

Greetings & Welcome to Chem 106: sec. 2273 Chemistry for Non-Science Majors

<http://chemconnections.org/general/chem106/>



Dr. Ron Rusay

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or rrusay@dvc.edu

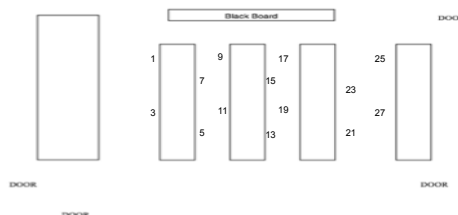
Office Hours (PS 235): MW 11:00 – 12:30; Tuesday,
Thursday, Friday by appointment, daily e-mail with
replies usually within 24 hours.

Discussion/Lab: 2:00–4:50 M or W (PS 221)
Weekly attendance required.

Chem 106

Week 1

Lab Map

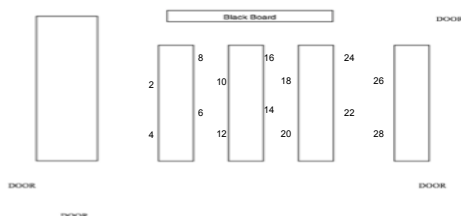


- Introduce yourself to one other classmate.
- Describe what other courses you are taking this semester to them and learn what your classmate is taking.
- With your classmate move to one of the numbered lab station locations in the above map.

Chem 106

Week 1

Lab Map



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Chem 106: Class/ Lab

<http://chemconnections.org/general/chem106/106%20Intro.1A>

CONNECTIONS

Chemistry, STEM & Applications (STEAM)

Why CHEM 106? (Select one or more.)

- Required lab science course needed to meet my higher education goals. I have to take it.
- Chemistry is very easy to me and I need the 4 credit A to boost my GPA.
- Rate_em.com said that it is better to take chemistry than geology, astronomy or oceanography.
- I am very interested in science and chemistry.
- 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 Energy 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
ASATC	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			
Knowledge AAT				X		
Sports Med/AS		X	X	X	X	
Training AS						
Chemistry courses that fulfill AS degree requirements (ONE REQUIRED)						
Allied Health AS		X	X	X	X	
Life Science AS		X		X	X	
Biotech Science AS			X		X	
Chemistry courses that ARE REQUIRED to earn AS degree						
Dental Hygiene AS			X	X		
Civil Eng AS					X	
Electronics Eng AS					X	
Mech Eng AS					X	
Geology AS					X	X
Recreation Therapy AS		X	X			

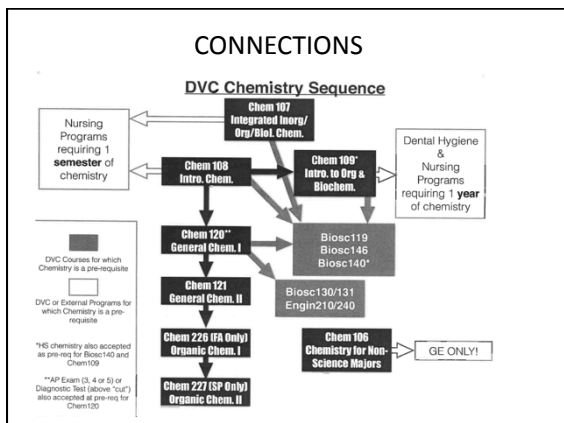
Chem 108 and 107 (Organic Chemistry I & II) are required for transfer in some regions but are not currently part of any DVC degree program.

CONNECTIONS

My plans after Chem 106:

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

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



Chem 106

Week 1

Chem 106 is a "hybrid" on-line course.

What is the difference between an on-line course and a hybrid on-line course?

- An on-line course is 100% on-line. It does not have face-to-face class meetings.
- Hybrid courses have required face-to-face meetings plus an on-line component.
- Chem 106 has one required face-to-face 3 hour discussion/lab meeting per week.
- The three hour weekly lectures in a regular course are replaced with on-line reading, viewing, and doing activities

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Chem 106: Hybrid On-line Course

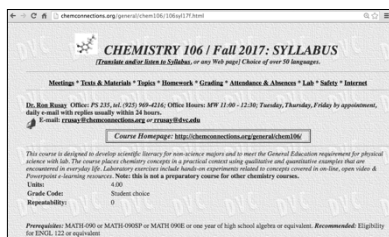
<https://www.youtube.com/watch?v=R5g1anmx2us&feature=youtu.be>



Have you taken an on-line course before?

Chem 106: Class/ Lab

<http://chemconnections.org/general/chem106/106syl17f.html>



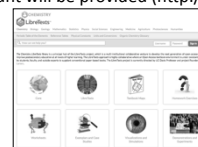
Please read carefully.

Chem 106: Class/ Lab

<http://chemconnections.org/general/chem106/106syl17f.html>

Resources (References & Equipment):

FREE on-line resources & a personal/collaborative ChemWiki (Libretext) account will be provided (<http://chemwiki.ucdavis.edu/>)



Textbook: No specific textbook; Any edition of any Introductory, or General, or General-Organic-Biological Chemistry textbook is suitable for reference. Several are on Chem 106 course reserve @ the DVC library.

Chem 106: Class/ Lab

<http://chemconnections.org/general/chem106/106sy117f.html>

Resources: **(REQUIRED/MUST HAVE)**

1. Chem 106 Course & Lab Manual (Available in the DVC Bookstore: \$24.00)
2. i-clicker: The older version that is shown above is acceptable, as well as the newer .2 version (\$5.00-\$40.00 on-line & DVC)
3. Personal e-mail account. (DVC/CCCCC "Insite" account not recommended, but ok.)
4. Notebook: 3 ring recommended
5. Access to the Internet (Can be limited, such as only on the DVC Campus or at free WiFi hotspots)
6. An individual ChemWiki/Libretext account, which will be provided to you by Dr. R.
7. Lab safety glasses with side shields or goggles on sale by DVC Chem Club



Chem 106: Class/ Lab

<http://chemconnections.org/general/chem106/106sy117f.html>

Grading:

1. Graded Guiding questions & embedded i-clicker questions are valued at 10% of the TOTAL grade.
2. Laboratory experiments, activities, pre- & post-lab questions, worksheets and simulations are valued at 30% of the TOTAL grade.
3. Capstone Global Warming writing/research project is valued at 10% of the TOTAL grade.
4. 3 exams, and a final exam, which equal two hour exams in value, comprise 50% of the TOTAL grade.

Chem 106: Class/ Lab

<http://chemconnections.org/general/chem106/106sy117f.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 106 Survey: Class/ Lab

<http://chemconnections.org/general/chem106/survey-2017s.html>

Assignment

Complete the following form and submit it to your instructor. Once Dr. R. receives your results, you will be provided a portion score for this first class assignment. As noted, completion will be used in the calculation of your overall course grade. If the survey is not received by the deadline on the survey calendar page, we will not be able to include your information and the online course system will enter a zero for the assignment. We will not give your class member a zero, but we will not be able to include your information in the survey process of course completion in Chem 106, and the zero will be entered in your overall grade. We will not be able to include your information in the survey process of course completion in Chem 106, and the zero will be entered in your overall grade. We will not be able to include your information in the survey process of course completion in Chem 106, and the zero will be entered in your overall grade.

Chem 106 Introduction/ Course Survey

Name (Last, First) *

PHC id *

Lab Section *

Section *

Section *

e-mail address *

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

Chem 106: A Journey of discovery

<http://chemconnections.org/general/chem106/calendar-106-f17.html>

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

One Step (week) @ a time

<http://chemconnections.org/general/chem106/calendar-106-f17.html>

The calendar is dynamic and beyond the current week is tentative. The current week's calendar is fixed & static the beginning of each week.

Chem 106: Recommendations

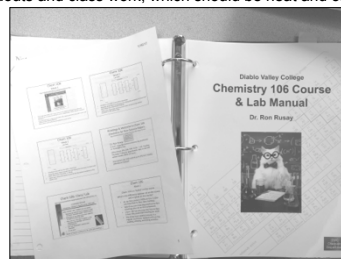
Refer to the course calendar page frequently. Plan by week.
Execute day-by-day. Meet all due dates!!

1. Before coming to each weekly meeting: **Read, View & Do** all of the scheduled on-line activities/materials: **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 follow them. Bring any questions for discussion to next class meeting.
4. **Collaboratively complete all lab assignments, activities & worksheets** with your group members, which will include 1-3 partners
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 explain concepts clearly to someone else.

Chem 106: Recommendations

Refer to the course calendar page frequently. Plan by week.
Execute day-by-day. Meet all due dates!!

6. Keep a separate notebook for your Course/Lab Manual, notes, handouts and class work, which should be neat and organized.



Viewing: Guiding Questions

Measurements & Relative Scale

<http://chemconnections.org/general/chem106/Powers%20of%20Ten-Guide.html>

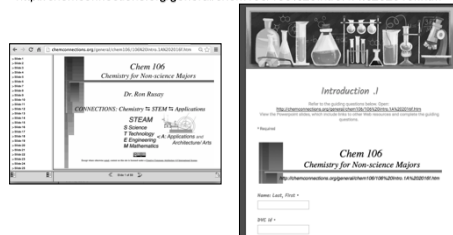


From the calendar links, submit responses on-line that will be graded weekly.

Reading: Guiding Questions & Powerpoint Resources

Introduction

<http://chemconnections.org/general/chem106/106%20Intro.1A%202016f.htm>



From the calendar links, read all Powerpoint slides (can be printed).
Submit responses on-line for accompanying **Guiding Questions** relating to the information in the Powerpoint slides.

Reading: Powerpoint Slides

Embedded i-clicker Questions

<http://chemconnections.org/general/chem106/106%20Intro.1A%202016f.htm>

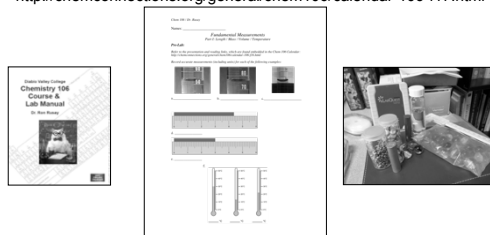


Read all Powerpoint slides (can be printed), and review all questions and answers for the embedded questions. Several of these questions will be asked @ the start of each weekly class/lab. **Only answers submitted with a personal, registered i-clicker will receive credit.**
These slides & questions will be the basis for and a large part of exams.

Doing: Lab Experiments

Fundamental Measurements [Experiment #1: Week 2]
(Course/ Lab Manual pg. 5 [pre-lab]; pp. 7-8 [procedure & questions])

<http://chemconnections.org/general/chem106/calendar-106-f17.html>



From the Course/Lab Manual; Collaboration & Group-Individual contributions will be a key part of each activity. Submitted group materials & individual's contribution to the group work-product will be a part of grading rubrics.

Doing: Lab Experiments

Safety (Video & Handout)

<http://chemconnections.org/general/chem106/calendar-106-f17.html>

1. What is the purpose of the lab safety video?

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Due today, *have signed before leaving Lab today.*
Completed handout due Week #2 before beginning experiment.

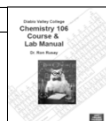
Doing: Lab Experiments

Safety

(Video & Handout: Graded Guiding Questions)
http://chemconnections.org/general/movies/Safety_Video.mp4/



Lab Drawer Check Out



Follow instructions

Lab Drawer Check Out

Pick up a combination lock at the front of lab.
Both you and your partner /classmate are to provide all of the information in each of the following 3 forms, sign and turn them in before leaving lab today.

Write down the lock's combination where you can find it; bring to lab next week

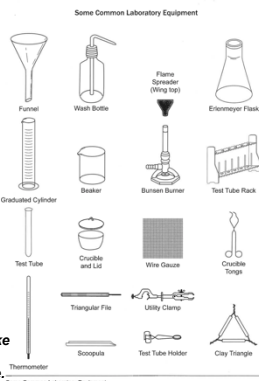
Read carefully & sign

Check that all of the equipment on the list is in the drawer and unbroken.

Check Out

On the pink form note what is missing or broken. If everything is OK, sign form, note combination for your use, turn in with completed/ signed acknowledgment form and card to Dr. R.

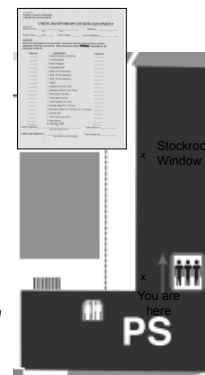
If anything is missing or broken, take the pink form to the Chemistry Stockroom. Directions on next slide.



Missing or Broken Equipment

Go to stockroom window to replace missing or broken equipment. Stockroom window is in the middle of this building. Turn right out of lab, walk past 3 lab rooms and look for the double glass doors. Window is in the back.

When everything is OK, sign form, note combination for your use, turn in with completed/ signed acknowledgment form and card to Dr. R.



Doing: Lab Experiments

Safety

(Video & Handout: Graded Guiding Questions)

http://www.chemconnections.org/general/chem106/Safety_focus_ques-17.pdf

NAME: _____

DATE: _____

1. What is the purpose of the safety shower and eyewash station?

2. What is the purpose of the fire blanket?

3. What is the purpose of the fire extinguisher?

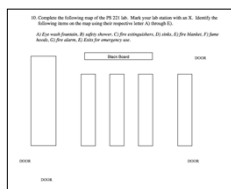
4. What is the purpose of the fire alarm?

5. What is the purpose of the fire alarm pull station?

6. What is the purpose of the fire alarm control panel?

7. What is the purpose of the fire alarm control panel?

8. What is the purpose of the fire alarm control panel?



"Due" today, *have signed before leaving Lab today.*
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