

Final Exam: Wednesday, December 19, 2007 (10:15a.m.-12:15p.m.)

Kinetics Topics: Chapter 15

- reaction rates
- rate laws, rate constants (with proper units), rate orders
- determining reaction orders using the method of initial rates
- integrated rate laws
 - zero-order, first-order, and second-order reactions and rate laws
 - plots of $[A]$ vs. time, $\ln[A]$ vs. time, and $1/[A]$ vs. time, respectively
- half-life for first-order and second-order reactions
- how and why temperature affects reaction rates (e.g., collision frequency, collision energy, collision orientation)
- Arrhenius equation
- catalysts – definition; how it affects reaction rates; homogenous vs. heterogeneous catalysts

(Disclaimer: This is intended to be a helpful checklist in preparation for the kinetics on the final exam. While effort has been made to be complete here, this is not guaranteed and it remains the student's responsibility to completely prepare for the exam.)