



School of Pure and Applied Sciences

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<b>PROFESSOR:</b>	<b>PHONE NUMBER:</b>
<b>OFFICE LOCATION:</b>	<b>E-MAIL:</b>
<b>OFFICE HOURS:</b>	<b>SEMESTER:</b>

**I. COURSE NUMBER AND TITLE, CATALOG DESCRIPTION, CREDITS:**

**CHM 2046L GENERAL CHEMISTRY II LABORATORY (1 CREDIT)**

This laboratory course emphasizes thermodynamics, kinetics, equilibrium, acid-base reactions, and electrochemistry through appropriate laboratory-based investigations. Data collection, analysis, and presentation techniques employing graphing calculators, computers, and spectrophotometers are important features of this laboratory.

**II. PREREQUISITES FOR THIS COURSE:**

CHM 2045 and CHM 2045L with a grade of "C" or better in each course

**CO-REQUISITES FOR THIS COURSE:**

CHM 2046

**III. GENERAL COURSE INFORMATION: Topic Outline.**

- Laboratory safety
- Basic mathematical skills used in chemistry
- Measurement theory and dimensional analysis
- Scientific graphing, especially of properties with "straight line" behavior
- Experiments that illustrate and reinforce the concepts of CHM 2046

**IV. ALL COURSES AT FLORIDA SOUTHWESTERN STATE COLLEGE CONTRIBUTE TO THE GENERAL EDUCATION PROGRAM BY MEETING ONE OR MORE OF THE FOLLOWING GENERAL EDUCATION COMPETENCIES:**

**C**ommunicate clearly in a variety of modes and media.

**R**esearch and examine academic and non-academic information, resources, and evidence.

**E**valuate and utilize mathematical principles, technology, scientific and quantitative data.

**A**nalyze and create individual and collaborative works of art, literature, and performance.

**T**hink critically about questions to yield meaning and value.

**I**nvestigate and engage in the transdisciplinary applications of research, learning, and knowledge.

**V**isualize and engage the world from different historical, social, religious, and cultural approaches.

Engage meanings of active citizenship in one's community, nation, and the world.

#### A. General Education Competencies and Course Outcomes

1. Listed here are the course outcomes/objectives assessed in this course which play an integral part in contributing to the student's general education along with the general education competency it supports.

General Education Competency: **Evaluate**

Course Outcomes or Objectives Supporting the General Education Competency Selected:

- List, explain, and apply the basic safety rules and procedures in the chemistry laboratory.
- Recognize and correctly use standard laboratory glassware and analytical equipment for conducting experiments.
- Identify and use basic scientific laws, concepts, and models in experiments and calculations.
- Perform quantitative measurements to determine the colligative, thermodynamic, acid-base, kinetic, equilibrium, and electrochemical properties of the selected chemical systems.
- Interpret and analyze the experimental data, perform calculations, summarize the scientific findings, and draw conclusions.
- Generate and use graphs, including manual or based on Excel (or similar software), to analyze, calculate, or interpret experimental and graphical data.
- Communicate the results of an experiment in the form of a laboratory report.
  - ~~List and explain basic chemistry laboratory safety rules, regulations, and procedures.~~
  - ~~Use basic chemistry laboratory safety rules, regulations, and procedures to safely complete chemistry laboratory experiments.~~
  - ~~Collect and analyze data, including graphical analysis, to determine thermodynamic, kinetic, equilibrium, and electrochemical properties of selected chemical systems.~~
  - ~~Solve numerical problems to determine thermodynamic, kinetic, equilibrium, and electrochemical properties of selected chemical systems.~~

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#### V. DISTRICT-WIDE POLICIES:

##### PROGRAMS FOR STUDENTS WITH DISABILITIES

Florida SouthWestern State College, in accordance with the Americans with Disabilities Act and the College's guiding principles, offers students with documented disabilities programs to equalize access to the educational process. Students needing to request an accommodation in this class due to a disability, or who suspect that their academic performance is affected by a disability should contact the Office of Adaptive Services at the nearest campus. The office locations and telephone numbers for the Office of Adaptive Services at each campus can be found at <http://www.fsw.edu/adaptiveservices>.

##### REPORTING TITLE IX VIOLATIONS

Florida SouthWestern State College, in accordance with Title IX and the Violence Against Women Act, has established a set of procedures for reporting and investigating Title IX violations including sexual misconduct. Students who need to report an incident or need to receive support regarding an incident should contact the Equity Officer at [equity@fsw.edu](mailto:equity@fsw.edu). Incoming students are encouraged to participate in the Sexual Violence Prevention training offered online. Additional information and resources can be found on the College's website at <http://www.fsw.edu/sexualassault>.

#### VI. REQUIREMENTS FOR THE STUDENTS:

List specific course assessments such as class participation, tests, homework assignments, make-up procedures, etc.

**VII. ATTENDANCE POLICY:**

The professor's specific policy concerning absence. (The College policy on attendance is in the Catalog, and defers to the professor.)

**VIII. GRADING POLICY:**

Include numerical ranges for letter grades; the following is a range commonly used by many faculty:

90 - 100	=	A
80 - 89	=	B
70 - 79	=	C
60 - 69	=	D
Below 60	=	F

(Note: The "incomplete" grade ["I"] should be given only when unusual circumstances warrant. An "incomplete" is not a substitute for a "D," "F," or "W." Refer to the policy on "incomplete grades.")

**IX. REQUIRED COURSE MATERIALS:**

(In correct bibliographic format.)

**X. RESERVED MATERIALS FOR THE COURSE:**

Other special learning resources.

**XI. CLASS SCHEDULE:**

This section includes assignments for each class meeting or unit, along with scheduled Library activities and other scheduled support, including scheduled tests.

**XII. ANY OTHER INFORMATION OR CLASS PROCEDURES OR POLICIES:**

(Which would be useful to the students in the class.)