I. **Course Title**
   General Chemistry Lab

II. **Course Prefix/Number**
   CHEM 132L

III. **Credit Hours**
   1

IV. **Prerequisites**
   CHEM 131 Minimum Grade: C
   Prerequisite or Co-Requisite: CHEM 132

V. **Catalog Description**
   A laboratory to accompany CHEM 132. The laboratory work consists of learning basic techniques and studying chemical and physical principles discussed in the lecture. One lab lecture and two hours of laboratory per week.

VI. **Curricular Relationships**
   Required for all BA and BS degrees in chemistry; for BS degrees in Biology (Cellular and Molecular Biology and Organismal Biology emphases), for BA and BS degrees in geology; and for most pre-professional programs in health sciences and pre-engineering. May be used for BA degrees in Biology.

VII. **Student Learning Outcomes**
   • Students will demonstrate an ability to solve problems, think critically, and draw analogies.
   • Students will demonstrate an ability to write effectively, particularly with respect to technical subjects.
   • Students will demonstrate an understanding of the basic topics of general chemistry that they will need for success and understanding in additional coursework that has some grounding in chemistry or biochemistry, particularly as it pertains to lab work.
   • Students will be able to employ proper laboratory techniques through several hands-on experiments in the laboratory.
   • Students will be able to collect, analyze, and interpret data.
   • Students will be able to work and interact effectively as members of groups.
VIII. Content Outline

- Making polymers
- Complex formation
- Esterification as saponification reactions
- Redox reactions
- Calorimetry
- Ideal gas law
- Colligative properties
- Acid-base titration
- Buffers
- Equilibrium
- Kinetics

IX. Course Procedures/Policies/Grading Scale

- Students are expected to attend all lab lectures and all laboratory sessions. Lab reports must be turned in for each experiment. Pre-lab exercises are given for each experiment. Two laboratory examinations (written/practical) are given.
- Normal grading is used for this course.
  Grading Scale: $>90 = A; 80-89 = B; 70-79 = C; 60-69 = D; <60 = F$

X. Required/Recommended Readings

An in-house written text is used for the laboratory

XI. Issues Unique to this Course

Co-Requisite: CHEM 132, except for students who successfully completed CHEM 132 in a previous semester.

XII. Additional Departmental Issues

None