

CHEG 2333: Material and Energy Balances Fall 2022

Instructor: Dr. Michael Gyamerah
Section # and CRN: P01 CRN 19961
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 Building Room 104
Class Days & Times: MWF 12:00 pm – 12:50 pm
Catalog Description: **(3-1) Credit 3 semester hours.** Application of the laws of conservation of mass and energy to reacting and non-reacting, simple and complex chemical systems. Application of both element and species balances to multiple reaction systems. Application of the degrees-of-freedom analysis to single process units and multi-unit process flow-sheets. Numerical solution techniques for the solution of balance equations.

Prerequisites: CHEG 1202; CHEM 1304 or CHEM 1403 and PHYS 2325.
Required Text: Felder, R.M., Rousseau, R. W., and Bullard, L.G., "Elementary Principles of Chemical Processes", John Wiley and Sons Inc., 4th edition, ISBN 978-0-470-61629-1
Recommended Text: Himmelblau, D. M. and Riggs, J. B., "Basic Principles and Calculations in Chemical Engineering": International Edition, 2003, Pearson Education, ISBN 0-13-123368-8.

Student Learning Outcomes:

Upon successful completion of this course, students will be able to:	Program Learning Outcome Alignment	Core Curriculum Outcome Alignment
1. Apply conservation laws by (i) performing mass or mole balances on single or multiple units, (ii) performing balances on batch or continuous systems, and (iii) determining balances for systems at steady state.	D1	
2. Present and report basic engineering information by (i) identifying systems of units, (ii) performing unit conversions, (iii) calculating mole and mass fractions, and (iv) determining the total volume, average molar weight, total mass and total number of moles of a mixture.	D1	
3. Solve mass balances with or without chemical reactions, by (i) solving mass balances with chemical reactions, (ii) determining the extent of reaction, (iii) drawing and completely labeling a flow chart with or without a reactor, (iv) determining the limiting and excess reactants, (v) determining theoretical air, excess air, and relative humidity, (vi) calculating stream compositions, and (vii) perform calculations that highlight safety due to fluid pressures in vessels and lower and upper flammability limits of fuel-air mixtures	D1	
4. Analyze, formulate, and solve energy balances by (i) calculating heat, enthalpy, work, and internal, kinetic, and potential energies, (ii) calculating heat and enthalpy entering and leaving a unit, (iii) utilizing steam tables to determine vapor pressure, and (iv) applying and determining the latent heat of vaporization.	D1	

CHEG PROGRAM STUDENT LEARNING OUTCOME:

This course will evaluate the competence of students in the CHEG Department student learning outcome D1 (an ability to identify, formulate, and solve **fundamental engineering problems** by applying principles of engineering, science, and mathematics). This student learning outcome is a modification of the ABET of the ABET student learning outcome 1: an ability to identify, formulate and solve **complex engineering problems** by applying principles of engineering, science and mathematics.

The three performance criteria used to assess the student learning outcome D1 are:

1. **Identify fundamental engineering problems.** Given a problem, the student is able to :
 - understand the given problem and identify the subject/topic area and concepts involved,
 - convert the problem into a well labeled sketch (such as free body diagram, flow chart, functional block diagram, schematic diagram, and
 - identify the system of units applicable to the problem
2. **Formulate/analyze fundamental engineering problems by applying principles of mathematics.** Given a problem, the student is able to:
 - define the known and the unknown variables in the problem,
 - state relevant laws and equations needed for the problem, and
 - list and apply assumptions to the relevant laws and equations to obtain the specific equations appropriate to the problem
3. **Solve fundamental engineering problems by applying principles of mathematics (differential and integral calculus).** Given a problem, the student is able to:
 - implement strategy to solve the problem,
 - solve the problem (showing consistent units throughout), and
 - evaluate and interpret the result

Major Course Requirements

Method of Determining Final Course Grade

Course Grade Requirement	Total
Homework	5%
Quizzes & Online Canvas Tests	15%
Midterm Exam	20%
Exams	20%
Final Exam	40%
Total	100%

Grade Criteria and Conversion:

A = 90 – 100pts;

B = 80 – 89pts;

C = 70 – 79pts;

D = 60 – 69pts;

F = 59pts 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 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
1. Homework Assignments	The assignments will assess the ability of the students to (i) identify systems of units, (ii) perform unit conversions, (iii) perform mass or mole balances on single or multiple units, (iv) perform balances on batch or continuous systems, (v) determine the total volume, average molar weight, total mass and total number of moles of a mixture (vi) perform calculations that highlight safety due to fluid pressures in vessels and lower and upper flammability limits of fuel-air mixtures, (vii) drawing and completely labeling a flow chart with or without a reactor, (viii) calculate heat and enthalpy entering and leaving a unit, and (ix) utilize steam tables to determine vapor pressure,.
2. Quizzes and Online Canvas Tests	The online quiz covers reading assignments of the topics to be covered prior to class and concept tests from the Chemical Engineering Concept Warehouse and course material covering heat and mass balances
3. Midterm Exam	The midterm exam will cover topics taught during the first half of the semester
4. Exams	Exam 1 will cover process and process variables, and fundamentals of material balances. Exam 2 will cover single and multi-phase systems material balances, and energy and energy balances
5. Final Exam	This is a comprehensive exam that covers all materials covered during the semester

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%.

Semester Calendar

Week One: Topic Description	Introduction to Engineering Calculations Units, Dimensions, Significant figures, Mean, Variance, Standard deviation, Interpolation, Goodness of fit of data, Linear, semi-logarithmic and log-log plots
Readings:	M: Course syllabus and posted lecture notes 2 W: Chapter 2(2.0 – 2.8) & posted Lecture notes 2 F: Chapter 2(2.0 – 2.8) & posted Lecture notes 2
Assignment (s):	M: Pre-Class Reading Assignment and Quiz on Canvas and one-minute paper W: Pre-Class Reading Assignment and Quiz on Canvas and one-minute paper F: Pre-Class Reading Assignment and Quiz on Canvas and one-minute paper
Week Two: Topic Description	Processes and Process Variables Process Variables: Mass, Volume, and Flow rates; mass and volumetric flow rates; flow rate measurements using rotameter and orifice meter
Readings:	M: Chapter 3 (3.0 - 3.1) and posted lecture notes 3 W: Chapter 3 (3.2) and posted lecture notes 3 F: Chapter 3 (3.2) and posted lecture notes 3
Assignment (s):	M: Pre-Class Reading Assignment and Quiz on Canvas and one-minute paper W: Pre-Class Reading Assignment and Quiz on Canvas and one-minute paper F: Pre-Class Reading Assignment and Quiz on Canvas and one-minute paper
Week Three: Topic Description	Processes and Process Variables Process Variables: 1) Chemical composition: (i) mass, moles and molar mass (ii) mass and mole fractions; (iii) average molar mass, 2) Concentration: (i) molar concentration and molarity, (ii) parts per million (ppm) and parts per billion (ppb), and (iii) mass, molar and volumetric flow rates, and 3) Pressure: pressure and fluid pressure
Readings:	M: Chapter 3 (3.3) and posted lecture notes 3 W Chapter 3 (3.4a) and posted lecture notes 3 F Chapter 3 (3.4a) and posted lecture notes 3
Assignment (s):	M: Pre-Class Reading Assignment and Quiz on Canvas and one-minute paper W: Pre-Class Reading Assignment and Quiz on Canvas and one-minute paper F: Pre-Class Reading Assignment and Quiz on Canvas and one-minute paper & Homework 1
Week Four: Topic Description	Processes and Process Variables Process Variables: 1) Pressure: (i) Fluid pressure, (ii) hydrostatic head, (iii) atmospheric, absolute and gage pressures, and (iv) fluid pressure measurements, and safety of pressure vessels, 2) Temperature: (i) Temperature measurement and temperature scales, (ii) Celsius (or centigrade) scale, (iii) Fahrenheit scale, (iv) Kelvin scale, (v) Rankine scale and (vi) Temperature conversion
Readings:	M: Chapter 3 (3.4b-3.4c) and posted lecture notes 3 W: Chapter 3 (3.5-3.6) and posted lecture notes 3 F: Chapter 3 (3.5-3.6) and posted lecture notes 3

Assignment (s): M: Pre-Class Reading Assignment and Quiz on Canvas and one-minute paper
W: Pre-Class Reading Assignment and Quiz on Canvas and one-minute paper
F: Pre-Class Reading Assignment and Quiz on Canvas and one-minute paper

Week Five:
Topic Description

Fundamentals of Material Balances

- 1) Process Classification: (i) Batch, (ii) Continuous and (iii) Semibatch; Steady state and transient or unsteady state processes,
- 2) Balances: (i) The general balance equation, (ii) balances on continuous steady-state processes, (iii) integral balances on batch and semibatch processes
- 3) Material Balance Calculations: (i) Flowchart or Block Flow Diagram, (ii) Label flowchart with known process variables and represent unknown variables with letters for the input and output streams
- 4) Flowchart scaling and Basis of Calculation

Readings: M: Chapters 4 (4.0 - 4.2) and posted lecture notes 4
W: Chapters 4 (4.3 – 4.3b) and posted lecture notes 4
F: Chapters 4 (4.3 – 4.3b) and posted lecture notes 4

Assignment (s): M: Pre-Class Reading Assignment and Quiz on Canvas and one-minute paper
W: Pre-Class Reading Assignment and Quiz on Canvas and one-minute paper
F: Pre-Class Reading Assignment and Quiz on Canvas and one-minute paper

Week Six:
Topic Description

Fundamentals of Material Balances

- 1) Balancing a Process, 2) Degree-of-freedom analysis, 3) General procedure for single-unit process material balance calculations, and 4) Balances of real chemical processes

Readings: M: Chapter 4 (4.3c & 4.3d) and posted lecture notes 4
W: Chapter 4 (4.3e & 4.3f) and posted lecture notes 4
W: Chapter 4 (4.3e & 4.3f) and posted lecture notes 4

Assignment (s): M: Pre-Class Reading Assignment and Quiz on Canvas and one-minute paper
W: Pre-Class Reading Assignment and Quiz on Canvas and one-minute paper
F: Pre-Class Reading Assignment and Quiz on Canvas and one-minute paper

Week Seven:
Topic Description

Fundamentals of Material Balances

- 1) Balance on multiple-unit processes: (i) Overall balances and (ii) subsystems and their mass balances
- 2) Recycle and Bypass
- 3) Chemical Reaction Stoichiometry: (i) Stoichiometry, (ii) Limiting and excess reactants, fractional conversion and extent reaction, (iii) Chemical equilibrium and (iv) Multiple reactions, yield and selectivity

Readings: M: Chapter 4 (4.4 & 4.5) and lecture notes 4
W: Chapter 4 (4.6) and lecture notes 4
F: Chapter 4 (4.6) and lecture notes 4

Assignment (s): M: Pre-Class Reading Assignment and Quiz on Canvas and one-minute paper
W: Pre-Class Reading Assignment and Quiz on Canvas and one-minute paper
F: E x a m 1

Week Eight:
Topic Description

Fundamentals of Material Balances

- 1) Balance on reactive processes: (i) Balances on molecular and atomic species, (ii) Independent equations, species and reactions, (iii) molecular species balances, (iv) atomic species balances, (v) extent of reaction, (vi) product separation and recycle, and (vii) purging
- 2) Combustion reactions; (i) Combustion chemistry, (ii) theoretical and excess oxygen and air, (iii) material balances on combustion reactors, and (iv) **safety of handling fuel-air mixtures and calculations involving lower and upper flammability limits (LFL and UFL) of fuel-air mixtures.**

Readings:

M: Chapter 4 (4.7) and posted lecture notes 4
W: Chapter 4 (4.7 & 4.8) and posted lecture notes 4
F: Chapter 4 (4.8) and posted lecture notes 4

Assignment (s):

M: Pre-Class Reading Assignment and Quiz on Canvas and one-minute paper
W: Pre-Class Reading Assignment and Quiz on Canvas and one-minute paper
F: Midterm

Week Nine:
Topic Description

Single-Phase Systems- Physical Property Data and their Estimation

- 1) Liquid and solid densities: (i) Tabulations in handbooks, (ii) methods of estimation and (iii) experimental data
- 2) Ideal gases: (i) Equation of state, (ii) Ideal-gas equation of state, (iii) Standard temperature and pressure, and (iv) Ideal gas mixtures
- 3) Equation of state for nonideal gases: (i) Critical temperature and pressure, (ii) Virial equations of state, and (iii) Cubic equations of state
- 4) The compressibility-factor equation of state: (i) Generalized compressibility chart, (ii) Non-ideal gas mixtures, (iii) Kay's rule and estimation of pseudocritical temperature and pressure

Readings:

M: Chapter 5 (5.1 & 5.2) and posted lecture notes 5
W: Chapter 5 (5.2 & 5.3) and posted lecture notes 5
F: Chapter 5 (5.3 & 5.4) and posted lecture notes 5

Assignment (s):

M: Pre-Class Reading Assignment and Quiz on Canvas and one-minute paper
W: Pre-Class Reading Assignment and Quiz on Canvas and one-minute paper
F: Pre-Class Reading Assignment and Quiz on Canvas and one-minute paper

Week Ten:
Topic Description

Multiphase systems: Physical Property Data and their estimation

- 1) Single-component phase equilibrium: (i) Phase diagrams, (a) vapor pressure, (b) boiling point, and boiling point temperature at a pressure P, (c) normal boiling point, d) melting or freezing point, (e) sublimation point, (f) triple point and (g) critical temperature and pressure; (ii) Estimating of

- vapor pressures, (a) Clapeyron equation, and (b) Antoine equation
- 2) The Gibbs Phase Rule: (i) Extensive and intensive properties, (ii) Degrees of freedom, and (iii) System at equilibrium

Readings: M: Chapter 6 (6.1) and posted lecture notes 6
W: Chapter 6 (6.1 & 6.2) and posted lecture notes 6
F: Chapter 6 (6.2) and posted lecture notes 6

Assignment (s): M: Pre-Class Reading Assignment and Quiz on Canvas and one-minute paper
W: Pre-Class Reading Assignment and Quiz on Canvas and one-minute paper
F: Pre-Class Reading Assignment and Quiz on Canvas and one-minute paper & Homework 2

**Week Eleven:
Topic Description**

Multiphase systems: Physical Property Data and their estimation

1) Gas-liquid systems: One condensable component: (i) Evaporation, drying, humidification, condensation and dehumidification, (ii) Saturated vapor, (iii) Raoult's law, (iv) Superheated vapor, (v) Dew point, (vi) Degrees of superheat, (vii) Relative saturation (Relative humidity), Molal saturation (Molal humidity), Absolute saturation (Absolute humidity) and Percentage saturation (Percentage humidity)

2) Multicomponent gas-liquid systems: (i) Vapor-liquid equilibrium data, and (ii) Raoult's law and Henry's law

Readings: M: Chapter 6 (6.3) and posted lecture notes 6
W: Chapter 6 (6.3 & 6.4) and posted Lecture notes 6
W: Chapter 6 (6.4) and posted Lecture notes 6

Assignment (s): M: Pre-Class Reading Assignment and Quiz on Canvas & one-minute paper
W: Pre-Class Reading Assignment & Canvas Quiz & one-minute paper

**Week Twelve:
Topic Description**

Multiphase systems: Physical Property Data and their estimation

1) Solutions of solids in liquids: (i) Solubility and saturation, (ii) Solid solubilities

2) Equilibrium between two liquid phases: Miscibility and distribution coefficients

3) Adsorption on solid surfaces

Readings: M: Chapter 6 (6.5) and posted lecture notes 6
W & F: Chapter 6 (6.6 & 6.7) and posted lecture notes 6

Assignment (s): M: Reading Assignment and Quiz on Canvas and one-minute paper
W & F: Reading Assignment and Canvas Quiz and one-minute paper

**Week Thirteen:
Topic Description**

Energy and Energy Balances

1) Forms of energy: (i) Internal, (ii) Kinetic and Potential

2) Heat and work and energy transfer between closed system and surrounding

3) The first law of thermodynamics

4) Kinetic and Potential Energy

5) Energy balances on closed systems and open systems at steady state: ((i) closed and open systems, (ii) Flow work, (iii) Shaft work, (iv) Specific properties and enthalpy, and (v) The steady-state open system energy balance

Readings: M: Chapter 7 (7.1 & 7.2) and posted lecture notes 7
W: Chapter 7 (7.3 & 7.4) and posted lecture notes 7

Assignment (s): M: Reading Assignment and Quiz on Canvas and one minute paper
W & F: Reading Assignment and Canvas Quiz and one minute paper

**Week Fourteen:
Topic Description**

Tables of Thermodynamic Data

1) Reference states and state properties: (i) Reference state, (ii) State property

2) Steam tables: (i) Vapor-liquid equilibrium curve, (ii) subcooled liquid, (ii) Saturated liquid, (iii) Saturated vapor (saturated steam for the phase diagram of water), (iv) Superheated steam and (v) Steam tables

Readings: M: Chapter 7 (7.5a) and posted lecture notes 7
W: Chapter 7 (7.5b) & posted lecture notes 7

Assignment (s): M: Reading Assignment and Quiz on Canvas and one minute paper
W: Reading Assignment and Quiz on Canvas and one minute paper

Week Fifteen:
Topic Description

Energy and Energy Balances

1. Energy Balance Procedures: (i) Energy balance on a one-component process, (ii) Energy balance on a two-component process
2. Mechanical Energy Balances: (i) Mechanical energy balance, (ii) Bernoulli equation

Readings: M: Chapter 7 (7.6) and lecture notes 7
W: Chapter 7 (7.7) and posted lecture notes 7

Assignment (s): M: Exam 2

Week Sixteen:
Topic Description

Course Review & 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. 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: pv tutoring@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/>

Office of Testing Services

Testing Services serves to create opportunities by offering a suite of exams that aid in the students' academic and professional success. Currently, we administer entrance (HESI A2), college readiness (TSI assessment), Prior Learning (CLEP, DSST), and proctored exams. Location: Wilhelmina Delco, 3rd Floor, Rm. 305; Phone: 936-261-3627; Email: aetesting@pvamu.edu; Website: www.pvamu.edu/testing

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; Website: <https://www.pvamu.edu/disabilityservices/>

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 college in the traditional manner. The Center for Instructional Innovation and Technology Services (CIITS) supports student learning through online, hybrid, web-assist, and 2-way video course delivery. For more details and contact information, visit: <https://www.pvamu.edu/dlearning/distance-learning-2-2/students-2/>; Phone: 936-261-3283

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. 102; Phone: 936-261-3563; Website: <https://www.pvamu.edu/sa/departments/veteranaffairs/>

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; Website: <https://www.pvamu.edu/studentengagement/>

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: Anderson Hall, 2nd floor; Phone: 936-261-3570; Website: <https://www.pvamu.edu/careerservices/>

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.

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/> 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](#). 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 or email covid-19@pvamu.edu.