

# Chemistry 105

## General Chemistry Laboratory

### Sections 003 & 004

**Instructor:** Dr. A. W. Herlinger, 418 Flanner Hall (FH), 773-508-3127, email: [aherlin@luc.edu](mailto:aherlin@luc.edu)

**Office Hours:** Wednesday 9:30 – 10:30 AM, other times by appointment.

**Textbook:** Slowinski's Chemical Principles in the Laboratory for Chemistry 105: Loyola University Edition, E. J. Slowinski, W. C. Wolsey, and R. C. Rossi, Brooks/Cole, 2011. ISBN-10: 113368825X | ISBN-13: 9781133688259

**Safety:** Safety goggles must be worn at all times in the laboratory. A pair of safety goggles will be provided for your use at the first laboratory meeting.

**Meetings:** The general chemistry laboratories begin promptly at 11:30 AM and 2:45 PM on Wednesdays in Flanner Hall, Rooms 305 & 308.

**Laboratory Assistants:** Mr. Jonathan Derouin, FH – 19, 773-508-3153 and Mr. Kyle Webster FH – 410, 773-508-3134.

**Office Hours:** Wednesday 9:30 – 10:30 AM, other times by appointment.

**Course Description:** A practical laboratory experience designed to illustrate the chemical principles and reactions studied in the first semester of general chemistry. Emphasis is placed on the development of laboratory skills and critical evaluation of data.

**Course Objectives:** Provide a foundation for advanced laboratory work in chemistry and an appreciation for the scientific method with special emphasis on observation and analysis of experimental results. Acquire knowledge of the properties and reactions of matter. Gain an understanding of the basic principles of chemistry and its applications.

**Calculators:** A simple scientific calculator is sufficient. Calculators may not be shared during examinations and cases or covers must be removed.

**Examinations and Academic Honesty:** Course grades will be determined from the scores received on laboratory reports, advanced study assignments, and a final examination as well as understanding and adherence to the safety rules for the laboratory. All students must do their own work and are responsible for exercising the highest level of academic integrity. The University policy on academic integrity is stated in the Catalog of Undergraduate Studies.

Please read these guidelines at:

[http://www.luc.edu/academics/catalog/undergrad/reg\\_academicintegrity.shtml](http://www.luc.edu/academics/catalog/undergrad/reg_academicintegrity.shtml).

## Laboratory Schedule

<i>Date</i>	<i>No.</i>	<i>Topic</i>	<i>Assignment (pages)</i>
9/5		Check-In. Safety and Balances	Handouts, v-vi, vii-viii
9/12	1	Densities of Liquids and Solids	1 – 6, 357 – 362, 367 – 369
9/19	2	Resolution of Matter. Paper Chromatography	7 – 13
9/26	4	Determination of a Chemical Formula	23 – 27, 364 – 366
10/3		No Laboratory Meeting	
10/10		Mid-semester Break	
10/17	5	Identify of a Compound by Mass Relationships	29 – 33
10/24	14	Heat Effects and Calorimetry	97 – 104
10/31	11	Atomic Spectrum of Hydrogen	69 – 77
11/7	7	Analysis of an Unknown Chloride	41 – 45
11/14	13	Structure of Molecules – Molecular Models	87 – 95
11/21		Thanksgiving Break	
11/28		Check-Out	
12/6		Final Laboratory Examination – Thursday at 4:00 PM in FH – 133	

**Grading Scheme:** Scores for laboratory work will be determined from the points obtained out of a possible 150 points received on eight laboratory reports (10 points each for 80 total points), eight advanced study assignments (5 points each for 40 total points), a written lab final (25 points), clean-up (1 point), safety (2 points), and check-in/check-out (2 points).

Students are expected to complete all laboratory work at the scheduled time. No make-up laboratories will be given. If a laboratory is missed for a valid reason as described in detail in the lecture syllabus, it will be dropped in calculating an average score. If a second laboratory is missed, a proportionate score may be given at the discretion of the instructor.