

SYLLABUS CHEM 1990 Fall 2021
Introduction to Chemistry and Biochemistry Professions
1 credit, Pass/Fail

Tuesdays noon – 12:50pm

Course Description:

This is a required course for chemistry and biochemistry majors. It is designed to provide incoming students with a sound foundation on how to get the most out of their chemistry/biochemistry education, expose students to exciting areas of chemistry and biochemistry, outline opportunities at USU that will help students reach their career goals, and help students master “employability skills” for success. The class includes presentations on topical issues presented by faculty and invited guests, discussions about career options, and activities to learn the best practices for resume writing and professionalism. These topics are essential to success in a chemistry/biochemistry related job, graduate work, or professional school. This class will be administered completely on line using synchronous ZOOM lectures/activity sessions during class time.

Instructor Contact Information:

Dr. Joanie Hevel
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Joanie.hevel@usu.edu
435-797-1622

**If you would like to meet via zoom, send an email to set up an appointment.

**Questions about assignments will be answered via email; however, questions must be sent at least 24 hours before the assignment is due.

General Information:

- Lectures will take place on **Tuesdays at noon to 12:50pm** via ZOOM. ZOOM links will be listed on the CANVAS website. **Lecture attendance is mandatory. TURN YOUR VIDEO ON.**
- This is a pass/fail course. To pass, you must receive **80% of points** and you must participate in three outside activities (see Assignment 1 for information about outside activities).
- All essential information about the course will be available on the CANVAS website, found at <https://canvas.usu.edu/>. Access is available with username = banner ID. Only students who are registered for the class will have access to the course Canvas pages.
- Assignments will be submitted on CANVAS unless otherwise indicated.
- There is no assigned textbook for this course.
- This course will adhere to the USU Academic Policies and Procedures Manual found at the web site <http://www.usu.edu/provost/faculty-life/syllabus.cfm>.

Absentee Policy:

- Lecture attendance and participation is mandatory. Lecture attendance is required so that you receive critical information needed to complete assignments correctly.
- Covid quarantine: If you are in quarantine due to covid exposure, you are still required to attend lectures via zoom and complete assignments on time. Dr. Hevel will be informed by the COVID CARE team if you are in quarantine due to covid. **DON'T FORGET TO CONTACT the COVID CARE IF YOU NEED TO QUARANTINE** (<https://www.usu.edu/covid-19/if-you-are-sick/care-team>).
- Covid illness: If you are ill and/or need to isolate due to covid exposure, Dr. Hevel will be informed by from the COVID CARE team about your situation. **DON'T FORGET TO CONTACT the COVID CARE IF YOU NEED TO ISOLATE** (<https://www.usu.edu/covid-19/if-you-are-sick/care-team>). If you are too ill to attend a lecture or complete an assignment on time, you must contact Dr. Hevel at the earliest date possible to take a pop quiz and/or to request an extension on an assignment deadline.
- If you are unable to attend a lecture due to a non-covid illness or for another reason, you must contact Dr. Hevel at the earliest date possible to receive instruction and/or request an extension on an assignment deadline.

Schedule:

Week	Date	Lecture Topic and Activities	Associated Assignment (see below for details)	Assignment Due Date (11:59pm)
1*	Aug 31	<ul style="list-style-type: none"> • Course introduction • Discuss outside class activities assignment • 12:20 – 12:50pm: Study skills – interview a panel of upper-level undergraduate students and graduate students 	A1 Outside activities A2 Study habits A3 Your degree and current career ideas	A1 – Nov 30 (13 weeks to complete) A2 – Sep 7 A3 – Sep 7
2*	Sep 7	<ul style="list-style-type: none"> • Being professionally ready • Conduct & correspondence • Review of professions we will encounter later in the semester • Having a resume early 	A4 Get to know your Department and send a professional email A5 Prepare for Career Interviews A6 Watch Career Services Video & complete the resume quiz A7 Draft resume	A4 – Sep 14 A5 – Sep 14 A6 – Sep 13 A7 – Sep 13
3*	Sep 14	<ul style="list-style-type: none"> • Resume building notes • In class peer review examples • Using “Track Changes” 	A8 Peer review of your resume A9 Revised resume 2.0 A10 Gain approval and make an appointment with Career Services A11 Show feedback and submit last resume 3.0	A8 – Sep 21 A9 – Sep 21 A10 – Oct 12 A11 – Oct 26 (4 weeks to complete A11)
4*	Sep 21	<ul style="list-style-type: none"> • noon-12:20pm: Chem & Biochem advising with Jordan Truex • 12:20pm-12:50pm: OPTIONAL - Learn about Preparing for Health Professions while at USU Q&A 	A12 Explore ACS or ASBSM & Prospects websites	A12 – Oct 5

5*	Sep 28	<ul style="list-style-type: none"> • Video: Science publishing and citation: review of scientific literature, the peer review process, and how to cite scientific literature • Introduction to using literature databases 	A13 Attend a USU research seminar	A13 – Nov 16 (7 weeks to complete)
6*	Oct 5	<ul style="list-style-type: none"> • Video: Bibliographies • Video: How to use Zotero • Questions 	A14 Literature databases and reference management	A14 – Oct 12
7*	Oct 12	<ul style="list-style-type: none"> • noon-12:25pm: Panel with USU alumni who completed BS or MS degrees within the last several years • 12:25pm-12:50pm: Panel with USU alumni currently in graduate or medical school 	A15 Summary from panel discussions	A15 – Oct 19
8	Oct 19	Career Explorations interviews	A16: Summaries from Career Explorations interviews	A16 - Nov 23 (5 weeks to complete)
9	Oct 26	Career Explorations interviews		
10	Nov 2	Career Explorations interviews		
11	Nov 9	Career Explorations interviews		
12	Nov 16	noon-12:30pm: OPTIONAL - Learn about internships and undergraduate research (Prof. Hevel)		
13	Nov 23	noon-12:30pm: OPTIONAL - Learn about applying to grad school (Prof. Dickenson)		
14*	Nov 30	noon-12:20pm: Zoom feedback session	A17: Take the end of class survey	A17 – Nov 30

Assignment summaries (see CANVAS for additional details):

- All assignments should be submitted via the CANVAS website unless otherwise noted.
- See schedule above for due dates. The deadline is 11:59pm on each date shown above.
- Each assignment provides you a chance to practice your written communication skills, a critical element for your future success. All assignments will be graded with the following rubric:
 - 90% Assignment completion
 - 10% Correct grammar, spelling, punctuation, and use of professional formatting (in other words, your submission should ‘look nice’ – include your name, a title, the date, use the same font throughout, etc).

Assignment 1. Outside activities

Being at a University offers amazing opportunities to learn and grow outside of the classroom. The purpose of this assignment is to encourage you to broaden your perspective and get into the habit of exploring the wide range of science-related activities and seminars on offer at USU. Over the course of the semester, you must attend, or participate in, three outside (science- or career-related) class activities of your choice. See CANVAS for a full list of suggestions, or come up with your own ideas (if your activity is not on my suggestion list, check with Dr. Hevel first). Example activities are shown below. Fill out the template on CANVAS to answer questions about each of your activities.

- Attend a research seminar (in addition to the one for Assignment 13)
- Attend a Health Professions event
- Interview a professional scientist working in a career you find interesting
- Attend the optional lecture session on Health Professions (Sep 21)
- Attend the optional lecture session on How to Apply for Graduate School (Nov 23)
- Explore the USUReady website (<https://www.usu.edu/academic-support/index>) and watch at least one of their videos
- Interview the USU Chemistry and Biochemistry Librarian, Anne Hedrich, about how to make the most of library resources
(see <https://library2.usu.edu/librarians/index.php?search=anne%20hedrich>)
- Listen to an ‘Instead’ podcast (these are interviews with USU scientists that you can find on your podcast app)
- Attend a research group meeting (contact a faculty member for permission to attend)
- Work or volunteer in a research group
- Interview a Chemistry or Biochemistry faculty about their research area
- Participate in a mock interview for an undergraduate research position or other job (contact Dr. Hevel if you are interested)

Assignment 2. Study habits

On Aug 31st, the class will interview a panel of upper-level undergraduate and graduate students about the study habits and organizational tricks that have been the most useful to them while at USU.

- List and discuss three habits or tricks you learned about that may be useful for you in your college career.
- Discuss what you have learned about good and poor study habits from your first semester of college (or additional semesters if you are further along into your degree).

Assignment 3. Your degree and current career ideas

Explain why you selected Chemistry or Biochemistry as your major. Then describe your current ideas or plans for your future career – if you have no ideas about what you want to do after completing your degree, explain.

Assignment 4. Get to know your Department and send a professional email

- Go to the Department of Chemistry and Biochemistry webpage, click on the Faculty/Staff tab, and choose Faculty.
- Review the web pages for at least three faculty. Note that some faculty have an additional website containing more information about their research and research group (look for a 'website' link below the photo).
- Send a professional email to one of the faculty. In this email, you must introduce yourself briefly, use professional language, include a professional signature line, and ask a question related to the person's decision to go into Chemistry or Biochemistry or about their career path. You must copy me (joanie.hevel@usu.edu) on your email. If this leads to additional dialogue with the faculty member, you don't have to copy me on continuing email correspondence. No submission on CANVAS is required for this assignment.

Assignment 5. Prepare for Career Interviews

Look over the list of guests we will host during the four weeks of Career Interviews later in the semester (see list on CANVAS).

- Pick four guests that you will help interview (along with other students in the class). (Note that you are required to attend at least four of the Career Interviews, but you can certainly attend more (or all) of them).
- List three questions you would like to ask these guests.

Assignment 6. Watch the Career Service video and take the quiz

Watch the video and answer the questions on the quiz

Assignment 7. Draft resume

Prepare a one-page draft resume for yourself based on the information in the video.

Assignment 8. Peer review of your draft resume

Each student must gain a peer review from another student (you will receive the contact information of your peer partner on CANVAS).

Assignment 9. Create and submit a revised resume (resume 2.0)

Based on the feedback from your peer evaluation, revise your resume.

Assignment 10. Gain approval for resume 2.0 and schedule an appointment with Career Services)

For this assignment there are 2 parts: 1) gain my approval that your resume 2.0 is ready to go (this will show up in CANVAS once you have submitted your resume 2.0 as a "PASS" in the comments section) and 2) make an appointment to get feedback from Career Services. If your resume 2.0 still needs to be edited before meeting with Career Services, I will let you know and you will need to edit your resume before going to see Career Services. Demonstrate that you have scheduled an online appointment with Career Services for review. Submit a print screen of your scheduled appointment on CANVAS. Note that your revised resume (Assignment 11) will be due on Oct 26 so your appointment date must be before then. You have four weeks to complete this assignment so that Career Services has time to meet with all of you.

Assignment 11. Revised resume 3.0

After obtaining feedback about your draft resume from Career Services, use the advice you obtained to develop an improved version. Submit the revised resume. Show the improvements you made by using track changes. (Turn track changes 'on' in Microsoft Word in the 'Review' tab – if you have questions about how to do this, contact Dr. Hevel).

Assignment 12. Explore ACS or ASBMB & Prospects websites

- Decide if you want to explore careers in Chemistry or Biochemistry for this assignment.
- If you choose Chemistry:
 - Go to the American Chemical Society webpage: <https://www.acs.org/content/acs/en.html>.
 - Take some time to explore the webpage – it contains a wealth of interesting and useful information!
 - Click on the ‘Careers’ tab and go to ‘Exploring Career Options’. Select ‘College to Career’ in the Undergraduate section and choose ‘Chemistry Careers’.
 - Select the career (or careers) listed here that you currently find most appealing and read the information provided.
- If you choose Biochemistry:
 - First go to the American Society for Biochemistry and Molecular Biology (ASBMB) website (<https://www.asbmb.org/>) and explore the contents of the website. This is the premier biochemistry-related organization in the US and contains a wealth of interesting and useful information.
 - Next, go to the Prospects Biochemistry website (<https://www.prospects.ac.uk/careers-advice/what-can-i-do-with-my-degree/biochemistry>). This is a UK-based organization, but the information is very relevant to jobs in the US.
 - Select the career (or careers) listed here that you currently find most appealing and read the information provided.
- Everyone: For one of the careers you read about, prepare a short paragraph (4-7 sentences) describing why you are interested in the career and what you learned from either the ACS or Prospects website.

Assignment 13. Attend a USU research seminar

- Select a science-related USU research seminar to attend via ZOOM or in-person. The seminar does not have to be sponsored by the Chemistry & Biochemistry Department, but must be a science research seminar. Dr. Hevel will provide suggestions on CANVAS, but you are welcome to search the websites of USU Departments to find out when their research seminars are given (most Departments have a weekly research seminar series). Non-USU seminars, career advice webinars, non-science, and other non-research seminars will not be accepted for this assignment – if you aren’t sure if a particular seminar qualifies, contact Dr. Hevel for permission.
- Use the template on CANVAS to prepare a synopsis of the seminar. Don’t stress if you don’t understand everything discussed in the seminar – do your best to understand as much as you can and don’t be shy about asking questions during the Q&A at the end of the seminar.

Assignment 14. Literature databases and reference management

- Watch Zotero training video. You can find it in Canvas in the module for this week.
- Download and install Zotero (<https://www.zotero.org/>) on your computer. Follow instructions in the video!
- Select a science topic you find interesting.
- Using Scopus (<https://library2.usu.edu/inabs/more.php?Identify=630>) or another literature database, identify three **primary research** articles related your selected topic. These articles must be primary research articles (not review articles or non-peer-reviewed articles). At a minimum, read the abstract and Introduction sections of these articles.
- Write a short synopsis (4-7 sentences) that summarizes the three articles (one synopsis total, not one per article).
- Cite the three articles correctly in your synopsis and prepare a bibliography using ZOTERO. You must use the formatting style used in the journal ‘Nature’.
- Submit your synopsis (with bibliography) and a screen shot of your ZOTERO database.

Assignment 15. Summary from panel discussions

Write a paragraph about what you learned from the panel discussions on Oct 12. In your paragraph, answer the following questions.

At this point, do you think you will be interested in going directly into the work force or attending graduate school, medical school, or another professional school after completing your Bachelor's degree? Explain your thoughts about this. Did you learn anything from the two panel discussions that helped you with this decision? What are the key things you need to do during the next few years to prepare for your next career step?

Assignment 16. Summaries from Career Explorations interviews

Prepare four summaries - one for each of the four Career Exploration interviews you selected. In your summary, address the following questions:

- Which career are you describing in this summary? Provide the name of the guest and the person's title (see document on Canvas if you forgot).
- Is this a career you might be interested in pursuing? Why or why not?
- Did you learn anything about this career that you didn't know before? If so, what?

Either use the textbox or upload a file containing your summaries.

Assignment 17: Take the end-of class survey

Grading:

- **Pass = a minimum score of 80% and participation in three outside activities.**
- Late assignments will have 10% of points removed per day that it is late (weekend days count). This adds up quickly, so do not turn assignments in late!

Grading element		Description	Points
Attendance		2 pts 8 classes with asterisk	16
Assignments	1	Outside activities: 3 activities required, 4 points each *You will automatically fail the course if you do not participate in three outside activities*	12
	2	Study habits	5
	3	Your degree and current career ideas	3
	4	Get to know your Department and send a professional email	3
	5	Prepare for Career Interviews	3
	6	Watch career services & take resume quiz	3
	7	Draft resume	3
	8	Peer review	3
	9	Resume 2.0	3
	10	Gain approval & Make an appointment with Career Services	2
	11	Resume 3.0	5
	12	Explore ACS or ASBSM and Prospects websites	5
	13	Attend a USU research seminar	5
	14	Literature databases and reference management	5
	15	Summary from panel discussion	5
	16	Summaries from Career Exploration interviews	16
	17	End-of-class survey	3
TOTAL			100