PRAIRIE VIEW A&M UNIVERSITY

SYLLABUS

CVEG 3301 (P01 & P81): Environmental Engineering
Spring 2024

Course Information

Instructor:	Dr. Raghava Kommalapati, PE, BCEE, F.ASCE, *Honeywell Endowed Professor*
Section # and CRN:	Lec -P01 (CRN 24434) & Lab - P81 (CRN 24435)
Office Location:	110J Wilson Bldg . (Also check my other Office in 206T Wilson Bldg)
Office Phone:	936-261 1660
Email Address:	rrkommalapati@pvamu.edu
Office Hours:	Tues, Thurs, 10.30 am to 12.30 pm and other hours by appointment
Mode of Instruction:	Face to Face
Course Location:	Lec: 117 ENCARB Bldg. Lab: 109 K/A Wilson Eng Bldg.
Class Days & Times:	Tues, Thurs, 9:30 – 10:20 am (Lec) and Tuesday 2:00-4.50 pm (Lab)
Catalog Description:	CVEG 3301 (2-3) Credit 3 semester hours. Review of environmental chemistry and biology, introduction to environmental science and engineering, material balance, reaction kinetics, reactor design, introduction to solid and hazardous waste, water and wastewater quality characteristics, laboratory analysis of water and wastewater samples using a variety of techniques.
Prerequisites:	CHEM 1403 or 1303 and 1304 and CHEM 1112 and BIOL 1307 or 1308 or 1309 or appropriate course approved by the department.
Co-requisites:	None
Required Text(s):	Principles of Environmental Engineering and Science by Masten and Davis (4th ed), ISBN 978-1-260-04886-5 (loose leaf edition)
Recommended Text(s):	• Introduction to Environmental Engineering, 6th ed., 2023, Davis & Cornwell, McGraw-Hill, ISBN 978-1-260-58748-7 (loose leaf edition) • **Water Quality**, Tchobanoglous and Schroeder, 1985, Addison-Wesley. • Principles of Environmental Engineering and Science, 3rd ed., 2014, Davis M. and Masten S., McGraw-Hill, ISBN 978-0-07-339790-0 • Introduction to Environmental Engineering, 3rd ed., 2010, Vesilind, Morgan & Heine, Cengage Learning, ISBN 978-0-495-29583-9 • Standard Methods for the Examination of Water and Wastewater, 19th ed., AWWA, 1995. • Chemistry for Environmental Eng., 4th ed., Sawyer, McCarty & Parkin, 1994, McGraw-Hill • Introduction to Environmental Engineering and Science, 3rd ed., 2008, Masters G. and Ela W., McGraw-Hill.
Course Goals or Overview:	This course aims to provide a broad understanding of the field of environmental engineering and get hands-on experience with water and wastewater quality analysis.
Estimated ABET Category Content	Engineering Science: 3 credits or 100%

Course Learning Objectives:

	Upon successful completion of this course, students will be able to:	Student Learning Outcome # Alignment	Core Curriculum Objective Alignment
1	Comprehend the basic concepts of environmental engineering	ABET 3 (1)	
2	Discern the various aspects of water pollution	ABET 3 (1)	
3	Utilize the concepts of environmental chemistry	ABET 3 (1)	
4	Use the experimental data to determine the order of reaction and reactions rate constant	ABET 3 (1)	
5	Utilize the principles of reactor design and reaction kinetics in designing ideal reactors.	ABET 3 (1)	
6	measure the water quality parameters	ABET 3 (6)	
7	measure the wastewater quality parameters	ABET 3 (6)	

Student Learning Outcome Measures

Course	CVEG Objectives*				ABET Criterion 3-Student Learning Outcomes*						
	1	2	3	4	1	2	3	4	5	6	7
CVEG 3301	X	X					R			**M**	

X means the Program Objective is achieved
M means that the skills described in the program outcome are covered and measured in the course.
R means the described outcome is reinforced in the course (not measured) but could be monitored.

* The Civil Engineering Program Learning Outcomes are derived from ABET Criterion 3 (Student Outcomes). Program Educational Objectives (PEOs) and student learning outcomes are provided at the end of this course outline. **Items in Bold and Red are measured**

Major Course Requirements
Students will be evaluated based on their performance in class examinations, homework, quiz, laboratory reports, in-class work, class paper(s), and class attendance and participation in discussions.

Method of Determining Final Course Grade

	Course Grade Requirement	Weightage
1.	Homework, Quizzes, and all Other Assignments	15
2.	Lab Reports	15
3.	Class Exams, including Midterm (3)	48*
4.	Final Exam (comprehensive)	22
5.	Class Participation/ Discussion	-10**
	Total:	**100**

* Instructor, at his discretion, may drop the lowest score and/or use the final exam score to replace one of the lower scores. Students will be informed before the grades are finalized.
** Attendance: The university attendance policy notwithstanding, the overall grade is subject
to be discounted up to 10 points for lack of attendance and participation

Grading Criteria and Conversion:

A = >90% B = 80-89.7% C = 70- 79.7% D = 60 – 69.7% F = < 60%

If a student has stopped attending the course (i.e. "stopped out") at any point after the first day of class but did not officially withdraw from the course and has missed assignments and exams and performed below the grade level of a D, a grade of FN (failed-non attendance) will be assigned for the final course grade to ensure compliance with the federal Title IV financial aid regulations. In contrast, if the student has completed all assignments and exams, but performed below the grade level of a D, a grade of F will be assigned for the final course grade.

Detailed Description of Major Assignments:

Assignment Title or Grade Requirement	Description
Homework:	There will be 4-8 homework or other assignments that will be assigned at the end of each topic, and students are expected to submit them before the deadline. At the discretion of the instructor, one homework may be dropped or used as a bonus.
Quizzes and In-class work	The quizzes & in-class work is conducted randomly and are used as a tool to keep the students come prepared and address tardiness. This cannot be made up if a student misses for excused or unexcused absence.
Lab Reports	Lab reports must be written following a professional lab reporting format (a journal article format) and submitted for each lab individually before the deadline.
Exams	Three or possibly four exams, including midterm, will be given, and the instructor, at his discretion, may choose to drop the lowest score
Final Exam	It is a comprehensive exam and will cover all the material

Topics to be Covered (please see weekly calendar for detailed topics list)

I. Introduction Environmental Science and Engineering
II. Environmental Chemistry and Biology
III. Material Balance
IV. Reaction kinetics and Reactor Analysis and Design
V. Water and Wastewater Quality characteristics
VI. Introduction to Solid and Hazardous Waste Management
VII. Laboratory Analysis of Water and Wastewater Samples

Laboratory Experiments

I. Turbidity and Color
II. Solids (total, suspended and volatile)
III. Hardness, Alkalinity and Acidity
IV. Biochemical Oxygen Demand
V. Chemical Oxygen Demand
VI. Ammonia and Nitrogen
VII. Other Analysis using Test Kits

Special Experiments (Demonstration only as time permits)

Inorganic Ion Analysis using Ion Chromatograph
Determination of Organic Carbon content of Wastewater using Total Organic Carbon (TOC) analyzer
Determination of Specific Organic chemicals in Wastewater using High-Performance Liquid chromatography
Identification and Determination of Specific Organic chemicals in Wastewater using Gas chromatography and Mass Spectrometry

Course Procedures or Additional Instructor Policies

- Attendance in the class is mandatory, and being absent for three or more classes may constitute sufficient reason for receiving a failing grade for the course (please read the attached University Class Attendance Policy).
- Cell phone use in the classroom is strictly prohibited (including texting or any other use). All cell phones MUST be turned off/silenced and out of sight while in the classroom. In an emergency, you should get prior permission from the instructor and use it in silent mode. It is a distraction for other students and faculty.
- Cell phones, smart watches, headphones and other gadgets cannot be with you during the exam. Cell phone is not a substitute for calculator. If a *cell phone or other gadgets including smart watches are either open or near you during the exam/quiz or other assignments, then that assignment will be marked "zero" credit.*
- Any other electronic gadgets (except for approved calculators) can be brought to the class only with prior explicit approval from the instructor.
- Students should come to class on time, and being tardy for 3 classes will be counted as one absence.
- Students should not go in and out of the classroom (or the lab) once the class starts except in emergency cases. This implies once you come into the class on time, do not leave class until the class is adjourned.
- Students should come to class properly dressed.
- The student must provide proper documentation to justify an excused absence ahead of time and in case of emergencies as soon as possible (do not wait for the next class time).
- Any form of Dishonesty will result in a grade of F (ZERO) for the assignment or test involved (see Department and University Policy below). The second such act will automatically earn a grade of F for the course. It is the student's responsibility to stay away from any appearance of cheating.
- Late homework will not be accepted unless you make prior arrangements with the instructor. Standard 8½ " X 11" paper should be used for homework [Engineering paper is recommended]. Work submitted by students should be done neatly, in pen/pencil, and on one side of the sheet only. Loose sheets torn out of notebooks will not be accepted.
- Professionalism includes class conduct and participation in class. Unprofessional classroom behavior will not be tolerated. Students should not hold private conversations in class. Disruptive behavior of any kind including talking on the phone or with other students and arguments with the instructor may result in ejection from the classroom or administrative withdrawal from the course.
- Quizzes are given during the first few minutes of the class, and these quizzes cannot be made up (even if it is excused absence). You will have several such quizzes and a maximum of two will be dropped to account for any absences.
- The laboratory report should be submitted one week from the day the experiment was performed or as instructed. The report must follow the format and should address all the important aspects of the experiment (please see the lab format). Lab time during the first few weeks will be used to cover background water quality material before we start conducting lab experiments.
- No food, drinks or any type of smoke is allowed while in the laboratory.
- Course review will be provided only for the Final Exam on the designated date.
- No makeup test(s) will be given, If you miss a test you will receive zero credit. If you have an excused absence, please discuss it with the instructor ahead of time or as soon as possible. Failure to take the final examination will result in an automatic "F" grade.
- The Final Exam is comprehensive but focuses on material not covered in the prior exams. The Exam will include questions from the laboratory part of the course.

Calendar (You should check the University Calendar for the accuracy of dates-Rev)

♦ Classes Start	January 16
♦ Census Date (12th class day)	January 31
♦ Final Day to Drop courses without Record	January 31
♦ Mid-Term	March 07- 09
♦ Spring Break	March 11- 16
♦ Founders day/Honors Convocation	March 20
♦ Final day to withdraw from a Course or Univ. (W)	April 26
♦ Final Exam per university Final Exam Schedule	April 30 - May 08 (TBD and subject to university final exam calendar

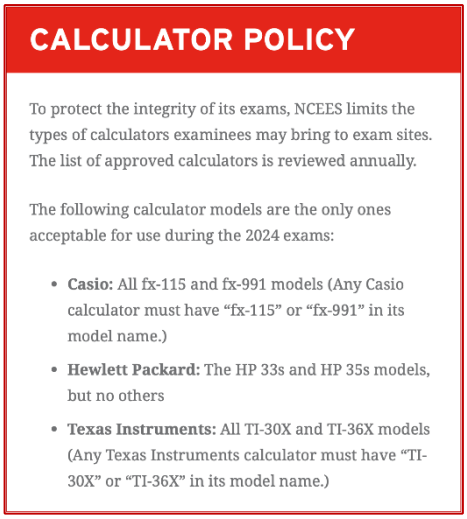
CEE POLICY TO ERADICATE CHEATING (TO PROTECT THE INTEGRITY OF EXAMS)

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.

CALCULATORS: The calculators allowed for use in exams are restricted to the latest Fundamentals of Engineering (FE) approved calculators. For the latest National Council of Examiners for Engineering and Surveying (NCEES) Fundamentals of Engineering (FE) approved calculators visit https://ncees.org/exams/fe-exam/ (look under "Other Resources.")

The current **NCEES Calculator Policy** (-see Figure):



CALCULATOR POLICY

To protect the integrity of its exams, NCEES limits the types of calculators examinees may bring to exam sites. The list of approved calculators is reviewed annually.

The following calculator models are the only ones acceptable for use during the 2024 exams:

- **Casio:** All fx-115 and fx-991 models (Any Casio calculator must have "fx-115" or "fx-991" in its model name.)
- **Hewlett Packard:** The HP 33s and HP 35s models, but no others
- **Texas Instruments:** All TI-30X and TI-36X models (Any Texas Instruments calculator must have "TI-30X" or "TI-36X" in its model name.)

Statement Regarding the Usage of Artificial Intelligence in the Classroom

Intellectual honesty is vital to an academic community and for my fair evaluation of your work. All work submitted in this course must be your own, completed in accordance with the University's academic regulations. You may not engage in unauthorized collaboration or make use of ChatGPT or other AI composition software. Using these tools without my permission puts your academic integrity at risk

Semester Calendar

16 WEEK CALENDAR (Tentative)	
Week One: Topic	Introduction to Environmental Engendering, Review of Chemistry
Chapter (s):	Chapter 1 and Handout
Assignment (s):	
Week Two: Topic	Review of Environmental Chemistry, Lab safety Review
Chapter (s):	Handout and Chapter 2
Assignment (s):	HW 1
Week Three: Topic	Review of Environmental Chemistry
Chapter (s):	Handout and Chapter 2
Assignment (s):	HW 2
Week Four: Topic	Review of Environmental Biology, Water and Wastewater Quality
Chapter (s):	Chapter 4 and Handout
Assignment (s):	HW 3
Week Five: Topic	Water and Wastewater Quality & **Test 1**
Chapter (s):	Chapter 4 and Handout
Assignment (s):	HW 4
Week Six: Topic	Water and Wastewater Quality
Chapter (s):	Chapter 4 and Handout
Assignment (s):	
Week Seven: Topic	Water and Wastewater Quality and Lab 1
Chapter (s):	Chapter 4 and Handout
Assignment (s):	HW 5
Week Eight: Topic	Water and Wastewater Quality and Lab 2
Chapter (s):	Chapter 4 and Handout
Assignment (s):	
Week Nine:	**Midterm**
Week Ten: Topic	Water and Wastewater Quality and Lab 3
Chapter (s):	Chapter 4 and Handout
Assignment (s):	HW 6
Week Eleven: Topic	Water and Wastewater Quality and Lab 4
Chapter (s):	Chapter 4 and Handout
Assignment (s):	HW 7
Week Twelve: Topic	Solid Waste Management and Lab 5
Chapter (s):	Chapter 9
Assignment (s):	HW 8
Week Thirteen: Topic	Solid Waste Management and Lab 6 and 7
Chapter (s):	Chapter 9
Assignment (s):	
Week Fourteen: Topic	Hazardous Waste Management & **Test 3**
Chapter (s):	Chapter 10
Assignment (s):	
Week Fifteen: Topic	Hazardous Waste Management and Lab 8
Chapter (s):	Chapter 10
Assignment (s):	HW 9
Week Sixteen: Topic	**Final Exam**

Student Support and Success

John B. Coleman Library
The John B. Coleman Library's mission is to enhance the scholarly pursuit of knowledge, to foster intellectual curiosity, and to promote life-long learning and research through our innovative services, resources, and cultural programs, which support the Prairie View A&M University's global mission of teaching, service, and research. It maintains library collections and access both on campus, online, and through local agreements to further the educational goals of students and faculty. Library Website Phone: 936-261-1500

Academic Advising Services
Academic Advising Services offers students various services that contribute to student success and lead toward graduation. We assist students with understanding university policies and procedures that affect academic progress. We support the early alert program to help students connect to success early in the semester. We help refer students to the appropriate academic support services when they are unsure of the best resource for their needs. Faculty advisors support some students in their respective colleges. Your faculty advisor can be identified in PantherTracks. Advisors within Academic Advising Services are available to all students. We are located across campus. Find your advisor's location by academic major on the advising website. Phone: 936-261-5911

The University Tutoring Center
The University Tutoring Center (UTC) offers free tutoring and academic support to all registered PVAMU students. The mission of the UTC is to help provide a solid academic foundation that enables students to become confident, capable, independent learners. Competent and caring staff and peer tutors guide students in identifying, acquiring, and enhancing the knowledge, skills, and attitudes needed to reach their desired goals. Tutoring and academic support are offered face-to-face in the UTC and virtually in online sessions. Other support services available for students include Supplemental Instruction, Study Breaks, Academic Success Workshops, and Algebra Study Jam. Location: J. B. Coleman Library, Rm. 307; Phone: 936-261-1561; Email: pvtutoring@pvamu.edu; University Tutoring Website

Writing Center
The Writing Center provides well-trained peer tutors to assist students with writing assignments at any stage of the writing process. Tutors help students with various writing tasks from understanding assignments, brainstorming, drafting, revising, editing, researching, and integrating sources. Students have free access to Grammarly online writing assistance. Grammarly is an automated proofreading and plagiarism detection tool. Students must register for Grammarly by using their student email address. In addition, students have access to face-to-face and virtual tutoring services either asynchronously via email or synchronously via Zoom. Location: J. B. Coleman Library, Rm. 209; Phone: 936-261-3724; Writing Center Website, Grammarly Registration

Panther Navigate
Panther Navigate is a proactive system of communication and collaboration between faculty, academic advisors, and students that is designed to support student success by promptly identifying issues and allowing for intervention. Panther Navigate helps students by providing a central location to schedule advising appointments, view campus resources, and request assistance. Students who recognize that they have a problem that negatively affects their academic performance or ability to continue school may self-refer an academic early alert. To do so, students will log in to Canvas and click on Student Alerts on the left sidebar within a course. Students also have the option to download the Navigate Student app. Phone: 936-261-5902; Panther Navigate Website

Student Counseling Services
The Student Counseling Services 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 assists 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: Hobart Taylor, 2nd floor; Phone: 936-261-3564; Health & Counseling Center Website

Office of Testing Services
The Office of Testing Services serves to facilitate and protect the administration of educational and professional exams to aid students, faculty, staff, and the community in their academic and career goals. We provide proctoring services for individuals who need to take exams for distance or correspondence courses for another institution, exams for

independent study courses, or make-up exams. In order for a proctored exam to be administered by our office, the instructor of the course must first submit the online PVAMU Testing Services – Test Proctoring Form (this form can only be completed by the instructor) to the Office of Testing Services 72 hours prior to the first exam being administered. Once the Test Proctoring Form has been submitted, the instructor will inform their testers so they can then register for an appointment with our office on one of the selected proctored exam test dates within the testing window for the exam and pay the applicable fees. To access the OTS – Test Proctoring Form, to schedule a proctored exam appointment, or to find more information about our proctoring services, please visit the OTS – Proctoring Service website. Location: Wilhelmina Delco, 3rd Floor, Rm. 305; Phone: 936-261-3627; Email: aetesting@pvamu.edu; Testing Website

Office of Diagnostic Testing and Disability Services
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, contact the Office of 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 non-standardized test administrations, ASL interpreters, ALDs, digital recorders, Livescribe, and a comprehensive referral network across campus and the broader community. Location: Hobart Taylor, Rm. 1D128; Phone: 936-261-3583; Disability Services Website

Center for Instructional Innovation and Technology Services (CIITS)
Distance Learning, also referred to as Distance Education, is the employment of alternative instructional delivery methods to extend programs and services to persons unable to attend classes in the traditional manner. CIITS supports student learning through online, hybrid, web-assist, and 2-way video course delivery. For more details and contact information, visit CIITS Student Website. Phone: 936-261-3283 or email: ciits@pvamu.edu.

Veteran Affairs
Veteran 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. 102; Phone: 936-261-3563; Veteran Affairs Website

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; Student Engagement Website

Center for Careers & Professional Development
This center supports students through professional development, career readiness, and placement and employment assistance. The center 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 center website for information regarding services provided. Location: Anderson Hall, 2nd floor; Phone: 936-261-3570; Center for Careers & Professional Development Website

University Rules and Procedures

Academic Misconduct
Academic dishonesty is defined as any form of cheating or dishonesty that has the effect or intent of interfering with any academic exercise or fair evaluation of a student's performance. The college faculty can provide additional information, particularly related to a specific course, laboratory, or assignment.

You are expected to practice academic honesty in every aspect of this course and all other courses. Make sure you are familiar with the *University Administrative Guidelines on Academic Integrity*, which can be found on the Academic Integrity webpage. Students who engage in academic misconduct are subject to university disciplinary procedures. As listed in the *University Administrative Guidelines on Academic Integrity*, the University Online Catalog, and the Student Code of Conduct, the following are examples of prohibited conduct. This list is not designed to be all-inclusive or exhaustive. In addition to academic sanctions, any student found to have committed academic misconduct that is also a violation of criminal law may also be subject to disciplinary review and action by the Office of Student Conduct (as outlined in the Student Code of Conduct).

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 learned, giving or receiving aid unauthorized by the instructor on assignments or examinations. Examples: unauthorized use of notes for a test; using a "cheat sheet" on a quiz or exam; any alteration made on a graded test or exam which is then resubmitted to the teacher;

2. Plagiarism: Careless or deliberate use of the work or the ideas of another; representation of another's work, words, ideas, or data as your own without permission or appropriate acknowledgment. Examples: copying another's paper or answers, failure to identify information or essays from the internet and submitting or representing it as your own; submitting an assignment which has been partially or wholly done by another and claiming it as yours; not properly acknowledging a source which has been summarized or paraphrased in your work; failure to acknowledge the use of another's words with quotation marks;

3. Collusion: When more than one student or person contributes to a piece of work that is submitted as the work of an individual;

4. Conspiracy: Agreeing with one or more persons to commit an act of academic/scholastic dishonesty; and

5. Multiple Submission: Submission of work from one course to satisfy a requirement in another course without explicit permission. Example: using a paper prepared and graded for credit in one course to fulfill a requirement and receive credit in a different course.

PVAMU's General Statement on the Use of Generative Artificial Intelligence Tools in the Classroom
Generative Artificial Intelligence (GAI), specifically foundational models that can create writing, computer code, and/or images using minimal human prompting, are increasingly becoming pervasive. Even though ChatGPT is one of the most well-known GAIs currently available, this statement includes any and all past, current, and future generations of GAI software. Prairie View A&M University expects that all work produced for a grade in any course, be it face-to-face or virtual, will be the sole product of a student's endeavors to meet those academic goals. However, should an instructor permit their students to use artificial intelligence as a resource or tool, students must not substitute the substance of their original work with the results of using such GAI tools. This clearly violates the University's Administrative Guidelines on Academic Integrity and its underlying academic values.

Nonacademic Misconduct
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 ability 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. The Office of Student Conduct will adjudicate such incidents under nonacademic procedures.

Sexual Misconduct
Sexual harassment of students and employees at Prairie View A&M University is unacceptable and will not be tolerated. Any member of the university community violating the university's sexual harassment policy will be subject to disciplinary action. In accordance with the Texas A&M University System guidelines, your instructor is obligated to report to the Office of Title IX Compliance (titleixteam@pvamu.edu) any instance of sexual misconduct involving a student, which includes sexual assault, stalking, dating violence, domestic violence, and sexual harassment, about which the instructor becomes aware during this course through writing, discussion, or personal disclosure. The faculty and staff of PVAMU actively strive to provide a learning, working, and living environment that promotes respect that is free from

sexual misconduct, discrimination, and all forms of violence. If students, faculty, or staff would like assistance or have questions, they may contact the Title IX Coordinator, Dr. Zakiya Brown, at 936-261-2144 or titleixteam@pvamu.edu. More information can be found at Title XI Website, including confidential resources available on campus.

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. Additional information and/or support may be provided by the Office of Disability Services or the Office of the Dean of Students.

Non-Discrimination Statement
Prairie View A&M University does not discriminate on the basis of race, color, sex, religion, national origin, age, disability, genetic information, veteran status, sexual orientation, or gender identity in its programs and activities. The University 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 discrimination or harassment, we encourage you to report it. 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 Director of Equal Opportunity & Diversity has been designated to handle inquiries regarding the non-discrimination policies and can be reached at Harrington Science Building, Suite 109, or by phone at 936-261-1744 or 1792.

Class Attendance Policy (See the University Online Catalog for Full Attendance Policy)
Prairie View A&M University requires regular class attendance. Attending all classes supports the 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 the Internet. Excessive absenteeism, whether excused or unexcused, may result in a student's course grade being reduced or in the 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.

Makeup Work for Legitimate Absences
Prairie View A&M University recognizes that there are a variety of legitimate circumstances in which students will miss coursework and that accommodations for makeup work will be made. If a student's absence is **excused**, the instructor must either provide the student an opportunity to make up any quiz, exam, or other work contributing to the final grade or provide a satisfactory alternative by a date agreed upon by the student and instructor. Students are encouraged to work with instructors to complete makeup work before known scheduled absences (University-sponsored events, administrative proceedings, etc.). Students are responsible for planning their schedules to avoid excessive conflicts with course requirements.

Absence Verification Process
All non-athletic absences (e.g., Medical, Death/Funeral, Court/Legal-related, etc.) for which a student seeks to obtain a valid excuse must be submitted to the Dean of Students/Office of Student Conduct, with supporting documentation, for review and verification. Please use the Online Reporting Forms to access/complete/submit the *Request for a University Excused Absence* form for an excuse. Upon receipt, a staff member will verify the documentation and provide an official university excuse, if applicable. The student is responsible for providing the official university excuse issued by the Office for Student Conduct to the professor(s). Questions should be directed to the Dean of Students via email: deanofstudents@pvamu.edu or phone: (936) 261-3550 or Office for Student Conduct via email: studentconduct@pvamu.edu or phone: (936) 261-3524.

Student Academic Appeals Process
Authority and responsibility for assigning grades to students rest 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 University Online 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 10 or later version; Mac with OS Catalina
- Smartphone or iPad/tablet with wi-fi*
- High-speed internet access
- 8 GB memory
- Hard drive with 320 GB storage space
- 15" monitor, 1024 x 768, color
- Speakers (internal or external)
- Microphone and recording software
- Keyboard & mouse
- Most current version of Google Chrome, Safari, or Firefox

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

* Some courses may require remote proctoring. At this time only Chromebooks, laptops, and desktops running Windows or Mac work with our proctoring solution, but iPads are not compatible. Most other applications will work with Android or Apple tablets and smartphones.

Participants should have a basic proficiency of the following computer skills:

- Sending and receiving email
- A working knowledge of the Internet
- Microsoft Word (or a program convertible to Word)
- Acrobat PDF Reader
- Windows or Mac OS
- Video conferencing software (Zoom)

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 discussion boards. Foul or abusive language will not be tolerated. Do not use ALL CAPS for communicating to others AS IT CAN BE INTERPRETED AS YELLING. Avoid slang terms such as "wassup?" and texting abbreviations such as "u" instead of "you." Limit and possibly avoid the use of emoticons. Be cautious when using humor or sarcasm as tone is sometimes lost in an email or discussion post, and the message might be taken seriously or sound offensive.

Video Conferencing Etiquette

When using Zoom, WebEx, or other video conferencing tools, confirm the visible area is tidy, clear of background clutter, inappropriate or offensive posters, and other distractions. Ensure you dress appropriately and avoid using high traffic or noisy areas. Stay muted when you are not speaking and avoid eating/drinking during the session. Before the class session begins, test audio, video, and lighting to alleviate technology issues.

Technical Support

Students should go to Password Reset Tool 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 Center for Instructional Innovation and Technology Services at 936-261-3283 or email ciits@pvamu.edu.

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 occur in a seminar fashion. The use of the discussion board will accomplish this. The instructor will determine the exact use of discussion boards.

It is strongly suggested that students type their discussion postings in a word processing application such as Word 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, copy and paste to the discussion board.

COVID-19 Campus Safety Measures

In accordance with the latest guidelines from the PVAMU Health Services, the following measures are in effect until further notice.

- Students who are ill will be asked to adhere to best practices in public health, such as masking, handwashing, and social distancing, to help reduce the spread of illness across campus.
- Mandatory self-reporting will no longer be required by students. Students will be responsible for communicating with their professors regarding COVID, similarly to any other illness.
- There will be no mandatory isolation. Students who are too ill to engage in classroom activities will be responsible for securing the appropriate documentation to support the absence.
- Students who self-isolate will be responsible for communicating with their professors and securing an excuse from Student Conduct.
- All students will have access to TimelyCare, a telehealth platform that provides virtual medical care 24/7 and by appointment in the Student Health Clinic. Students are encouraged to enroll with TimelyCare at the beginning of the semester, at timelycare.com/pvamu.
- Students will have access to COVID testing in the Student Health Clinic by appointment. Testing is for students who are symptomatic ONLY.

Civil Engineering Program Outcomes (Student Learning Outcomes)
ABET EAC Criterion 3 {[1] - [7] Student Outcomes (SOs} ***Beginning Spring 2019***

1) an ability to identify, formulate, and solve **complex** engineering problems by applying principles of engineering, science, and mathematics
2) an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors
3) an ability to communicate effectively with a range of audiences
4) an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts
5) an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives
6) an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions
7) an ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

Civil Engineering Program Criteria (2019-2020)

Curriculum*: The curriculum must prepare graduates to apply knowledge of mathematics through differential equations, calculus-based physics, chemistry,* ***and at least one additional area of basic science****;* ***apply probability and statistics to address uncertainty****; analyze and solve problems in* ***at least four technical areas*** *appropriate to civil engineering; conduct experiments in* ***at least two technical areas*** *of civil engineering and analyze and interpret the resulting data; design a system, component, or process in at least two civil engineering contexts;* ***include principles of sustainability in design****; explain basic concepts in* ***project management****,* ***business****,* ***public policy****, and* ***leadership****; analyze issues in* ***professional ethics****; and explain the importance of* ***professional licensure****.*

Faculty*: The program must demonstrate that faculty teaching courses that are primarily design in content are* ***qualified*** *to teach the subject matter by virtue of* ***professional licensure****, or by* ***education*** *and* ***design experience****. The program must demonstrate that it is* ***not critically dependent on one individual****.*

Civil Engineering Program Educational Objectives (PEOs)

Graduates from the Civil Engineering program will:

1. Have careers in civil engineering or related fields that lead to increasing levels of responsibility and leadership
2. Obtain professional licensure/certifications
3. Complete graduate studies in civil engineering or related fields
4. Engage in professional development and service

Mapping of Program Educational Objectives onto Student Outcomes

PEO	Program Educational Objectives	CE Student Outcomes						
	Graduates from the Civil Engineering program will:	[1]	[2]	[3]	[4]	[5]	[6]	[7]
PEO 1	Have careers in civil engineering or related fields that lead to increasing levels of responsibility and leadership	X	X	X	X	X	X	X
PEO 2	Obtain professional licensure/certifications	X	X					
PEO 3	Complete graduate studies in civil engineering or related fields	X	X	X	X		X	X
PEO 4	Engage in professional development and service	X	X	X	X		X	X

Mapping of CE Courses and Student Outcomes [Beginning Fall 2019] Updated Fall 2021

Previous Course No.	New Course No.	Course Title	CE Student Outcomes/SOs						
			[1]	[2]	[3]	[4]	[5]	[6]	[7]
CVEG 1011	CVEG 1101	Introduction to Engineering							
CVEG 1021	CVEG 1102	Introduction to Civil Engineering Lab							I
CVEG 2043	CVEG 2301	Engineering Mechanics I							I
CVEG 2061	CVEG 2101	Materials & Dynamics Lab						I	
CVEG 2063	CVEG 2332	Mechanics of Materials I		I					
CVEG 2073	CVEG 2304	Global Development Issues {CORE}			I	√	I		R
CVEG 2081	CVEG 2102	Surveying & Geospatial Concepts			R			I	
CVEG 3023	CVEG 3300	Geotechnical Engineering		I					
CVEG 3031	CVEG 3100	Concrete & Steel Lab						√	
CVEG 3043	**CVEG 3301**	**Environmental Engineering**			**R**			**√**	
CVEG 3051	CVEG 3102	Professional Engineering I				√			
CVEG 3053	CVEG 3302	Transportation Engineering			R		√		
CVEG 3063	CVEG 3303	Hydraulics			√		R	√	
CVEG 3073	CVEG 3304	Structural Analysis I	I						√
CVEG 3083	CVEG 3305	Steel Design	√	√	R				
CVEG 4013	CVEG 4300	Reinforced Concrete	R	√					
CVEG 4021	CVEG 4100	Geotech Engineering Design Lab		R					√
CVEG 4043	CVEG 4301	Environmental Engineering Design	√	√	R				
CVEG 4053	CVEG 4302	Transportation Engineering Design	√				√		
CVEG 4063	CVEG 4303	Water Resources Engineering	√	√					I
CVEG 4093	CVEG 4304	Systems Engineering		√					√
CVEG 4472	CVEG 4200	Sr. Design & Professionalism I		√	√	√	√		√
CVEG 4482	CVEG 4201	Sr. Design & Professionalism II	√	√	√	√			

I – means the described outcome is introduced (not measured) but could be monitored.
√ - means that the skills described in the program outcome are covered and **measured** in the course.
R – means the described outcome is reinforce in the course (not measured) but could be monitored.
Additionally, evidence are to collected to satisfy **CE Program Criteria** covering basic concepts in **Management** (CVEG 3302, 4302, 4200, 4201, 4304), **Business** (CVEG 4304, 4200, 4201), **Public Policy** (CVEG 2304, 4200, 4201), **Professional Ethics** (CVEG 1102, 2304, 3102), Leadership (CVEG 4200, 4201), **Consideration of Sustainability** (CVEG 4301, 4302, 4303), **Importance of Professional Licensure** (CVEG 3102, 4200, 4201).

The Assessment Process

Student Learning outcomes are measured using both **direct** and **indirect** measurements. Direct measurements are derived from either designated homework, tests, lab reports, project reports or other assignments. Indirect measurements are drawn from end-of-semester Student Opinion Surveys (SOS) and any surveys completed by graduating Seniors. The above-listed Student Learning Outcomes (Program Outcomes) are measured and evaluated in specified cycles, and an Assessment Report is prepared annually for the purposes of continuously improving the Program's learning outcomes.