



The mission of Concord University is to provide quality, liberal arts based education, to foster scholarly and creative activities and to serve the regional community (<http://www.concord.edu/academics/>).

Course Prefix, Number and Title: CHEM 471 Research
Course CRN # and Section: 20806 01
Semester Taught: Spring 2019
Credit Hours: 2
Prerequisites: Permission of instructor
Course Time: TBA
Building and Room Number: TBA

Professor: Dr. Marwa Abdel Latif, Assistant Professor of Chemistry
Office Location: Science Hall Rm. 402A
Office Hours: MWF 10 am – 12 pm Also by appointment
Email: mabdellatif@concord.edu
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Office Fax: 304-384-6225
College/Department Website: <http://www.concord.edu/physci/node/2>

Course Description/Rationale:

Semester-long independent research project consisting of a literature review and a research proposal, and presentation of oral and written report. Completion of standardization procedures and standards syntheses. May only be taken one time as a science elective in the curriculum, but may be taken repeatedly for credit..

Course Management System: N/A

Hardware/Software Needed: N/A

Text requirements:

- 1) Laboratory notebook
- 2) Many scientific papers (ask for help obtaining copies of articles you need for your literature review) related to your chosen research topic. A comprehensive annotated bibliography will be required. Students will be required to visit with VT library to obtain some primary literature.

Concord University Educational Goal(s):

Skills: Proficiency in interpreting data, integrating information, formulating ideas, thinking critically, and communicating with others, as demonstrated by the following competencies:

1. Effective inter-communication skills and literacy adapted as needed for the demands of various kinds of discourse:
 - listening and speaking
 - reading and writing
 - non-verbal communication
 - media and technological literacy
2. An ability to employ appropriate observational, logical, analytical, computational, creative, and critical thinking skills in problem solving.
4. An ability to analyze, synthesize, and integrate elements, information and ideas.
5. An ability to evaluate elements, information, and ideas on the basis of appropriate criteria.

National Standards: N/A

Specific Learning Outcomes:

As a result of taking this course students should be able to:

1. develop skills and working knowledge of the literature related to the student's chosen research topic.
2. design and conduct an independent research project.
3. become familiar with research techniques associated with the investigation of the hypothesis generated for the project.
4. become familiar with scientific writing, publication, and the peer-review process by writing up the research findings in a publishable format and presenting the research in a professional venue.
5. be able to discuss their research with others in a professional venue.

Course Requirements:

The student's grade will be based upon successful and timely completion of the following:

1. Overall effort, time commitment, preparation of the necessary components for completion of the project, attention to details, and attending regular meetings w/ the instructor.
2. A formal, written project proposal and timeline for project completion that will be completed, reviewed by faculty mentor, and final iteration submitted to both the mentor and the department chairperson by the end of the fifth week of classes.
3. A written literature review should be submitted to the faculty mentor by a date determined by the mentor, allowing for plenty of time for several revisions. Minimally, the final version of the literature review will be due to the faculty mentor by the end of the semester.
4. The initial portion of the collection of research data/learning of laboratory techniques should be undertaken. Very careful and meticulous laboratory notes regarding data collection, analysis, writing, etc. is expected.

Grading Scale: F = < 60, D = 60-70, C = 70-80, B = 80-90, and A = >90.

Laboratory Conduct:

Proper laboratory safety rules and procedures will be followed. Deviation from these policies will NOT be tolerated. Following a second infraction, individuals will be dropped from the class and will receive an F in the course if the action occurs after the final date for withdrawal (*Classroom Conduct*, current Concord University catalog). ANYONE CAUGHT CHEATING will receive an "F" for the semester. This includes all forms of academic dishonesty as described in the current University course catalog, *Academic Dishonesty*.

Attendance Policy:

Students are expected to commit 6-9 hours per week, but further specifics on attendance are provided by the instructor. The hours include literature search, laboratory sessions, and assigned meetings with instructors and other research scientists.

Accessibility/Accommodations:

Concord University is committed to responding to the needs of students with disabilities as defined by the Americans with Disabilities Act. Please inform your instructor at the beginning of the class semester if you have a disability and are requesting accommodations. It is your responsibility to self-disclose that you are requesting accommodations. The University and instructor will provide you with a reasonable accommodation. You should register with CU's Disability Services Office, located in the Athens campus Jerry and Jean Beasley Student Center, bottom floor, across from the Campus Post Office. The Disability Services Office phone is 304-384-6086 or you can email the Director, Nancy Ellison, at nellison@concord.edu for assistance.

Academic Dishonesty:

Academic dishonesty is morally unacceptable as well as destructive to the learning and teaching atmosphere. Academic dishonesty includes the giving or receiving of improper help on examinations or assignments, falsifying documents, and plagiarism (the act of stealing and using, as one's own, the ideas or the expression of the ideas of another). Such dishonesty can lead to a variety of penalties — including but not limited to failure of assignment, failure of course, loss of institutional privileges, or dismissal from the University. (See University Catalog Academic Policies and Procedures.)

Concord University Honor Code:

A Concord University Honor Code was approved by students, staff, faculty, administration, and the CU Board of Governors. The Code states:

"As a member of the Concord University Community I will act with honesty and integrity in accordance with our fundamental principles and I will respect myself and others while challenging them to do the same."

The Honor Code is intended to unite the Concord community behind a culture of honesty, integrity, and civility.

Class/Online Attendance Policy:

Regular class attendance is part of a student's academic obligation at Concord. Irregular attendance may affect academic performance adversely and is detrimental to the atmosphere of a class. (See University Catalog Academic Policies and Procedures.)

Emergency Alert System:

In an effort to increase safety and security on our campus, Concord University encourages everyone to register for instant text message alerts. Alerts will only be used for security and safety notices. All students, faculty, and staff are eligible to receive text message alerts on their cell phones or email alerts. Please contact the IT Help Desk for further assistance (304-384-5291).

Emergency Information:

Emergency/courtesy telephones are located at the main entrance of each residence hall and at various other locations on campus. Emergency telephones can be identified by the flashing blue light and will provide the user with a direct link to Public Safety at the press of a button. To report an on-campus emergency, call 304-384-5357 or 911. The Office of Public Safety is located on the bottom floor of the Rahall Technology Center. For further emergency information go to: <http://www.concord.edu/administration/office-public-safety>.

Inclement Weather Policy:

As a general policy, the University will remain in normal operations during adverse weather conditions. In the event of severe weather conditions, the following may occur:

University Closure

No students or employees are to report.

Classes Cancelled

Students do NOT report BUT employees are expected to report to work at their normal time.

Operating on an Inclement Weather Delay

Under this schedule, all 8 a.m. classes will start at 10 a.m. Students and faculty will follow the Inclement Weather Schedule. (See <http://www.concord.edu/emergency-alerts> for Athens/Beckley Inclement Weather Schedules.)

**Announcements invoking the late schedule or other options referenced above are aired on area radio and television stations and are sent as text and email messages to those enrolled for this service. Announcements of campus closures and schedule delays are also posted on the CU webpage. Log on to <http://www.concord.edu> →Everyday Access →Emergency Alert System.*

Student Conduct:

In classrooms, online, laboratories, and during any activities that are part of course requirements, students are expected to observe reasonable rules of conduct.

Sexual Harassment & Assault:

Federal law, Title IX, and Concord University policy prohibits discrimination, harassment, and violence based on sex and gender (Including sexual harassment, sexual assault, domestic/dating violence, stalking, sexual exploitation, and retaliation). If you or someone you know has been harassed or assaulted, you can receive confidential counseling support through the Concord University Counseling Center (304-384-5290). Alleged Violations can be reported non-

confidentially to the Concord University Title IX Coordinator at 304-384-6327 or titleix@concord.edu. Reports to Campus Security can be made at (304-384-5357). As an employee at Concord University, **I am a mandatory reporter** which means I must report any sexual misconduct I am made aware of. This includes verbal or written (such as in an assignment) disclosures of sexual harassment or sexual assault.

Technology Services:

Contact the CU Help Desk at extension 5291 from campus or 304-384-5291 off campus. You may also e-mail cuhelpdesk@concord.edu.

Academic Resources:

The Academic Success Center is ready to assist any student with academic or personal concerns, tutoring, study skills, time management, and much more. The Academic Success Center is located in Suite 243 (Atrium) of the Rahall Technology Center. Students can stop by the ASC Monday through Friday, 8:00 am until 4:00 or by appointment. The ASC may be reached by calling (304) 384-6074, (304) 384-6298, or asc@concord.edu. Website: <http://hub.concord.edu/academicsuccess/> The drop-in tutoring schedule is posted online: <https://apps.concord.edu/tutoring/>. Smarthinking— online, and on-demand tutoring—is available on Blackboard at elearn.concord.edu.

Syllabus Disclaimer

"This syllabus is subject to change based on the needs of the class. Please check it regularly."