

Review of Fundamentals: This material will not be explicitly covered in class. The intent of assigning this reading is to provide a review of relevant high-school-level material. Review by next Friday: Sections A.1 (5th ed pgs F1-9, 4th ed pgs F1-10), B.3-B.4 (5th ed pgs F17-F21, 4th ed pgs F18-21), C (5th ed pgs F22-28, 4th ed pgs F23-28), D (5th ed pgs F29-36, 4th ed pgs F30-36), E (5th ed pgs F37-43, 4th ed pgs F38-44), F (5th ed pgs F45-50, 4th ed pgs F46-50), G (5th ed pgs F51-58, 4th ed pgs F52-59), H (5th ed pgs F60-63, 4th ed pgs F61-64), L (5th ed pgs F85-92, 4th ed pgs F85-91), and M (5th ed pgs F95-103, 4th ed pgs F93-100).

Significant Figures: Significant figures are important. Rules for scientific notation and significant figures are available in the back of our textbook in **Appendix 1, pages A5-A6**. You are also responsible for knowing the following SI prefixes: n (nano, 10⁻⁹), μ (micro, 10⁻⁶), m (milli, 10⁻³), c (centi, 10⁻²), and k (kilo, 10³).

Reading for Lecture #2: Sections A.2-A.3 (5th ed pgs F9-13, 4th ed pgs F10-13) – Force and Energy, Sections B.1-B.2 (5th ed pgs F15-17, 4th ed pgs F15-18) – Elements and Atoms, Section 1.1 (5th ed and 4th ed pgs 1-3) – The Nuclear Atom.

Pre-lecture Question for Lecture #2: Answer question(s) on 5.111x website.

Problem Set #1 (due Friday, Sept. 12th): The PSET should be downloaded from the 5.111 course webpage. Problems 1-6 cover the review of fundamentals and can be worked on immediately. Work on problems 7-12 after the material is covered in lecture.

Topics:

- I. General Course Information and Policies
- II. Course Material Overview (See Syllabus)
- III. Introduction to the 5.111 Teaching Team

By the end of today's class, you should

- be familiar with general course policies and where to go for more information.
- understand the scope of chemical principles we will study in 5.111 and begin to understand how basic chemical principles relate to current research challenges.

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5.111 Principles of Chemical Science
Fall 2014

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