Course Web site
http://www.sinc.sunysb.edu/Class/che142jl/

Assignments
Personal Workshop Form

Prof. Joseph Lauher
Chemistry Room 749 Chemistry
che142@notes.cc.sunysb.edu

CHE142 Lecture MWF 10:40-11:35 AM
Harriman 137

Workshops: (attendance is required)
RO1 Monday 11:45-12:40 PM Chem. Rm 123
RO2 Tuesday 8:45-9:40 AM Chem. Rm 126
RO3 Tuesday 11:20-12:15 PM Chem. Rm 126
RO4 Monday 12:50-1:45 PM Chem. Rm 126

There are Workshops this week

Text:
Chemical Principles, 5th Edition, by Steven Zumdahl

Three in class exams  300pt
Comprehensive Final  200pt
Quizzes in Class and workshops ~100pt

First Exam Friday       Feb. 23

How to get an A
• Read and Study the text
• Come to class
• Go to Workshops
• Work Problems!

Office Hours
Professor Lauher

Monday ----- 2:00-3:00 pm
Tuesday ----- 1:15-2:15 pm
Chemistry Room 749

Graduate TAs
Matthew Christiansen   Monday Sections
Christopher Marai      Tuesday Sections

CPS Clickers
http://www.einstruction.com

Class Name: CHE142 Class Key: H26309K498

First quiz:
What grade to you expect to get in CHE 142?
What grade to you expect the person sitting next to you to get in CHE 142?

A   B   C   D   E   F
What is the pH of a 1M solution of HCl?

A 0  E  6
B 1  F  7
C 2  G  8
D 4  H  10

What is the pH of a 10^{-2} M solution of HCl?

A 0  E  7
B 1  F  8
C 2  G  9
D 4  H  10

What is the pH of a 10^{-10} M solution of HCl?

A 0  E  7
B 1  F  8
C 2  G  9
D 4  H  10

What is the pH of a 1 M solution of HA?

assume pK_a of HA = 4  K_a = 10^{-4}
No calculator needed!

A 0  E  7
B 1  F  8
C 2  G  9
D 4  H  10

What is the pH of a 1 M solution of NaA?

assume pK_a of HA = 4  K_a = 10^{-4}
No calculator needed!

A 0  E  7
B 1  F  8
C 2  G  9
D 4  H  10

What is does this represent?

propane C_3H_8

CH_3CH_2CH_3

What is the molecular formula?

C_4H_8O_2
Line drawings
End of every indicated bond has C atom unless some other element is indicated.

\[
\begin{align*}
\text{C}_8\text{H}_{11}\text{ClO} \\
\end{align*}
\]

Hydrogens on C atoms are usually not shown, but hydrogens on other elements are shown.
Add hydrogens as needed to give C four bonds.

How many carbon atoms?
A 4
B 5
C 6
D 7
E 8
F 9

What is the molecular formula?
A \(\text{C}_6\text{H}_7\text{NO}\)
B \(\text{C}_6\text{H}_8\text{NO}\)
C \(\text{C}_6\text{H}_9\text{NO}\)
D \(\text{C}_6\text{H}_{10}\text{NO}\)
E \(\text{C}_6\text{H}_{11}\text{NO}\)
F \(\text{C}_6\text{H}_{12}\text{NO}\)

What is the molecular formula?
A \(\text{C}_{19}\text{H}_{24}\text{O}_2\)
B \(\text{C}_{19}\text{H}_{25}\text{O}_2\)
C \(\text{C}_{19}\text{H}_{26}\text{O}_2\)
D \(\text{C}_{19}\text{H}_{27}\text{O}_2\)
E \(\text{C}_{19}\text{H}_{28}\text{O}_2\)
F \(\text{C}_{19}\text{H}_{29}\text{O}_2\)
G \(\text{C}_{19}\text{H}_{30}\text{O}_2\)
H \(\text{C}_{19}\text{H}_{31}\text{O}_2\)

What is coming?
Chapter 12 Quantum Mechanics
Electronic Structure of Atoms
Chapter 13 Electronic Structure of Molecules
Chapter 14 Molecular Orbital Theory
Introduction to Organic Chemistry
Chapter 15 Kinetics
Chapter 20 Transition Metals
Introduction to Biological Chemistry