

**PALOMAR COLLEGE**  
**COURSE OUTLINE OF RECORD FOR**  
**DEGREE CREDIT COURSE**

Transfer course     A.A. degree applicable course  
(check all that apply)

**COURSE NUMBER AND TITLE:** CHEM 110L    General Chemistry Laboratory

**UNIT VALUE:** 2

**MINIMUM NUMBER OF SEMESTER HOURS:** 96

**BASIC SKILLS REQUIREMENTS:** Appropriate language and computational skills.

**ENTRANCE REQUIREMENTS**

**PREREQUISITE:** Concurrent enrollment in, or completion of CHEM 110

**COREQUISITE:** None

**RECOMMENDED PREPARATION:** None

**SCOPE OF COURSE:**

Qualitative and quantitative investigations designed to accompany CHEM 110.

**SPECIFIC COURSE OBJECTIVES:**

The successful student will be able to:

1. Record and evaluate experimental data.
2. Assess error and perform statistical analysis.
3. Solve novel problems by the systematic application of dimensional analysis and scientific logic.

**CONTENT IN TERMS OF SPECIFIC BODY OF KNOWLEDGE:**

Experiments and investigations suitable for a first semester course in general college chemistry to include the following:

Mass and volume relationships	Gas law experiments
Basic laboratory techniques	Gravimetric analysis
Chromatography	Conductivity/ionic reactions
Empirical formula determination	Colligative Properties
Types of chemical reactions	Titrimetric analysis
Molecular Models	
Enthalpy	
Chemistry of oxygen	

**REQUIRED READING:**

Postma, James M., Julian L. Roberts, Jr., and J. Leland Hollenberg. Chemistry in the Laboratory. 5<sup>th</sup> edition. New York: W.H. Freeman and Company, 2000.

**SUGGESTED READING:** None

**REQUIRED WRITING:**

Students are required to:

1. Answer assigned questions (homework, quizzes, and exams) involving definition, concepts and theory.  
Approximately 25 paragraphs of required writing.
2. Set up and calculate problems related to course content.

**OUTSIDE ASSIGNMENTS:**

**Students are expected to spend a minimum of three hours per unit per week in class and on outside assignments, prorated for short-term classes.**

Students are required to pre-study the lab theory and procedures before coming to class. Otherwise, the laboratory report is accomplished during the three-hour lab period.

**INSTRUCTIONAL METHODOLOGY:**

**Check all that apply:**

- lecture  
 laboratory  
 lecture-laboratory combination  
 directed study

**This course may be offered as a distance learning course and meets Title 5 regulations 55370, 55372, 55374, 55376, 55378, and 55380.**

Yes  No .

**If yes, check all that apply.**

- Television Course (Video one-way, e.g. ITV, video cassette, etc.)  
 Online Course (Text one-way, e.g. newspaper, correspondence, electronic file, etc.)  
 Two-Way Video Conferencing (Two-way interactive video and audio)  
 One-Way Video Conferencing (One-way interactive video and two-way interactive audio)  
 Computer Assisted Instruction (A specialized form of mediated instruction relying primarily on student access to information and prepared lessons or teaching materials through a computer terminal, but not under immediate supervision of a qualified instructor.)

**GRADING POLICY AND STANDARDS** (include methods of determining whether the stated objectives have been met by students):

15 experiment reports @ 20 points each	= 300 points
10 unknowns @ 10 points each	= 100 points
2 exams @ 100 points each	= 200 points
Total points	= 600 points

90-100%	540-600 pts	= A
80-89 %	480-539 pts	= B
65-97 %	390-479 pts	= C
50-64 %	300-389 pts	= D

Point distribution and grade distribution may vary depending on instructor.

**IS COURSE REPEATABLE FOR REASON(S) OTHER THAN DEFICIENT GRADE?**

Yes \_\_\_ No X      Number of times course may be taken for credit: 1.

If yes, identify specific provision of Title 5 Division 2 section(s), 55761-55763 and 58161 which qualifies course as repeatable:

**CONTACT PERSON:** David Boyajian

**SIGNATURES:**

<b>SIGNATURES ON FILE</b>
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