

# Transfer Student Success Packet

*University of Massachusetts Amherst*

*Department of Chemistry*

*Dear transfer students,*

*Fellow students and faculty members within the chemistry department at UMass Amherst know that transferring to a new university can be stressful, so we decided to craft this success packet to help make the transition as simple and stress-free as possible. Before COVID-19, transfer students could easily network by hanging out in the Computer Resource Center (CRC), or by wandering into the main advising office for the chemistry department; but this is no longer the case. Transfer students are now facing unprecedented challenges, making the process more stressful than ever. Hopefully, this packet will give you the necessary information to hit the ground running, after transferring to UMass Amherst. I know that I speak for all of us within the chemistry department when I say, we look forward to speaking with you, helping you, and watching you succeed.*

## Bachelor of Science in Chemistry

### Suggested Course Sequence

The sequence below is the recommended sequence for a chemistry major enter Fall 2015 and later.  
Make changes to the sequence only in consultation with an advisor.

	Fall	Spring
<b>Freshman</b>	CHEM 121 General Chem I MATH 131 Calculus I ENGLWRIT 112 College Writing BIOL 151 Intro Biol I + CHEM 196 Independent Research (optional)	CHEM 122 General Chem II MATH 132 Calculus II PHYS 151 General Physics I and Lab GEN ED Diversity (DU/DG) ++ CHEM 196 Independent Research (optional)
<b>Sophomore</b>	CHEM 265 Organic Chem I CHEM 267 Organic Chem I Lab CHEM 291A Sophomore Seminar MATH 233 Multivariate Calculus PHYS 152 General Physics II and Lab CHEM 296 Independent Research (optional)	CHEM 266 Organic Chem II CHEM 268 Organic Chem II Lab CHEM 315 Quantitative Analysis  CHEM 296 Independent Research (optional)
<b>Junior</b>	CHEM 330 Writing in Chemistry CHEM 341 Inorganic Chem CHEM 475 Physical Chem I CHEM 477 Physical Chem Lab CHEM 396 Independent Research (optional)	Upper-level Courses* CHEM 342 Inorganic Chem Lab CHEM 476 Physical Chem II  CHEM 396 Independent Research (optional) or CHEM 388 Independent Research **
<b>Senior</b>	Upper-level Courses* CHEM 388 Independent Research ** or CHEM 499Y Honors Research/Thesis** & or CHEM 496 Independent Research (optional)	Upper-level Courses* CHEM 499T Honors Research/Thesis** CHEM 496 Independent Research (optional)

Upper-level courses				
	Fall	Group A/B	Spring	Group A/B
CHEM 396/496	Independent Research	B	CHEM 396/496	Independent Research
CHEM 513	Instrumental Analysis	A/B	CHEM 423	Biochemistry for Chemists
CHEM 515	Thry Analytical Processes	A	CHEM 585	Advanced Physical II
CHEM 546	Advanced Inorganic	A	CHEM 590CB	Chemical Biology
CHEM 551	Advanced Organic	A		
CHEM 552	Organic Spectroscopy	A		
CHEM 584	Advanced Physical I	A		
PHYS 531	Electronics for Scientists I w/Lab	B	PHYS 553	Optics with Lab
600 and 700 level	Chem courses also accepted	A	PSE 501	Intro to Polymer Science
BIOCHEM 423	General Biochemistry I*	A	600/700 level	Chem courses also accepted
			BIOCHEM 424	General Biochemistry II*
<b>If double majoring in Biochemistry and Molecular Biology</b>				
			BIOCHEM 426	General Biochemistry Lab*
				B

+ Required for students entering Fall 2015

++ Required for students entering Fall 2018

\* Minimum of 12 credits of upper-level courses required to graduate. At least 2 credits must be taken from both groups A and B.

\*\* CHEM 388 and 499Y/T are not intended to be a student's first lab experience.

**NOTES:**

To satisfy the American Chemical Society certification take CHEM 423 (or BIOCHM 423), plus two additional Group A upper level CHEM electives.

Students interested in chemical physics are encouraged to take Physics 181, 182 and 287 instead of Physics 151 and 152.

## Bachelor of Arts in Chemistry Suggested Course Sequence

The sequence below is the recommended sequence for a chemistry major enter Fall 2015 and later.  
Make changes to the sequence only in consultation with an advisor. A BA major has a language requirement.

Fall		Spring	
<b>Freshman</b>	CHEM 121 General Chem I MATH 127 or 131 Calculus I ENGLWRIT 112 College Writing BIOL 151 Intro Biol I + CHEM 196 Ind. Research (optional)	CHEM 122 General Chem II MATH 128 or 132 Calculus II PHYS 131 or 151 General Physics I and Lab GEN ED Diversity (DU/DG) ++ CHEM 196 Ind. Research (optional)	
<b>Sophomore</b>	CHEM 265 Organic Chem I CHEM 267 Organic Chem I Lab CHEM 291A Sophomore Seminar PHYS 132 or 152 General Physics II and Lab CHEM 296 Ind. Research (optional)	CHEM 266 Organic Chem II CHEM 268 Organic Chem II Lab CHEM 315 Quantitative Analysis  CHEM 296 Ind. Research (optional)	
<b>Junior</b>	CHEM 330 Writing in Chemistry CHEM 341 Inorganic Chem CHEM 471 Elem. Physical Chem Or CHEM 475 Physical Chem I* & CHEM 396 Ind. Research (optional)	Upper-level Courses** CHEM 342 Inorganic Chem Lab  CHEM 476 Physical Chem II* CHEM 396 Ind. Research (optional)	
<b>Senior</b>	Upper-level Courses** CHEM 496 Ind. Research (optional)	Upper-level Courses** CHEM 496 Ind. Research (optional)	

Upper-level courses					
Fall		Group A/B	Spring		Group A/B
CHEM 4xx+	Any 400 level chemistry course or above	A	CHEM 4xx+	Any 400 level chemistry course or above	A
CHEM Eng 290A	Intro to Energy Engineering	A/B	CHEM ENG 571	Physical and Chemical Processing of Materials	A
PHYS 531	Electronics for Scientists I w/Lab	A	PHYS 553	Optics with Lab	B
GEOLOGY 311	Mineralogy	B	GEOLOGY 321	Petrology w/lab	B
EDUC 512	Teaching Science in the Middle and High School	B	GEO SCI 519	Aqueous Environmental Geochemistry	B
EnvSci 515	Microbiology of Soil	B	EDUC 706	Science Teaching Workshop	B
ENVSCI 575	Environmental Chemistry w/lab	B	ENVIRSCI 585	Inorg. Contam. In Soil, Water, and Sediment	B
FOOD SCI 542	Food Chemistry 2	B	FOOD SCI 541	Food Chemistry 1	B
FOOD SCI 544	Food Chemistry Lab	B	FOOD SCI 575	Elements of Food Processing Engineering	B
PUBHLTH 420	The DNA Experience	B	FOOD SCI 741	Lipid Chemistry	B
			HIS 397ST	Sci., Tech., and War in 20 <sup>th</sup> cent. US/Eur	B
<b>If double majoring in Biochemistry and Molecular Biology</b>					
BIOCHM 423	General Biochemistry I*	A	BIOCHM 424	General Biochemistry II*	A
BIOCHM 276	Introductory Biochemistry Lab	B	BIOCHM 426	General Biochemistry Lab*	B
			BIOCHM 276	Introductory Biochemistry Lab	B

+ Required for students entering Fall 2015

++ Required for students entering Fall 2018

\* CHEM 475 **and** CHEM 476 must **both** be taken, if substituted for CHEM 471.

\*\* Minimum of 9 credits of upper-level courses required to graduate. At least 2 credits must be taken from both groups A and B.

NOTES: Students interested in chemical physics are encouraged to take Physics 181, 182 and 287.

## **Course Sequence Alteration Suggestions for Transfer Students**

Since Sophomore Seminar (CHEM 290A) and Quantitative Analysis (CHEM 315) are not typically offered at community colleges, there are a couple of suggested changes to both course sequences. These changes only apply if all other necessary courses were completed at community college before transferring.

### **Bachelor of Science in Chemistry:**

- Fall Semester of Junior Year - Take Sophomore Seminar, Junior Year Writing, Inorganic Chemistry, and Physical Chemistry 1.
- Spring Semester of Junior Year - Take Quantitative Analysis, Inorganic Chemistry Lab, Physical Chemistry 2, and begin Independent Research (more about that later).
- Fall Semester of Senior Year - Take Physical Chemistry Lab, Independent Research, and advanced courses.
- Spring Semester of Senior Year - Take advanced courses.

*Tip for B.S. Chemistry Transfers: It is really helpful to take Physical Chemistry Lab (CHEM 477) fall of senior year, after you're able to experience Quantitative Analysis Lab. Both of those labs are taught by the same professor, and students learn a lot of necessary skills in Quantitative Analysis Lab that are not reviewed in Physical Chemistry Lab because it does not line up sequentially with the suggested course sequence.*

### **Bachelor of Arts in Chemistry:**

- Fall Semester of Junior Year - Take Sophomore Seminar, Writing in Chemistry, Inorganic Chemistry, and Elementary Physical Chemistry/Physical Chemistry 1.
- Spring Semester of Junior Year - Take Quantitative Analysis, Inorganic Chemistry lab, Physical Chemistry 2 (if following that sequence), and Independent research or an alternative upper-level elective. *While independent research is not necessary, it can help students develop a relationship with a faculty member so they would be able to write a recommendations letter for graduate school, jobs, or a professional school.*
- Fall Semester of Senior Year - Take second semester of Independent Research (or another alternative upper-level elective), along with advanced courses.
- Spring Semester of Senior Year - Take advanced courses.

*B.A. Chemistry Transfers: Requires four semesters of language that can be met in a variety of ways. Some students may be able to test out of those requirements, but always talk to your advisor and plan accordingly.*

*General Tip for Chemistry Transfers: Try to plan with your advisor as much as possible. **Transfer students need 45 residential credits to graduate**, so look at a couple of nonrequired classes that seem interesting to know which semester they are offered. Add up the number of credits required for chemistry courses and create a solid roadmap for your journey at UMass. Planning the process takes away a lot of the unnecessary stress, letting you focus on what matters. Plus, no one wants to get to the last semester of senior year and find out they are missing a requirement for graduation.*

## **Undergraduate Research**

*CHEM 396 and 388/499 Requirements*

*Undergraduate research is coordinated by the Undergraduate Program Director, **Nate Schnarr**. Please contact Nate if you are looking for an undergraduate research mentor.*

[schnarr@chem.umass.edu](mailto:schnarr@chem.umass.edu)

## **Support Resources**

***Ruthanne Paradise** plays many important roles within the chemistry department, Chief Undergraduate Advisor, Senior Lecturer, and Director of Analytical/Physical Labs. She also runs the **UMass Chemistry Club**; in case you want to get involved with that. If you have any questions or concerns relating to chemistry or the chemistry department, Ruthanne can probably help.*

[rparadise@chem.umass.edu](mailto:rparadise@chem.umass.edu)

<https://www.chem.umass.edu/undergraduate-students/chemistry-clubs>

*Other faculty members that play key roles within the chemistry department at UMass Amherst can be found in the department directory.*

<https://www.chem.umass.edu/about/department-directory>

## **Mental Health**

*Center for Counseling and Psychological Health (CCPH) offers a wide variety of mental health services to students, including, crisis services, individual therapy, psychiatric services, specialty services (assessing learning disorders, eating disorder, substance abuse, etc.), online resources, and more!*

<https://www.umass.edu/counseling/>

## ***Tips for Transfer Students***

- *Always plan with your advisor to stay on track. Ask questions about your ARR to make sure everything is accounted for.*
- *Communicate any questions or concerns with professors/advisors.*
- *If you are concerned about doing well in a class, say something/email the professor right away (in the beginning of the semester). This will show initiative on your part and raise awareness for the professor. Professors appreciate communication and transparency.*
- *Advocate for yourself! If you think something is unfair, respectfully email the professor saying why you feel that way.*
- *Organize class documents/files for efficiency. When less time is spent looking for something, more time can be spent working on an assignment or studying.*
- *Use a calendar to maximize productivity and minimize anxiety.*
- *Practice mindfulness and set aside a little bit of time for yourself each day.*
- *Fuel your body with nutritious meals.*
- *Surround yourself with supportive friends and family members.*