CHEM 1043
General Inorganic Chemistry II
SUMMER 2021

Instructor: Dr. Gururaj M. Neelgund
Section # and CRN: Z01 and 32110
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Office Hours: F 11:00am - 1:00pm (Virtual)
Mode of Instruction: Online
Course Location: Online
Class Days & Times: M-R 11:00am - 1:30pm
Catalog Description: General Inorganic Chemistry II. (3-0) Credit 3 semester hours. A continuation of CHEM 1033. Bonding theory and molecular structure, intermolecular forces properties of solutions, chemical kinetics, chemical equilibrium, acid/ base equilibria, thermodynamics, electrochemistry and nuclear chemistry and introduction to organic chemistry

Prerequisites: MATH 1113, CHEM1033


Recommended Texts: Chemistry an Atoms-Focused Approach, First Edition
Thomas R. Gilbert, Rein V. Kirss, Natalie Foster, Geoffrey Davies.

Student Learning Outcomes:

<table>
<thead>
<tr>
<th>Upon successful completion of this course, students will be able to:</th>
<th>Program Learning Outcome # Alignment</th>
<th>Core Curriculum Outcome Alignment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Be able to understand the scientific approach and methods involving making observations and gathering data;</td>
<td></td>
<td>ABEF</td>
</tr>
<tr>
<td>2 Be able to perform stoichiometric calculations;</td>
<td></td>
<td>ABEF</td>
</tr>
<tr>
<td>3 Demonstrate the ability to obtain basic knowledge of First Law of Thermodynamics and energy balance calculations;</td>
<td></td>
<td>ABEF</td>
</tr>
<tr>
<td>4 Gain a basic understanding of atomic structure and electronic configurations of elements;</td>
<td></td>
<td>ABEF</td>
</tr>
<tr>
<td>5 Be able to understand the kinetic molecular theory of gases and perform simple calculations using the ideal gas law;</td>
<td></td>
<td>ABEF</td>
</tr>
<tr>
<td>6 Gain a basic understanding of periodic properties of elements and chemical bonding.</td>
<td></td>
<td>ABEF</td>
</tr>
<tr>
<td>7 Apply knowledge of chemistry to everyday life and explain the observation and changes.</td>
<td></td>
<td>ABEF</td>
</tr>
</tbody>
</table>

Major Course Requirements
This course will utilize the following instruments to determine student grades and proficiency of the learning outcomes for the course.
Method of Determining Final Course Grade

Exams – written tests designed to measure knowledge of presented course material, Questions are embedded in the common exam to be used for assessment purpose.

Assessment on Critical Thinking, and Empirical and Quantitative Skills through the embedded questions to evaluate the overall knowledge-mastering level of the whole class.

Assessment on Communication, Critical Thinking, and Empirical and Quantitative Skills through the online homework system that can be monitored in real time to show the students’ learning progress and response to the teaching materials

Class Participation – daily attendance and participation in class discussions

Assessment on Communication, Critical Thinking, and Empirical and Quantitative Skills through the class observation on student’s participation rate. The data is subjective

Quiz – in class or online quizzes designed to measure ability to apply presented course material.

Assessment on Communication, Critical Thinking, and Empirical and Quantitative Skills through the in-class pop quizzes and online take home quizzes that can be used to monitor student’s understanding the teaching materials

Projects/Case Study – A group of no more than 5 students to work on a special selected topic that is designed to measure ability to apply presented course material to everyday real life scenario, write a technical report and presentation to the class

Assessment on team work, Communication, Critical Thinking, Empirical and Quantitative, and Social responsibility skills through a modified common LEAP Rubric

<table>
<thead>
<tr>
<th>Course Grade Requirement</th>
<th>Value</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quiz</td>
<td>10 points each</td>
<td>400</td>
</tr>
<tr>
<td>Exam</td>
<td>10 points each</td>
<td>300</td>
</tr>
<tr>
<td>Exam</td>
<td>10 points each</td>
<td>300</td>
</tr>
<tr>
<td>Total:</td>
<td></td>
<td>800</td>
</tr>
</tbody>
</table>

Finding Average: Total received points/ number of assignments

Grading Criteria and Conversion:
A = 90-100%
B = 80-89%
C = 70-79%
D = 60-69%
F < 60%

Submission of Assignments:
Formatting Documents: Microsoft Word is the standard word processing tool used at PVAMU. If you’re using other word processors, be sure to use the “save as” tool and save the document in either the Microsoft Word, Rich-Text, or plain text format.

Exam Policy
Exams should be taken as scheduled. No makeup examinations will be allowed except under documented emergencies (See Student Handbook). A scientific calculator is required for exam taking. Students will not be allowed to use telephone or other communicating devices to make calculations

Detailed Description of Major Assignments:

<table>
<thead>
<tr>
<th>Assignment Title or Grade Requirement</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sum of partial exams</td>
<td>60% (lowest grade will be dropped)</td>
</tr>
<tr>
<td>Online Homework</td>
<td>20%</td>
</tr>
<tr>
<td>Final Exam</td>
<td>20%</td>
</tr>
</tbody>
</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 considered an “artifact,” an item of coursework that serves as evidence that course objectives are met. More information will be provided during the semester, but for general information, you can visit Taskstream via the link in eCourses.
Semester Calendar

**Week One:** Chapter 11 - Rate of reaction
Assignment (s): Quiz-I (Covers Chapter 11)

Chapter 12 - Gaseous chemical equilibrium

**Week Two:** Chapter 12 - Gaseous chemical equilibrium (Cont.)
Assignment (s): Exam-I (Covers Chapters 11 and 12)

Chapter 13 - Acids and bases
Assignment (s): Quiz-II (Covers Chapter 13)

**Week Three:** Chapter 14 - Equilibria in acid-base solutions
Assignment (s): Exam-II (Covers Chapters 13 and 14)

Chapter 15 – Complex ion and precipitation equilibria
Assignment (s): Quiz-III (Covers Chapter 15)

Chapter 16 - Spontaneity of reaction

**Week Four:** Chapter 16 - Spontaneity of reaction (Cont.)
Assignment (s): Exam-III (Covers Chapters 15 and 16)

Chapter 17 - Electrochemistry

**Week Five:** Chapter 17 – Electrochemistry (Cont.)
Assignment (s): Quiz-IV (Covers Chapter 17)

Chapter 18 - Nuclear reactions
Assignment (s): Exam-IV (Covers Chapters 17 and 18)

Chapter 19 - Complex ions
Assignment (s): Quiz-V (Covers Chapter 19)

Chapter 20 - Chemistry of the metals
Assignment (s): Exam-IV (Covers Chapters 19 and 20)

**Final Exam** (Covers all chapters)
Student Support and Success

John B. Coleman Library
The library and its partners have as their mission "to provide resources and instructional material in support of the evolving curriculum, as a partner in Prairie View A&M University's mission of teaching, research, and service" and to support the University's core values of "access and quality, diversity, leadership, relevance, and social responsibility" through emphasis on ten key areas of service. It maintains library collections and access both on campus, online, and through local agreements to further the educational goals of students and faculty.

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

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

Writing Center
The Writing Center provides student consultants on all aspects of the writing process and a variety of writing assignments. Writing Center consultations assist students in such areas as prewriting, brainstorming, audience awareness, organization, research, and citation. Location: Hilliard Hall 121

University Rules and Procedures

Disability statement (See Student Handbook):
Students with disabilities, including learning disabilities, who wish to request accommodations in class should register with the Services for Students with Disabilities (SSD) early in the semester so that appropriate arrangements may be made. In accordance with federal laws, a student requesting special accommodations must provide documentation of their disability to the SSD coordinator.

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

Forms of academic dishonesty:
1. Cheating: deception in which a student misrepresents that he/she has mastered information on an academic exercise that he/she has not mastered; giving or receiving aid unauthorized by the instructor on assignments or examinations.

2. Academic misconduct: tampering with grades or taking part in obtaining or distributing any part of a scheduled test.

3. Fabrication: use of invented information or falsified research.

4. Plagiarism: unacknowledged quotation and/or paraphrase of someone else’s words, ideas, or data as one’s own in work submitted for credit. Failure to identify information or essays from the Internet and submitting them as one’s own work also constitutes plagiarism.

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

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

Attendance Policy
Prairie View A&M University requires regular class attendance. Excessive absences will result in lowered grades. Excessive absenteeism, whether excused or unexcused, may result in a student’s course grade being reduced or in assignment of a grade of “F”. Absences are accumulated beginning with the first day of class.

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

Disability statement (See Student Handbook):
Students with disabilities, including learning disabilities, who wish to request accommodations in class should register with the Services for Students with Disabilities (SSD) early in the semester so that appropriate arrangements may be made. In accordance with federal laws, a student requesting special accommodations must provide documentation of their disability to the SSD coordinator.

TECHNICAL CONSIDERATIONS

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

Note: Be sure to enable Java & pop-ups

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

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

Technical Support:
Students should go to https://mypassword.pvamu.edu/ if they have password issues. The page will provide instructions for resetting passwords and contact information if login issues persist. For other technical questions regarding eCourses, call the Office of Distance Learning at 936-261-3283
Communication Expectations and Standards:
Emails or discussion postings will receive a response from the instructor, usually in less than 48 hours. Urgent emails should be marked as such. Check regularly for responses.

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

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

COVID-19 Campus Safety Measures
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-monitoring** - Students should follow CDC recommendations for self-monitoring. Students who have a fever or exhibit symptoms of COVID-19 should participate in class remotely and should not participate in face-to-face instruction.

- **Face Coverings** - Face coverings (cloth face covering, surgical mask, etc.) are 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 difficult to reliably maintain.

- **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. Students should notify their instructors of the quarantine requirement. Students under quarantine are expected to participate in courses and complete graded work unless they have symptoms that are too severe to participate in course activities. Students experiencing personal injury or illness that is too severe for the student to attend class qualify for an excused absence. To receive an excused absence, students must provide appropriate documentation to the Office for Student Conduct, studentconduct@pvamu.edu.