CHEM 209 L02

SEPTEMBER 2016 To know rooms and exact dates for Experiments and Tutorials you will need to refer to your own schedule in PeopleSoft.

SUN	MON	TUES	WED	THUR	FRI	SAT
28	29	30	31	1	2	3
4	5 Labour Day	6	7	8	9	10
11	12 **No Tutorials** **Expt** Orientation odd-number sections	13 Lectures begin *Welcome!* *Intro and Q&A session for course information* *In-class demonstration* *HOW FAST – textbook reading pp 555-557* *Learning objective:* Qualitatively *describe* what the speed of a reaction depends upon.	14	15 *HOW FAST – textbook reading pp 557-566* *Learning objectives:* *Generate* plots of concentration versus time for the chemical species of a reaction. Determine instantaneous and average rate of reaction from experimental data. *Relate* reactant concentration to instantaneous reaction rates using rate laws.	16 Last day to drop	17
18	19 Last day to add/swap **Tut 1** Review **Expt** Orientation even-number sections	20 *HOW FAST – textbook reading pp 566-579* *Learning objectives:* Given experimental data, quantitatively *determine* the components of a rate law (*k* and order), using the method of initial rates. *Use* integrated rate laws to *determine* the amount of product produced (or reactant remaining) at any given point within a reaction and *determine* the half-life of a reaction.	21	22 *HOW FAST – textbook reading pp 583-589, 592-593* *Learning objectives:* *Determine* the rate law given the mechanism of a reaction, and vice versa – for reactions with a slow first step only. *Draw and interpret* a reaction energy diagram for a given reaction.	23	24
25	26 **Tut 2A** Kinetics **Expt 1** odd-number sections	27 *HOW FAST – textbook reading pp 579-583, 593-595* *Learning objectives:* *Use* the Arrhenius Equation to *determine* the effect of changing temperature on rate and activation energy. *Explain* how reaction speed can be modified using a catalyst	28	29 *HOW FAR – textbook reading pp 610-626* *Learning objectives:* Qualitatively *describe* chemical equilibrium. *Generate* and *manipulate* expressions for K and Q for reactions using concentrations or partial pressures, based on a given reaction or set of related reactions. *Distinguish* between K and Q, and use these values to determine the direction in which a reaction will proceed.	30	