

## Course Syllabus

# Syllabus for Chem 3A: Intro Gen Chemistry Reedley College

Section: 51433

Term: Summer 2021

## Course Information

Class times: Online

## Required Books and Materials:

- Tro, *Introductory Chemistry Essentials*, 3<sup>rd</sup>-6<sup>th</sup> Any edition from 3-6 will work for the class. Homework problems are posted for each edition.
- The lab manual will be provided as a free download from Canvas. Experiments and worksheets can be printed or downloaded and written on for submission (electronically).
- Scientific calculator (I recommend the TI-36X Pro; cell phone calculators are **not** acceptable)

## Faculty Information

Instructor: Kirk Kawagoe

Office and phone: Zoom!

Cell phone: (559) 393-2121 (**text only**, this is the best method of contacting me). I will usually get back to within the hour (or faster).

email: Use the canvas e-mail system. I will get back to you within 24-hours. Do not use my RC email.

Office hours: Daily (M-TH) 11 AM and 8 PM for 1 hour by zoom, Fridays 11 AM only.

## Statement on Academic Dishonesty:

[Academic Dishonesty](#)

## Accommodations

It is our policy not to discriminate against any student. If you suspect that you have any type of physical disability or learning disability that is relevant to your performance in the course, please stop by the disabled student services office and discuss it with them as they may be able to provide services and support that could help you succeed.

If you have a verified need for an academic accommodation or materials in alternate media (i.e., Braille, large print, electronic text, etc.) per the Americans with Disabilities Act (ADA) or Section 504 of the Rehabilitation Act, please contact me as soon as possible.

## Attendance

This is an online class. Class attendance will be monitored via assignments turned in.

- Students who have not contacted me or have not turned in the first assignment by Wednesday (5/26), will likely be dropped.
- Students who have not taken exam 1 or do not turn in 75% of assignments as of mid-term may also be dropped. Exceptions can be made if students have contacted me and worked out a plan to successfully catch up.
- I require one zoom check in per week during office hours or other arranged zoom meeting.

## Important dates (for Spring 2021)

- 5/24/21 Memorial Day
- 5/28/21 Last day to drop without a W on your transcript (via WebAdvisor)
- 6/05/21 Last day to drop with a W
- Final Exam: Opens 6/17/21 must be completed by 6/18/21 (Last day of class) 11:59 PM

## Exams

Five multiple choice exams will be given in this class. In chemistry, topics build on one another; therefore, all exams are comprehensive. Make up exams will generally not be given. Certain constants, conversion factors and equations will be provided on exams. Examples of information given can be found on Canvas. You are allowed to use your text book during the exam, but the exams will be difficult to complete if you have to look up additional information during the exam.

## Extra Credit

Extra credit assignments will not be given.

## Grading

A summary of your grades, including a projected course grade, is available on Canvas. To receive a passing grade, you must have at **least a 70% lab average and a 65% exam average** regardless of your success in the rest of the course.

The grading scale will be based on a straight percentage:

- A = 90% - 100%
- B = 80% - 89%

- C = 70% - 79%
- D = 60% - 69%
- F = 0% - 59%

The final grade will be calculated using weighted categories:

- 10% Homework
- 25% Lab reports/worksheets. You must successfully complete Experiment 11B to pass the class. In addition, you must receive at a 70% average in lab to pass the course.
- 50% Exams. Your exam average must be at least 60% to pass the class with a grade of C or better.
- 15% Final Exam

## Homework

Homework is due following the completion of each chapter (see Schedule on Canvas).

## Lab

Lab work will follow as closely as possible the material discussed in the lectures. There is no published lab manual for this course. All the lab assignments and experiments are available on Canvas.

For each experiment:

- Download the experiment file
- View the video
- Fill out the experiment data sheets
- Complete the calculations in the prelab, experiment, and postlab assignments
- Submit the file back to the assignment link by the due date.

## Late Work

Points are deducted for each day the assignment is late up to 50% (4% per day). Other than exams, most assignments can be turned in at any point of the semester for at least partial credit.

## Success in Chemistry



- Do not underestimate the time required for this class.
- Do not fall behind. Chemistry is cumulative and builds upon earlier concepts.
- Try and read ahead of the class schedule. Work through the examples in the text. Take notes while watching lecture videos.
- Check in EVERY DAY.
- Study for understanding. Critical thinking is a requirement for success in Chem 3A.
- Always show your work, including all units and considering significant figures.













- Complete and turn in all assignments. Work extra problems.
- Consider forming a study group.
- Ask for help. Text or email me with questions any time (literally). I will reply at my earliest convenience.













## Course Outline Outline and Objectives













The following document contains details about what content is covered by this class: [Course Outline](#)








### Course Summary:

Date	Details	Due
	 <a href="https://scccd.instructure.com/courses/70222/assignments/1661175">Hwk 1 &amp; 2 (Chapters 1 &amp; 2)</a> ( <a href="https://scccd.instructure.com/courses/70222/assignments/1661175">https://scccd.instructure.com/courses/70222/assignments/1661175</a> )	due by 11:59pm
Tue May 25, 2021	 <a href="https://scccd.instructure.com/courses/70222/assignments/1661159">Week 1 Discussion</a> ( <a href="https://scccd.instructure.com/courses/70222/assignments/1661159">https://scccd.instructure.com/courses/70222/assignments/1661159</a> )	due by 11:59pm
	 <a href="https://scccd.instructure.com/courses/70222/assignments/1661199">Worksheet 2b</a> ( <a href="https://scccd.instructure.com/courses/70222/assignments/1661199">https://scccd.instructure.com/courses/70222/assignments/1661199</a> )	due by 11:59pm
Wed May 26, 2021	 <a href="https://scccd.instructure.com/courses/70222/assignments/1661170">Exp 3 - Densities of Liquids and Solids</a> ( <a href="https://scccd.instructure.com/courses/70222/assignments/1661170">https://scccd.instructure.com/courses/70222/assignments/1661170</a> )	due by 11:59pm
	 <a href="https://scccd.instructure.com/courses/70222/assignments/1661180">Hwk 3 (Ch 3)</a> ( <a href="https://scccd.instructure.com/courses/70222/assignments/1661180">https://scccd.instructure.com/courses/70222/assignments/1661180</a> )	due by 11:59pm
Thu May 27, 2021	 <a href="https://scccd.instructure.com/courses/70222/assignments/1661169">Exp 1 - Properties and Changes of Matter</a> ( <a href="https://scccd.instructure.com/courses/70222/assignments/1661169">https://scccd.instructure.com/courses/70222/assignments/1661169</a> )	due by 11:59pm
	 <a href="https://scccd.instructure.com/courses/70222/assignments/1661181">Hwk 4 (Ch 4)</a> ( <a href="https://scccd.instructure.com/courses/70222/assignments/1661181">https://scccd.instructure.com/courses/70222/assignments/1661181</a> )	due by 11:59pm
Fri May 28, 2021	 <a href="https://scccd.instructure.com/courses/70222/assignments/1661182">Hwk 5 (Ch 5)</a> ( <a href="https://scccd.instructure.com/courses/70222/assignments/1661182">https://scccd.instructure.com/courses/70222/assignments/1661182</a> )	due by 11:59pm
	 <a href="https://scccd.instructure.com/courses/70222/assignments/1661190">Lab 2 Online</a> ( <a href="https://scccd.instructure.com/courses/70222/assignments/1661190">https://scccd.instructure.com/courses/70222/assignments/1661190</a> )	due by 11:59pm













Date	Details	Due
	 <a href="https://scccd.instructure.com/courses/70222/assignments/1661196">Nomenclature Worksheets</a> <a href="https://scccd.instructure.com/courses/70222/assignments/1661196">(https://scccd.instructure.com/courses/70222/assignments/1661196)</a>	due by 11:59pm
Sat May 29, 2021	 <a href="https://scccd.instructure.com/courses/70222/assignments/1661162">Exam 1 (Chapters 1-4)</a> <a href="https://scccd.instructure.com/courses/70222/assignments/1661162">(https://scccd.instructure.com/courses/70222/assignments/1661162)</a>	due by 11:59pm
Sun May 30, 2021	 <a href="https://scccd.instructure.com/courses/70222/assignments/1661162">Exam 1 (Chapters 1-4)</a> <a href="https://scccd.instructure.com/courses/70222/assignments/1661162">(https://scccd.instructure.com/courses/70222/assignments/1661162)</a> (1 student)	due by 1am
	 <a href="https://scccd.instructure.com/courses/70222/assignments/1661162">Exam 1 (Chapters 1-4)</a> <a href="https://scccd.instructure.com/courses/70222/assignments/1661162">(https://scccd.instructure.com/courses/70222/assignments/1661162)</a> (1 student)	due by 11:59pm
Mon May 31, 2021	 <a href="https://scccd.instructure.com/calendar?event_id=143633&amp;include_contexts=course_70222">Memorial Day</a> <a href="https://scccd.instructure.com/calendar?event_id=143633&amp;include_contexts=course_70222">(https://scccd.instructure.com/calendar?event_id=143633&amp;include_contexts=course_70222)</a>	12am
	 <a href="https://scccd.instructure.com/courses/70222/assignments/1661161">That one thing.</a> <a href="https://scccd.instructure.com/courses/70222/assignments/1661161">(https://scccd.instructure.com/courses/70222/assignments/1661161)</a>	due by 11:59pm
Tue Jun 1, 2021	 <a href="https://scccd.instructure.com/calendar?event_id=144577&amp;include_contexts=course_70222">CHEM-3A-51433-2021SU</a> <a href="https://scccd.instructure.com/calendar?event_id=144577&amp;include_contexts=course_70222">(https://scccd.instructure.com/calendar?event_id=144577&amp;include_contexts=course_70222)</a>	11am to 12pm
	 <a href="https://scccd.instructure.com/calendar?event_id=144631&amp;include_contexts=course_70222">CHEM-3A-51433-2021SU</a> <a href="https://scccd.instructure.com/calendar?event_id=144631&amp;include_contexts=course_70222">(https://scccd.instructure.com/calendar?event_id=144631&amp;include_contexts=course_70222)</a>	8pm to 9pm
	 <a href="https://scccd.instructure.com/courses/70222/assignments/1661183">Hwk 6 (Ch 6)</a> <a href="https://scccd.instructure.com/courses/70222/assignments/1661183">(https://scccd.instructure.com/courses/70222/assignments/1661183)</a>	due by 11:59pm
	 <a href="https://scccd.instructure.com/courses/70222/assignments/1661191">Lab 4 - Mole</a> <a href="https://scccd.instructure.com/courses/70222/assignments/1661191">(https://scccd.instructure.com/courses/70222/assignments/1661191)</a>	due by 11:59pm
Wed Jun 2, 2021	 <a href="https://scccd.instructure.com/calendar?event_id=144761&amp;include_contexts=course_70222">CHEM-3A-51433-2021SU</a> <a href="https://scccd.instructure.com/calendar?event_id=144761&amp;include_contexts=course_70222">(https://scccd.instructure.com/calendar?event_id=144761&amp;include_contexts=course_70222)</a>	8am to 8:30am
	 <a href="https://scccd.instructure.com/calendar?event_id=144632&amp;include_contexts=course_70222">CHEM-3A-51433-2021SU</a> <a href="https://scccd.instructure.com/calendar?event_id=144632&amp;include_contexts=course_70222">(https://scccd.instructure.com/calendar?event_id=144632&amp;include_contexts=course_70222)</a>	8pm to 9pm




Date	Details	Due
	 <a href="https://scccd.instructure.com/courses/70222/assignments/1661184">Hwk 7 (Ch 7)</a> <a href="https://scccd.instructure.com/courses/70222/assignments/1661184">https://scccd.instructure.com/courses/70222/assignments/1661184</a>	due by 11:59pm
	 <a href="https://scccd.instructure.com/courses/70222/assignments/1661193">Lab 7. Reaction Types</a> <a href="https://scccd.instructure.com/courses/70222/assignments/1661193">https://scccd.instructure.com/courses/70222/assignments/1661193</a>	due by 11:59pm
	 <a href="https://scccd.instructure.com/courses/70222/assignments/1661160">Week 2 Discussion</a> <a href="https://scccd.instructure.com/courses/70222/assignments/1661160">https://scccd.instructure.com/courses/70222/assignments/1661160</a>	due by 11:59pm
	 <a href="https://scccd.instructure.com/calendar?event_id=144643&amp;include_contexts=course_70222">CHEM-3A-51433-2021SU</a> <a href="https://scccd.instructure.com/calendar?event_id=144643&amp;include_contexts=course_70222">https://scccd.instructure.com/calendar?event_id=144643&amp;include_contexts=course_70222</a>	11am to 12pm
	 <a href="https://scccd.instructure.com/calendar?event_id=144633&amp;include_contexts=course_70222">CHEM-3A-51433-2021SU</a> <a href="https://scccd.instructure.com/calendar?event_id=144633&amp;include_contexts=course_70222">https://scccd.instructure.com/calendar?event_id=144633&amp;include_contexts=course_70222</a>	8pm to 9pm
Thu Jun 3, 2021	 <a href="https://scccd.instructure.com/courses/70222/assignments/1661185">Hwk 8 (Ch 8)</a> <a href="https://scccd.instructure.com/courses/70222/assignments/1661185">https://scccd.instructure.com/courses/70222/assignments/1661185</a>	due by 11:59pm
	 <a href="https://scccd.instructure.com/courses/70222/assignments/1661188">Lab 13 - Formula of a Hydrate</a> <a href="https://scccd.instructure.com/courses/70222/assignments/1661188">https://scccd.instructure.com/courses/70222/assignments/1661188</a>	due by 11:59pm
	 <a href="https://scccd.instructure.com/calendar?event_id=144644&amp;include_contexts=course_70222">CHEM-3A-51433-2021SU</a> <a href="https://scccd.instructure.com/calendar?event_id=144644&amp;include_contexts=course_70222">https://scccd.instructure.com/calendar?event_id=144644&amp;include_contexts=course_70222</a>	11am to 12pm
	 <a href="https://scccd.instructure.com/calendar?event_id=145034&amp;include_contexts=course_70222">CHEM-3A-51433-2021SU</a> <a href="https://scccd.instructure.com/calendar?event_id=145034&amp;include_contexts=course_70222">https://scccd.instructure.com/calendar?event_id=145034&amp;include_contexts=course_70222</a>	12:30pm to 1:30pm
Fri Jun 4, 2021	 <a href="https://scccd.instructure.com/courses/70222/assignments/1661186">Hwk 9 (Ch 9)</a> <a href="https://scccd.instructure.com/courses/70222/assignments/1661186">https://scccd.instructure.com/courses/70222/assignments/1661186</a>	due by 11:59pm
	 <a href="https://scccd.instructure.com/courses/70222/assignments/1661192">Lab 5 - Empirical Formula</a> <a href="https://scccd.instructure.com/courses/70222/assignments/1661192">https://scccd.instructure.com/courses/70222/assignments/1661192</a>	due by 11:59pm
Mon Jun 7, 2021	 <a href="https://scccd.instructure.com/calendar?event_id=144645&amp;include_contexts=course_70222">CHEM-3A-51433-2021SU</a> <a href="https://scccd.instructure.com/calendar?event_id=144645&amp;include_contexts=course_70222">https://scccd.instructure.com/calendar?event_id=144645&amp;include_contexts=course_70222</a>	11am to 12pm

Date	Details	Due
	 <a href="https://scccd.instructure.com/calendar?event_id=144634&amp;include_contexts=course_70222">CHEM-3A-51433-2021SU</a> <a href="https://scccd.instructure.com/calendar?event_id=144634&amp;include_contexts=course_70222">(<a href="https://scccd.instructure.com/calendar?event_id=144634&amp;include_contexts=course_70222">https://scccd.instructure.com/calendar?event_id=144634&amp;include_contexts=course_70222</a>)</a>	8pm to 9pm
	 <a href="https://scccd.instructure.com/courses/70222/assignments/1661172">Hwk 10 (Ch 10)</a> <a href="https://scccd.instructure.com/courses/70222/assignments/1661172">(<a href="https://scccd.instructure.com/courses/70222/assignments/1661172">https://scccd.instructure.com/courses/70222/assignments/1661172</a>)</a>	due by 11:59pm
	 <a href="https://scccd.instructure.com/courses/70222/assignments/1661195">Lewis Dot wks</a> <a href="https://scccd.instructure.com/courses/70222/assignments/1661195">(<a href="https://scccd.instructure.com/courses/70222/assignments/1661195">https://scccd.instructure.com/courses/70222/assignments/1661195</a>)</a>	due by 11:59pm
	 <a href="https://scccd.instructure.com/courses/70222/assignments/1661163">Exam 2 (Ch 5-8)</a> <a href="https://scccd.instructure.com/courses/70222/assignments/1661163">(<a href="https://scccd.instructure.com/courses/70222/assignments/1661163">https://scccd.instructure.com/courses/70222/assignments/1661163</a>)</a>	due by 11:59pm
	 <a href="https://scccd.instructure.com/calendar?event_id=144646&amp;include_contexts=course_70222">CHEM-3A-51433-2021SU</a> <a href="https://scccd.instructure.com/calendar?event_id=144646&amp;include_contexts=course_70222">(<a href="https://scccd.instructure.com/calendar?event_id=144646&amp;include_contexts=course_70222">https://scccd.instructure.com/calendar?event_id=144646&amp;include_contexts=course_70222</a>)</a>	11am to 12pm
Tue Jun 8, 2021	 <a href="https://scccd.instructure.com/calendar?event_id=144635&amp;include_contexts=course_70222">CHEM-3A-51433-2021SU</a> <a href="https://scccd.instructure.com/calendar?event_id=144635&amp;include_contexts=course_70222">(<a href="https://scccd.instructure.com/calendar?event_id=144635&amp;include_contexts=course_70222">https://scccd.instructure.com/calendar?event_id=144635&amp;include_contexts=course_70222</a>)</a>	8pm to 9pm
	 <a href="https://scccd.instructure.com/courses/70222/assignments/1661173">Hwk 11 (Ch 15) &lt;===</a> <a href="https://scccd.instructure.com/courses/70222/assignments/1661173">(<a href="https://scccd.instructure.com/courses/70222/assignments/1661173">https://scccd.instructure.com/courses/70222/assignments/1661173</a>)</a>	due by 11:59pm
	 <a href="https://scccd.instructure.com/courses/70222/assignments/1661189">Lab 14 Online (Molar Mass)</a> <a href="https://scccd.instructure.com/courses/70222/assignments/1661189">(<a href="https://scccd.instructure.com/courses/70222/assignments/1661189">https://scccd.instructure.com/courses/70222/assignments/1661189</a>)</a>	due by 11:59pm
	 <a href="https://scccd.instructure.com/calendar?event_id=144647&amp;include_contexts=course_70222">CHEM-3A-51433-2021SU</a> <a href="https://scccd.instructure.com/calendar?event_id=144647&amp;include_contexts=course_70222">(<a href="https://scccd.instructure.com/calendar?event_id=144647&amp;include_contexts=course_70222">https://scccd.instructure.com/calendar?event_id=144647&amp;include_contexts=course_70222</a>)</a>	11am to 12pm
Wed Jun 9, 2021	 <a href="https://scccd.instructure.com/calendar?event_id=145733&amp;include_contexts=course_70222">CHEM-3A-51433-2021SU</a> <a href="https://scccd.instructure.com/calendar?event_id=145733&amp;include_contexts=course_70222">(<a href="https://scccd.instructure.com/calendar?event_id=145733&amp;include_contexts=course_70222">https://scccd.instructure.com/calendar?event_id=145733&amp;include_contexts=course_70222</a>)</a>	12:30pm to 1:30pm
	 <a href="https://scccd.instructure.com/calendar?event_id=144636&amp;include_contexts=course_70222">CHEM-3A-51433-2021SU</a> <a href="https://scccd.instructure.com/calendar?event_id=144636&amp;include_contexts=course_70222">(<a href="https://scccd.instructure.com/calendar?event_id=144636&amp;include_contexts=course_70222">https://scccd.instructure.com/calendar?event_id=144636&amp;include_contexts=course_70222</a>)</a>	8pm to 9pm
	 <a href="https://scccd.instructure.com/courses/70222/assignments/1661174">Hwk 12 (Ch 11)</a> <a href="https://scccd.instructure.com/courses/70222/assignments/1661174">(<a href="https://scccd.instructure.com/courses/70222/assignments/1661174">https://scccd.instructure.com/courses/70222/assignments/1661174</a>)</a>	due by 11:59pm

Date	Details	Due
Thu Jun 10, 2021	 <a href="https://scccd.instructure.com/calendar?event_id=144648&amp;include_contexts=course_70222">CHEM-3A-51433-2021SU</a> <a href="https://scccd.instructure.com/calendar?event_id=144648&amp;include_contexts=course_70222">(<a href="https://scccd.instructure.com/calendar?event_id=144648&amp;include_contexts=course_70222">https://scccd.instructure.com/calendar?event_id=144648&amp;include_contexts=course_70222</a>)</a>	11am to 12pm
	 <a href="https://scccd.instructure.com/calendar?event_id=144637&amp;include_contexts=course_70222">CHEM-3A-51433-2021SU</a> <a href="https://scccd.instructure.com/calendar?event_id=144637&amp;include_contexts=course_70222">(<a href="https://scccd.instructure.com/calendar?event_id=144637&amp;include_contexts=course_70222">https://scccd.instructure.com/calendar?event_id=144637&amp;include_contexts=course_70222</a>)</a>	8pm to 9pm
	 <a href="https://scccd.instructure.com/courses/70222/assignments/1661176">Hwk 13 (Ch 12)</a> <a href="https://scccd.instructure.com/courses/70222/assignments/1661176">(<a href="https://scccd.instructure.com/courses/70222/assignments/1661176">https://scccd.instructure.com/courses/70222/assignments/1661176</a>)</a>	due by 11:59pm
	 <a href="https://scccd.instructure.com/courses/70222/assignments/1661187">Lab 11b Online</a> <a href="https://scccd.instructure.com/courses/70222/assignments/1661187">(<a href="https://scccd.instructure.com/courses/70222/assignments/1661187">https://scccd.instructure.com/courses/70222/assignments/1661187</a>)</a>	due by 11:59pm
Fri Jun 11, 2021	 <a href="https://scccd.instructure.com/calendar?event_id=144649&amp;include_contexts=course_70222">CHEM-3A-51433-2021SU</a> <a href="https://scccd.instructure.com/calendar?event_id=144649&amp;include_contexts=course_70222">(<a href="https://scccd.instructure.com/calendar?event_id=144649&amp;include_contexts=course_70222">https://scccd.instructure.com/calendar?event_id=144649&amp;include_contexts=course_70222</a>)</a>	11am to 12pm
	 <a href="https://scccd.instructure.com/courses/70222/assignments/1661177">Hwk 14 (Ch 13)</a> <a href="https://scccd.instructure.com/courses/70222/assignments/1661177">(<a href="https://scccd.instructure.com/courses/70222/assignments/1661177">https://scccd.instructure.com/courses/70222/assignments/1661177</a>)</a>	due by 11:59pm
	 <a href="https://scccd.instructure.com/courses/70222/assignments/1661194">Lab 9 Online</a> <a href="https://scccd.instructure.com/courses/70222/assignments/1661194">(<a href="https://scccd.instructure.com/courses/70222/assignments/1661194">https://scccd.instructure.com/courses/70222/assignments/1661194</a>)</a>	due by 11:59pm
Sat Jun 12, 2021	 <a href="https://scccd.instructure.com/courses/70222/assignments/1661167">Exam 3 (Chapters 9-11, 15)</a> <a href="https://scccd.instructure.com/courses/70222/assignments/1661167">(<a href="https://scccd.instructure.com/courses/70222/assignments/1661167">https://scccd.instructure.com/courses/70222/assignments/1661167</a>)</a>	due by 11:59pm
	 <a href="https://scccd.instructure.com/calendar?event_id=144650&amp;include_contexts=course_70222">CHEM-3A-51433-2021SU</a> <a href="https://scccd.instructure.com/calendar?event_id=144650&amp;include_contexts=course_70222">(<a href="https://scccd.instructure.com/calendar?event_id=144650&amp;include_contexts=course_70222">https://scccd.instructure.com/calendar?event_id=144650&amp;include_contexts=course_70222</a>)</a>	11am to 12pm
Mon Jun 14, 2021	 <a href="https://scccd.instructure.com/calendar?event_id=144638&amp;include_contexts=course_70222">CHEM-3A-51433-2021SU</a> <a href="https://scccd.instructure.com/calendar?event_id=144638&amp;include_contexts=course_70222">(<a href="https://scccd.instructure.com/calendar?event_id=144638&amp;include_contexts=course_70222">https://scccd.instructure.com/calendar?event_id=144638&amp;include_contexts=course_70222</a>)</a>	8pm to 9pm
	 <a href="https://scccd.instructure.com/courses/70222/assignments/1661178">Hwk 15 (Ch 14)</a> <a href="https://scccd.instructure.com/courses/70222/assignments/1661178">(<a href="https://scccd.instructure.com/courses/70222/assignments/1661178">https://scccd.instructure.com/courses/70222/assignments/1661178</a>)</a>	due by 11:59pm
	 <a href="https://scccd.instructure.com/courses/70222/assignments/1661168">Exam 3 (Chapters 9-11, 15)</a> <a href="https://scccd.instructure.com/courses/70222/assignments/1661168">(<a href="https://scccd.instructure.com/courses/70222/assignments/1661168">https://scccd.instructure.com/courses/70222/assignments/1661168</a>)</a> (2 students)	due by 11:59pm



Date	Details	Due
Tue Jun 15, 2021	 <a href="https://scccd.instructure.com/calendar?event_id=144651&amp;include_contexts=course_70222">CHEM-3A-51433-2021SU</a> <a href="https://scccd.instructure.com/calendar?event_id=144651&amp;include_contexts=course_70222">(<a href="https://scccd.instructure.com/calendar?event_id=144651&amp;include_contexts=course_70222">https://scccd.instructure.com/calendar?event_id=144651&amp;include_contexts=course_70222</a>)</a>	11am to 12pm
	 <a href="https://scccd.instructure.com/calendar?event_id=144639&amp;include_contexts=course_70222">CHEM-3A-51433-2021SU</a> <a href="https://scccd.instructure.com/calendar?event_id=144639&amp;include_contexts=course_70222">(<a href="https://scccd.instructure.com/calendar?event_id=144639&amp;include_contexts=course_70222">https://scccd.instructure.com/calendar?event_id=144639&amp;include_contexts=course_70222</a>)</a>	8pm to 9pm
	 <a href="https://scccd.instructure.com/courses/70222/assignments/1661179">Hwk 16 (Ch 17)</a> <a href="https://scccd.instructure.com/courses/70222/assignments/1661179">(<a href="https://scccd.instructure.com/courses/70222/assignments/1661179">https://scccd.instructure.com/courses/70222/assignments/1661179</a>)</a>	due by 11:59pm
	 <a href="https://scccd.instructure.com/courses/70222/assignments/1661197">pH worksheet</a> <a href="https://scccd.instructure.com/courses/70222/assignments/1661197">(<a href="https://scccd.instructure.com/courses/70222/assignments/1661197">https://scccd.instructure.com/courses/70222/assignments/1661197</a>)</a>	due by 11:59pm
Wed Jun 16, 2021	 <a href="https://scccd.instructure.com/calendar?event_id=144652&amp;include_contexts=course_70222">CHEM-3A-51433-2021SU</a> <a href="https://scccd.instructure.com/calendar?event_id=144652&amp;include_contexts=course_70222">(<a href="https://scccd.instructure.com/calendar?event_id=144652&amp;include_contexts=course_70222">https://scccd.instructure.com/calendar?event_id=144652&amp;include_contexts=course_70222</a>)</a>	11am to 12pm
	 <a href="https://scccd.instructure.com/calendar?event_id=144640&amp;include_contexts=course_70222">CHEM-3A-51433-2021SU</a> <a href="https://scccd.instructure.com/calendar?event_id=144640&amp;include_contexts=course_70222">(<a href="https://scccd.instructure.com/calendar?event_id=144640&amp;include_contexts=course_70222">https://scccd.instructure.com/calendar?event_id=144640&amp;include_contexts=course_70222</a>)</a>	8pm to 9pm
	 <a href="https://scccd.instructure.com/courses/70222/assignments/1661168">Exam 4 (12-14, 17)</a> <a href="https://scccd.instructure.com/courses/70222/assignments/1661168">(<a href="https://scccd.instructure.com/courses/70222/assignments/1661168">https://scccd.instructure.com/courses/70222/assignments/1661168</a>)</a>	due by 11:59pm
Thu Jun 17, 2021	 <a href="https://scccd.instructure.com/calendar?event_id=144653&amp;include_contexts=course_70222">CHEM-3A-51433-2021SU</a> <a href="https://scccd.instructure.com/calendar?event_id=144653&amp;include_contexts=course_70222">(<a href="https://scccd.instructure.com/calendar?event_id=144653&amp;include_contexts=course_70222">https://scccd.instructure.com/calendar?event_id=144653&amp;include_contexts=course_70222</a>)</a>	11am to 12pm
	 <a href="https://scccd.instructure.com/calendar?event_id=144641&amp;include_contexts=course_70222">CHEM-3A-51433-2021SU</a> <a href="https://scccd.instructure.com/calendar?event_id=144641&amp;include_contexts=course_70222">(<a href="https://scccd.instructure.com/calendar?event_id=144641&amp;include_contexts=course_70222">https://scccd.instructure.com/calendar?event_id=144641&amp;include_contexts=course_70222</a>)</a>	8pm to 9pm
Fri Jun 18, 2021	 <a href="https://scccd.instructure.com/calendar?event_id=144654&amp;include_contexts=course_70222">CHEM-3A-51433-2021SU</a> <a href="https://scccd.instructure.com/calendar?event_id=144654&amp;include_contexts=course_70222">(<a href="https://scccd.instructure.com/calendar?event_id=144654&amp;include_contexts=course_70222">https://scccd.instructure.com/calendar?event_id=144654&amp;include_contexts=course_70222</a>)</a>	11am to 12pm
	 <a href="https://scccd.instructure.com/courses/70222/assignments/1661198">Summer 2021 Final Exam</a> <a href="https://scccd.instructure.com/courses/70222/assignments/1661198">(<a href="https://scccd.instructure.com/courses/70222/assignments/1661198">https://scccd.instructure.com/courses/70222/assignments/1661198</a>)</a>	due by 11:59pm
	 <a href="https://scccd.instructure.com/courses/70222/assignments/1661164">Exam 2 retested material ver A</a> <a href="https://scccd.instructure.com/courses/70222/assignments/1661164">(<a href="https://scccd.instructure.com/courses/70222/assignments/1661164">https://scccd.instructure.com/courses/70222/assignments/1661164</a>)</a>	

Date	Details	Due
	 <a href="https://scccd.instructure.com/courses/70222/assignments/1661165">Exam 2 retested material ver B</a> ( <a href="https://scccd.instructure.com/courses/70222/assignments/1661165">https://scccd.instructure.com/courses/70222/assignments/1661165</a> )	
	 <a href="https://scccd.instructure.com/courses/70222/assignments/1661166">Exam 2 retested material ver C</a> ( <a href="https://scccd.instructure.com/courses/70222/assignments/1661166">https://scccd.instructure.com/courses/70222/assignments/1661166</a> )	
	 <a href="https://scccd.instructure.com/courses/70222/assignments/1661171">Final Exam Scored</a> ( <a href="https://scccd.instructure.com/courses/70222/assignments/1661171">https://scccd.instructure.com/courses/70222/assignments/1661171</a> )	

# Academic Dishonesty

The following information is from 2020-2021 Reedley College Catalog Pages 47-48.

## Academic Dishonesty

Students at Reedley College are entitled to the best education that the college can make available to them, and they, their instructors, and their fellow students share the responsibility to ensure that this education is honestly attained. Because cheating, plagiarism, and collusion in dishonest activities erode the integrity of the college, each student is expected to exert an entirely honest effort in all academic endeavors. Academic dishonesty in any form is a very serious offense and will incur serious consequences.

## Cheating

Cheating is the act or attempted act of taking an examination or performing an assigned, evaluated task in a fraudulent or deceptive manner, such as having improper access to answers, in an attempt to gain an unearned academic advantage. Cheating may include, but is not limited to, copying from another's work, supplying one's work to another, giving or receiving copies of examinations without an instructor's permission, using or displaying notes or devices inappropriate to the conditions of the examination, allowing someone other than the officially enrolled student to represent the student, or failing to disclose research results completely.

## Plagiarism

Plagiarism is a specific form of cheating: the use of another's words or ideas without identifying them as such or giving credit to the source. Plagiarism may include, but is not limited to, failing to provide complete citations and references for all work that draws on the ideas, words, or work of others, failing to identify the contributors to work done in collaboration, submitting duplicate work to be evaluated in different courses without the knowledge and consent of the instructors involved, or failing to observe computer security systems and software copyrights. Incidents of cheating and plagiarism may result in any of a variety of sanctions and penalties, which may range from a failing grade on the particular examination, paper, project, or assignment in question to a failing grade in the course, at the discretion of the instructor and depending on the severity and frequency of the incidents.

## Authority and Disciplinary Actions

Instructors shall be in charge of their classes and students are under obligation to respect the authority of each instructor. Reedley College seeks to develop responsible, democratic citizenship among the students enrolled. Students are responsible for their conduct. Failure to adhere to the

college's standards will result in disciplinary action. The college reserves the right to exclude at any time a student who violates student conduct standards and/or is not taking proper advantage of the opportunities offered. (See Student Right to Know on page 10). Reedley College reserves the right to exclude at any time a student who, in the judgment of the administration, is not taking proper advantage of the opportunities offered.

## Student Rights

Student rights are protected by federal and state laws, and by policies established by the trustees of the State Center Community College District. It is therefore essential for the protection of students' rights that procedures be established and followed which would identify violations of student conduct standards and the resolutions of such violations. Students have a right to an oral or written notice (reasons for disciplinary action), an opportunity for a review, and a decision given orally or in writing. For more information contact the Vice President of Student Services' office. (Board Policy 5520, Administrative Regulation 5520)

The colleges policies on academic dishonesty can be found at:

- <https://www.reedleycollege.edu/admissions-aid/college%20catalogs.html>  
(<https://www.reedleycollege.edu/admissions-aid/college%20catalogs.html>)
- 2020-2021 Catalog Pages 47-48

# Course Outline

The following information is provided for transfer of courses to other colleges. It contains the official course description and other information that the college provides upon transfer.

## Subject and Course Number

CHEM-3A

## Course Title:

Introductory General Chemistry

## Course Description:

This is a survey course in the principles of inorganic chemistry covering the composition of matter, physical and chemical changes, atomic and molecular structure, inorganic nomenclature, chemical formula and reaction calculations, gas laws, bonding, solutions, net-ionic equations, acid-base theories, pH, oxidation-reduction reactions, thermodynamics, nuclear chemistry and equilibrium. The course emphasizes problem solving and chemical calculations. Both qualitative and quantitative theory and techniques will be covered. It is intended for applied science and non-science majors or for students preparing to take Chemistry 1A. PREREQUISITES: Mathematics 103 or 3A or 5A or equivalent. ADVISORIES: English 1A or 1AH, Chemistry 10 or high school chemistry. (A, CSU-GE, UC, I) (C-ID CHEM 101)

## Units and Hours

Minimum Credit Units: 4

Total Course In-Class (Contact) Hours: 108

Total Student Learning Hours: 216

Maximum Credit Units: 4

Total Course Out-of-Class Hours: 108

## Math Prerequisite:

Intermediate Algebra (Math 103) or College Algebra (Math 3A) or Math Analysis I (Math 5A)

## Student Learning Outcomes:

- Construct and balance a chemical reaction and use the reaction to predict stoichiometric quantities.
- Describe acid-base reactions and how to calculate pH.

- Explain concepts from the periodic table and the use the periodic table to solve chemical problems.
- Name and draw Lewis diagrams of inorganic and molecular compounds from the formula and vice versa.
- Safely conduct laboratory experiments implementing concepts and principles learned in lecture.
- Use dimensional analysis to solve for an unknown parameter of density, volume, mass, pressure, temperature, molar mass, concentration, or an empirical formula.

## Course Objectives

1. apply solution properties and stoichiometry to calculate quantities (e.g. moles, volume, grams) of reactants and products in a reaction;
2. develop techniques to write Lewis electron-dot formulas and identify the shape using the VSEPR theory;
3. identify the nature and applications for electron exchange reactions;
4. prepare and solve simple mathematical problems involving formula calculations related to gas laws;
5. calculate molarity, mass percentage concentration and density of solutions and apply the molarity in dilution calculations.
6. identify types of matter, recognize physical properties and chemical properties, and apply the Law of Conservation of Mass and the Law of Conservation of Energy;
7. describe the impact of chemistry on modern society and the relationship between chemistry and other disciplines including agriculture, the medical field, and industry;
8. distinguish and identify metals, non-metals, metalloids, alkali metals, alkaline earth metals, halogens, noble gases, transition metals, and of the lanthanide and actinide series;
9. identify the principles of equilibrium in reversible reactions, saturated solutions, solutions of weak electrolytes and solutions of gases in solving related problems;
10. use the periodic table to identify physical and chemical properties of elements and calculate molar masses of compounds and molecules;
11. explain, write and balance chemical equations, and use these equations along with stoichiometry and the mole concept to convert quantities (e.g. grams or moles) of a given substance into quantities of an unknown substance;
12. identify different types of intramolecular and intermolecular forces of attraction present in various substances based on chemical formulas and structures;
13. define and identify acids and bases and perform math calculations involving pH measurements;
14. explain colligative properties of solutions (e.g. boiling point elevation, freezing point depression, and osmotic pressure);
15. calculate empirical formulas, and mass percentage composition given the appropriate data;
16. explain state and energy changes accompanying heating and cooling curves;
17. recognize the electromagnetic spectrum and explain the basic principles of the quantum mechanical model of the atom;
18. diagram heating and cooling curves;

19. perform unit conversions using the correct significant figures; between the English and metric systems, temperatures in different units, density, energy, and with SI units;
20. understand the structure of the atomic nucleus;
21. explain the fundamental types of nuclear radiation and the effects they have on biological systems
22. predict the physical behavior of gases to pressure, temperature, and volume changes;
23. apply gas laws and stoichiometry to calculate quantities (e.g. moles, volume, grams) of gas produced or consumed during a reaction;
24. perform calculations involving a limiting reactant and determine the percent yield;
25. name inorganic compounds given their formulas, and write formulas given names;
26. complete, identify type and balance chemical equations of reactions;
27. demonstrate laboratory skills which include operating an analytical balance; calibrating and/or use fundamental lab equipment such as a thermometer, barometer, buret, pipette; recognizing use and limitations of laboratory glassware; recording and report writing.

## Course Outline

### A. Introduction to chemistry

- The Scientific Method

### B. Matter and energy

- classifying matter: solid, liquid and gas
- elements, compounds, and mixtures
- physical and chemical properties
- physical changes and chemical changes
- conservation of matter
- energy and heat capacity

### C. Metric system

- scientific notation
- significant figures
- basic units of measurement
- converting units
- density

### D. Elements, atoms, and the periodic table

- atomic theory
- the nuclear atom
- properties of subatomic particles
- the Periodic Law and the periodic table
- ions and isotopes

- atomic mass

#### E. Atomic structure: atoms and ions

- molecular view of elements
- chemical formulas
- writing formulas for ionic and molecular compounds
- formula mass

#### F. Nomenclature of inorganic compounds

- naming ionic compounds (salts, acids, and bases)
- naming molecular compounds

#### G. Periodic properties of elements

- trends of the periodic table (size of atoms and ions, electronegativity, and ionization energy)
- groups and periods
- similarities in groups
- Bohr's model of an atom
- the Quantum-Mechanical Model
- orbital shapes
- electron configuration

#### H. Chemical bonds: ionic, covalent, and metallic

- intermolecular bonding
- electronegativity
- Lewis structures

#### I. Chemical Composition

- mole concept
- Avogadro's number
- chemical formulas and conversion factors
- formula stoichiometry
- empirical formula and molecular formula
- limiting reactants

#### J. Chemical Reactions

- equation stoichiometry
- solubility rules
- types of reaction
- double replacement
- single replacement



- neutralization
- precipitation
- oxidation reduction

#### K. Gas laws and Kinetic Molecular Theory

- Boyle's Law
- Charles's Law
- the Combined Gas Law
- Avogadro's Law
- the Ideal Gas Law
- Dalton's Law
- gas stoichiometry

#### L. Liquids and Solids

- solutes and solutions
- units of concentrations (molarity, molality, normality, percent by mass, percent by volume, ppm, and ppb)
- heat of reactions and enthalpy (heating and cooling curves, heat of fusion, heat of vaporization and specific heat)
- reaction rates and chemical equilibrium
- intermolecular and intramolecular bonding
- dipole-dipole, dispersion, hydrogen bonding
- types of crystalline solid: molecular, ionic, metallic, covalent network

#### M. Acids-base theory, acidity constants, and pH

- definition of acids and bases
- acid-base titrations
- strong and weak acid and bases
- the pH scale
- buffers

#### N. Chemical equilibrium

- dynamic equilibrium
- the rate of a chemical reaction
- Le Châtelier's Principle

#### O. Oxidation and reduction reactions

- definition of oxidation and reduction
- oxidation states
- balancing an oxidation reduction reaction

## P. Nuclear Chemistry

- radioactivity and the atomic nucleus
- the effects of radiation on biological systems

## Lab Outline

1. Orientation, safety
2. Quantitative separation of a mixture
3. Measurement
4. Density
5. Calorimetry
6. Atoms and spectra
7. Formula of a hydrate
8. Heat of neutralization
9. Models and shapes
10. Molar mass of unknown gas
11. Titration to determine the percentage of acetic acid in vinegar
12. Acids, bases and pH
13. Ionic reactions
14. Melting points of solids
15. Preparation of Alum
16. Titration of acid of unknown acid concentration