

Course Information

Contact Details

Instructor	Dr. Jeremy B. Maddox
Office	closed due to COVID-19
Office Hours	weekdays by appointment via Zoom
Telephone	use email instead
Email	jeremy.maddox@wku.edu

Course Details

Course	CRN 41102 CHEM 450G-C02 (3 credits)
Title	Physical Chemistry I
Location	WEB
Day(s)/Time	WEB
Summary	A detailed study of the fundamental principles and models describing the physical and chemical properties of matter at both the microscopic and macroscopic levels. Selected topics may include thermodynamics and equilibria, the kinetic theory of gases, transport properties, chemical kinetics, introductory quantum mechanics, spectroscopy, statistical thermodynamics, and interdisciplinary applications.

Required Textbook(s)

Title	Physical Chemistry (11th edition)
Author(s)	Peter Atkins, Julio de Paula, and James Keeler
Publisher	Oxford
ISBN	9780198769866

Recommended Textbook(s)

Title	Conceptual Guide to Thermodynamics
Author(s)	B. Poirier
Publisher	Wiley
ISBN	9781118840535

Student Learning Objectives

CHEM 450/CHEM 450G emphasizes advanced concepts in theoretical chemistry and problem solving techniques involving applied calculus. Students will demonstrate qualitative and quantitative proficiency in thermodynamics, transport theory, and chemical kinetics.

Reading and Problem Set Assignments

Reading and homework problem sets will be assigned regularly, and students should expect to make a significant time commitment outside of class for detailed study of this material. The reading and homework will cover various topics from the required textbook.

Homework problem will be collected for a grade and must be completed in a timely fashion. Students are encouraged to use the instructor's office hours for additional discussion and assistance with the homework problems, as needed.

Mathematica Software

The instructor will use *Mathematica* software for solving problems and analyzing functions. Students are strongly encouraged to use *Mathematica* software to aid in the solution of homework problems. *Mathematica* may be downloaded from the WKU Software Center.

Examinations

There will be several exams in this course. Students will be given advanced notice of exam dates. The instructor reserves the right to modify the exam schedule in order to meet the time constraints of the course. All exams will be closed book and closed notes.

Grading Policy

Students will receive numeric scores on all problem set assignments, exams. Each homework assignment carries an equal weight in determining an average homework score (normalized to 100). Similarly, the mid-term exam scores and the final exam score will carry an equal weight in determining an average exam score (normalized to 100). Students will receive a course score (normalized to 100) consisting of a weighted average of the homework score (25%) and exam score (75%). The final course score will be used to assign a letter grades based on the following scale:

A (100-90) B (89-80) C (79-70) D (69-60) F (59-0)

The last day to drop a class with a W (withdrawal) and the last day to change a class from credit to audit is posted by the WKU Registrar's Office. The student is responsible for initiating all changes in enrollment status with the WKU Registrar's Office.

Attendance Policy

The policy of the WKU Student Handbook will be followed in this course, "Registration in a course obligates the student to be regular and punctual in class attendance...When a student is absent from class because of illness, death in the family, or other justifiable reasons, it is the student's responsibility to contact the instructor as soon as possible."

Make-up work is not available for this course.

Students must maintain a high degree of engagement with the digital content provided for this online course. This includes video lectures and homework problems. Students must be responsive to email inquiries using their official WKU email account.

Academic Dishonesty, Plagiarism, and Cheating

The policy of the WKU Student Handbook will be followed in this course, “Students who commit any act of academic dishonesty may receive from the instructor a failing grade in that portion of the coursework in which the act is detected or a failing grade in the course without possibility of withdrawal. The faculty member may also present the case to the Office of Student Conduct for disciplinary sanctions.”

Student Accessibility Services

In compliance with University policy, students with disabilities who require academic and/or auxiliary accommodations for this course must contact the Student Accessibility Resource Center located in Downing Student Union, 1074. SARC can be reached by phone number at (270) 745-5004 [(270) 745-3030 TTY] or via email at sarc.connect@wku.edu. Please do not request accommodations directly from the professor or instructor without a Faculty Notification Letter (FNL) from The Student Accessibility Resource Center.

Title IX Policy

WKU is committed to supporting faculty, staff and students by upholding WKU’s Title IX Sexual Misconduct/Assault Policy (0.2070) and Discrimination and Harassment Policy (0.2040). Under these policies, discrimination, harassment and/or sexual misconduct based on sex/gender are prohibited. If you experience an incident of sex/gender-based discrimination, harassment and/or sexual misconduct, you are encouraged to report it to the Title IX Coordinator, Andrea Anderson, (270) 745-5398 or Title IX Investigators, Michael Crowe, (270) 745-5429 or Joshua Hayes, (270) 745-5121. Please note that while you may report an incident of sex/gender based discrimination, harassment and/or sexual misconduct to a faculty member, WKU faculty are “Responsible Employees” of the University and MUST report what you share to WKU’s Title IX Coordinator or Title IX Investigator. If you would like to speak with someone who may be able to afford you confidentiality, you may contact WKU’s Counseling and Testing Center at (270) 745-3159.