**University of Texas at El Paso**  
**Foundations of Engineering**  
**UNIV 1301**

**CRN 17940** – Tue & Thru. 09:00 AM – 10:20 AM  
**CRN 17942** - Tue & Thru. 10:30 AM – 11:50 AM  
**CRN 17947** - Tue & Thru. 15:00 AM – 16:20 AM

**FALL 2017**

| CLASS MEETING TIME | Tue & Thru: 09:00 AM – 10:20 AM at UGLC 210  
| Tue & Thru: 10:30 AM – 11:50 AM at UGLC 336  
| Tue & Thru: 15:00 AM – 16:20 AM at LART 209 |
| --- | --- |
| CLASS MEETING PLACE | 09:00 AM – 10:20 AM at **UGLC 210**  
| 10:30 AM – 11:50 AM at **UGLC 336**  
| 15:00 AM – 16:20 AM at **LART 209** |
| INSTRUCTOR: | Dr. Henry Van |
| OFFICE NUMBER/BUILDING | E226E (2nd Floor of the Engineering Building) |
| OFFICE HOURS (Dr. Van’s) | Mon. 09:30 AM – 11:30 PM & 13:00 PM – 14:30 PM  
| Wed. 09:30 AM – 11:30 PM & 13:00 PM – 14:30 PM |
| PHONE: | 915-255-9593 (Cell) |
| EMAIL: | hvan2@utep.edu |
| PEER LEADER: | Caleb Gillis for Class at 9:00 AM – at UGLC 210.  
| Luis Gonzalez for Class at 10:30 AM – at UGLC 336  
| Rebeca Fierro for Class at 15:00 AM – at UGLC LART 207 |
| OFFICE NUMBER/BUILDING | UGLC 214 |
| PHONE | 915-861-5822 |
| EMAIL | cbgillis@miners.utep.edu |
| ADVISOR: | Patricia Mendoza pamendoza@utep.edu |
| LIBRARIAN: | Debjani Mukhopadhyay dmukhopadhyay@utep.edu |

**CONTACT INFO. FOR FELLOW CLASSMATES**
Other materials needed:
- One 3 ring binder or notebook for readings/handouts, class notes, assignments and/or journal entries.
- Access to computer or laptop.
- Scientific calculator.

Course Description

“Foundations of Engineering” is the Gateway to your engineering education at the University of Texas at El Paso and to the exciting profession of engineering. You will have the opportunity to make meaningful connections to the magic of engineering and to contribute to the UTEP legacy of leadership 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 skills and personal growth skills.
- Engineering skills in critical thinking and problem solving.
- Mathematical tools and applications for engineering.
- Connections with the engineering profession and opportunities to appreciate the world of engineering.

At the end of the semester you will:

- Develop and apply elements of leadership through effective individual participation and meaningful team collaboration.
- Examine your roles and responsibilities crucial for your success in college and beyond.
- Identify, assess, and build on your strengths and experiences to develop academic and transitional strategies necessary for success in your academic, career, and life goals.
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• Engage in research and critical thinking activities that demonstrate
your ability to effectively integrate your learning within, across, and
beyond academic settings
• Engage in campus and community activities to increase your sense
of academic and social belonging.
Student Conduct

All students are expected and required to obey federal, state, and local laws, to comply with the Regents' Rules and Regulations, with The University of Texas System and University rules and regulations, with directives issued by an administrative official of the U.T. System or The University of Texas at El Paso in the course of his or her authorized duties, and to observe standards of conduct appropriate for an academic institution.

Scholastic Dishonesty

Any student who commits an act of scholastic dishonesty is subject to discipline. Scholastic dishonesty includes but is not limited to cheating, plagiarism, collusion, the submission for credit of any work or materials that are attributable in whole or in part to another person, taking an examination for another person, any act designed to give unfair advantage to a student or the attempt to commit such acts. Students with Disabilities Policy: Suggested language from Center for Accommodations and Support Services. If you have or suspect a disability and need an accommodation, you should contact the Center for Accommodations and Support Services at 747-5148 or at cass@utep.edu or go to Room 106 Union East Building.

Syllabus Change Policy

Except for changes that substantially affect the evaluation (grading) statement, this syllabus is a guide for the course and is subject to change with advance notice.
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UTEP Final Exam Policy

Exemption from final examinations cannot be given. Final examinations are scheduled to be two hours, forty-five (45) 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 a 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 three examinations.

Copyright Statement

Some of the materials in this course are copyrighted. Violation of US copyright law can result in civil damages up to $100,000 for each work copied. Copying of textbooks is not “fair use” under the Copyright Act. The “fair use doctrine” only permits non-commercial copying of part (in general, not more than 10%) of a copyrighted work. Do not bring a copied textbook to this class. Your cooperation is expected.

Grading:

<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>2 Exams</td>
<td>40%</td>
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<tr>
<td>Final Exam</td>
<td>20%</td>
</tr>
<tr>
<td>Project and Presentation</td>
<td>20%</td>
</tr>
<tr>
<td>Homework, quiz, class participation, activities and survey</td>
<td>20%</td>
</tr>
</tbody>
</table>

Project: The project will be a team design engineering project. More information and deadlines about the project will be given at a later date.

Presentation: The presentation will be about the project you designed. It will be a fifteen-minute presentation using PowerPoint. All of the team members are required to present.
Homework: The homework must be turned in at the beginning of the class by the due date. As part of your homework, you will be required to have at least 1 mentoring session with your professor and peer leader and attend several campus events.

Quizzes: The quizzes will be given at the beginning of the class. No make-up quiz will be given if you are late or absent for any reason.

Class Participation and Activities: There will be many in-class group and individual activities. 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.

Survey: There will be an end-of-semester survey. Your participation is important and it will count as a homework and class activity.

Grading Scale:  
100%-90%........ A  
89% -80%..........B  
79% -70%.........C  
69% -60%.........D  
59% - 0%..........F

Attendance: You are required to come to class and be on time. Attendance is very important since during class you will be given the tools needed to successfully complete this class. You must contact your Peer Leader and/or Instructor if you know you will be absent either by phone or email. It is your responsibility to get all the lecture notes, assignments, and hand-outs you missed. An excused absence will only be given as described in the undergraduate catalog. Please keep in mind that you will be dropped after 6 unexcused absences. However, if you want to be dropped at any time, you must contact your professor and peer leader.

Mentoring: You will be meeting, on a “one-on-one” basis, with your Peer Leader and your Instructor at least once during the semester. Each
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meeting will count as one homework. The meetings will be scheduled after the first exam.
Missing assignments and exams:

You will be allowed one make-up homework assignment during the course of the semester. You will lose 20 points per each week the assignment is late. Exams can only be made up from the day the exam is given in class to the next class day. Example: if the exam is on a Tuesday, you can take the exam on that Tuesday, Wednesday (the next day) and Thursday (prior to the class time). However, 30 points will be deducted from your actual exam grade.

Academic Conduct:

Academic dishonesty will not be tolerated. You must submit your work only. If you are found to be cheating or plagiarizing, you will be subject to disciplinary action, per UTEP catalog policy (http://www.utep.edu/dos/acadint.htm).

Cell Phone: All cell phones must be turned off or on vibrate before the beginning of the class. If a student starts using his/her cell phone during class, he/she will have to leave the classroom and may only return with the instructor’s permission.

Harassment: Please be aware that harassment is unacceptable in the classroom. No jokes, comments of sexual nature as well as racist will be tolerated. The student that uses harassment will be sent to the Dean of students for disciplinary action.
Important Fall 2017 Dates:
Labor Day – no classes September 4
Census Day September 13
Homecoming Week October 1-7
Freshmen Mid-Terms Grades Available October 30
Course Drop deadline November 3
Thanksgiving – no classes November 23-24
Dead Day December 8

Important College of Engineering Dates:
ACES Ballon Bambucha (Open House) August 30
Gold Rush September 6
Career Expo September 21-22
ACES Bike Rally (Get Ready for Finals) November 16
Order of the Engineer / Hooding Ceremony December 16
Engineering and Science EXPO February 2
National Engineers Week February 19-22
TCM Celebration - campus-wide Celebration March 23
Order of the Engineer / Hooding Ceremony May 12
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UNIV 1301 COURS GOALS

The following are the goals for this course:

**Goal 1.** Develop and apply elements of leadership through effective individual participation and meaningful team collaboration to empower you to be an agent of change.

1.3 Learn more about collaboration, roles, and facilitation skills through faculty instruction and student practice.

- You will participate in Teamwork exercises where you will be assigned a role, use your skills and abilities to jointly work with your Team Members and achieve the exercise successfully.
- You will learn to trust, clarify roles, communicate openly and effectively, appreciate diversity of ideas, and balance the Team’s Focus.

**Goal 2.** Examine the roles and responsibilities crucial for your success in college and beyond.

2.4 Develop a plan of study by participating in appropriate academic advising.

- Familiarize yourself with CAP (in Goldmine) and match your classes with career objectives.
- Your will turn in a copy of planned registration schedule (including list of prerequisites), degree plan, and unofficial transcript.

**Goal 3.** 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 You will reflect on your responsibility for and contribution to your own learning.

- Prepare an essay on why do you wish to become an engineer.
Goal 4. Engage in research and critical thinking activities that demonstrate your ability to effectively integrate your learning within, across, and beyond academic settings.

4.7 You will reflect on how the research process applies to their learning within, across, and beyond academic settings.

You will:
- Work on MATH assignments in and out of class.
- Be given quizzes and test requiring use their critical thinking and solving skills.
- Attend the library orientation that will include how to find accurate sources and the ethical way to use them.
- Have a research project that will require them to use the library including finding and using books and newspapers in their research.
- Be required to explore databases to find an abstract from a research article related to their research project. They will need to review the research article to understand how it is different from “popular” articles.
- Conduct research for their final project. The project will include a written paper, a PowerPoint presentation, and/or a website, video and 3D printing. The instructor monitors their progress by asking students to submit drafts of project paper, timeline and other work that indicates their progress. The final project paper will include an annotated bibliography.
- Complete an end of the semester reflection essay about their overall experience in the course and their project/team assignments.
- Be introduced to the ethical definition with a workshop from the Office of Student Conduct and Conflict Resolutions (OSCCR).
- Learn about ethics through lectures and/or case studies which will include professional ethics and student ethical behavior as well.
Goal 5. You will engage in campus and community activities to increase their sense of academic and social belonging.

5.6 You will become familiar with the university’s student organizations.

You will:

✓ Have presentations from various departments (including engineering) and offices in the university. These will be coordinated by your instructor or peer leader.
✓ Attend at least 2 social, cultural or intellectual events and be asked to turn in a short description of the event.
✓ Be required to take your written assignment to the Writing Center, have it corrected, and then turn in both the draft with comments and the corrected version together.
✓ Attend a one-on-one conference at least once with Instructor and at least once with Peer Leader (this will count as an assignment for credit/grade).
✓ Communicate with your Instructor and Peer Leader throughout the semester via email and/or Blackboard.
✓ Visit the Library to become familiar with databases, and where resources are located in the library. This orientation will be conducted by the assigned Librarian. This activity will be coordinated by your Instructor or Peer Leader.
✓ Attend the compliance presentation and meet with appropriate Academic or Departmental Advisor.
✓ Have the Peer Leader as a resource. The Peer Leader will also start each class session with announcements on campus events and opportunities for student involvement.
✓ Attend at least one Engineering related event such as Gold Rush, TCM, Student Organization meetings and/or activities.
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<table>
<thead>
<tr>
<th>Date</th>
<th>Class Topic (subject to change)</th>
<th>Homework</th>
</tr>
</thead>
<tbody>
<tr>
<td>Week 1</td>
<td>08/28 Introduction. Syllabus. Talk About High Impact Practices (UTEP Edge)</td>
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<td></td>
<td>08/30 Keys to Success in Engineering Study. Group Discussion</td>
<td>Leadership Assignment 1- DUE Next Class</td>
</tr>
<tr>
<td>Week 2</td>
<td>09/04 NO CLASSES- LABOR DAY</td>
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<td></td>
<td>09/06 Gold Rush</td>
<td>Turn in a summary of Activity</td>
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<tr>
<td>Week 3</td>
<td>09/11 Leadership In Class Exercise</td>
<td>Leadership Assignment 2- DUE Next Class</td>
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<tr>
<td></td>
<td>09/13 Units and Conversions. In class group quiz.</td>
<td>Resume Draft--Must Include Leadership skills-Due Next Class</td>
</tr>
<tr>
<td>Week 4</td>
<td>09/18 Career Center Services Presentation</td>
<td>Turn in Revised Resume-Due Next Class</td>
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<td>09/20 The Engineering Profession. Activities.</td>
<td>Assignment on ENGR Career-Due Next Class</td>
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<tr>
<td>Week 5</td>
<td>09/25 Understanding the Teaching and Learning Process</td>
<td>Book Homework-Due Next Class</td>
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<td>09/27 Intro to Linear Equations. In Class Quiz</td>
<td>MATH Homework-Due Next Class</td>
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<tr>
<td>Week 6</td>
<td>10/02 Making the Most of How you are Taught.</td>
<td>Book Homework-Due Next Class</td>
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<tr>
<td>Week 7</td>
<td>10/09 <strong>Exam 1.</strong></td>
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<td>10/11 Mentoring. Talk to students one on one</td>
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<td>Week 8</td>
<td>10/16 <strong>OSCCR Presentation &amp; Case Studies</strong></td>
<td>Reflection on Presentation</td>
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<td>10/18 Personal Growth and Student Development.</td>
<td>Assignment on Long and Short Term Goals</td>
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<tr>
<td>Week 9</td>
<td>10/23 <strong>UTEP Presentation-Guest Speaker</strong></td>
<td>Write About Event/Experience</td>
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<td>Week 10</td>
<td>Date</td>
<td>Event</td>
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<tr>
<td>10/30</td>
<td>Library Orientation Visit. Assign Project Teams and Topics.</td>
<td>Run CAPP-Due Next Class</td>
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<thead>
<tr>
<th>Week 11</th>
<th>Date</th>
<th>Event</th>
<th>Notes</th>
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<tbody>
<tr>
<td>11/06</td>
<td>Quadratic Equations. Group work.</td>
<td>MATH Homework-Due Next Class</td>
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<tr>
<td>11/08</td>
<td>Tinkercad &amp; 3DPrinterOS-ATLAS LAB (UGLC 202)</td>
<td>TBA</td>
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<thead>
<tr>
<th>Week 12</th>
<th>Date</th>
<th>Event</th>
<th>Notes</th>
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<tbody>
<tr>
<td>11/15</td>
<td>Exam 2</td>
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<thead>
<tr>
<th>Week 13</th>
<th>Date</th>
<th>Event</th>
<th>Notes</th>
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<tbody>
<tr>
<td>11/20</td>
<td>I-movie &amp; WIX-ATLAS LAB (UGLC 202)</td>
<td>TBA</td>
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<td>11/22</td>
<td>Orientation to Engineering Education.</td>
<td>Book Homework-Due Next Class</td>
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<tr>
<th>Week 14</th>
<th>Date</th>
<th>Event</th>
<th>Notes</th>
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<tbody>
<tr>
<td>11/27</td>
<td>Counseling Center. Global Engineering Programs (Study Abroad)</td>
<td>TBA</td>
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<tr>
<td>11/29</td>
<td>Basic Trig. Laws of Cosines and Sines.</td>
<td>MATH Homework-Due Next Class</td>
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<table>
<thead>
<tr>
<th>Week 15</th>
<th>Date</th>
<th>Event</th>
<th>Notes</th>
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<tbody>
<tr>
<td>12/04</td>
<td>Broadening Your Education. Review Exam 3</td>
<td>Book Homework-Due Next Class</td>
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<tr>
<td>12/06</td>
<td>Exam 3.</td>
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<table>
<thead>
<tr>
<th>Week of Finals</th>
<th>Date</th>
<th>Event</th>
<th>Notes</th>
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<tbody>
<tr>
<td>12/13</td>
<td>Students’ Presentations Dec. 13, 2017 4:00 – 6:45 PM</td>
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Legend: Red - Subject to change