CHEM 167 – Physical Chemistry Preparation
Fall 2022 Syllabus

Instructor: Prof. Michael T. Ruggiero, Ph.D.
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Office Hours: By appointment (just email me!)

Course Information
Class: W 9:40-10:30
Location: Old Mill Annex A303

Required Text: *Physical Chemistry – A Molecular Approach*, Donald A. McQuarrie and John D. Simon. University Science Books, California. ISBN: 978-0-935702-99-6.

Recommended Text: *Mathematics for Physical Chemistry – Opening Doors,* Donald A. McQuarrie. University Science Books, California. ISBN: 978-1-891389-56-6.

Course Description and Goals
In this course you will learn the underlying mathematic concepts that are required to understand and interpret physical chemistry concepts taught in CHEM 260. By the end of the course you should understand and be prepared to perform the mathematics required for the problems assigned to you in CHEM 260.

Grading
75% - Assignments
25% - Attendance and participation

Student Learning Accommodations
In keeping with University policy, any student with a documented disability interested in utilizing accommodations should contact SAS, the office of Disability Services on campus. SAS works with students and faculty in an interactive process to explore reasonable and appropriate accommodations, which are communicated to faculty in an accommodation letter. All students are strongly encouraged to meet with their faculty to discuss the accommodations they plan to use in each course. A student's accommodation letter lists those accommodations that will not be implemented until the student meets with their faculty to create a plan.
Contact SAS:
A170 Living/Learning Center;
802-656-7753;
access@uvm.edu
www.uvm.edu/access

Religious Holidays
Students have the right to practice the religion of their choice. If you need to miss class to observe a religious holiday, please submit the dates of your absence to me in writing by the end of the second full week of classes. You will be permitted to make up work within a mutually agreed-upon time. https://www.uvm.edu/registrar/religious-holidays

Academic Integrity
The policy addresses plagiarism, fabrication, collusion, and cheating. https://www.uvm.edu/policies/student/acadintegrity.pdf

Topics Covered

- Differentiation and integration in one, two, and three-dimensions
- Operators
- Eigenfunction/eigenvalue problems
- Complex numbers
- Probability and statistics
- Waves and their properties
- Partial differential equations
- Vector calculus
- Spherical coordinates
- Matrix algebra
- Series and limits