



# SYLLABUS

## CVEG 3102: Professional Engineering I Spring 2024

**Instructor:** Dr. I. Ahmed

**Section # and CRN:** P01,  
CRN:23977

**Office Location:** WILS110F

**Office Phone:** 936-261-1659

**Email Address:**

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**Office Hours:** MW 10-12,  
2-3:30, R 11-12, 1-2  
(or by appointment)

**Mode of Instruction:**

Face to Face

**Class Days & Times:**

**R 2:00 – 4:50pm**  
**ENCARB 133**

**Catalog Description:**

**Attendance will be taken (3 missed classes will lead to an “F”)  
(Revised here by Dr. Ahmed to fit the new FE Exam Format)**

Fundamentals of engineering and related science subjects include computers, engineering economics, ethics, fluid mechanics, mathematics/probability & statistics, statics, dynamics, mechanics of materials, and CEE Topics: Environmental, Water Resources, Structures, Materials, Geotechnical, Transportation, and Construction & Surveying.

**Prerequisites:**

**(Modified to fit current Civil FE Exam Format)**

MATH 2320; (**CIVIL**: CVEG 2301, 2332, 2102, 3300, 3100, 3301, 3302, 3303, 3304, 4300, 4301, 4302, 4303)

**Co-requisites:**

CVEG 3305

**Required Text:**

National Council of Examiners for Engineering and Surveying (NCEES)  
*Fundamentals of Engineering Supplied-Reference Handbook*, 8<sup>th</sup> Edition, 2<sup>nd</sup>  
Revision, 2011. ([www.ncees.org](http://www.ncees.org)); Free Download

*FE Civil Practice Problems* by Lindeburg **[ISBN-13: 978-1591265306]**

<https://ppi2pass.com/fe-civil-practice-problems-fecep1p.html>

Or, Amazon for quick and trusted delivery (For supplemental practice problems)

**Recommended Text:**

FE Review Manual for Civil Engineering by Lindeburg  
[For Serious Learners/Future Professionals]  
**ISBN-13: 978-1591265290**

## Method of Determining Final Course Grade:

### Grading Policy

#### Final grade will be determined based on the following:

Attendance/Weekly Study Report	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%
<b>TOTAL</b>	<b>100%</b>

### 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

MLK Holiday	January 15
Last day to withdraw without academic record	February 1
Last day to withdraw from classes with an automatic "W"	April 26
Spring Break	March 15 (Friday)

- **Disability Statement:**

**Students with disabilities who believe that they may need an academic adjustment in this class, are encouraged to contact the Office for Students with Disabilities Services at (936) 261-3581/3582 as soon as possible to better ensure receipt of timely adjustments. Once you receive a letter from the Office for Disability Services, kindly make an appointment with me to discuss appropriate academic adjustments for this class.**

### 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 (Tests may not be in this order. Class announcements will made on upcoming tests)**

- Statics
- Dynamics
- Mechanics of Materials
- Materials (Civil Engineering Materials Lab Topics; **Not** Material Science topics)
- Engineering Economics
- Ethics
- Fluid Mechanics/Hydraulics (CVEG 3303)
- Hydrologic and Hydraulic Systems (CVEG 4303): Take Home Test
- Geotechnical Engineering
- Structural Analyses and Design (RC and Steel): Take Home Test
- Transportation Engineering
- Environmental Engineering (CVEG 3301/4301): 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 every Tuesday at 5 PM.

**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.

Week Number	Thursdays	Topic Covered	Total Problems	Timed Exams
1	Jan 18	Course Introduction, FE Exam Format Changes	---	---
Others	Thursdays	Crash Reviews of Selected “Fundamental” topics + 2-hour Subject Exam ( <b>In-class/FE Style Multiple Choice</b> )	15	Yes
15 or:	Saturday in April, before the Final Exam Week	5-hour Mock FE Exam (Comprehensive) ( <b>In-class/Computer/FE Style Multiple Choice</b> )	100	Yes

### 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 Thursday and you are required to attend that hour. Test questions change every year in this class so please study diligently and do not rely on any floating past tests**
- **You will need to have the NCEES formula book (or printed sheets for specific subject test for the week) for use during the test (or, just bring those formula sheets you need for the day's test)**
- **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 UNLESS YOU NEED ONE FOR EXCUSED ABSENCE because you only need to pass only 70% of the subject tests offered to receive the full percentage in that category**
- **The mock exam is comprehensive on the topics covered during the semester. No Makeups are allowed unless you have serious medical issues. Do not plan any trips on that Saturday in April before the finals week**
- **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.

**Policy CVEG 3102 – Professional Engineering I** - “The Civil & Environmental Engineering Department highly encourages all CVEG major students to take and pass the Fundamentals of Engineering (FE) Exam prior to graduation. If a student passes the FE exam prior to taking **CVEG 3102-Professional Engineering I**, he/she will receive a letter grade of “A” when he/she registers for the course. If the student is currently enrolled and passes the FE exam before the final grade is assigned, the student will receive a letter grade of “A.” If a student receives a grade “D” or “F” in CVEG 3102 in any semester, and after the grade is posted, he/she passes the FE exam, he/she will have to register CVEG 3102 in the following semester to pass this course. In all cases, the student will need to consult with the Professor/Instructor of Record to ensure class attendance adheres to University policy.” Once the final grade is assigned to the course, it will not be changed even if the student passes the FE exam. Passing of the FE exam will have to be verified with the Professor/Instructor of Record by logging into NCEES student account, in person or via online ZOOM session using the screen share tool.

## POLICY TO ERADICATE CHEATING (PROTECT INTEGRITY OF EXAMS)

Cheating is unprofessional, unethical and is antithetical to our core value of "Excellence in Civil Engineering Education," and WILL NOT BE TOLERATED at any level. To combat this serious problem, the Civil & Environmental Engineering (CEE) Department has adopted the following rules to eradicate cheating.

- If a student cheats on a test/assignment, the student shall receive an **automatic zero** for the test/assignment.
- A student who has been determined to have cheated in a course will IMMEDIATELY relinquish his/her leadership position in any of the department's professional organizations.
- If a student cheats multiple times in a course, the student will receive a **grade of "F"** for the course.
- The calculators allowed for use in exams is **restricted** to the **latest** FE-approved calculators. For the latest NCEES FE approved calculators visit [ncees.org](http://ncees.org) or <https://ncees.org/exams/calculator/>  
[This NCEES policy protects the integrity of NCEES exams and has been adopted to do likewise for department's exams.]

### EXAM GUIDELINES (Faculty should consider adopting these for all exams)

- 1) All cellphones/smartwatches **MUST** be placed in a book bags during exams and turned off. Book bags **MUST** be placed in front of the classroom and away from students. Students without a book bag must place cellphone/smartwatch (turned off) on Instructor's desk – **no exceptions**
- 2) Any student possessing a cellphone/smartwatch or any other unauthorized device **WILL** receive an **automatic zero for the test/assignment**. This is cheating.
- 3) **Calculator covers** are **DISALLOWED** during tests and must be placed in students' book bags during exams.
- 4) There shall be **NO SHARING** of resources during the exam
- 5) **Restroom Visit:** if you need to use the restroom, do so before opening the exam. Once the exam begins, you must submit your work to the instructor if you leave the classroom to visit the rest room (your exam terminates).

## 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/> 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.

### **Protections and Accommodations for Pregnant and Parenting Students**

The U.S. Department of Education's Office for Civil Rights (OCR) enforces, among other statutes, Title IX of the Education Amendments of 1972. Title IX protects people from discrimination based on sex, sexual orientation, and gender identity in education programs or activities that receive federal financial assistance. This protection includes those who may be pregnant and parenting. Title IX states: "No person in the United States shall, on the basis of sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any education program or activity receiving Federal financial assistance." Students seeking accommodations related to pregnancy or parenting should contact the Office of Title IX for information, resources, and support at [titleixteam@pvamu.edu](mailto:titleixteam@pvamu.edu). Additional information and/or support may be provided by the Office of Disability Services

or the Office of the Dean of Students.

### **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/> 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 10<sup>th</sup> 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 10<sup>th</sup> 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 class according to the fee schedule as well as your financial aid may be affected.

If you are not financially able to purchase a required textbook for an engineering course prior to the 10<sup>th</sup> 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.*

## **COVID-19 Campus Safety Measures**

To promote public safety and protect students, faculty, and staff during the COVID-19 pandemic, Prairie View A&M University has adopted policies and practices for the Fall 2020 academic term to limit virus transmission. Students must observe the following practices while participating in face-to-face courses and course-related activities (office hours, help sessions, transitioning to and between classes, study spaces, academic services, etc.):

- **Self-monitoring** - Students should follow CDC recommendations for self-monitoring. Students who have a fever or exhibit symptoms of COVID-19 should participate in class remotely and should not participate in face-to-face instruction.
- **Face Coverings** - Face coverings (cloth face covering, surgical mask, etc.) must be properly worn in all non-private spaces including classrooms, teaching laboratories, common spaces such as lobbies and hallways, public study spaces, libraries, academic resource and support offices, and outdoor spaces where 6 feet of physical distancing is difficult to reliably maintain.
- **Physical Distancing** - Physical distancing must be maintained between students, instructors, and others in course and course-related activities.
- **Classroom Ingress/Egress** - Students must follow marked pathways for entering and exiting classrooms and other teaching spaces. Students should leave classrooms promptly after course activities have concluded, should not congregate in hallways and should maintain 6-foot physical distancing when waiting to enter classrooms and other instructional spaces.
- **Face-to-face Class** - To attend a face-to-face class, students must wear a face covering (or a face shield if they have an exemption letter). If a student refuses to wear a face covering, the instructor should ask the student to leave and join the class remotely. If the student does not leave the class, the faculty member should report that student to the Office for Student Conduct for adjudication. Additionally, the faculty member may choose to teach that day's class remotely for all students.

- **COVID-19 Guidelines for Student Conduct Adjudication** - The mandatory COVID-19 Training/Certification taken by all students serves as the 1st Warning for violation of COVID-19 Guidelines.
  - 1<sup>st</sup> incident: upon review of Incident Report and finding of responsibility — Conduct Probation
  - 2<sup>nd</sup> incident: upon review of Incident Report and finding of responsibility — Suspension
  - Consult the Code of Student Conduct in the Student Planner or [Student Conduct website](#) for additional information on Conduct Probation and Suspension.
  
- **Personal Illness and Quarantine** - Students required to quarantine must participate in courses and course-related activities remotely and must not attend face-to-face course activities. Students should notify their instructors of the quarantine requirement. Students under quarantine are expected to participate in courses and complete graded work unless they have symptoms that are too severe to participate in course activities. Students experiencing personal injury or illness that is too severe for the student to attend class qualify for an excused absence. To receive an excused absence, students must provide appropriate documentation to the Office for Student Conduct, [studentconduct@pvamu.edu](mailto:studentconduct@pvamu.edu).