

Chem 260 Abbreviated Syllabus (Spring 2020)

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Course Goals. Chem 260 provides an introduction to core concepts in physical chemistry and in analytical chemistry. Because these areas, even at an introductory level, are too broad to cover in a single semester, our *content-specific goals* are relatively modest; these are to:

- predict the favorability of a reaction and how that favorability depends on temperature
- determine the composition of a reaction when it is at equilibrium
- evaluate how a reaction progresses and elucidate a possible pathway by which it occurs
- study reactions quantitatively in the laboratory by designing and carrying out experiments, and by evaluating experimental data

In addition to these content-specific goals, we also have several *growth-oriented goals* that are important to your development as a student in STEM; these are to . . .

- learn to identify patterns in data and to ask interesting questions
- appreciate the utility of mathematical models as predictive tools
- increase your ability to think critically about abstract ideas
- improve your skills at solving quantitative problems
- become more comfortable working in the laboratory, particularly as part of a research team and to communicate better the results of your work in lab

Working Toward Success in Chem 260. Whatever your background in chemistry, specifically, and in STEM, more generally, in addition to your usual commitments—attending class and lab, completing assignments, and preparing for exams, to name a few items—commit yourself to . . .

- *focusing on growth-oriented goals as much as you focus on content-specific goals:* identify the new skills you are developing and the existing skills you are strengthening
- *participating in class and in lab:* take advantage of our time together by being an active, engaged learner
- *collaborating with your classmates in class and in lab:* this class is not a competition; you have much to learn from each other and to teach each other
- *reflecting every day, even if for just a few minutes, on your most recent class or lab:* look for connections between what you learn in class and what you do in lab; between a new concept and older concepts from earlier in the semester; or between this course and other courses you are taking or have completed
- *asking questions:* in-class and out-of-class; of yourself, of me, and of each other; to clarify uncertainty or to satisfy curiosity

Course Web Site. Many useful materials, including a detailed syllabus, a daily class and a weekly lab schedule, copies of course and lab materials, and answer keys to worksheets, suggested problems, and exams, are available at the course's web site. The link to the site is:

<http://bit.ly/dpuchem260>