CHEG 1102: Introduction to CHEG Lab FALL 2022

Instructor: Dr. Michael Gyamerah/Dr. Carl McIntyre
Section # and CRN: P01-CRN: 18051
Office Location: C.L. Wilson 201D
Office Phone: 936-261-9408
Email Address: migyamerah@pvamu.edu
Office Hours: MW 10:00 am - 11:00 am; TR 10 am - 11:30 am; F 2:00 pm – 4:00 pm
Mode of Instruction: Face to Face
Course Location: Gilchrist Engineering Bldg 109
Class Days & Times: TR 12:30 pm – 1:20 p.m.
Catalog Description: (1-0) Credit 1 semester hours. Introduction to the field of engineering, industries, careers, and the curriculum. Basic engineering terms, concepts, calculations problem solving skills, ethics, and computer applications.

Prerequisites: NONE
Co-requisites: CHEG 1101 (unless complete)
Required Text(s): None
Recommended Text(s): None

Course Learning Objectives:

<table>
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<tr>
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<th>Upon successful completion of this course, students will be able to:</th>
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<tr>
<td></td>
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<tr>
<td>1</td>
<td>Identify, sketch, or discuss concepts associated with chemical engineering.</td>
</tr>
<tr>
<td>2</td>
<td>Formulate fundamental chemical engineering concepts such as mass, mole, composition, density and molecular weight.</td>
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<tr>
<td>3</td>
<td>Solve fundamental chemical engineering problems using engineering problem solving strategies and computer applications software.</td>
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</table>

ABET OUTCOMES:
Course Outcome 1: This outcome is the same as departmental outcome D1.
Students will have an ability to identify, formulate, and solve fundamental engineering problems by applying principles of engineering, science, and mathematics.

The two performance criteria used to assess this outcome consist of
1. Ability to identify, sketch, or discuss concepts associated with chemical engineering.
Students are able to:
   (i) Discuss or present the role of engineers in society, career opportunities, career paths, job environment, and performance expectations.
   (ii) Discuss the ethical and professional responsibilities of chemical engineers.
   (iii) Describe the different chemical processes and how the processes operate.
   (iv) Effectively communicate ideas using both oral and written communications while avoiding dishonesty and plagiarism.
(v) Prepare a simple report discussing in class experiments.
(vi) Create a process flow diagram, flow chart, or Gantt chart using Visio.

2. Ability to formulate fundamental chemical engineering concepts such as mass, mole, composition, density and molecular weight.

   Given a problem, the student is able to:
   (i) Perform unit conversions given a conversion table.
   (ii) Convert a given value from mass to moles or moles to mass using molecular weight.
   (iii) Write values using the correct number of significant figures.
   (iv) Depict a number using scientific notation.

3. Ability to solve fundamental chemical engineering problems using engineering problem solving strategies and computer applications software.

   Given a problem, the student is able to:
   (i) Input formulas and perform calculations using Excel or Matlab.
   (ii) Calculate mass fractions or mole fractions given mass/mole amounts.
   (iii) Determine an unknown species through a hands-on density calculation based on measured mass and volume.

Major Course Requirements

Method of Determining Final Course Grade

<table>
<thead>
<tr>
<th>Course Grade Requirement</th>
<th>Value</th>
<th>Total</th>
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<tbody>
<tr>
<td>1) Homework Assignments</td>
<td>15 %</td>
<td>150 pts</td>
</tr>
<tr>
<td>2) Online Quiz</td>
<td>10 %</td>
<td>100 pts</td>
</tr>
<tr>
<td>3) Lab Activities/Reports</td>
<td>25 %</td>
<td>250 pts</td>
</tr>
<tr>
<td>4) Midterm Exam</td>
<td>15 %</td>
<td>150 pts</td>
</tr>
<tr>
<td>5) Chemical Engineering Process Video</td>
<td>15 %</td>
<td>150 pts</td>
</tr>
<tr>
<td>6) Final Exam</td>
<td>20 %</td>
<td>200 pts</td>
</tr>
<tr>
<td><strong>Total:</strong></td>
<td></td>
<td><strong>1000</strong></td>
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</table>

Grading Criteria and Conversion:

A = 900 – 1000 points
B = 800 – 899 points
C = 670 – 799 points
D = 550 – 669 points
F = 549 or below

A signifies that the student has mastered the subject matter and understands all concepts covered.
B signifies that the student has a good understanding of the subject matter with few exceptions.
C signifies that the student has an adequate understanding of the material and can follow most concepts.
D signifies that the student does not understand important class concepts needed to be successful in future courses.
F signifies that the student has missed significant assignments or does not understand several concepts.

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, including the final exam, 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, including the final exam, 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:

<table>
<thead>
<tr>
<th>Assignment Title or Grade Requirement</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>1. Homework Assignments</td>
<td>The homework assignments will assess the ability of student to use tools such as Excel, Visio, or Matlab software and performing calculations.</td>
</tr>
<tr>
<td>2. Online Quiz</td>
<td>The online quiz includes watching videos or reading handouts to answer a question set.</td>
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<tr>
<td>3. Lab/Lab Reports</td>
<td>This assignment includes participating in data collection and writing a lab report on findings.</td>
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<tr>
<td>4. Midterm Exam</td>
<td>This assignment examines student performance for topics covered during the first half of the semester.</td>
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<tr>
<td>5. Process Presentations</td>
<td>The assignment will help students understand the various processes that are within the chemical engineering profession. Students will give a PowerPoint presentation.</td>
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<tr>
<td>6. Final Exam</td>
<td>The final exam is a comprehensive test that covers the material taught during lecture, covered online, or covered in labs.</td>
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</table>

Course Procedures or Additional Instructor Policies

Taskstream
Taskstream is a tool that Prairie View A&M University uses for assessment purposes. One of your assignments may be required to be submitted as an "artifact," an item of coursework that serves as evidence that course objectives are met. If applicable, more information will be provided during the semester, but for general information, you can visit Taskstream via the link in eCourses.

Conduct:
1. Students will conduct themselves in a manner that is respectful to their fellow classmates and the instructor at all times.
2. Cell phones, ipads and smart phones or similar electronic devices MUST be turned off and stowed away during class time. Students are NOT allowed to leave class to answer cell phones or use these devices.
3. Students caught using ipads and smart phones or similar electronic devices during exams will receive ZERO for the exam and be subject to sanctions as stipulated under Academic Misconduct.
4. Students should be prepared to stay in the classroom for the duration of the exam. Students who have any condition that may require them to leave the exam room should make prior arrangements with the Instructor. Students who decide to leave the exam room for any other reason must handover their exam paper and consider the exam over for them.
5. Programmable calculators are NOT allowed in class.
6. Students should dress professionally and are NOT allowed to wear caps/hats in class.
7. Students are NOT allowed to bring food to the classroom or eat in class.

Submission of Assignments:
All homework assignments are due directly to the Instructor, prior to the start of class or the assignment will not be accepted. All homework assignments and exams should be written on one side of the page only, and should use the appropriate cover sheet, with the name, assignment title and date. All pages should be numbered. Failure to use the correct cover sheet will result in the assignment grade being reduced by 20%.
<table>
<thead>
<tr>
<th>Modules</th>
<th>Topic</th>
<th>Assignment/Activity</th>
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</thead>
</table>
| **Week 1** | Course Introduction; Meet & Greet; Review of Syllabus | • Read the syllabus  
• Bring schedule to class  
• Discussion 1 |
| **Week 2** | What is a Chemical Engineer? | • Watch AIChE Video  
• View Careers videos  
• Quiz 1 and Class Activity |
| **Week 3** | Introduction to Excel | • View Excel Basic videos  
• Homework 1 |
| **Week 4** | Units and Unit Conversions | • Homework 2  
• |
| **Week 5** | Class Lab Activity: Converting Units and Measurements | • Lab Report 1 |
| **Week 6** | Ethics; Plagiarism; | • Quiz 2  
• Discussion 2 |
| **Week 7** | Exam Practice  
Midterm Exam Review | • Class Activity |
| **Week 8** | Midterm Exam | |
| **Week 9** | Common Engineering Measurements | • Watch online lesson on “Mass, Moles, and Density”  
• Complete Measurements Assignment |
| **Week 10** | Class Lab Activity: Mass, Moles, and Density | • Lab Report 2 |
| **Week 11** | Introduction to Chemical Processes | • Watch the “How It’s Made” videos  
• Complete online quizzes about videos |
| **Week 12** | Introduction to Microsoft Visio Energy Projections | • Complete Visio Flowchart assignment |
| **Week 13** | Chemical Engineering Processes Videos; Class Lab Activity Data Analysis | • Upload 10 minute Process Videos  
• Lab Report 3 |
| **Week 14** | Engineering Disasters | • Watch Engineering Disasters Video  
• Complete Online Quiz |
| **Week 15** | Final Exam Review | |
| **Week 16** | Final Exam | TBD |
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. Website: https://www.pvamu.edu/library/; Phone: 936-261-1500

Academic Advising Services
Academic Advising Services offers students a variety of services that contributes to student success and leads towards graduation. We assist students with understanding university policies and procedures that affect academic progress. We support the early alert program to help students get connected 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 with Academic Advising Services are available to all students. We are located across campus. Find your advisor's location by academic major at www.pvamu.edu/advising. 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, in virtual face-to-face sessions (https://www.pvamu.edu/student-success/sass/university-tutoring-center/), and through online sessions (https://www.pvamu.edu/pvplace/). Other support services available for students include Supplemental Instruction, Study Break, Academic Success Workshops, and Algebra Study Jam. Location: J. B. Coleman Library, Rm. 307; Phone: 936-261-1561; Email: pvtutoring@pvamu.edu; Website: https://www.pvamu.edu/student-success/sass/university-tutoring-center/

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; Website: https://www.pvamu.edu/student-success/writing-center/; Grammarly Registration: https://www.grammarly.com/enterprise/signup

Academic Early Alert
Academic Early Alert is a proactive system of communication and collaboration between faculty, academic advisors, and PVAMU students that is designed to support student success by promptly identifying issues and allowing for intervention. Academic Early Alerts help students by providing a central location to schedule advising appointments, view advisor contact information, and request assistance. Students who recognize that they have a problem that is negatively affecting their academic performance or ability to continue school may self-refer an Academic Early Alert. To do so, students will log in to PV Place and click on Academic Early Alert on the left sidebar. Phone: 936-261-5902; Website: https://www.pvamu.edu/student-success/early-alert/

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 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; Website: https://www.pvamu.edu/healthservices/student-counseling-services/
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.

**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 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. 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 at 936-261-2144 or titleixteam@pvamu.edu. More information can be found at www.pvamu.edu/titleix, 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.

**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 High Sierra*
- 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, or Firefox

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

* Smartphones, Google Chrome books, and Android tablets may not be supported. iPads are the only tablets supported.

**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

**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 [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 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** [NOTE: Delete this section when the COVID-19 pandemic is over]

To promote public safety and protect students, faculty, and staff during the coronavirus pandemic, PVAMU has adopted policies and practices to limit virus transmission.

- **Self-reporting** – Students who test positive for COVID-19 are required to report their positive test results within 48 hours using the [PVAMU Self-Reporting Form](https://mypassword.pvamu.edu/). Proof of off-campus and self-administered home test results must be sent to covid-19@pvamu.edu. Proof for self-administered home test is a picture of the test with a photo ID in the same photo.

- **Self-monitoring** – Students should follow public health guidance to help slow the spread of the virus, including being vaccinated. Students who have a fever or exhibit symptoms of COVID-19 should not participate in face-to-face instruction.

- **Face Coverings** – Face coverings (KN-95, surgical mask, etc.) are highly recommended in 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 challenging to maintain reliably.

- **Physical Distancing** – Physical distancing should be maintained between students, instructors, and others in course and course-related activities where possible.

- **Personal Illness and Quarantine** – Students required to quarantine are to participate in courses and course-related activities remotely and must not attend face-to-face course activities. Communication with the student’s instructor for remote support will take place by the Office of the Assistant Vice President for Academic Engagement and Success. 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 may qualify for an excused absence. To receive an excused absence, students must provide appropriate documentation to the Office for Student Conduct, studentconduct@pvamu.edu.

- **Questions** – For answers regarding COVID-19 policies and/or procedures, students should refer to [www.pvamu.edu/coronavirus](http://www.pvamu.edu/coronavirus) or email covid-19@pvamu.edu.