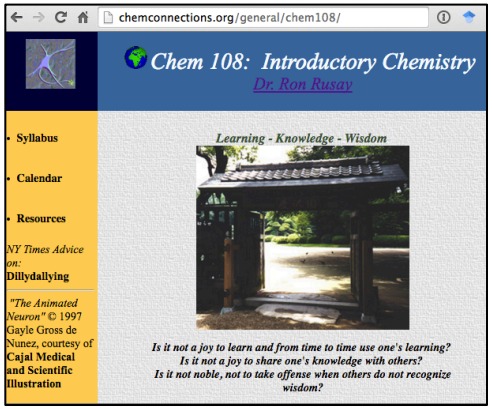
Greetings & Welcome to Chem 108

Introductory Chemistry

http://chemconnections.org/general/chem108/

If you are enrolled or on the wait list, please pick up a course Syllabus @ the front of the class.



Please hold ALL of your questions. They will be answered shortly in the slides that follow.

Dr. Ron Rusay

Class: MW 11:10-12:35 (PS 277)

Discussion/Lab:
12:45-3:55 M (PS 217) *sec. 2341*
12:45-3:55 W (PS 217) *sec. 2343*

Greetings & Welcome to Chem 108

Introductory Chemistry

http://chemconnections.org/general/chem108/

Message from President

Susan E. Lamb

DVC DIABLO VALLEY COLLEGE

"I am very glad that you are here and I want you to feel welcome, safe and connected to our college. DVC values each and every one of you, and does not tolerate racist attitudes or hate speech of any kind. If you see or hear anyone spreading hate language anywhere on our campus, please tell me or contact Newin Orante (Vice President of Student Services) or Police Services. We take such incidences very seriously and will pursue and prosecute hate crimes on our campuses."

Chem 108

http://chemconnections.org/general/chem108/108syl19f.html

- Please be sure to sign the roster next to your name on the clipboard that is circulating.
- The rosters and wait lists are full. The sections are closed. If you are not listed, there is no way to add.
- **Class size is limited to 28 max due to lab safety.** Anyone on the roster who is absent today will be placed last on the roster after the wait listed sign-ins.
- **28 lab drawers** will be assigned in lab to the first 28 on the completed list. **Add codes will be provided at the end of the first lab meeting: Today & Wednesday.**

CONNECTIONS

Show of hands for each choice (A-D)

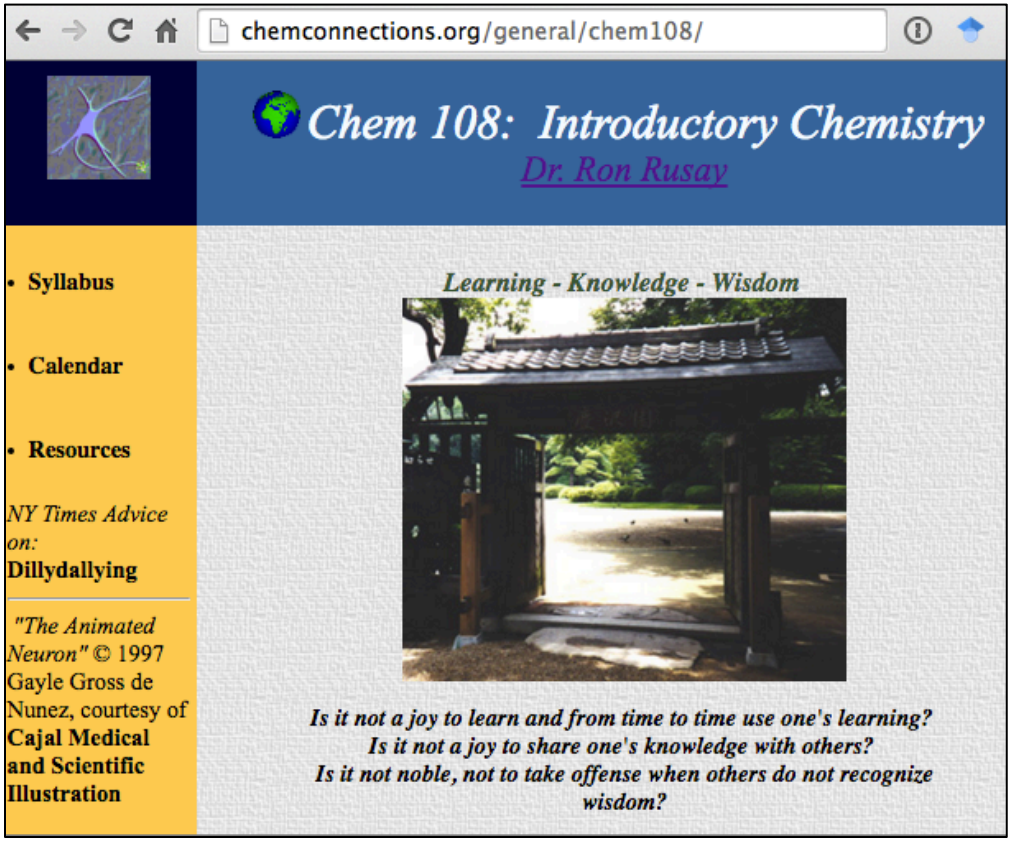
I personally have or have easy (24/7) access to:

A. a smart phone
B. a personal computer
C. the Internet
D. a printer

If you DO NOT have a smartphone or DO NOT have easy access to B.), C.), or D.), please make an appointment to meet with Dr. R. as soon as possible to get more information and work out a plan to conveniently use them. It is essential that you can use certain technology; all but smartphones are available for use on the DVC campus.

Take out your smart phone.

If you don't have it with you, introduce yourself to a class mate and share theirs.



Open DVC wifi.
Connect to the Internet.
Go to:

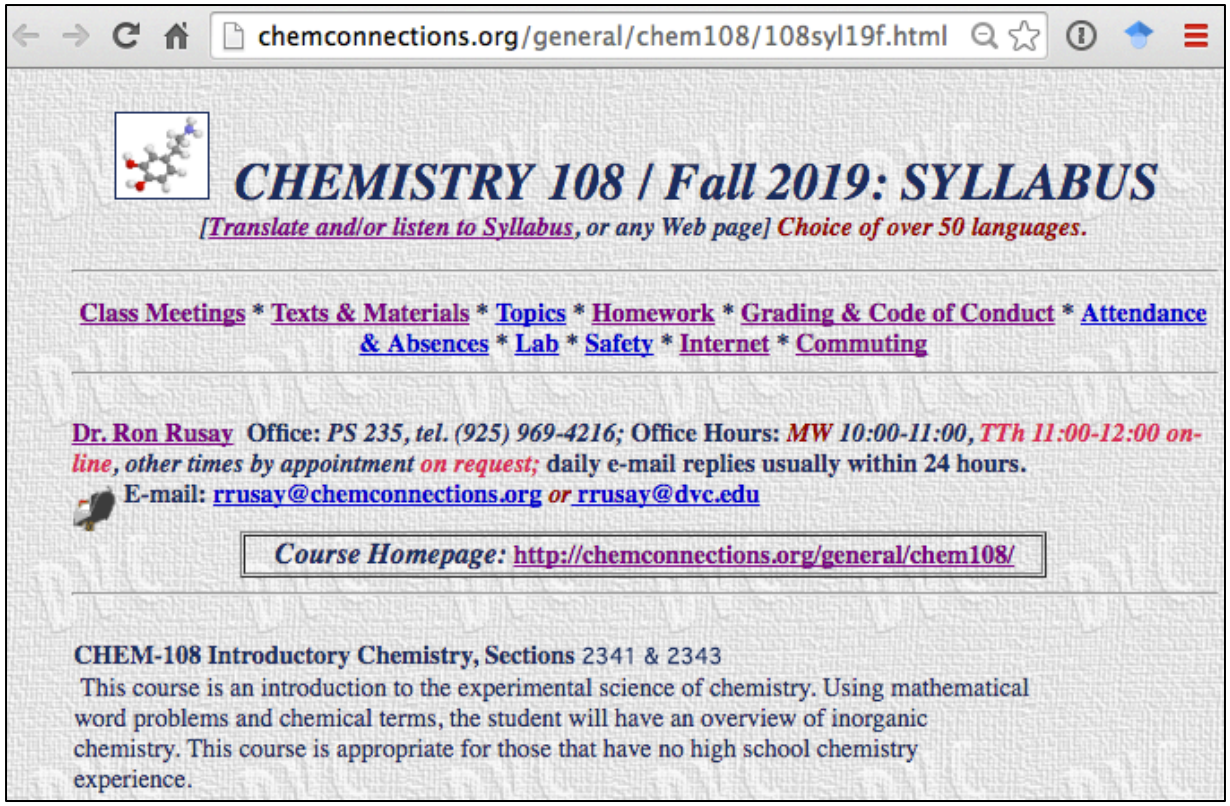
http://chemconnections.org/general/chem108/

Click on Syllabus link

Chem 108

http://chemconnections.org/general/chem108/108syl19f.html

Syllabus link



CONNECTIONS
Chemistry, STEM & Applications

Why am I enrolling in CHEM 108?

A. It is a required course that is needed to meet my higher education goals. I have to take it.
B. Chemistry is very easy to me and I need the 4 credit A to boost my GPA.
C. I am very interested in science and chemistry.
D. I'm not sure.

Show of hands; i-clickers or Reef App to be used in future class meetings.)
https://app.reef-education.com/#/account/create

CONNECTIONS

Chemistry, STEM & Applications

My plan after completing Chem 108 is to:

A. take *General Chemistry :* (If @ DVC: Chem 120)

B. take *Integrated Inorganic, Organic, and Biological Chemistry:* (If @ DVC: Chem 107)

C. take *Introduction to Organic and Biochemistry:* (If @ DVC: Chem 109).

D. NOT take other chemistry courses after Chem 108.

Show of hands; i-clickers or Reef App to be used in future class meetings.)
https://app.reef-education.com/#/account/create

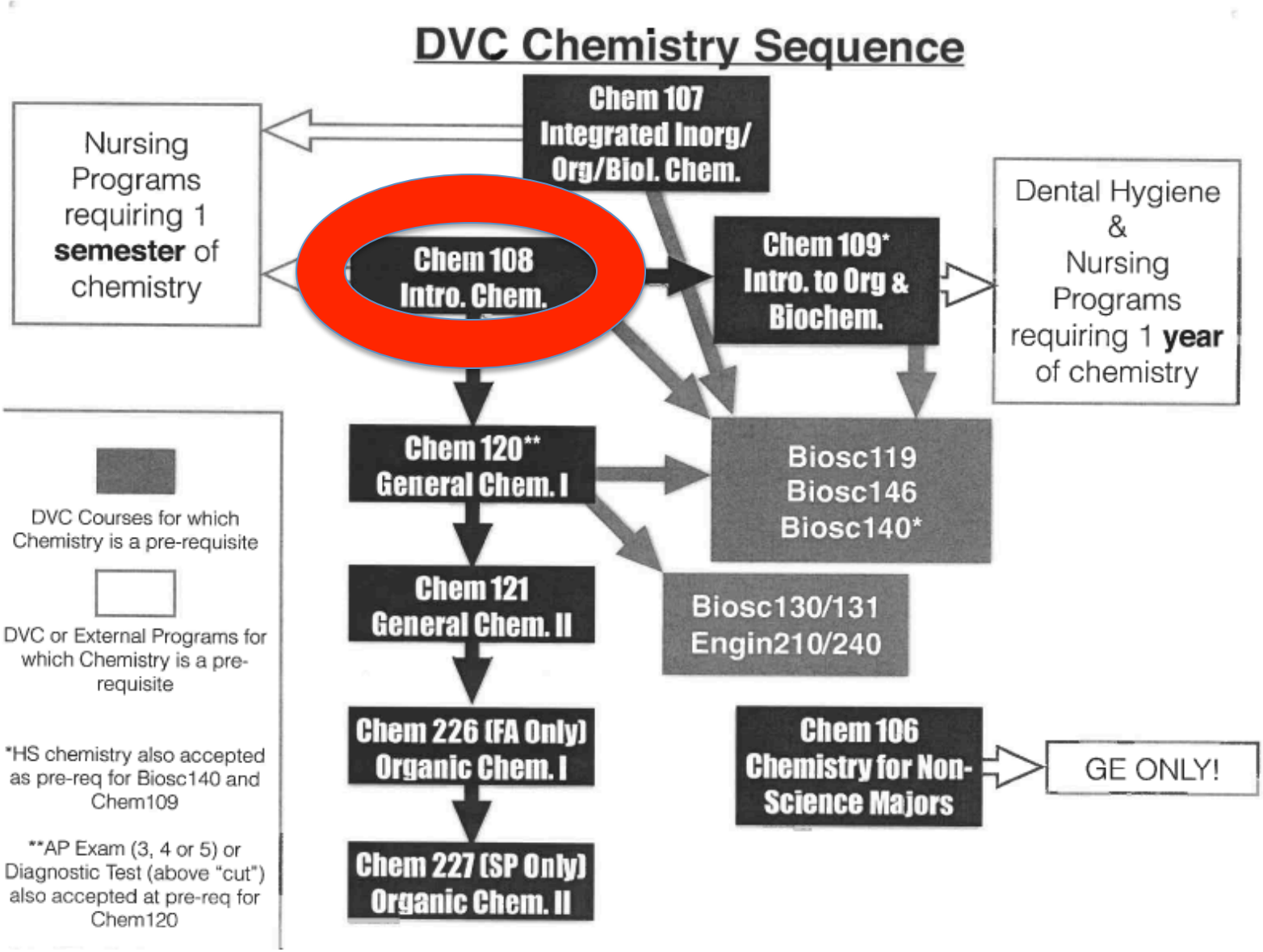
CONNECTIONS

Requirements Met by DVC Chemistry Courses

	Chem 106 Chemistry for Non-Science Majors	Chem 107 Integrated Inorg/ Org/Biol Chem.	Chem 108 Introductory Chem.	Chem 109 Intro. to Org. & Biochem.	Chem 120 Gen. Chem. I	Chem 121 Gen. Chem. II
Chemistry courses that fulfill GE science requirements						
DVC GE	X		X	X	X	X
IGETC	X		X	X	X	X
CSU GE	X	X	X	X	X	X
Chemistry courses that fulfill AS degree requirements						
Natural Science AS	X	X	X	X	X	X
Health Education AS			X			
Kinesiology AAT					X	
Sports Med/Athl Training AS		X	X	X	X	
Chemistry courses that fulfill AS degree requirements (ONE REQUIRED)						
Allied Health AS		X	X	X	X	
Life Science AS		X		X	X	
Enviro Science AS			X		X	
Chemistry courses that ARE REQUIRED to earn AS degrees						
Dental Hygiene AS			X	X		
Civil Eng AS					X	
Elec/Comp Eng AS					X	
Mech Eng AS					X	
Geology AS					X	X
Resp. Therapy AS		X	X			

Chem 226 and 227 (Organic Chemistry I & II) are required for transfer in some majors but are not currently part of any DVC degree program.

CONNECTIONS

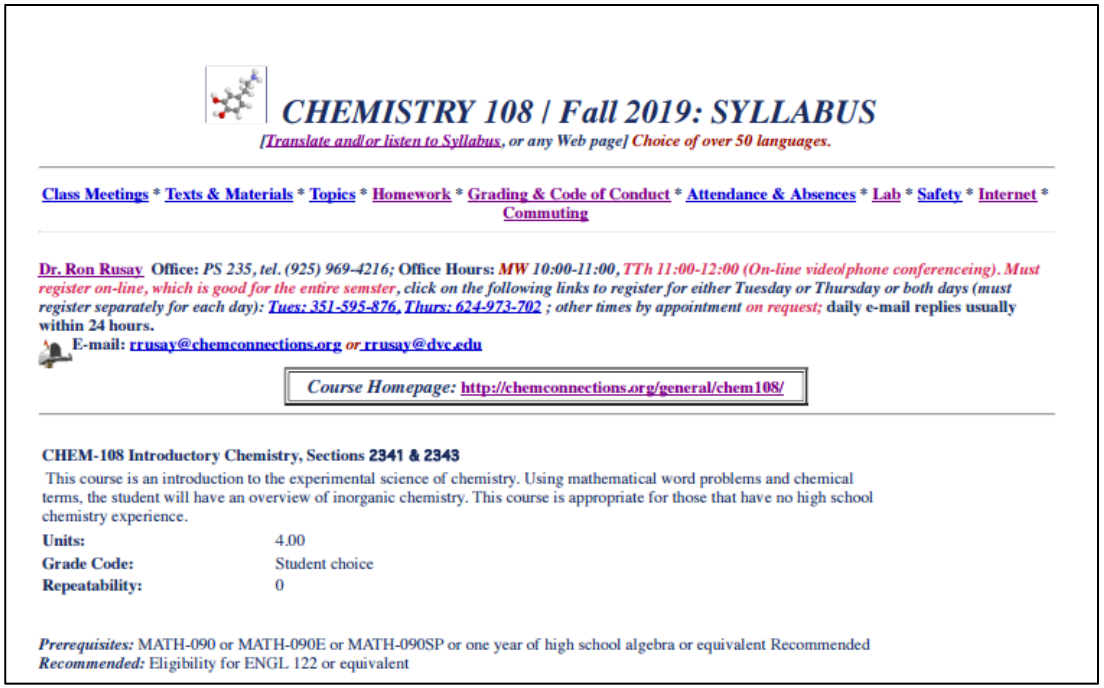


Chem 108: Class/ Lab

http://chemconnections.org/general/chem108/108syl19f.html

$$$???

First Timers:
Tuition Free
(Get information from DVC A &R)



CHEMISTRY 108 / Fall 2019: SYLLABUS

[Translate and/or listen to Syllabus, or any Web page] Choice of over 50 languages.

Class Meetings * Texts & Materials * Topics * Homework * Grading & Code of Conduct * Attendance & Absences * Lab * Safety * Internet * Commuting

Dr. Ron Rusay Office: *PS 235, tel. (925) 969-4216;* Office Hours: *MW 10:00-11:00, TTh 11:00-12:00 (On-line video/phone conferenceing). Must register on-line, which is good for the entire semster, click on the following links to register for either Tuesday or Thursday or both days (must register separately for each day): Tues: 351-595-876, Thurs: 624-973-702 ; other times by appointment on request;* daily e-mail replies usually within 24 hours.

E-mail: rrusay@chemconnections.org *or* rrusay@dvc.edu

Course Homepage: http://chemconnections.org/general/chem108/

CHEM-108 Introductory Chemistry, Sections 2341 & 2343

This course is an introduction to the experimental science of chemistry. Using mathematical word problems and chemical terms, the student will have an overview of inorganic chemistry. This course is appropriate for those that have no high school chemistry experience.

Units:	4.00
Grade Code:	Student choice
Repeatability:	0

Prerequisites: MATH-090 or MATH-090E or MATH-090SP or one year of high school algebra or equivalent Recommended
Recommended: Eligibility for ENGL 122 or equivalent

$$$???

Course Materials:
Kept as low as possible

Please read carefully, after today's class.

Chem 108

http://chemconnections.org/general/chem108/108syl19f.html

Resources: (REQUIRED/MUST HAVE)

1. **Chem 108 Lab Manual (Available in the DVC Bookstore: $17.95)**
2. **Webassign: Class Key, dvc 3947 0654, provides access to all of the Webassign resources through your account, which includes An Introduction to Chemistry e-book with associated questions and supporting resources ($41.00) (Hard copies of An Introduction to Chemistry, Atoms First ISBN978-0-9778105 can be purchased @ $74.45.)**
3. **i<clicker: The older version is acceptable, as well as the newer . 2 and i-clicker+ versions ($5.00-$40.00 on-line & DVC); i-clicker Reef Access ($14.99)**
4. **Personal e-mail account. (DVC/CCCCD "Insite" account not recommended, but ok.)**
5. **Notebook: 3 ring recommended**
6. **Access to the Internet (Can be limited, such as only on the DVC Campus or at free WiFi hotspots)**
7. **Lab safety glasses with side shields or goggles on sale by DVC Chem Club**

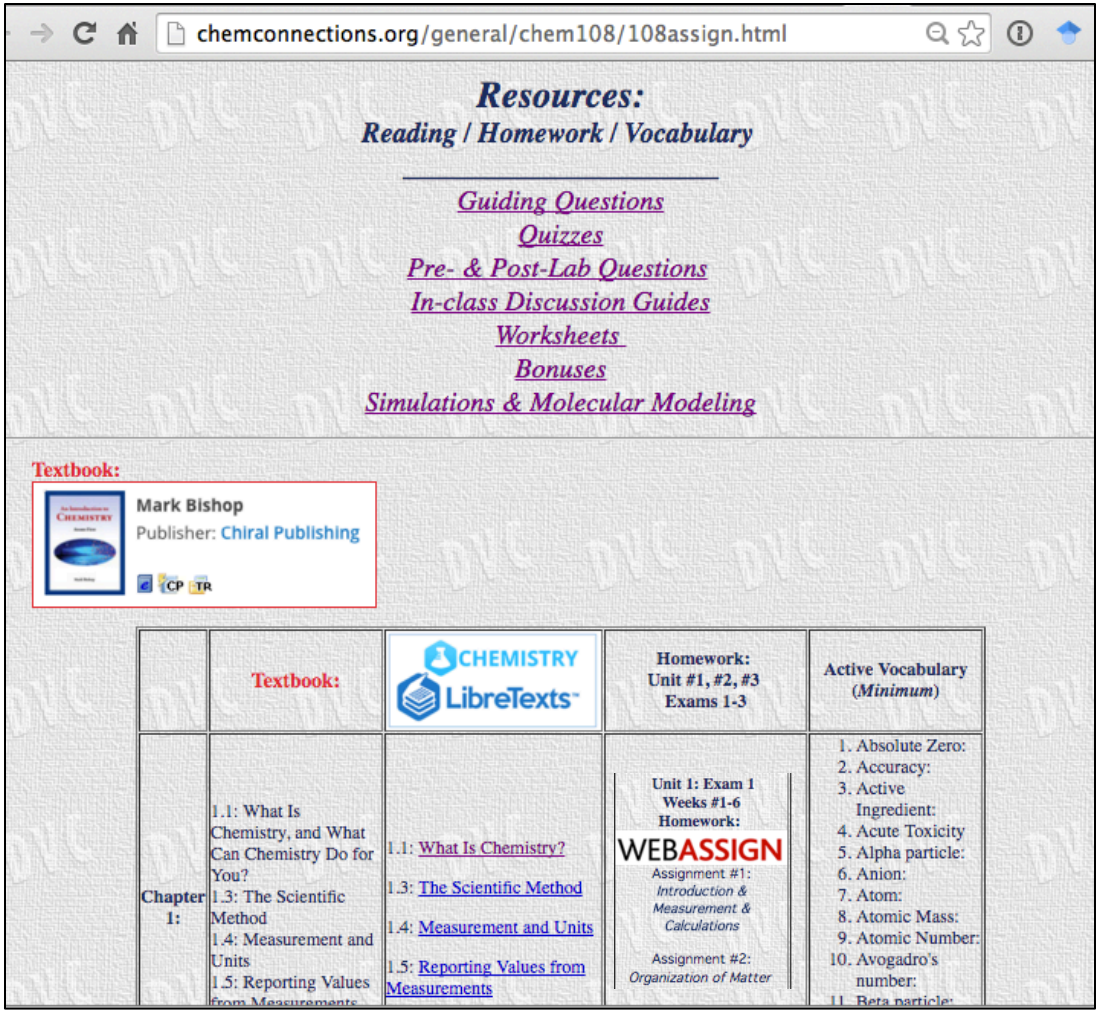
Chem 108

http://chemconnections.org/general/chem108/108assign.html

From Homepage Click on Resources link

Resources:

Reading / Homework/ Vocabulary/ Guiding Questions / Quizzes/ Discussion Guides/ Worksheets/ Simulations & Molecular Modeling



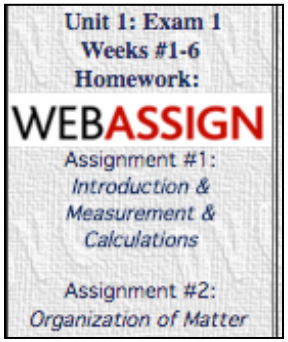
Libretext aka ChemWiki

alternative to or additional resource for textbook

https://chem.libretexts.org

CHEMISTRY LibreTexts™

Must enroll in Webassign regardless of choice.



Chem 108

http://chemconnections.org/general/chem108/108syl19f.html

Grading:

1. i-clicker questions/in-class participation + answers to on-line Guiding Questions + on-line simulations/ quizzes are valued at 15% of the TOTAL grade.
2. Webassign completed work is valued at 15% of the TOTAL grade.
3. Laboratory experiments, activities, pre- & post-lab questions, worksheets and simulations are valued at 25% of the TOTAL grade.
4. 3 exams, each comprising 15% of the TOTAL grade, and, in total, equal to **45%** of the TOTAL grade.

Chem 108

http://chemconnections.org/general/chem108/108syl19f.html

Exam Dates: 9/30, 11/4, 12/18
. [Cell phones will not be allowed during exams and quizzes.]

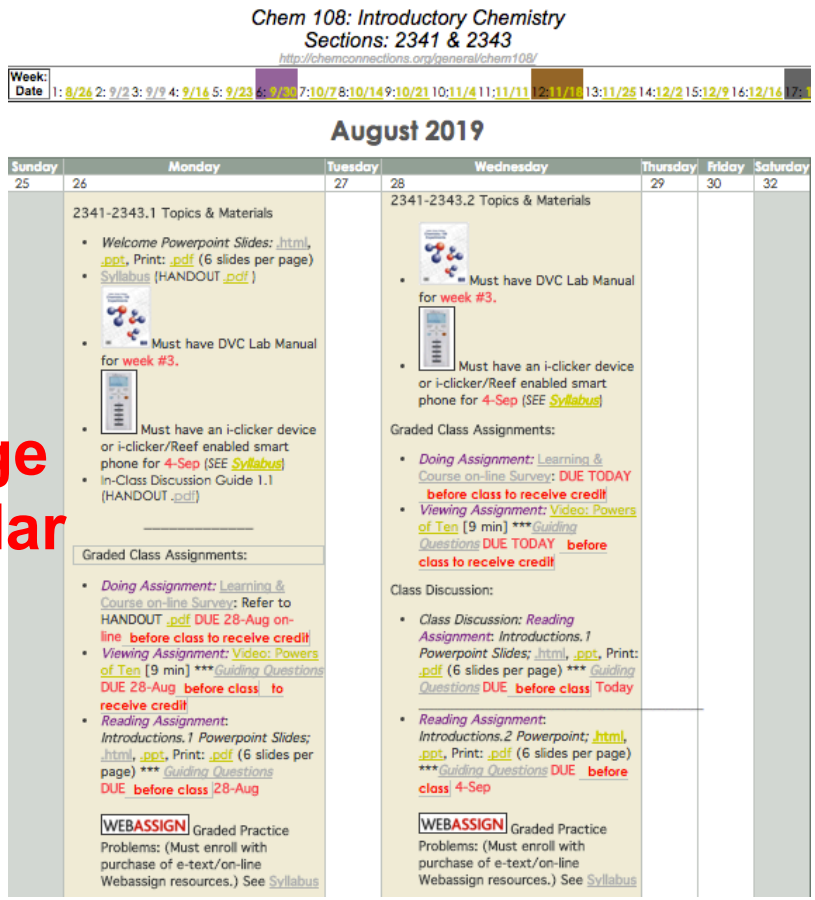
Final letter grades will be assigned based on an overall average in the following ranges: 87-100 A; 75-86 B; 60-74 C; 50-59 D; <50 F, using normalized class averages.

NOTE: The DVC Code of Conduct will be strictly enforced. Cheating and plagiarism are unacceptable and will unconditionally result in a failing grade
SEE: DVC Academic College Policies

Chem 108: Beginning of a Journey

http://chemconnections.org/general/chem108/calendar-108-f19.html

From Homepage Click on Calendar link



Chem 108: Introductory Chemistry
Sections: 2341 & 2343
http://chemconnections.org/general/chem108/

Week: Date | 1: 8/26 2: 9/2 3: 9/9 4: 9/16 5: 9/23 6: 9/30 7:10/7 8:10/14 9:10/21 10:11/4 11:11/11 12:11/18 13:11/25 14:12/2 15:12/9 16:12/16 17:

August 2019

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
25	26	27	28	29	30	32

2341-2343.1 Topics & Materials

- *Welcome Powerpoint Slides:* .html, .ppt, Print: .pdf (6 slides per page)
- Syllabus {HANDOUT .pdf }
- Must have DVC Lab Manual for week #3.
- Must have an i-clicker device or i-clicker/Reef enabled smart phone for 4-Sep (*SEE Syllabus*)
- In-Class Discussion Guide 1.1 (HANDOUT .pdf)

Graded Class Assignments:

- *Doing Assignment:* Learning & Course on-line Survey: Refer to HANDOUT .pdf DUE 28-Aug on-line before class to receive credit
- *Viewing Assignment:* Video: Powers of Ten [9 min] ***Guiding Questions DUE 28-Aug before class to receive credit
- *Reading Assignment:* *Introductions.1 Powerpoint Slides;* .html, .ppt, Print: .pdf (6 slides per page) *** *Guiding Questions* DUE before class 28-Aug

WEBASSIGN Graded Practice Problems: (Must enroll with purchase of e-text/on-line Webassign resources.) See Syllabus

2341-2343.2 Topics & Materials

- Must have DVC Lab Manual for week #3.
- Must have an i-clicker device or i-clicker/Reef enabled smart phone for 4-Sep (*SEE Syllabus*)

Graded Class Assignments:

- *Doing Assignment:* Learning & Course on-line Survey: DUE TODAY before class to receive credit
- *Viewing Assignment:* Video: Powers of Ten [9 min] ***Guiding Questions DUE TODAY before class to receive credit

Class Discussion:

- *Class Discussion: Reading Assignment: Introductions.1 Powerpoint Slides;* .html, .ppt, Print: .pdf (6 slides per page) *** *Guiding Questions* DUE before class Today
- *Reading Assignment:* *Introductions.2 Powerpoint;* .html, .ppt, Print: .pdf (6 slides per page) ***Guiding Questions DUE before class 4-Sep

WEBASSIGN Graded Practice Problems: (Must enroll with purchase of e-text/on-line Webassign resources.) See Syllabus

Follow the Viewing-Reading-Doing links in the calendar to lead you on your path.

Chem 108

Refer to the course calendar page **TODAY** & **frequently**. The current week's calendar is set the beginning of the week, and is then static. Plan by each week……. *Execute day-by-day. Meet all due dates!!*

Before coming to each class/lab meeting: ***Read, View & Do*** the scheduled activity links: ***Videos, Powerpoint Class Slides, Notes, Worksheets, Simulations, etc.***

1. ***Answer all on-line Guiding Questions***.
2. Review and consider logical answers & ***explanations for the embedded Powerpoint i-clicker questions,*** *then refer to the correct answers, which are presented in class*. Bring any questions for discussion to the class meetings and Office Hours.
3. ***Complete WEBASSIGN Homework, all lab assignments, activities & worksheets.***
4. Individually and collaboratively use all available resources to develop a sufficient level of ***mastery of the class/lab vocabulary, problems, and topics*** *to understand the chemistry / science and be able to explain concepts clearly to someone else*.

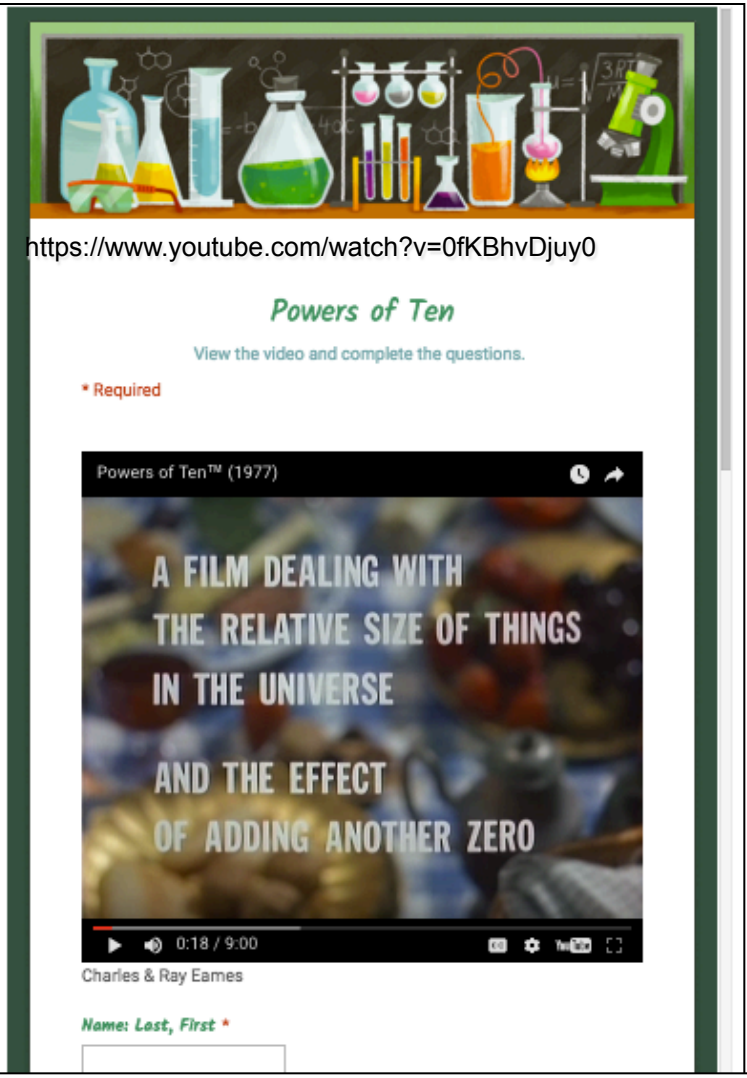
Hearing/Viewing: Guiding Questions (GQ)

Measurements & Relative Scale

http://chemconnections.org/general/chem108/Powers%20of%20Ten-Guide.html

1. Answer all on-line Guiding Questions.

First GQ assignment Due before next class.

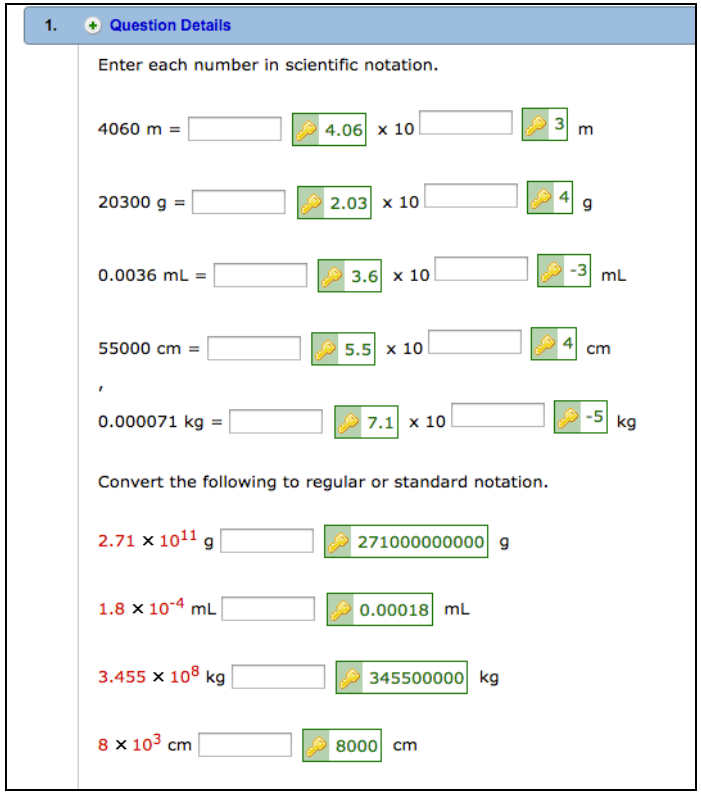


From the calendar links, submit responses on-line; graded weekly.

WebAssign Homework

https://www.webassign.net/v4cgi/selfenroll/classkey.html
Class Key: dvc 3947 0654

http://chemconnections.org/general/chem108/Student_Quick_Start_Guide_SE.pdf



1. Question Details

Enter each number in scientific notation.

4060 m = [ ] 4.06 x 10 [ ] 3 m

20300 g = [ ] 2.03 x 10 [ ] 4 g

0.0036 mL = [ ] 3.6 x 10 [ ] -3 mL

55000 cm = [ ] 5.5 x 10 [ ] 4 cm

0.000071 kg = [ ] 7.1 x 10 [ ] -5 kg

Convert the following to regular or standard notation.

2.71×10^{11} g [ ] 271000000000 g

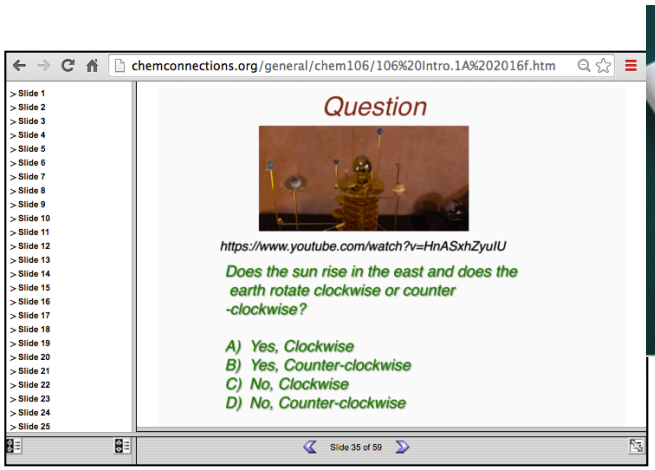
1.8×10^{-4} mL [ ] 0.00018 mL

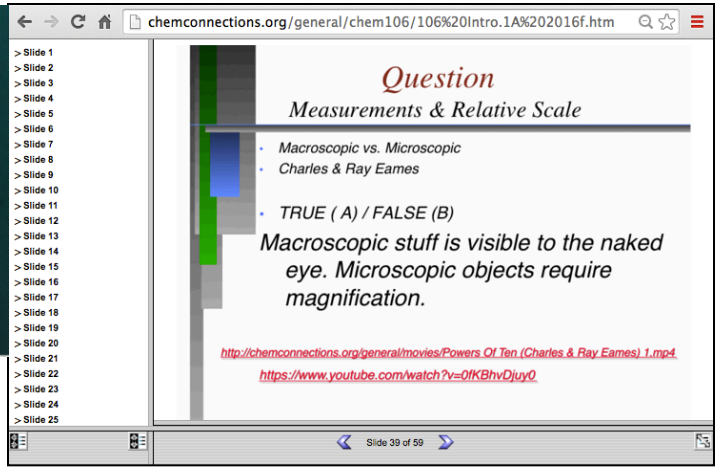
3.455×10^{8} kg [ ] 345500000 kg

8×10^{3} cm [ ] 8000 cm

Reading: Powerpoint Slides

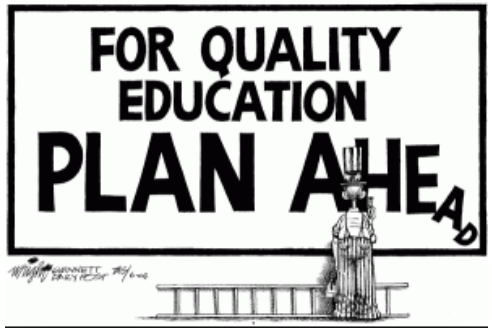
Embedded i-clicker Questions





Read Powerpoint slides before class (can be printed), consider embedded questions; answers will be provided in class. One of these questions will be asked @ the start of the following class. ***Only answers submitted with a personal, registered i-clicker or smart phone will receive credit.***

These slides & questions will be the basis for a significant part of exams.



Refer to Calendar's Next & Future Classes/Labs

Chem 108: Introductory Chemistry
Sections: 2341 & 2343
http://chemconnections.org/general/chem108/

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- *Reading Assignment*: *Introductions.1 Powerpoint Slides;* .html, .ppt, Print: .pdf (6 slides per page) *** *Guiding Questions* DUE **before class** 28-Aug

WEBASSIGN Graded Practice Problems: (Must enroll with purchase of e-text/on-line Webassign resources.) See Syllabus

2341-2343.2 Topics & Materials

-  Must have DVC Lab Manual for week #3.
-  Must have an i-clicker device or i-clicker/Reef enabled smart phone for 4-Sep (*SEE Syllabus*)

Graded Class Assignments:

- *Doing Assignment:* Learning & Course on-line Survey: DUE TODAY **before class to receive credit**
- *Viewing Assignment:* Video: Powers of Ten [9 min] ****Guiding Questions* DUE TODAY **before class to receive credit**

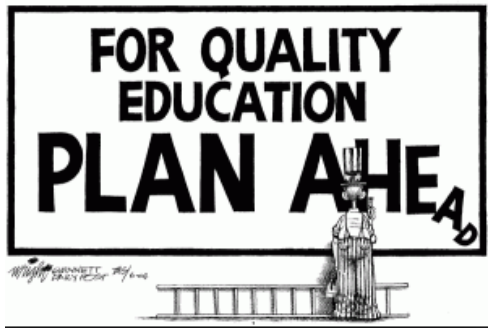
Class Discussion:

- *Class Discussion: Reading Assignment*: *Introductions.1 Powerpoint Slides;* .html, .ppt, Print: .pdf (6 slides per page) *** *Guiding Questions* DUE **before class** Today
- *Reading Assignment*: *Introductions.2 Powerpoint;* .html, .ppt, Print: .pdf (6 slides per page) ****Guiding Questions* DUE **before class** 4-Sep

WEBASSIGN Graded Practice Problems: (Must enroll with purchase of e-text/on-line Webassign resources.) See Syllabus

http://chemconnections.org/general/chem108/calendar-108-f19.html

The calendar is dynamic and has the class plan for the period through Exam-1. Beyond the current week it is tentative, but very useful for planning.



Also Refer to Resources Page

http://chemconnections.org/general/chem108/108assign.html

The Resources page includes links related to assignments and textbook and LibreTexts reading.

How much time beyond class & lab time will all of this take?

http://chemconnections.org/general/chem108/calendar-108-f19.html

All of the outside assignments & homework are designed for ~1.5-2 hrs/day, but the answer will depend on you!

Budget your time & get help when needed!! DON'T WAIT!!

Where to get tutoring help, if & when needed?

- Dr. R. MW 10:00-11:00 *PS 235*;
- On-line video/phone conferencing TTh 11:00-12:00;
- Other times by appointment (*through e-mail request*);
- Daily e-mail (replies usually within 24 hours) ;
- DVC: peer tutoring beginning Sept. 3rd

PS110: M, T, W, & Th (9 am – 7pm) and Fridays (9 am to 1 pm)

(On-line) NetTutor: total of five hours free tutoring for the fall semester through Canvas; must be requested by e-mail through Dr. R.

Get help when needed!!
DON'T WAIT!!