Course Title: General Chemistry Laboratory I
Course Prefix: Chem Course No.: 1042 Section No.: P51
Department of Chemistry and Physics Brailsford College of Arts and Sciences
Instructor Name: Dr. Gina Chiarella
Office Location: Room 230AF - E. E. O'Banion Science Building
Office Phone: 936-261-3113 Fax: 936-261-3117
Email Address: gmchiarella@pvamu.edu
U.S. Postal Service Address: Prairie View A&M University
P.O. Box 519 Mail Stop 2215
Prairie View, TX 77446
Office Hours: M 11:00–1:00 PM, W 10:00–11:00 AM and 1:00–2:00 PM, R 11:00–12:00 and by appointment.
Virtual Office Hours: by appointment
Course Location: Room 221 - E. E. O'Banion Science Building
Class Meeting Days & Times: TR 1:00 pm – 2:50 pm
Catalog Description: General Chemistry Laboratory II – (0-4) Credit 2 semester hours. For students majoring or
minor in chemistry. A general laboratory course covering aspects of volumetric and
gravimetric analysis, qualitative analysis, determination of chemical and physical
properties, and chemical synthesis
Prerequisites: Math 1113
Co-requisites: CHEM 1043
Required Text: Modular Laboratory Program in Chemistry
Recommended Text/Readings:
Access to Learning Resources:
PVAMU Library:
phone: (936) 261-1500;
web: http://www.tamu.edu/pvamu/library/
University Bookstore:
phone: (936) 261-1990;
web: https://www.bkstr.com/Home/10001-10734-1?demoKey=d
Course Goals or Overview:
This course is designed for students that are majors or minors in chemistry. To establish a fundamental understanding of atomic and molecular structure of matter as well as chemical bonding and interactions
Course Outcomes/Objectives
At the end of this course, the student will
1. Be able to use conversion factors in metric or U.S. units and apply the significant figure concept in stoichiometric calculations.
2. Be able to use basic laboratory equipment such as the Venier pH meter, temperature probe, and volt meter as well as the buret, electronic balances and the centrifuge.
3. Demonstrate the ability to prepare solutions from solids and by dilution.
4. Define chemistry concisely and with clarity from a practical stand point.
5. Be able to write correct formulas of compounds, write balanced chemical equations and identify various reaction types through observation.
6. Identify the safety symbols and equipment in a chemistry laboratory and understand their primary use.
Course Requirements & Evaluation Methods
This course will utilize the following instruments to determine student grades and proficiency of the learning outcomes for the course. Note: See Program Outcomes in True Outcomes
Exams – written tests designed to measure knowledge of lab experiments
Experiments – laboratory exercises designed to present basic concepts in chemistry
Grading Matrix (points will vary according to instructor’s grading system)

<table>
<thead>
<tr>
<th>Instrument</th>
<th>Value (points or percentages)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 Exams, performance and report</td>
<td>12 assignments at 100 points each</td>
<td>1200</td>
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<tr>
<td>Total:</td>
<td></td>
<td>1200</td>
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Grade Determination:
A = 1200 – 1060pts
B = 1059 – 920 pts
Course Procedures

Laboratory Experiments:
Each student is required to:

- **Follow** the safety guidelines for a safe laboratory experience. Pay close attention to the instructor who may find it necessary to modify a procedure.
- **Wear** safety GOGGLES/GLASSES (available in lab) while in class.
- **Read** the experimental procedure and do the PRELAB prior to coming to the class.
- **Clean** work area and place all items in the designated storage area prior to leaving the laboratory class.
- **Report** broken or missing equipment to the instructor.

Submission of Assignments:
*Lab work is to be submitted on day of experiment or the following lab period*

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).

### 16 WEEK CALENDAR

<table>
<thead>
<tr>
<th>Week One</th>
<th>Topic</th>
<th>No Lab the first week</th>
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<tbody>
<tr>
<td>Chapter (s):</td>
<td>Assignment (s):</td>
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<tbody>
<tr>
<td>Chapter (s):</td>
<td>Assignment (s):</td>
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<table>
<thead>
<tr>
<th>Week Three</th>
<th>Topic</th>
<th>#2-ANAL 492: Separating and Identifying Food Dyes by Paper Chromatography</th>
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</thead>
<tbody>
<tr>
<td>Chapter (s):</td>
<td>Assignment (s):</td>
<td>Lab report</td>
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<thead>
<tr>
<th>Week Four</th>
<th>Topic</th>
<th>#3-ANAL 356: Gravimetric Determination of Sulfate</th>
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<tbody>
<tr>
<td>Chapter (s):</td>
<td>Assignment (s):</td>
<td>Lab report</td>
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<tr>
<th>Week Five</th>
<th>Topic</th>
<th>#4-SYNT 439: Synthesizing Aspirin</th>
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<tbody>
<tr>
<td>Chapter (s):</td>
<td>Assignment (s):</td>
<td>Lab report</td>
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<thead>
<tr>
<th>Week Six</th>
<th>Topic</th>
<th>#5-Anal 437: Evaluating the Calcium Ion Content in Commercial Dried Milk Powers</th>
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<tbody>
<tr>
<td>Chapter (s):</td>
<td>Assignment (s):</td>
<td>Lab report</td>
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<thead>
<tr>
<th>Week Seven</th>
<th>Topic</th>
<th>#6-Anal 403: Estimating the Copper Content of Malachite Using Microscale Colorimetric Techniques</th>
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<tbody>
<tr>
<td>Chapter (s):</td>
<td>Assignment (s):</td>
<td>Lab report</td>
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<tr>
<th>Week Eight</th>
<th>Topic</th>
<th>#7-PROP 391: Solutions</th>
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<tbody>
<tr>
<td>Chapter (s):</td>
<td>Assignment (s):</td>
<td>Lab report</td>
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<thead>
<tr>
<th>Week Nine</th>
<th>Topic</th>
<th>#8-PROP 421: Determining the Solubility of an Unknown Salt at Various Temperatures</th>
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<tbody>
<tr>
<td>Chapter (s):</td>
<td>Assignment (s):</td>
<td>Lab report</td>
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<tr>
<th>Week Ten</th>
<th>Topic</th>
<th>#9-KINE 505: Studying the Rate of the Reaction of Potassium Permanganate and Oxalic Acid</th>
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</thead>
<tbody>
<tr>
<td>Chapter (s):</td>
<td>Assignment (s):</td>
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</table>
Assignment (s): Lab report

Week Eleven: Topic
#10-EQUL 404: Studying Chemical Equilibria and Applying Le Chatelier’s Principle Using Micro scale Techniques

Chapter (s): Assignment (s): Lab report

Week Twelve: Topic
#11-EQUL 499: Studying the pH of Strong Acid, Weak Acid, Salt, and Buffer Solutions

Chapter (s): Assignment (s): Lab report

Week Thirteen: Topic
#12-EQUL 400: Estimating the Solubility Product Constant of Strontium Iodate Using Micro scale Techniques

Chapter (s): Assignment (s): Lab report

Week Fourteen: Topic
#13-ELEC 450: Studying Electrochemical Half-Cells and Half-Reactions

Chapter (s): Assignment (s): Lab report

Week Fifteen: Topic
Finals: Review / Experiment Completion

Chapter (s): Assignment (s):

Week Sixteen: Final Evaluation

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.
Technical Considerations for Online and Web-Assist Courses

Minimum Hardware and Software Requirements:
- Pentium with Windows XP or PowerMac with OS 9
- 56K modem or network access
- Internet provider with SLIP or PPP
- 8X or greater CD-ROM
- 64MB RAM
- Hard drive with 40MB available space
- 15” monitor, 800x600, color or 16 bit
- Sound card w/speakers
- Microphone and recording software
- Keyboard & mouse
- Netscape Communicator ver. 4.61 or Microsoft Internet Explorer ver. 5.0 /plug-ins
- 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
  - 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 when directed to do so. Students are to be respectful and courteous to others in the discussions. Foul or abusive language will not be tolerated. When referring to information from books, websites or articles, please use APA standards to reference sources.

Technical Support: Students should call the Prairie View A&M University Helpdesk at 936-261-2525 for technical issues with accessing your online course. The helpdesk is available 24 hours a day/7 days a week. For other technical questions regarding your online course, call the Office of Distance Learning at 936-261-3290 or 936-261-3282.

Communication Expectations and Standards:
All emails or discussion postings will receive a response from the instructor within 48 hours.

You can send email anytime that is convenient to you, but I check my email messages continuously during the day throughout the work-week (Monday through Friday). I will respond to email messages during the work-week by the close of business (5:00 pm) on the day following my receipt of them. Emails that I receive on Friday will be responded to by the close of business on the following Monday.

Submission of Assignments:
Assignments, Papers, Exercises, and Projects will distributed and submitted through your online course. Directions for accessing your online course will be provided. Additional assistance can be obtained from the Office of Distance Learning.

Discussion Requirement:
Because this is an online course, there will be no required face to face meetings on campus. However, we will participate in conversations about the readings, lectures, materials, and other aspects of the course in a true seminar fashion. We will accomplish this by use of the discussion board.

Students are required to log-on to the course website often to participate in discussion. It is strongly advised that you check the discussion area daily to keep abreast of discussions. When a topic is posted, everyone is required to participate. 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.