**Department of Chemistry Syllabus**

This syllabi is advisory only. For details on a particular instructor's syllabus (including books), consult the instructor's course page. For a list of what courses are being taught each quarter, refer to the Courses page. *Every instructor has prerogative to teach the course as they see fit and ultimately the instructor's syllabus supersedes all others.*

***Chemistry 107B: Physical Chemistry for the Life Sciences***

Approved:

Suggested Textbook: (actual textbook varies by instructor; check your instructor)

PHYSICAL CHEMISTRY for the Biosciences 1st edition by Raymond Chang University Science Books 2005, ISBN 1-891389-33-5. **Required**

Problems and Solutions by Mark D. Marshal and Helen O. Leung University Science Books 2005, ISBN 1-891389-39-4. **Optional**

Suggested Schedule:

Week 1

Kinetic Theory of Gases 2 (pp. 21-28)

Kinetic Theory of Gases 2 (28-31) & 9 (311-7)

Chemical Kinetics 9 (pp. 318-325)

Week 2

Chemical Kinetics 9 (pp. 325-332)

Chemical Kinetics 9 (pp. 332-340)

Chemical Kinetics 9 (pp. 340-348)

Week 3

Chemical Kinetics 9 (pp. 348-354)

Enzyme Kinetics 10 (pp. 363-372)

Week 4

Enzyme Kinetics 10 (pp. 373-384)

Enzyme Kinetics 10 (pp. 385-396)

EXAM 1 2.6-2.9, 9, 10

Week 5

Quantum Mechanics 11 (pp. 401-410)

Quantum Mechanics 11 (pp. 410-418)

Quantum Mechanics 11 (pp. 418-426)

Week 6

Quantum Mechanics 11 (pp. 426-432)

Quantum Mechanics 11 (pp. 432-439)

The Chemical Bond 12 (pp. 447-450)

Week 7

The Chemical Bond 12 (pp. 450-455)

The Chemical Bond 12 (pp. 455-460)

Week 8

The Chemical Bond 12 (pp. 461-468)

Intermolecular Forces 13 (pp. 489-496)

Intermolecular Forces 13 (pp. 497-505)

Week 9

Intermolecular Forces 13 (pp. 505-510)

EXAM 2 11-13

Spectroscopy 14 (pp. 513-522)

Week 10

Spectroscopy 14 (pp. 522-531)

Spectroscopy 14 (pp. 532-539)

Spectroscopy 14 (pp. 539-551)

Spectroscopy 14 (pp. 552-567)

Additional Notes:

Learning Goals: