



- ▶ **Lecturer:** Dr. Nick Thomas
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- ▶ **Lab Class Days:** Thursdays
- ▶ **Lab Times:** Starting 9:25 am (period 2)
- ▶ **First Lab Class Day:** Tues, Jan 24 Room 306 Goodwyn Hall (check-in)

Web site

www.getnickt.com site contains links to each lab experiment (there is no lab manual to buy). Experiments must be downloaded, printed, and brought to each lab. Each experiment **MUST** be read before coming to lab class – be prepared! (note: the instructor does not use the Blackboard website)

Course Description

CHEM 3401. Inorganic Chemistry Laboratory (1). Coreq., CHEM 3400. Experiments to accompany lecture topics in CHEM 3400 and which illustrate the preparation, purification, and characterization of inorganic compounds.

Text

See ‘web site,’ above. A laboratory notebook will also be required for students to record observations from experiments. These will be handed in each week, graded, and returned the following lecture class. Safety goggles must be obtained by the student. Goggles must be worn at all time during lab. Failure to do so will result in points being deducted from lab grade. It’s a good idea to keep goggles in your bag or car so they are always on campus with you. The experiment order is listed on the class timetable.

Course Objectives

At the end of the course, students should be able to:

1. Perform the experiments carefully with due attention to accuracy, good procedure and safety

2. Use modern techniques for the synthesis and investigation of inorganic compounds
3. Characterize products using appropriate physical and spectroscopic techniques
4. Purify products by an appropriate method and determine their m.p. where required
5. Write a detailed report on each experiment, which will include abstract, balanced equations and appropriately detailed experimental procedure in a format suitable for publication in the primary literature. Correctly calculate the % yield. Record, fully interpret and discuss spectroscopic data.
6. Gain experience in using the special techniques and apparatuses involved in inorganic chemistry research

Registration

All students must be officially registered. Contact the registrar's office if you have any doubts concerning your registration status.

Attendance

Students have an obligation to attend all lectures and to be ON TIME. Labs will begin promptly at 9:25 am (period 2) on Tuesdays in room 306 Goodwyn Hall. The class meets the first week of class (Jan 9) for check-in. There will be no class Jan 16. The first actual lab will be Jan 16.

- Note: 1. Unless you have a pending emergency please switch off cellphone ringers in class as they are very distracting to all.***
- 2. No cell phone or earphones may be used during exams; only non-programmable calculators***

Assistance

Office hours will be posted on the instructor's office door and web site. Additional appointments may be made with the instructor. The Instructional Support Lab (203G) can also provide tutoring.

Grading

The laboratory grade will be based on the average grade of 10 written laboratory reports (the lowest of 11 being dropped). Each lab is graded out of 10. If a lab is missed FOR ANY REASON, it will automatically be the dropped lab. It will not be possible to make up any other missed labs, and a grade of zero will be given for other missed labs.

Completed lab reports will be due the following lab class unless they are part of a 2-part lab and the second depends on the first. Late labs will lose 1 point per day, no exceptions. Lab reports are to be written neatly, or they will be returned ungraded.

Students will work in groups of TWO, but each student will record his or her own data, and write up reports individually. Students will change lab partners EVERY WEEK.

Failure to hand in one or more labs will significantly affect your overall course grade. Retain your graded labs until the end of the semester.

Be sure to show all steps in calculations for full credit and give answers to the correct number of significant figures. Remember, you collect and share the data with your lab partner, but each person must write and submit his or her own report. Lab write up instructions are on the instructor's web site.

Important: If you miss a lab you CANNOT get results from someone else and submit a report. You must complete a lab yourself to get credit. Also, once graded labs are returned to the class, late labs will NOT be accepted.

Overall course grades will be based on the following scale:

A = 90-100%; B = 80-89%; C = 65-79%; D = 50-64%; F < 50%

Withdrawal

If you withdraw from this class during the semester, our department requires that you must also withdraw from CHEM 3400.

Academic Dishonesty

Academic Dishonesty (cheating, plagiarism, etc.) in any form will not be tolerated. All infractions will be dealt with according to the policies in the Student Handbook.

Accommodation Statement

It is the policy of AUM to provide appropriate modifications, accommodations or auxiliary aids to any student with a documented disability as defined by Section 504 of the Rehabilitation Act of 1973, as amended, and by the Americans with Disabilities Act (ADA) of 1990. It is the student's responsibility to request accommodations and provide appropriate documentation. Students with disabilities are encouraged to contact the Center for Disability Services (CDS) in Room 101 Taylor Center or call CDS at (334) 244-3631 prior to or upon enrollment at AUM.

Learning Outcomes

Learning Outcomes: After completion of this course, students will be able to analyze:

1. Methods to safely conduct basic chemical experiments in a modern laboratory
2. The handling and use of routine laboratory equipment, glassware and chemicals
3. Techniques for making accurate chemical measurements.