

SC 367 Chemical Reactions

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TEXTBOOK: Chemistry: The Central Science, 2012

OBJECTIVES: Chemical Reactions is the study of various reaction types and the physical and chemical properties that govern chemical reactions. At the conclusion of the course students will be able to:

- Relate the properties of gases and their chemical behavior
- Understand phase changes and energy changes due to attractions between particles
- Derive varied concentration measurements and determine their effect on properties of solutions
- Relate rates of reaction to concentration & predict rate laws
- Understand chemical equilibrium and predict how it is manipulated
- Identify properties of acids and bases and their reactions
- Write and balance equations for oxidation-reduction reactions

TIMELINE:

Week 1-3	Gas Laws & Reactions (Ch 10)
Week 3-5	Intermolecular Forces (Ch 11-12)
Week 6-8	Solutions & Colligative Properties (Ch 13)
Week 9-11	Chemical Kinetics (Ch 14)
Week 12-15	Chemical Equilibrium (Ch 15-16)
Week 16-17	Oxidation-Reduction Reactions (Ch 20)
Week 18	EXAMS (May 16 – 19, 2018)

Content and schedule may change as needed; students will be notified in class of any changes.

EXPECTATIONS:

- Come to class prepared, **READ ASSIGNED SECTIONS** and be ready to discuss assigned topic.
- **CELL PHONES SHOULD BE SILENCED AND PUT AWAY UPON ENTERING CLASS.** Handbook policies will be enforced.
- Turn in assignments at beginning of class; Late penalties: (except homework) 10% same day, 25% for one day, 50% for 2-5 days, NC for more than 5 days. See student handbook policies regarding make-up work for absences.
- Proper dress and paperwork for lab! (point deduction for being unprepared for lab)

ASSIGNMENTS:

Homework (10 pts): Assignments **online** at Mastering Chemistry, due by 11:59 the night before date specified. **No credit for homework submitted late.** Work MUST be shown to receive full credit. No work = 50%.

Lab Reports (50-100 pts): Due at beginning of class on Wednesday for data sheets, Friday following the lab for formal report each quarter. See Lab Guidelines for format instructions for formal lab reports. *Failure to follow lab report guidelines will result in significant deductions.*

Quizzes (20 pts): Announced or unannounced

Tests (100 points): Announced well in advance, Make up tests may be different from original.

In problem solving, **all work** (including units) must be **clearly shown** in order to receive credit on quizzes and tests. **NOTE:** All tests will be held by the instructor. Students may come to office to view their tests for feedback.

Attendance and Absences

Roll is taken every day, and the Student Handbook guidelines will be followed in dealing with absences. All discussions of missed work should occur outside of regular class time (office hours, between classes, during lunch, etc.).

In the case of planned absences, students should make arrangements to complete assignments **prior to the absence**, in accordance with the Student Handbook. Failure to make arrangements prior to planned absences will result in a 20% deduction on all graded work. In the event that a student is unexpectedly absent, he/she should make arrangements to complete any missed assignments immediately upon return. Failure to do so will result in a minimum 20% deduction on all graded work.

Any assignment missed due to absence that has not been completed and submitted within a reasonable time frame (usually the number of days missed), will not be accepted. This includes any and all written work. If you do not make up your missed work within the time scheduled, you will receive no credit (0%) for any missed assignments.

ASSESSMENT:

Includes homework, quizzes, unit tests, lab work, and semester exam.

Nine Weeks Average

Unit tests	50%
Lab work	25%
Quizzes	15%
Homework	10%

Semester Average

Nine weeks average	40% (x2)
Semester exam	20%

See student handbook for grading scale

SUPPLIES:

- Scientific calculator (TI-83/84 or Nspire may be used)
- Other supplies for activities and projects will be announced at least 1 week in advance.

ACADEMIC HONESTY:

Academic honesty is expected from every student. Students should never claim as his/her own work any work or knowledge **from** another person. Students should not share test information electronically, verbally or in writing. Handbook policies will be enforced.

- On lab reports, partners' *data* should be the same, but **answers to questions SHOULD NOT be the same.**
- Copying/pasting from any website to a paper or project. (cited or not)
- Using notes or another person's answers on a test; discussing information on test before or after taking.

Independent work on homework is critical to success in this course. The point value for homework is intentionally low to not penalize students for learning by doing. Students who shortcut homework answers perform significantly worse on tests than those willing to work through for understanding.

HELPFUL HINTS:

- READ the textbook assignments and take notes from reading and in class.
- Do homework early, when practice from class and examples are fresh. USE TEXT AND NOTES.
- Read over and re-copy notes. Waiting to study the night before a test rarely leads to success.
- Turn in work ON TIME—don't throw hard earned grades away due to late penalties.
- PLEASE take advantage of office and tutorial time. This will improve understanding of chemistry. Communication is VITAL to success at MSMS.