CVEG 3051: Professional Engineering
Spring 2017

Instructor: Dr. I. Ahmed
Section # and CRN: P01, CRN:22403
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Office Hours: M 3:00-5:00; T 3:00-5:00; W 3:00-5:00; R 2:00-5:00 (or by appointment)
Mode of Instruction: Face to Face

Class Days & Times: T 5:00 – 7:50pm; WILS 109K (Lecture will begin on time)

Catalog Description:

Prerequisites: (Modified to fit current Civil FE Exam Format)
MATH 2043; CHEG 2003; ELEG 1043 or COMP 1213; CVEG 2053 or 2454; ELEG 2023 or 2053; CHEG 2043 or MCEG 2013; CHEG 2013 or MCEG 2023 or ELEG 3033; and CHEG 3023 or CVEG 3063 or ELEG 3063 or MCEG 3063
(CIVIL: CVEG 2043, 2053, 2063, 2081, 3023, 3031, 3043, 3053, 3073, 4043, 4053, 4063, 4013)

Co-requisites:
CVEG 3083


Recommended Texts: FE Review Manual for Civil Engineering by Lindeburg or other authors

Student Learning Outcomes:

<table>
<thead>
<tr>
<th>Program Learning Outcome # Alignment</th>
<th>Core Curriculum Outcome Alignment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 understand the professional and ethical responsibilities in water resources engineering field</td>
<td>ABET 3 (f)</td>
</tr>
<tr>
<td>2 recognize the need to engage in life-long learning</td>
<td>ABET 3 (i)</td>
</tr>
</tbody>
</table>

* The Civil Engineering Program Learning Outcomes are derived from ABET Criterion 3 (Student Outcomes)
ABET Criterion 3. Student Outcomes

Engineering programs must demonstrate that their graduates have:
(a) an ability to apply knowledge of mathematics, science, and engineering
(b) an ability to design and conduct experiments, as well as to analyze and interpret data
(c) an ability to design a system, component, or process to meet desired needs
(d) an ability to function on multi-disciplinary teams
(e) an ability to identify, formulate, and solve engineering problems
(f) an understanding of professional and ethical responsibility
(g) an ability to communicate effectively
(h) the broad education necessary to understand the impact of engineering solutions in a global and societal context
(i) a recognition of the need for, and an ability to engage in life-long learning
(j) a knowledge of contemporary issues
(k) an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.

Civil Engineering Program Educational Objectives (PEOs):
Civil Engineering program graduates will:
2. have careers in civil engineering or related fields that lead to increasing levels of responsibility and leadership
3. obtain professional licensure/certifications
4. complete graduate studies in civil engineering or related fields
5. engage in professional development and service

Table: Outcome Measures

<table>
<thead>
<tr>
<th>Course</th>
<th>CVEG objectives</th>
<th>ABET Criterion 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>CVEG 3051</td>
<td>x x</td>
<td>a b c d e f g h i j k</td>
</tr>
</tbody>
</table>

x are the outcomes measured for this course

Major Course Requirements

Method of Determining Final Course Grade

Grading Policy

Final grade will be determined based on the following:

Attendance/Weekly Studies 10%
Subject Exams (pass 70% of the tests or more) 60%
5-hour Mock FE Exam with 100 questions (earn a minimum of 70%) 30%
TOTAL 100%

Course Grading Scale
A = 90 to 100
B = 80 to 89
C = 70 to 79
D = 60 to 69
F = 00 to 59

Important Dates
- Student Academic Appeals Process (Undergraduate Catalog, 2008-2010, pp. 70-71)
- Calendar (Spring 2017)
  - Martin Luther King Jr. Holiday January 16
  - Last day to drop course without record February 01
  - Spring Break March 13 – 18
  - Last day to withdraw from classes with an automatic “W” April 3
Course Goals or Overview:
To have students demonstrate an understanding of the subjects that are covered on the CIVIL Fundamentals of Engineering (FE) Exam through the use of individually based review of topics, peer-to-peer review sessions, and problem solving skills.

Course Outcomes/Objectives
At the end of this course, the student will

1. Be able to demonstrate an ability to solve FE style problems for the subjects covered in the Civil FE Exam
2. Understand the importance of the FE license and the path to becoming a Professional Engineer

Course Requirements & Evaluation Methods
Students will be evaluated based on their performance on in-class examinations, a 5-hour mock FE exam, and documentation of engagement in weekly study sessions.

General Topics Covered
- Statics
- Dynamics
- Mechanics of Materials
- Materials (Civil Engineering Materials Lab Topics; Not Material Science topics)
- Engineering Economics
- Ethics
- Fluid Mechanics/Hydraulics (CVEG 3063)
- Hydrologic and Hydraulic Systems (CVEG 4063): Take Home Test
- Geotechnical Engineering
- Structural Analyses and Design (RC and Steel): Take Home Test
- Transportation Engineering
- Environmental Engineering (CVEG 3043/4043): Take Home Test
- Mathematics (Calculus I, II), Probability and Statistics
- Computers

Course Procedures

Weekly Study Session Log Sheets
The weekly study session log sheets are to be submitted at the beginning of each class.

Exam Policy
Exams should be taken as schedule. No makeup examinations are offered in this class under any circumstance because you are required to pass only 70% of all subject tests administered.


<table>
<thead>
<tr>
<th>Week Number</th>
<th>Tuesday</th>
<th>Topic Covered</th>
<th>Total Problems</th>
<th>Timed Exams</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Jan 17</td>
<td>Course Introduction, FE Exam Format Changes</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Others</td>
<td>Tuesdays</td>
<td>Crash Reviews of Selected “Fundamental” topics + Subject Exam (No Scantrons)</td>
<td>15</td>
<td>Yes</td>
</tr>
<tr>
<td>15 or:</td>
<td>Last Saturday in April</td>
<td>5-hour Mock FE Exam (Scantrons Only)</td>
<td>100</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Additional Notes

- **Attendance in the class is mandatory and students are expected to report to class On Time.** If you know that you will be late to class or have to leave class early, please speak with or email the instructor before class and enter/leave the classroom quietly. Attendance will be taken at the beginning of class and may be taken at the end of class. Please read the attached University Class Attendance Policy.
- **You are expected to do crash review each week for the upcoming weekly subject test to show you can prepare on your own; The instructor will give short 1-hour review on most of the topics before the respective 2-hour subject tests every Tuesday.**
- **You must bring the NCEES formula book (printed or on your tablet or laptop) for use during the test; All other support materials are prohibited.**
- **Turn cell phones and other electronic devices off prior to the start of class.** They must remain off while class is in session whether we are in the classroom or outside the classroom. **If you are expecting an emergency call, please keep the cell phone in vibration mode and exit the classroom to take the call. The instructor will keep his in vibration mode for any University emergency messages.**
- **NO MAKE-UP EXAMS WILL BE GIVEN IN THIS CLASS.**
- **Late weekly study logs will not be accepted.**
- **The mock exam is comprehensive on the topics covered during the semester.**
- **Cheating on an exam and other forms of academic dishonesty will result in “F” on respective tests and possible referral with the maximum penalty recommended**
- **Grading/class related Appeals (see undergraduate catalog)**

**Course Assessment**
Students will be evaluated based on their performance in class examinations. ABET Criteria 3(a, e, f, i, and k) will be measured for this course.

**Student Support and Success**

**John B. Coleman Library**
The library and its partners have as their mission to provide resources and instructional material in support of the evolving curriculum, as a partner in Prairie View A&M University's mission of teaching, research, and service and to support the University's core values of access and quality, diversity, leadership, relevance, and social responsibility through emphasis on ten key areas of service. It maintains library collections and access both on campus, online, and through local agreements to further the educational goals of students and faculty. [https://www.pvamu.edu/library/](https://www.pvamu.edu/library/)  Phone: 936-261-1500

**The Learning Curve (Center for Academic Support)**
The Learning Curve offers Tutoring via peer tutoring. The services include workshops (i.e., Save My Semester, Recalculate Your Route), seminars (i.e., Tools You Can Use: TI-84), group review sessions (i.e., College Algebra Topic Reviews, GRE Preparation), group study opportunities (i.e., TSIA, HESI, Study Break, Exam Cram), and test-taking strategies (How to take Notes, Study Buddy, 5 Day Study Guide). The Learning Curve is a nationally certified tutoring program through the National Tutoring Association. The peer tutors are trained and certified by the coordinator each semester. Location: J.B. Coleman Library Rm. 207F. Phone: 936-261-1561

**The Center for the Oversight and Management of Personalized Academic Student Success (COMPASS)**
The Center for the Oversight and Management of Personalized Academic Student Success (COMPASS) is
designed to help Prairie View students in their second year and beyond navigate towards graduation by providing the following services: Academic Advisement, Targeted Tutorials for Personalized Learning, Campus-Wide Referrals, and Academic & Social Workshops. Location: J.B. Coleman Library Rm. 306. Phone: 936-261-1040

**Writing Center**
The Writing Center provides student consultants on all aspects of the writing process and a variety of writing assignments. Writing Center consultations assist students in such areas as prewriting, brainstorming, audience awareness, organization, research, and citation. Students taking on-line courses or courses at the Northwest Houston Center or College of Nursing may consult remotely or by email. Location: Hilliard Hall Rm. 121. Phone: 936-261-3724.

**Student Counseling Services**
The Student Counseling Services unit offers a range of services and programs to assist students in maximizing their potential for success: short-term individual, couples, and group counseling, as well as crisis intervention, outreach, consultation, and referral services. The staff is licensed by the State of Texas and provides assistance to students who are dealing with academic skills concerns, situational crises, adjustment problems, and emotional difficulties. Information shared with the staff is treated confidentially and in accordance with Texas State Law. Location: Owens-Franklin Health Center Rm. 226. Phone: 936-261-3564

**Testing**
The Department of Testing administers College Board CLEP examinations, the HESI A2 for pre-nursing majors, LSAT for law school applicants and MPRE for second-year law students, the Experiential Learning Portfolio option, the Texas Success Initiative (TSI) Assessment, which determines college readiness in the state, and exam proctoring, among other service such as SAT and ACT for high school students. Location: Delco Rm. 141. Phone: 936-261-4286

**Office of Diagnostic Testing and Disability Services**
As a federally-mandated educational support unit, the Office of Disability Services serves as the repository for confidential disability files for faculty, staff, and students. For persons with a disability, the Office develops individualized ADA letters of request for accommodations. Other services include: learning style inventories, awareness workshops, accessibility pathways, webinars, computer laboratory with adapted hard and software, adapted furniture, proctoring of non-standardized test administrations, ASL interpreters, ALDs, digital recorders, livescribe, Kurtzweil, and a comprehensive referral network across campus and the broader community. Location: Evans Hall Rm. 317. Phone: 936-261-3585

**Veteran Affairs**
Veterans Services works with student veterans, current military and military dependents to support their transition to the college environment and continued persistence to graduation. The Office coordinates and certifies benefits for both the G.I. Bill and the Texas Hazlewood Act. Location: Evans Hall Rm. 323. Phone: 936-261-3563

**Office for Student Engagement**
The Office for Student Engagement delivers comprehensive programs and services designed to meet the co-curricular needs of students. The Office implements inclusive and accessible programs and services that enhance student development through exposure to and participation in diverse and relevant social, cultural, intellectual, recreational, community service, leadership development and campus governance. Location: Memorial Student Center Rm. 221. Phone: 936-261-1340

**Career Services**
Career Services supports students through professional development, career readiness, and placement and employment assistance. The Office provides one-on-one career coaching, interview preparation, resume and letter writing, and career exploration workshops and seminars. Services are provided for students at the Northwest Houston Center and College of Nursing in the Medical Center twice a month or on a requested basis. Distance Learning students are encouraged to visit the Career Services website for information regarding services provided. Location: Evans Hall Rm. 217. Phone: 936-261-3570

**University Rules and Procedures**
Disability Statement (Also See Student Handbook):
The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, please contact Disability Services, in Evans Hall, Room 317, or call 936-261-3585/3.

Academic Misconduct (See Student Handbook):
You are expected to practice academic honesty in every aspect of this course and all other courses. Make sure you are familiar with your Student Handbook, especially the section on academic misconduct. Students who engage in academic misconduct are subject to university disciplinary procedures.

Forms of Academic Dishonesty:
1. Cheating: deception in which a student misrepresents that he/she has mastered information on an academic exercise that he/she has not mastered; giving or receiving aid unauthorized by the instructor on assignments or examinations.
2. Academic misconduct: tampering with grades or taking part in obtaining or distributing any part of a scheduled test.
3. Fabrication: use of invented information or falsified research.
4. Plagiarism: unacknowledged quotation and/or paraphrase of someone else’s words, ideas, or data as one’s own in work submitted for credit. Failure to identify information or essays from the Internet and submitting them as one’s own work also constitutes plagiarism.

Nonacademic Misconduct (See Student Handbook)
The university respects the rights of instructors to teach and students to learn. Maintenance of these rights requires campus conditions that do not impede their exercise. Campus behavior that interferes with either (1) the instructor’s ability to conduct the class, (2) the inability of other students to profit from the instructional program, or (3) campus behavior that interferes with the rights of others will not be tolerated. An individual engaging in such disruptive behavior may be subject to disciplinary action. Such incidents will be adjudicated by the Dean of Students under nonacademic procedures.

Sexual Misconduct (See Student Handbook):
Sexual harassment of students and employers at Prairie View A&M University is unacceptable and will not be tolerated. Any member of the university community violating this policy will be subject to disciplinary action.

Title IX Statement
Prairie View A&M University (PVAMU) is committed to supporting students and complying with the Texas A&M University System non-discrimination policy. It seeks to establish an environment that is free of bias, discrimination, and harassment. If you experience an incident of sex- or gender-based discrimination, including sexual harassment, sexual assault or attempted sexual assault, we encourage you to report it. While you may talk to a faculty member about an incident of misconduct, the faculty member must report the basic facts of your experience to Ms. Alexia Taylor, PVAMU’s Title IX Coordinator. If you would like to speak with someone who may be able to afford you privacy or confidentiality, there are individuals who can meet with you. The Title IX Coordinator is designated to handle inquiries regarding non-discrimination policies and can assist you with understanding your options and connect you with on- and off-campus resources. The Title IX Coordinator can be reached by phone at 936-261-2123 or in Suite 013 in the A.I. Thomas Administration Building.

Class Attendance Policy (See Catalog for Full Attendance Policy)
Prairie View A&M University requires regular class attendance. Attending all classes supports full academic development of each learner whether classes are taught with the instructor physically present or via distance learning technologies such as interactive video and/or internet.

Excessive absenteeism, whether excused or unexcused, may result in a student’s course grade being reduced or in assignment of a grade of “F”. Absences are accumulated beginning with the first day of class during regular semesters and summer terms. Each faculty member will include the University’s attendance policy in each course syllabus.

Student Academic Appeals Process
Authority and responsibility for assigning grades to students rests with the faculty. However, in those instances
where students believe that miscommunication, errors, or unfairness of any kind may have adversely affected the instructor's assessment of their academic performance, the student has a right to appeal by the procedure listed in the Undergraduate Catalog and by doing so within thirty days of receiving the grade or experiencing any other problematic academic event that prompted the complaint.

**TECHNICAL CONSIDERATIONS**

**Minimum Recommended Hardware and Software:**
- Intel PC or Laptop with Windows 7; Mac with OS X; Smartphone or iPad/Tablet with Wi-Fi
- High speed Internet access
- 8 GB Memory
- Hard drive with 320 GB storage space
- 15” monitor, 800x600, color or 16 bit
- Sound card w/speakers
- Microphone and recording software
- Keyboard & mouse
- Most current version of Google Chrome, Safari, Internet Explorer or Firefox

**Note:** Be sure to enable Java & pop-ups in the Web browser preferences

**Participants should have a basic proficiency of the following computer skills:**
- Sending and receiving email
- A working knowledge of the Internet
- Proficiency in Microsoft Word (or a program convertible to Word)
- Proficiency in the Acrobat PDF Reader
- Basic knowledge of Windows or Mac O.S.

**Netiquette (online etiquette):**
Students are expected to participate in all discussions and virtual classroom chats as directed. Students are to be respectful and courteous to others on discussions boards. Foul or abusive language will not be tolerated.

**Technical Support:**
Students should go to [https://mypassword.pvamu.edu/](https://mypassword.pvamu.edu/) if they have password issues. The page will provide instructions for resetting passwords and contact information if login issues persist. For other technical questions regarding eCourses, call the Office of Distance Learning at 936-261-3283

**Communication Expectations and Standards:**
Emails or discussion postings will receive a response from the instructor, usually in less than 48 hours. Urgent emails should be marked as such. Check regularly for responses.

**Discussion Requirement:**
Online courses often require minimal to no face-to-face meetings. However, conversations about the readings, lectures, materials, and other aspects of the course can take place in a seminar fashion. This will be accomplished by the use of the discussion board. The exact use of discussion will be determined by the instructor.

It is strongly suggested that students type their discussion postings in a word processing application and save it to their PC or a removable drive before posting to the discussion board. This is important for two reasons: 1) If for some reason your discussion responses are lost in your online course, you will have another copy; 2) Grammatical errors can be greatly minimized by the use of the spell-and-grammar check functions in word processing applications. Once the post(s) have been typed and corrected in the word processing application, it/they should be copied and pasted to the discussion board.

**College of Engineering Textbook Policy** – Students MUST acquire the required textbook that is listed on the course syllabus for this course. The textbook must be acquired by the 10th class day. Students are not allowed to share textbooks with students who are currently registered in the same class. Failure to acquire (or show proof of purchase) the required textbook by the 10th class day will result in the student being administratively dropped from the course. The University will assess financial obligations for the course to the student as with any other dropped
If you are not financially able to purchase a required textbook for an engineering course prior to the 10th class day, you may apply to the College of Engineering Textbook Fund for a textbook voucher. The voucher can only be used at the Campus Bookstore. This voucher is a loan and must be paid back to the College of Engineering prior to the start of pre-registration for the coming semester. If the loan is not repaid, a hold will be placed on your account. Additional information and application materials can be obtained from the Assistant Dean’s Office (SR Collins, Room 349) and obtained online at the College of Engineering website under student resources.

This policy is only for students who have declared a major (Engineering, Computer Science, and/or Technology) in the Roy G. Perry College of Engineering.