

Chemistry 322

Instrumental Methods

Spring 2020

- Instructor:** John D. Thoburn
Room 353 Brock Science Hall
Tel: 804-752-3790
Email: jthoburn@rmc.edu
- Office Hours:** Office hours are available by appointment – just send me an email!
- Class Time:** Tues/Thurs 8:00-9:30 AM
- Class Location:** Copley 302
- Lab Time:** Section 1: Wed 1:10 – 4:30 PM
Section 2: Thu 1:20 – 4:40 PM
- Lab Location:** Copley 301A
- Final Exam:** Thursday, May 21, 8:30 AM
- Required Materials:** *“Instrumental Analysis,”* by Grainger, Yochum, Grainger, and Sienerth

Course Goals and Objectives:

This course consists of an in-depth study of the analytical and instrumental techniques associated with product analysis and characterization. At the end of the course, each student will:

- Understand the theory and mechanical operation of instrumentation routinely used for chemical analyses
- Be able to choose the best instrumentation method for a particular analysis.
- Know where to start “trouble-shooting” chemical instrumentation.
- Posses an in-depth understanding of the basic principles underlying all types of spectroscopy and chromatography and become acquainted with the variety of other instrumental techniques available to chemists.
- Gain a general knowledge of what instruments “do”, how powerful they are, and how you can use them to solve chemical problems that you may encounter in subsequent courses (and future jobs!)

Evaluation:

Your progress in this course will be assessed through a combination of quizzes, tests, a final exam, in class assignments, homework, and lab reports. Your lab work/reports will count for 25% of your grade and all other written work will account for 75% of your grade.

Attendance:

As this is an upper level course there is no formal attendance policy. You are responsible for all information covered in a class period whether you are there or not. Make up tests will only be given under extreme circumstances (i.e. documented illness, death in the family, etc.)

Academic Integrity Policy:

You are expected to adhere to the Code of Academic Integrity as found in your student handbook. Any infraction of this code (including cheating on exams or quizzes, copying laboratory reports, or otherwise sharing information when you are not expressly permitted to do so) will result in referral to the college's Academic Integrity Council. There will be no exceptions to this policy.

The Americans with Disabilities Act of 1990 and other Federal laws require Randolph-Macon College to provide a "reasonable accommodation" to any individual who advises us of a physical, psychological, or learning disability. If you have a physical, psychological, or learning disability that requires an accommodation, you must first register with the Office for Disability Support Services, located in the Higgins Academic Center. Please arrange a meeting with the course instructor to discuss your needs and how to register for support services.