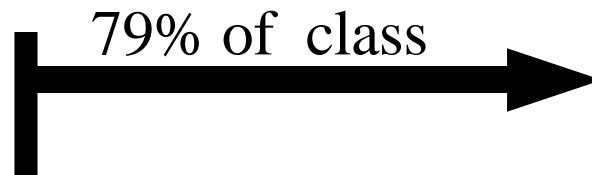


Welcome to Chemistry 106

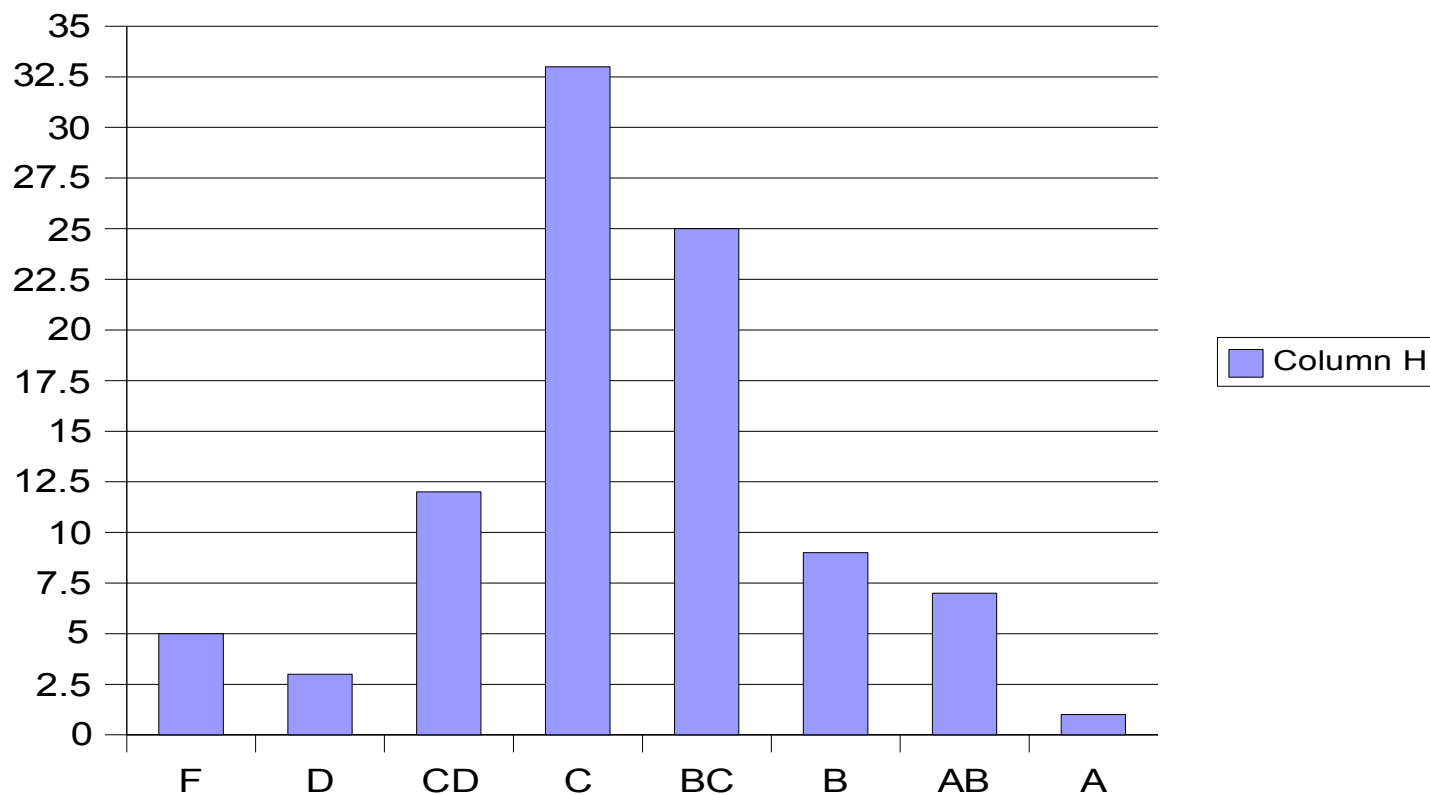
- General Chemistry II
- Prerequisites:
 - C or better in Chemistry 105
 - credit in Math 104
- Instructors:
 - Dr. Jonathan Gutow
 - Dr. Evon Ford
- Job Opportunities in Chemistry Department:
 - Work in the stock room to prepare materials for chemistry class labs.
 - Contact: Mrs. Hauer, who runs the stockroom.

Grade Distribution 105 S06

79% of class



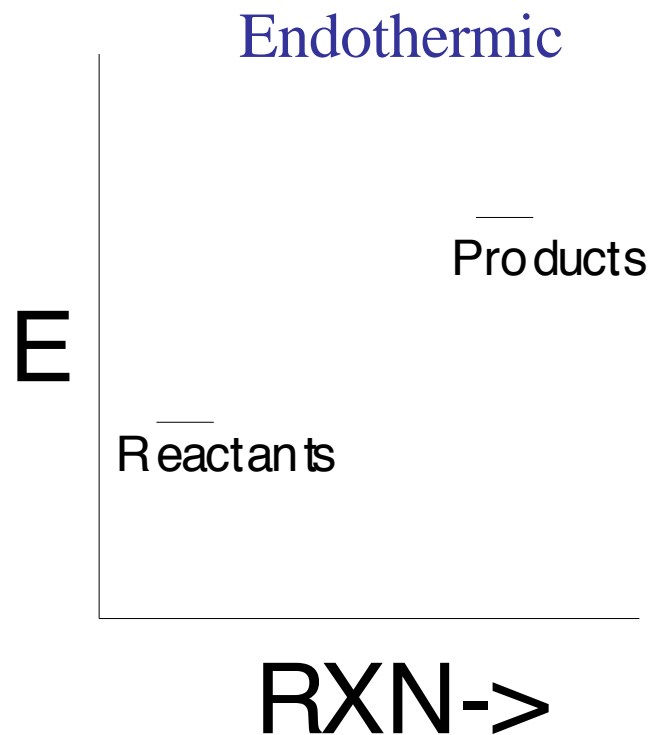
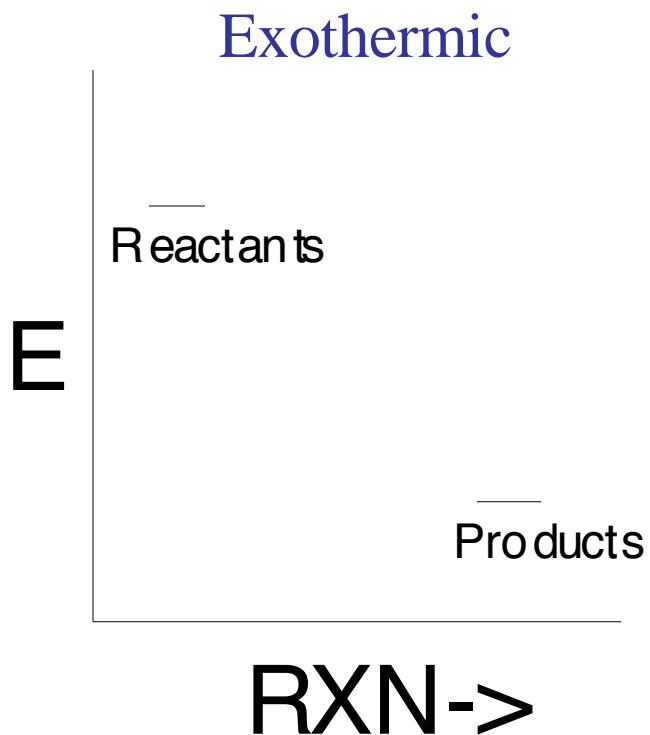
Chem 105 S07 Grade Distribution



Energy

- Capacity to do work = Force • distance or $E = F \cdot d$ (Units: $N \cdot m = J$)
- Law of conservation of energy: Energy cannot be created or destroyed. It can only be converted from one form to another.
- Types of Energy:
 - Kinetic Energy = energy of motion
 - Potential Energy = energy of position (also chemical)
 - Electromagnetic Energy (light)
- Thermochemistry = study of energy in chemical reactions

Potential Energy Reaction Pathway Diagrams



Naming “Normal” Alkanes (1-4)

# C	# H	Formula	Name
1	4	CH_4	Methane
2	6	H_3CCH_3 (C_2H_6)	Ethane
3	8	$\text{H}_3\text{CCH}_2\text{CH}_3$	Propane
4	10	$\text{H}_3\text{CCH}_2\text{CH}_2\text{CH}_3$	Butane

Naming “Normal” Alkanes (>4)

Named systematically using Greek prefixes:

Greek Prefix for # of C + -ane

# C	Prefix
5	Penta-
6	Hexa-
7	Hepta-
8	Octa-
9	Nona-
10	Deca-

Example: $\text{H}_3\text{CCH}_2\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_3 = \text{heptane}$

Alkane Subunits & General Formula

- Subunits:
 - $-\text{CH}_2-$: methylene group
 - $-\text{CH}_3$: methyl group
- General Formula: $\text{C}_n\text{H}_{2n+2}$