Greetings & Welcome to Chem 108 sec. 2373

Introductory Chemistry

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

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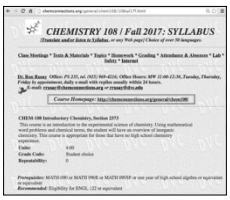
E-mail: rrusay@chemconnections.org (preferred) or rrusay@dvc.edu

Office Hours (PS 235): MW 11:00 – 12:30; Tuesday, Thursday, Friday by appointment, daily e-mail with replies usually within 24 hours.

Discussion/Lab: 2:00–4:50 W (PS 221)

Chem 108

http://chemconnections.org/general/chem108/108syl17f.html



- Please sign the roster next to your name on the clipboard that is circulating.
- If you are not listed, or here to add Chem 108, clearly print your name, DVC id & e-mail address on the second page of clipboard.
- Pick up a hard copy of the course syllabus on leaving class today.

CONNECTIONS
Chemistry, STEM & Applications

Why CHEM 108?

A. Required course 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 to be used next meeting.)

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
Chemistry, STEM & Applications

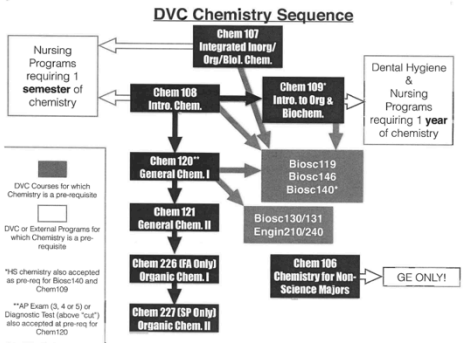
My plans after Chem 108:

A. I plan to take *General Chemistry :* (If @ DVC: Chem 120)
B. I plan to take *Integrated Inorganic, Organic, and Biological Chemistry:* (If @ DVC: Chem 107)
C. I plan to take *Introduction to Organic and Biochemistry:* (If @ DVC: Chem 109).
D. I *DO NOT* plan to take any other Chemistry courses after Chem 108.

Show of hands; (i-clickers to be used next meeting.)

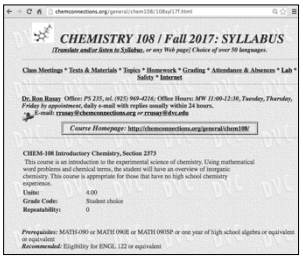
CONNECTIONS

DVC Chemistry Sequence



Chem 108: Class/ Lab

http://chemconnections.org/general/chem108/108syl17f.html


CHEMISTRY 108 / Fall 2017: SYLLABUS

Please read carefully.

Chem 108

http://chemconnections.org/general/chem108/108syl17f.html

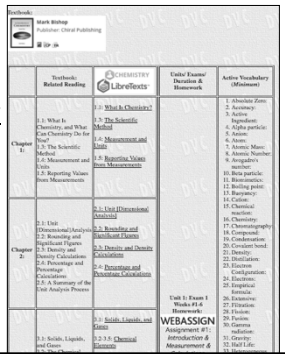
Resources: (REQUIRED/MUST HAVE)

1. **Chem 108 Lab Manual (Available in the DVC Bookstore: $17.95)**
2. **Webassign Class Key: dvc 7642 7360 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) DVC $56.70 (?) (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); Iclicker Reef Access Card for smartphone ($16.20)**
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

Resources:
Reading /
Active Vocabulary/
Guiding
Questions /
Simulations &
Molecular
Modeling



Libretext aka ChemWiki

Chem 108

http://chemconnections.org/general/chem108/108syl17f.html

Grading:

1. i-clicker questions/in-class participation + answers to on-line Guiding Questions + on-line simulations /quizzes are valued at 10% of the TOTAL grade.
2. Webassign completed work is valued at 10% 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, and a final exam, which equal two hour exams in value, comprise 55% of the TOTAL grade.

Chem 108

http://chemconnections.org/general/chem108/108syl17f.html

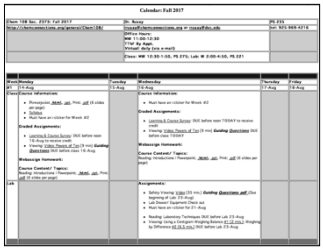
Tentative Exam Dates: 9/18, 10/30, 12/4 Final Exam: TBA. . [Cell phones will not be allowed during exams and quizzes.]

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/chem106/calendar-108-f17.html



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

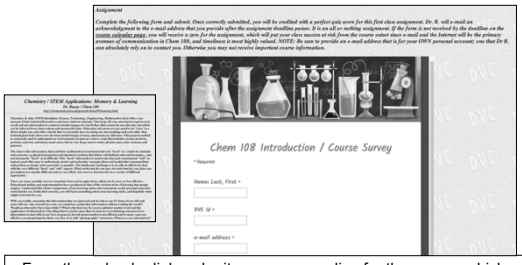
Chem 108

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

1. Before coming to each class/lab meeting: ***Hear/Read, View & Do*** the scheduled activity links: ***Videos, Powerpoint Class Slides, Notes, Worksheets, Simulations, etc.***
2. ***Answer all on-line Guiding Questions***.
3. 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.
4. ***Complete WEBASSIGN Homework, all lab assignments, activities & worksheets.***
5. 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.*

Chem 108 Survey

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



From the calendar link, submit responses on-line for the survey, which will provide your first grade.

Hearing/Viewing: Guiding Questions

Measurements & Relative Scale

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

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

Powers of Ten: *Scale*

10^n (exponent; base number)

Powers of 10

Exponential Number	Ordinary Number
$1 \times 10^6 = 10 \times 10 \times 10 \times 10 \times 10 \times 10$	1,000,000
$1 \times 10^3 = 10 \times 10 \times 10$	1,000
$1 \times 10^2 = 10 \times 10$	100
$1 \times 10^1 = 10$	10
$1 \times 10^0 = 1$	1
$1 \times 10^{-1} = \frac{1}{10}$	0.1
$1 \times 10^{-2} = \frac{1}{10} \times \frac{1}{10}$	0.01
$1 \times 10^{-3} = \frac{1}{10} \times \frac{1}{10} \times \frac{1}{10}$	0.001
$1 \times 10^{-6} = \frac{1}{10} \times \frac{1}{10} \times \frac{1}{10} \times \frac{1}{10} \times \frac{1}{10} \times \frac{1}{10}$	0.000 001

Scientific Notation

Scientific Notation: A single digit followed by a decimal and a power of ten.

power of 10

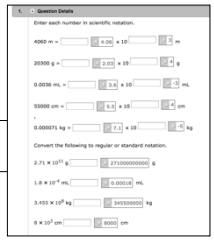
$D . D D \times 10^n$

Examples: 2,345 mL and 0.002340 g

2,345 mL = 2.345 x 10^{3}mL 0.002340 g = 2.340 x 10^{-3} g

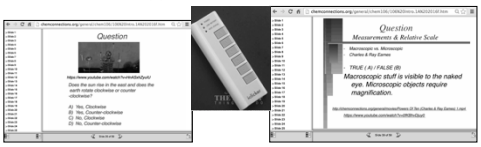
WebAssign Homework

https://www.webassign.net/v4cgi/selfenroll/classkey.html
Class Key: dvc 7642 7360
http://chemconnections.org/general/chem108/Student_Quick_Start_Guide_SE.pdf



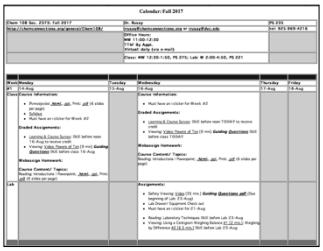
Reading: Powerpoint Slides

Embedded i-clicker Questions
http://chemconnections.org/general/chem106/106%20Intro.1A%202016f.htm



Read all 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 will receive credit.***
These slides & questions will be the basis for a significant part of exams.

: Refer to Calendar's Next Class/Lab



http://chemconnections.org/general/chem106/calendar-108-f17.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.