to create a supportive and positive learning environment.
- 5.2 Students will attend/participate in a minimum of two social, cultural, and/or intellectual events at UTEP.
- 5.3 Students will become aware of and use selected academic and student support resources.
- 5.4 Students will meet one-on-one in person or virtually at least twice with the instructional team to discuss and receive feedback about their academic progress and transition to UTEP.
- 5.5 Students will meet in person or virtually with at least two other faculty or staff members important to their academic progress such as their academic advisor, their other professors, teaching assistants and/or tutors.
- 5.6 Students will become familiar with the university's student organizations.

In the course we will address all these goals and sub-goals, which we will call objectives.

Tips for Success in this Class

Come to class, engage, do what you do to get the most from it (e.g. listen actively or take notes or both?)

Read and study textbook, hand-outs, and complete reading assignments before class.

Visit me and /or your peer leader during office hours if you need assistance, or e-mail me anytime.

Finish your assignments early. Ask someone to proofread your work so that you can incorporate any suggestions that they provide for improving your work.

Don't cram for examinations; start your success by not falling behind!

Take advantage of the teaching team, your peers and peer leaders, academic advisor and librarian, office hours, UTEP resources, and College of Engineering resources e.g. STUDENT ORGS.

Smart students create their future. You are smart students. You create your future. An enlightened engineering student has nothing to do with age, gender, race or education (well, a little of the latter!) It has everything to do with your spirit, creativity and insight. Starting your own business means becoming personally responsible for every facet of your company and taking on many roles. You must foster your belief in the future success of your company in each of your employees. In this course, we will engage in creative thinking as a way to help you begin thinking in an entrepreneurial manner, and to guide you toward the fundamentals of starting your own business.

Our Course Objectives

This course will prepare the student to succeed at UTEP and beyond through:

- Developing critical thinking skills and problem-solving skills.
- Promoting entrepreneurship, analytical thinking and business planning.
- Being mutually responsible and individually accountable, including in team work.
- Advising you study often, (study is your life and life is your study).
- Regular class attendance and requiring time-on-task.
- Recognizing the importance of integrity and practicing ethical communication skills.
- Promoting student participation in all aspects of the university experience
- Supporting good study habits, creative response to challenges, and spiritedness.
- Recognizing that the course is one key step in beginning your future career.

WELCOME TO YOUR lifelong journey of learning ACROSS the professional disciplines of arts, humanities, business and engineering.

Outcomes for UNIV 1301

By the end of the semester you will have:

Understanding of your role, opportunities and responsibilities that impact your success within the context of the university. This is commonly called a *leadership mindset*.

Learned about and practiced essential academic skills in order to strengthen performance in the university setting.

Begun building a strong network of faculty, staff, and peers in order to create a supportive and positive learning experience/environment.

Begun assessing and better understand your own interests, abilities and values in order to more efficiently pursue your academic, career, and life goals.

Become involved in UTEP activities and campus resources.

Learned and practiced the engineering design process

Begun to understand the role of mathematics as it is applied to engineering

Begun to appreciate the rigor and rewards of engineering as a career.

Your Course Teaching Team

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Through these Outcomes we are Focused (You and Us) On Learning Achievements

If we are all about "Engineering Your Future" then we must also be about:

- Introducing you to explore the challenges, problems, issues, and functions of the various engineering fields.
- Introducing you to the broad spectrum of Engineering professions and careers
- Providing you with a perspective of the necessary written and oral communication skills used by engineers.
- Introducing you to the professional character and ethical responsibility of engineers.
- Providing you with an awareness of historic engineering developments and their impact on society.
- Growing your awareness of the global scope of the present-day engineering community.
- Presenting problem solving skills that will aid in the success of students in the classroom.
- Assisting you to use design methodology that you can use in future courses
- Provide you with the latest statistics relative to the engineering community.

This Freshman Course is a Great Opportunity --- You can make it life changing!

It is the gateway and the pathway to our engineering curriculum: it begs you to think beyond completion of your degree and to view your professional life as one of your greatest, most personal, life challenges. We are promoting engineering education in a whole new light. Your Engineering life! You, taking a chance to impact your destiny. And to make a difference in so doing!

One where you take ownership of your education and invigorate your engagement in "setting your sails" for the furthest shores of your dreams. We are lucky to have the chance to spend a few moments together as you begin the sea journey of a lifetime.

Vamos!

What Learning Outcomes Are Our Focus?

"Engineering is science in service to society."¹

Tied to Dr. Michael Zwell's research², the following four areas are keys to building a **SUCCESSFUL ENGINEERING STUDENT COMPETENCY PROFILE**: relationships, task achievement, personal attributes, and leadership. This profile is related directly to the UNIV 1301 Engineering Course framework outlined above.

So we are all about

1. Developing Personal Attributes – developing "professional skills" for personal growth and development expected of every engineering student. The following behaviors best demonstrate competencies in this area:

- Enhances his/her effectiveness by demonstrating strong individual and team skills in oral, written, and electronic communications.
- Demonstrates consistent and disciplined study skills with focus on planning and organization.
- Maximizes academic and college experiences with self-directed, energetic behaviors including: punctuality, preparedness, planning, and participation.
- Practices good stewardship of his /her time and of UTEP resources to support individual engineering career goals.
- Showcases innovative ways to use technology and computer applications to enhance the learning process and classroom assignments.

¹ Widnell, Sheila Keys To Engineering Success, Prentice Hall, New Jersey, 2001, page 7.

² Zwell, Michael Creating a Culture of Competence, John Wiley & Sons, New York, ISBN: 0-471-35074-5.

- Demonstrates knowledge of UTEP engineering education resources by regularly utilizing the academic Center for Engineers and Scientists (ACES) services and participating in ACES functions/projects/service.

2. Demonstrating Leadership – establishing a mindset and culture tied to key engineering concepts.

The following behaviors best demonstrate competencies in this area:

- Applies critical thinking for effective problem-solving.
- Demonstrates an understanding of how the scientific method is used in engineering.
- Demonstrates appropriate delegation and situational leadership styles in team assignments.
- Takes full responsibility for all aspects of his / her student engineering.
- Displays courage in taking risks enabling intellectual and professional growth.
- Demonstrates an understanding for the need of life-long learning by reading technical literature, pursuing independent study, and gaining insight from related fields in science, engineering, social sciences and humanities.

3. Focusing on Task Achievement – embracing mathematics as a fundamental and powerful engineering tool. The following student behaviors best demonstrate competencies in this area:

- Develops an appreciation for the significant role of mathematics in the study and application of engineering concepts.
- Learns and applies basic mathematics and science so well that it becomes almost “second nature”.
- Reveals energy and capacity for amazement in solving engineering problems by successfully applying mathematics introduced in the course, including unit systems and conversions, linear & quadratic equations, basic trigonometric functions, applied statistics, etc.
- Explores and applies mathematic-based technology tools, improving and adding to his / her tool belt of skills.
- Enhances the personal development of the language of mathematics in discussing (with others) engineering problems, systems, and solutions.

4. Building strong Relationships -- making connections to engineering as a profession.

The following student behaviors best demonstrate competencies in this area:

- Seeks opportunities to learn about engineering as a profession, its responsibilities (to include professional ethics), its rewards, and its importance to the US society and global society.
- Engages with engineering mentors and practitioners to complement learning beyond academic and extra-curricular activities.
- Builds a portfolio of relationships with on campus, industry, and community mentors helpful in engineering studies, career readiness, and entry into the workforce.

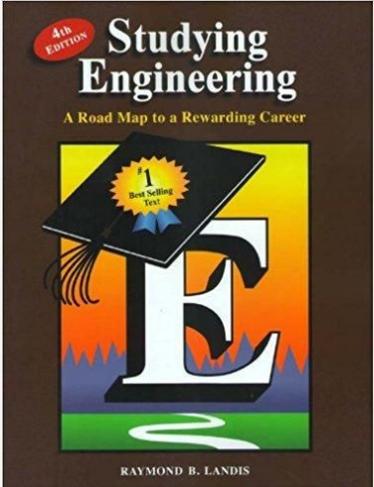
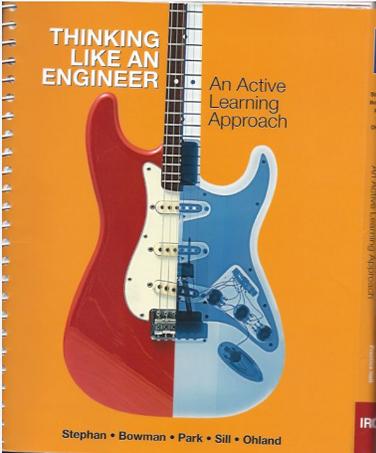
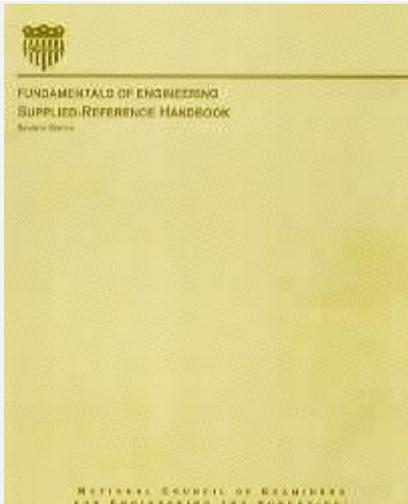
Desired / Required Textbook/s

NOTE that we will use materials from a variety of texts. Here are examples:

“Borders” is a valuable text for this class. It not required but is highly recommended.

For an example of the use of this book [see this link to the UTEP Bookstore](#).

	<p>Studying Engineering: Road Map to a Rewarding Career</p>
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	<p>The 4th Edition (there are many)</p> <p>Raymond B. Landis</p> <p>Cost</p> <p>UTEP Bookstore (Paperback): \$24.95?</p> <p>This is the required text for this course.</p>
<p>A helpful text is authored by:</p> <p>Elizabeth Stephan David Bowman William Park Benjamin Sill, and Mathew Ohland</p> <p>It is titled: Thinking Like an Engineer An Active Learning Approach</p> <p>Publisher Details: Pearson 2011</p>	
	<p>The FE Supplied-Reference Handbook is the only reference material that may be used during the Fundamentals of Engineering (FE) exam. You should study and become familiar with the contents throughout the 6 ± 2 years of your undergraduate engineering education.</p> <p>The handbook is available at: http://www.ncees.org/exams/study_materials/fe_handbook/index.php</p> <p>Note when using the above address that there are underscores between the words “study” and “materials” and also between “FE” and “handbook” in the address.</p>

We will often refer to the content of the handbook during our class process. The student who is successful is often distinguished by their use of the handbook and their use of a wide range of reference resources. Will you take the time to find, review and refer / study the handbook?

National Council of Examiners for Engineers and Surveyors Handbook

Another important and valuable reference for you is the NCEES FE Supplied-Reference Handbook. The National Council of Examiners for Engineers and Surveyors (NCEES) offers the Fundamentals of Engineering (FE) Supplied-Reference Handbook, 7th Edition (© 2006), in its entirety as a PDF file that may be downloaded free of charge. A bound copy may also be purchased from NCEES.

The rationale for your getting hold of the reference handbook is that you can familiarize yourself with material RELATED TO YOUR CLASSES as well as seeing what is ahead (and possibly what you have left to learn about!).

The reference handbook covers the key fundamental subjects used in professional engineering practice, including: mathematics, chemistry, physics, statics, dynamics, thermodynamics, fluids, heat transfer, computer technology, engineering economy, ethics, electric circuits and power. It also contains summaries of content in disciplines.

You can use the handbook as a desk reference, when you study.

What was that word? **STUDY!** Great word! And actions speak louder than words! ☺

We will also use core content from the text by:

David Ellis:

It is titled:

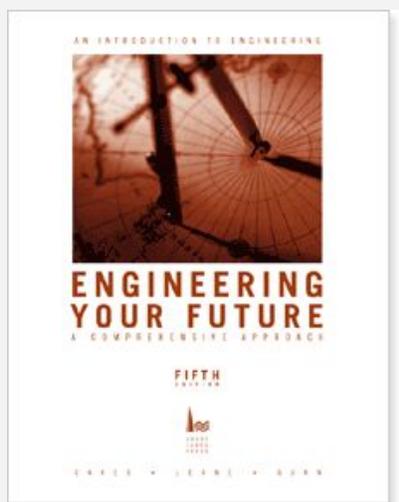
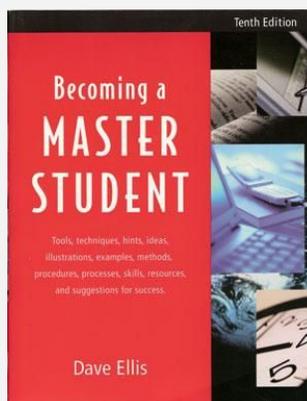
Becoming a MASTER STUDENT

Publisher:

10th Edition

Houghton Mifflin

You are the focus of the book and the course. You will be acquiring the tools that will help you achieve your academic, personal, and career goals. Along the way you will discover a great deal about yourself!



We will also refer to the text by:

Engineering Your Future

5th Edition

Authors: Gomez, Oakes, Leone

Hardcover, 794 pgs, color photos throughout

ISBN: 978-1-881018-87-2 or some such

Publisher Comments on Engineering Your Future (Great Lakes Press)

Students cannot make an educated decision about what career to pursue without adequate information. This Comprehensive Version from our EYF Series provides a broad introduction to the study and practice of engineering. In addition to presenting vital information, we have made it interesting and easy to read. The text has been developed with the following goals and objectives....

To introduce students to the broad spectrum of the engineering profession.

To encourage students to explore the challenges, problems, issues, and functions of the various engineering fields.

To provide students with a perspective of the necessary written and oral communication skills used by engineers.

To introduce students to the professional character and ethical responsibility of engineers.

To provide students with an awareness of historic engineering developments and their impact on society.

To introduce students to the global scope of the present-day engineering community.

To present problem-solving skills that will aid in the success of students in the classroom.

To assist students in applying common computer software, useful in their studies.

To introduce students to a design methodology for use in subsequent design courses.

Sound familiar? Most engineering colleges offer a freshman course that introduces students to the profession. There is a problem, however: no two courses seem to cover the same topics. There is usually significant overlap, but each course covers many topics that are different from those contained in the several books typically available. The primary objective of the authors in developing this book is to provide a text that allows a wide variety of material to be considered for selection in the freshman-engineering course. The idea is that only a subset of the topics presented would be selected for a given course. The many topics included allow for wide latitude in course development. The text contains examples within each chapter and assignments afterwards. The assignments include a collection of numerical, writing, and hands-on exercises. The goal is to encourage students to become familiar with the material being presented and, in some cases, to do further exploration.

Our Class Learning Environment

Our course is project-, problem- and team-based; thus, your commitment to and active participation in a team is critical for the success of each of the team-based projects in which you will be a member. Each team member will assume an expected level of responsibility and will be held accountable for his or her individual and group tasks and deliverables. In addition to these projects, you will also engage in various activities to effectively integrate you into engineering student life. Your active participation in all activities will ensure your success in this course.

Professional Responsibilities

On Attendance:

As in all the courses you will take as a college student, your attendance is a necessary and critical component of our course. This is particularly important because our course is team-based. In the event of an absence, you need to check with one or two classmates to find out what you missed. Also, you will evaluate your peers at the end of the semester (and they will evaluate you) to determine your contribution to their learning in our course.

Participation:

As pre-professionals in engineering, you should exhibit traits worthy of the profession, such as active participation and listening, questioning and clarification, summarizing others' ideas, trustworthiness/trustfulness, integrity, and respect. Participation points in the course will be evaluated on the following: activity in class discussions and project assignments; assignments/discussions; critical analysis/intellectual growth; collegiality; and preparedness.

Wireless Devices:

You can use wireless devices in our classroom. Be respectful of others, and your self.

Community Service:

Students are expected to volunteer a minimum of 5 hours with a community or university organization that benefits others. Documentation is required for gaining credit for this portion of your grade. (Out-of-Class Engagement). Student organizations are one example: get involved! “You will get out of life what you put into it.”

Projects:

We will have three design projects, and other experiential projects, for example:

1. Keys to Engineering Success Project: Teams will identify, investigate, and make presentations on essential skills necessary for success in college and in engineering studies.
2. Mathematics Enrichment Institute [MEI]: Teams will each become “expert” in a pre-calculus concept to prepare your foundation for the mathematics courses you will take as an engineering undergraduate student.
3. Design Project: Teams will participate in 3 design projects TBA.

What is the Grading Approach and Scale?

<i>Component</i>	<i>Description</i>	<i>Percent</i>
Grading	Homework & Assignments & During + End of Semester Feedback	10%
	In-Class (Teamwork) & Out-of-Class Engagement (inc one-on-ones)	10%
	Engineering Notebook / Intrinsic Motivation and Grit & Quizzes	10%
	Mid Semester Exams	10%
	Character and Leadership Development [EduGuide and SOs]	10%
	Design Project Experiences	40%
	Final Exam	10%
	TOTAL POINTS	100%
<i>Grading Scale</i>	100%-90% A 89% -80% B 79% -70% C 69% -60% D 59% - 0% F	

<i>Component</i>	<i>Description</i>
Note-taking	Engineering notebook: You best take notes during each class (lectures and discussions and oral reports). You should write a short summary for every learning and reading assignment and add these to your notebook. These will be turned in to the Teaching Team upon request who will grade your organization and content.
Homework	All homework must be turned in at the beginning of class on the due date. No late homework will be accepted. If you know you will be absent email your assignment to the instructor or peer leader before class or have a classmate turn it in for you. Extra credit may be given for exceptional examples of high quality, creative, and innovative work.
Quizzes	The quizzes will typically be given at the beginning of the class and at the discretion of the teaching team. No make-up quiz will be given if you are late or absent for any reason. Make-up for missed examinations are subject to the instructor’s discretion.
Class Engagement	There will be many in class group discussions and individual activities based on reading assignments – so come prepared. In order to get a grade for them you must participate in the activity. There will be no make up for any of the class activities.
Extra Credit	Extra Credit will not be provided.
Final Exam	Exemption from final examination may not be given. Final examinations are scheduled to be two hours, forty-five minutes in length and take place during the final examination period. It is the policy of the university not to administer a second final examination in the course. It is also university policy that students shall not have more than two final examinations in a single day. In the unlikely event that the examination schedule results in a student having three final

examinations on a single day, the faculty member upon the request of the student shall reschedule the second of that student's midterm examinations.

Important Academic Dates:

Labor Day – No Classes	September 4 th
Fall Census Day	Sept 13 th
Course drop deadline	November 3 rd
Mid-Term Grades Due	October 25 th FreshMrMS only
Mid-Term Grade	October 30 th FreshMrMS only
Thanksgiving – No Classes	November 23 rd - 24 th
Dead Day	December 8 th
Final Examination Week	December 11 th to 15 th

Final Exam Schedule

Final Exam – Our Section December 13th 10 AM – 12:45 PM

Important College of Engineering Dates

Here are some of our annual activities we encourage our engineering majors to remember.

- August 19, 2016: ESLC Leadership Retreat
- August 22, 2016: Fall Semester Begins
If you are an engineer student in Calculus I or higher go to room E-226 to declare your major.
- September 5, 2016: Resume Review Day
- **September 7, 2016: Gold Rush - Don't Just Rush, Gold Rush!**
- **September 22 & 23, 2016: Career Expo**
- October: ADVISING FOR WINTERMESTER AND THE SPRING SEMESTER
- December 10, 2016: The Order of the Engineer Ceremony.
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Looking ahead

- January 17, 2017: Spring Classes Begins
- February 3, 2017: Engineering and Science Expo Job Fair
- February 19 -25, 2017: National Engineers Week
- March: ADVISING FOR MAYMESTER AND THE SUMMER/FALL SEMESTER
- March 21, 2017: Internship and Part-time Job Fair
- March 24, 2017: TCM Day - The Longest Running Tradition on Campus!
- May 13, 2017: The Order of the Engineer Ceremony

Graduate & Professional School Fair

Students with Special Need of Classroom Accommodations

The Center for Accommodations and Support Services (CASS): Students requiring unique accommodations must contact the CASS office and provide their instructor with the proper documentation at the beginning of the semester. CASS office may be contacted at 747-5148, cass@utep.edu or go to Room 106 Union East Building.

If you have or suspect a disability and need an accommodation you should contact the Center for Accommodations and Support Services (CASS) at 747-5148 or at cass@utep.edu or go to Room 106 Union East Building.

Students who have been designated as needing classroom accommodations must reactivate their standing with on a yearly basis. Failure to report to CASS will place a student on the inactive list and nullify benefits received. If you have a condition which may affect your ability to exit safely from the premises in an emergency or which may cause an emergency during class, you are encouraged to discuss this in confidence with the instructor and/or director of Disabled Student Services. Call 747-5148 or email cass@utep.edu for more information about the American Disabilities Act (ADA).

Academic Integrity

In accordance with University regulations, scholastic dishonesty on a given assignment will be referred to the Dean of Students and may result in a zero on the assignment, an "F" in the course, or even suspension from the university. If you need assistance with your assignments, please consult authorized sources of help. "Plagiarism" is the unattributed use of someone else's work -- a classmate's, a website's, even a teacher's from another course. For more information on Scholastic Dishonesty and/or Plagiarism, consult the Handbook of Operating Procedures: Student Affairs, which is available in the Office of the Dean of Students and on the homepage of the Dean of Students at www.utep.edu/dos.

A Note About Getting Started In Our Class

There are two keys to innovation. Let's think about this

Key #1 The first is the ability to think beyond the relatively conventional paradigms and to examine traditional constraints using nontraditional thinking. You have to be able to go outside your own frame of reference and find another way to look at a problem.

Was it Einstein or Albert (?) who said:

" To me stupidity is simply doing the same thing I have always done and expecting the results to change. I have to think differently"

This got Einstein thinking about relativity (and frames of reference).

Key #2 A second key to innovation is the ability to discern the important issues and to keep your goal in view. [This sounds a little like Saint Francis of Assisi and his famous prayer]. The following commentary³ of Robert Burney is relevant here:

"We learned about life as children and it is necessary to change the way we intellectually view life in order to stop being the victim of old ways (in other words we need to become CRITICAL THINKERS). By looking at, becoming conscious of, our attitudes, definitions, and perspectives, we can start discerning what works for us and what does not work. We can then start making choices about whether our intellectual view of life is serving us - or if it is setting us up to be victims because we are expecting life to be something that it is not. In order to stop giving our power away, to stop reacting out of our inner children, to stop setting ourselves up to be victims, so that we can start learning to trust and love ourselves, we need to begin to practice discernment." **Discernment** is then thinking critically or as Burney says --- "having the eyes to see, and the ears to hear - and the ability to feel the emotional energy that is truth." See how important ethics is in Engineering profession?

Key #3 We cannot become clear on what we are seeing or hearing if we are reacting to emotional wounds that we have not been willing/able to feel and subconscious attitudes that we have not been willing/able to look at. We have to relearn how to learn.

Key #4 We cannot learn to trust ourselves as long as we are still setting ourselves up to be victimized by untrustworthy people. We cannot learn to love ourselves enough to meet our own needs until we start to release the attitudes and feelings that tell us that we are unworthy - that it is somehow shameful to be ourselves. We cannot learn to Love ourselves without learning discernment.

For anyone who is not familiar with the Serenity Prayer, here is the commonly accepted version of it - followed by an adapted version.

*Grant me the serenity to accept the things
I cannot change,
The courage to change the things I can,
And the wisdom to know the difference.⁴
Please help me to have:
the serenity to accept the things I cannot change (life, other people),
the courage and willingness to change the things I can (me, my own attitudes and behaviors),
and the wisdom and clarity to know the difference.⁵*

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⁴ The Serenity Prayer is generally thought to have been written by Reinhold Niebuhr.

⁵ Robert Burney's interpretation.

Discern - 1. To perceive, as with sight or mind; recognize; apprehend. 2 To discriminate mentally; recognize as separate and different. 3. To distinguish; discriminate.

Discernment - 1. The act or process of being discerning. 2. The mental power of discerning; keenness of judgment; insight. See synonyms under acumen, understanding, wisdom.

Thus, in the case of research efforts in each of the three projects, students will reflect on how the research process applies to their learning within, across, and beyond academic settings (Goal 4.7).

Companies get into real trouble when they see a means as an end – when they fail to discern and apply CQI or TQM (what are these????) or some other “flavor of the month” methodology to change their business processes: that’s when some interloper comes along and does it for them.

This also applies to communications: students will demonstrate the ethical use of sources such as accurate paraphrasing, quotations, and citations (Goal 4.6). See also above: Academic Integrity.

What Are the Rules of Engagement in Our Class?

Attendance and Participation: Your attendance and participation in class are required. Students may be absent two (2) times without penalty. At three (3) absences students will have to schedule a meeting with the teaching team. **At four absences students will be dropped; before the drop date the student will receive a W, after the drop date the grade will be an F.** Unavoidable absences that are properly documented may be excused at the discretion of the Teaching Team. Documented absences for school related activities, such as traveling with a team, will be excused.

Student Conduct: [from the Handbook of Operating Procedures] Each student is responsible for notice of and compliance with the provisions of the Regents Rules and Regulations, which are available for inspection electronically at <http://www.utsystem.edu/bor/rules/homepage.htm> All students are expected to behave as courteous, responsible adults. We will have frequent discussions and students are expected to tolerate and respect the opinions of others. Cell phones and pagers should be turned off or placed in mute mode during class. We recognize they provide for emergency access for your family and loved ones. However, there discreet use is vital.

Dropping the Class: Students may drop the class and receive a W any time prior to UTEP’s published final drop deadline. You will need to consult the Instructor prior to dropping.

Meeting with the Instructor and the Peer Leader: Students will meet with the Teaching Team early in the semester, and again as necessary throughout the semester. All students will meet with the Instructor of Record as necessary to complete class assignments or address individual needs.

Academic Integrity: Students are encouraged to work together on our class assignments. However, all written assignments must be entirely the work of the individual student. **Plagiarism:** [From the Handbook of Operating Procedures] "Plagiarism" means the appropriation, buying, receiving as a gift, or obtaining by any means another's work and the unacknowledged submission or incorporation of it in one's own academic work offered for credit, or using work in a paper or assignment for which the student had received credit in another course without direct permission of all involved instructors. Plagiarism is a serious violation of university policy and will not be tolerated. All cases of plagiarism will be reported to the Dean of Students for further review.

Format of Written Work: All written assignments done outside of class. If an assignment is not specified as being written (by hand), then digital form is reasonable: using black ink, 12 pt. font, 1 inch margins, double-spaced, on white paper. Notes and in-class work must be legible.

Email: You must provide the teaching team with a UTEP email address and check your UTEP email daily. We will notify you by email about changes in the syllabus, due dates, or class cancellations. We may also send you information about campus events, scholarships, job opportunities, etc.

Feedback: We want to hear from you about how you are doing in this class as well as your other classes. THERE ARE NO STUPID QUESTIONS!!! Please let us know if you don't understand something or need help.

Electronic Devices: Wireless devices (cell phones, PDA's, MP3 players, SmartPhones, etc.) are allowed in the classroom. It is recognized that some of these devices provide for emergency access for your family or loved ones. However, please use professional discretion with wireless devices, shutting them off, or setting them to mute or silent mode before coming to class. Do not answer incoming calls or make outgoing calls except in an emergency. Do not use text messaging or web browser features while in class. If you must answer the phone, leave the class discretely. You may return to the class once your call is finished. Only regular or scientific calculators will be allowed for use in completing class quizzes or examinations. No borrowing of calculators is allowed during exams.

Class Surveys: As part of completion of course requirements, students will be expected to complete surveys assigned by the instructor including: 1) end of course university class student survey; 2) ESP online end-of-semester feedback survey.

How Do We Get Started?

In our class, we just want to change your philosophy of learning and how you see the world around you! We KNOW you can be highly successful ~ you just need to unlock the keys to your potential as an engineer and entrepreneur. You have to adapt and grow, but most of all THINK. That is why our course is called "Seminar in CRITICAL INQUIRY!" You're embarking on an exciting journey that will shape your life both now and in the future. The lessons you learn through your work in this course as a "student embracing an engineering mindset" will influence you for years to come.

There are several keys to your "innovative" approach to this class.

Key #1 – Have an Open Mind

"A person who does not think and plan long ahead will find trouble right at his door." ~ Confucius
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The first key is the ability to think beyond the relatively conventional paradigms and to examine traditional constraints using nontraditional thinking. You have to be able to go outside your own frame of reference and find another way to look at a problems, challenges, and opportunities. This is fundamental to developing your "systems and critical thinking" mindset.

Key #2 – Focus on What Is Important

"Ultimately magic finds you if you let it." Tony Wheeler
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The second key to innovation is the ability to discern the important issues and assignments and to keep your goals in view. Bring balance to the demands to your time and energy and discern what commitments are most important and that will reap the most value to your efforts. Develop a "time on task" discipline.

Key #3 – Build a Positive Spirit

"No pessimist ever discovered the secrets of the stars, or sailed to an uncharted land, or opened a new heaven to the human spirit." ~ Helen Keller

The next key is to build a positive aptitude and attitude towards addressing and completing the class assignments one step at a time. Seek to learn and learn to seek help to address any opportunity.

Key #4 – Expect and Plan For Your Success

"Remind yourself regularly that you are better than you think you are. Successful people are not superhuman. Success does not require a super-intellect. Nor is there anything mystical about success. And success isn't based on luck. Successful people are just ordinary folks who have developed belief in themselves and what they do. Never -- yes, never -- sell yourself short."~
David J. Schwartz

Success is intentional. It comes from building a plan that expects success through an approach that is built on inspiration and preparation.

Engineering Notebooks:

Finally, you will be writing a lot this semester. You are required to begin keeping an engineering notebook. We will discuss what this involves in classes, and return to the subject throughout the course.

IMPORTANT NOTE: This syllabus is a draft and is subject to changes during the semester. Updates will be announced in class or forwarded by email. If you are absent you are still responsible for finding out about any changes.
Version 2.8 | August 21, 2017.

We take your education very seriously at UTEP. And we have a lot of fun doing it!

So welcome to our class and hold on to your dreams! Now let's get working

This Is the Beginning of the First Day of The Rest of Your Life
Change Your Game. Always Play the Game.
GO FOR IT! YOU CAN TO IT!

WITH SUCCESS COMES THE OPPORTUNITY TO EXCEL AT THE NEXT LEVEL.
ALL THE BEST WITH BEGINNING YOUR ENGINEERING DEGREE PROGRAM. WE LOOK FORWARD TO
SUPPORTING YOUR SUCCESS ~ THAT IS OUR MAIN BUSINESS!