

AMERICAN COLLEGE of THESSALONIKI

Division of Science and Technology

SNCC 117L: Chemistry 117 - Lab

Fall 2019

Laboratory Syllabus

Instructor: Dr. Mary S. Kalamaki

Office: Room #12, Bissell Library

E-mail: kalamaki@act.edu,

Tel: +30 2310398348

Class schedule and Office hours:

| | Section | Monday | Tuesday | Wednesday | Thursday | Friday |
|---------------|---------|---------------|---------------|-----------|---------------|---------------|
| Office hours* | | 9:30 – 10:00 | 9:30 – 10:00 | | | 9:30 – 10:00 |
| Lab | K | | | | 10:00 – 12:00 | |
| Office hours* | | 11:30 – 12:00 | 11:30 – 12:00 | | | 11:30 – 12:00 |
| Lab | L | | | | 12:00 – 14:00 | |
| Office hours* | | 13:30 – 14:00 | 13:30 – 14:00 | | | 13:30 – 14:00 |
| Lab | M | | | | 14:00 – 16:00 | |
| Office hours* | | 15:30 – 16:00 | 15:30 – 16:00 | | | 15:30 – 16:00 |
| Lab | N | | | | 16:00 – 18:00 | |
| Office hours* | | 17:30 – 18:00 | 17:30 – 18:00 | | | 17:30 – 18:00 |

* also available by appointment

Lab manual

Laboratory Manual for Chemistry for Biological Sciences by Mary S. Kalamaki (available via <http://moodle.act.edu/moodle2019/>).

Course description

SNCC 117L is a 2 hour laboratory course to accompany SNCC 117. The laboratory exercises are designed to illustrate the principles described in SNCC 117. Many of the experiments are scheduled to follow the lecture topics however, the lab is not meant to follow the lecture course on a day-by-day basis. A separate grade is assigned for this laboratory course.

Learning goals

Chemistry is an experimental science. The purpose of the laboratory is to expose the student to chemical phenomena through experimentation, and to develop the student's laboratory skills. Students will learn:

- The general procedures for conducting various elementary chemical experiments.
- How to operate common laboratory equipment.
- How to collect, organize and report experimental data.

Grading:

The final lab grade will be computed as follows:

10% – Laboratory participation, attendance and successful completion of the experiments.

20% – Pre-lab questions. Pre-lab questions' sheets should be given to the instructor at the beginning of each lab session and will cover the experiment to be performed on that day.

30% – Lab reports, Post-lab questions. Students will work in small groups. However, each student will have to submit his/her own lab report. Guidelines on how to prepare lab reports will be given during the first lab session by the instructor. Lab reports will be due at the beginning of the following week's lab session.

40% – Final exam.

Grading will be performed using an absolute scale.

| Grade Description | % points | US Letter Grade | US point grade |
|--------------------------|-----------------|------------------------|-----------------------|
| Excellent | 95-100 | A | 4.0 |
| Very Good (high) | 90-94 | A- | 3.67 |

| | | | |
|------------------------|-------|----|------|
| Very Good (low) | 85-89 | B+ | 3.33 |
| Good (high) | 80-84 | B | 3.0 |
| Good (low) | 75-79 | B- | 2.67 |
| Satisfactory (high) | 70-74 | C+ | 2.33 |
| Satisfactory (low) | 65-69 | C | 2.0 |
| Fail | 0-64 | F | 0 |

Attendance: Students must attend the lab section they are assigned to. **The maximum allowed number of absences for the lab is 1 lab period (2 hours)**. If a lab session is missed, the student is responsible for obtaining the data from his/her lab partners and submitting a lab report. Submitting a lab report late will result in a 5% per day penalty over the total points of the lab report. A summary of the ACT absence policy is attached at the end of the syllabus.

Academic Integrity

Students must comply with the ACT College-wide Policy on Academic Integrity:

College-wide Policy on Academic Integrity

All academic divisions at ACT, both undergraduate and graduate, will apply the following policy on academic integrity:

“A student committing an act of Academic Dishonesty in a given course will receive an F (0 percentage points) in the assignment where the academic infraction took place. If a student commits an act of Academic Dishonesty for a second time in the same course, this student will receive a failing grade in that course.

The individual faculty is responsible for enforcing the policy in a conscientious manner, for reporting all cases to the Academic Standards & Performance Committee (AS&PC) for record-keeping and for informing the affected students of their right to appeal the faculty’s decision to the AS&PC. Faculty must also insert the college’s policy on Academic Integrity in their course syllabi.”

Safety: Students are required to wear lab-coats, safety goggles and disposable gloves during lab sessions. Closed-toed shoes and long trousers/skirts must be worn in the laboratory. Unauthorized experimentation is strictly prohibited. Safety rules will be discussed extensively during the first lab session.

Miscellaneous supplies: A black, permanent-ink, fine-point marker to mark lab glassware, a scientific calculator and a lab notebook.

How to prepare for each experiment: students must prepare for lab experiments by reading the appropriate chapter of the lab manual in advance and/or supplementary material provided by the instructor. Students are expected to monitor the instructor's announcements and/or extra material posted on the course's web site at <http://moodle.act.edu/moodle2019/>.

Chem117 - List of experiments

| Date | Experiment # | Description |
|----------------|---------------------|---|
| September 26 | 1, 2 | Laboratory safety, Accuracy and precision, density, mole, mass and volume |
| October 3 | 3 | Flame tests |
| October 10 | 4 | VSEPR theory and the shapes of molecules |
| October 17 | 5, 6 | Chromatography, Limiting reactant and percent yield |
| October 24 | 7 | Solubility rules |
| October 31 | 8 | Thermochemistry (first Athens trip) |
| November 7 | 8 | Thermochemistry (second Athens trip) |
| November 14 | 9 | Chemical kinetics – iodine clock reaction |
| November 21 | 10 | Equilibrium Constant - Le Chatelier's Principle |
| November 28 | 11 | Volumetric analysis: acid base titrations |
| December 5 | | Final Review |
| December 10-13 | | Final exam |

The instructor reserves the right to make changes in the course syllabus during the semester. If changes are made, students will be officially notified in class and the changes will be posted at Moodle.

ACT Absence Policy

Students are expected to attend and participate in all of their courses throughout the term, including the first week. Those who fail to do so may be administratively withdrawn from individual courses of the College. **This may affect the students' scholarship and financial aid eligibility.**

A student is considered to have successfully attended a course if s/he has **attended 75% of the course lectures**. Thus, for a typical ACT course with 42 hours of contact time, this translates to **10 hours per course**. This policy applies to all ACT students, degree-seeking and Study Abroad. **Please note that absences are counted on an hourly basis.** Absences due to participation in school-related trips and activities may count toward this limit.

A College-wide Policy on Academic Integrity

Statement on Academic Integrity

"The College has the responsibility of maintaining the highest possible standards of academic integrity for the purpose of ensuring the quality of education it provides, underscoring its dedication to fostering a love of learning for its own sake, and of protecting those who rightly practice integrity in their academic affairs. It is the responsibility of the student to be informed about the college's policy on Academic Integrity, to refrain from infractions of that policy and from conduct, which may lead to suspicion of infractions, and to refrain from aiding or encouraging others in such infractions. It is the responsibility of the faculty to establish and maintain an environment which is conducive to Academic Integrity."

Academic Honesty

"Academic Dishonesty is the violation of Academic Integrity, committed by engaging in any form of unethical behaviour which violates acceptable standards of scholarly conduct. Such practices as cheating on examinations, submitting borrowed or purchased papers and/or prepared bibliographies as one's own, plagiarizing, falsifying or copying lab reports, or aiding another person in any of the above infractions of Academic Integrity, constitute acts of Academic Dishonesty."

College-wide Policy on Academic Integrity

All academic divisions at ACT, both undergraduate and graduate, will apply the following policy on academic integrity:

"A student committing an act of Academic Dishonesty in a given course will receive an F (0 percentage points) in the assignment where the academic infraction took place. If a student commits an act of Academic Dishonesty for a second time in the same course, this student will receive a failing grade in that course.

The individual faculty is responsible for enforcing the policy in a conscientious manner, for reporting all cases to the Academic Standards & Performance Committee (AS&PC) for record-keeping and for informing the affected students of their right to appeal the faculty's decision to the AS&PC. Faculty must also insert the college's policy on Academic Integrity in their course syllabi."

Academic Standards & Performance Committee

A student may appeal an initial decision made by an individual faculty to a formal body called the Academic Standards & Performance Committee (an existing standing Committee), chaired by the Director of Academic & Student Affairs.

The AS&PC will meet as needed to evaluate appeals on alleged cases of academic dishonesty referred to the Committee by an involved party. Each case referred to the Committee will have a separate hearing (several hearings could conceivably take place during a single session of the Committee). Cases sent before the Committee deemed invalid will be dismissed. The AS&PC will keep records of all academic infraction cases, whether appealed or not and it will reserve the right to invite a student who has breached repetitively the school's policy to a hearing that may lead to sanctions ranging from failure of an assignment, to failure of a course, semester-long dismissal from the college, expulsion from the college.