



HIGHLIGHTS

- Year 1** Introductory Chemistry I & II
Introductory Biology I & II
- Year 2** Genetics
Organic Chemistry I & II
- Year 3** Biochemistry I & II
- Year 4** Capstone course or research experience

Introduction to the Major

The biochemistry and molecular biology (BCMB) major prepares students for careers in a dynamic scientific field.

One of the most exciting and influential areas of science today, biochemistry and molecular biology (BCMB) exists at the intersection of biology and chemistry, focused on the cellular and molecular building blocks of living organisms. As a BCMB major, you will have opportunities to explore diverse topics in the classroom, in the lab, and in the field, and to develop the skills needed for successful careers in health sciences, biotechnology, education, or basic and applied research.

CORE COURSES

Our program provides a solid grounding in chemistry, genetics, cell biology, microbiology, physics, and calculus, plus a year-long course sequence that explores our current understanding of biochemistry. As you move on to advanced courses, you can specialize in the areas that interest you most. Examples of elective courses include:

- Protein Chemistry
- Chemistry and Biology of Medicine
- Viruses: Friends or Foes
- Biology of Cancer
- Chemical Biology: Techniques and Applications in Research

25%

of Clarkies major in
STEM fields

"Nestled within a liberal-arts education, BCMB at Clark provides students with the knowledge and skills to be successful problem solvers and compassionate leaders."

— DEBORAH ROBERTSON, BCMB FACULTY MEMBER



BIOCHEM/MOLECULAR BIOLOGY

Bachelor of Arts



DESIGN
YOUR
JOURNEY



**Explore
and navigate
Clark curriculum**



**Connect
and engage
with communities**



**Discover
and pursue
your passions**



**Develop
professional
skills**



**Reflect,
design
and plan**

YEAR

1

YEAR

2



□ **Let's get started!**

Build your foundation by taking introductory biology and chemistry courses and either physics or calculus. Talk to your adviser about Accelerated Introduction to Chemistry.



□ **Take a First-Year Intensive (FYI) course**

With the help of your adviser, select an FYI within STEM or an area you want to explore.



□ **Meet your faculty**

Make an appointment to meet with BCMB faculty during the first few weeks of the semester. This is a great opportunity to introduce yourself and will make it easier to ask questions or seek help later.



□ **Get connected**

Check out biology and chemistry department events where scientists share their research. Join a student organization like Clark Emergency Rapid Response, Women in STEM, or the Prehealth Society.



□ **Explore on and off campus**

Check out the School and Visual and Performing Arts calendar and attend on-campus events. Worcester is a great city with access to beautiful outdoor spaces and museums.



□ **Getting from here to there**

Use the BCMB degree planner to map out your major coursework. Explore courses that fulfill the Program of Liberal Studies (PLS) requirements such as Medical Ethics or Sociology of Medicine.



□ **Reflect on what sparked your interest this year**

Celebrate your progress and consider what classes and topics you enjoyed the most.



□ **Stay the course!**

Take three courses in the BCMB major each semester. Develop your expertise and explore your interests in BCMB. Build research skills by taking Analytical Chemistry, Recombinant DNA, or Bioinformatics.



□ **Pursue another point of view**

Take one course that fulfills the PLS, Diversity and Inclusion, or Verbal Expression requirements each semester.



□ **Keep connecting**

Meet with each of your STEM professors early in the semester. Talk with your teaching assistants. What are their research interests? How did they get started in STEM?



□ **Start networking**

Check out the Alumni Job Shadow Program to connect with alumni and learn about what they do.



□ **Want to get away?**

Consider options to Study Abroad and Away that include science courses or research opportunities.



□ **Look ahead**

Visit the Career Lab in ASEC to get your resume ready, attend a career fair to learn about potential paths, and explore research opportunities that fit your interests.



□ **Celebrate your successes, learn from your missteps, and plan for Year 3**

Discuss the past year and your plans with your adviser. Book an appointment with the Career Connections Center to explore internships for hands-on experience.

WHAT CAN I DO WITH MY MAJOR?

JOBS & EMPLOYERS

BCMB graduates work in medicine, pharmaceutical research and development, environmental regulation, veterinary practice, education, agricultural research, and more.

GRADUATE PROGRAMS

Alumni have pursued advanced study at Tufts University, Massachusetts College of Pharmacy and Health Sciences, Harvard University School of Dental Medicine, and others.

YEAR 3



Build your skills

Develop skills and knowledge in Biochemistry I & II and either cell biology or microbiology. Expand your horizons by selecting BCMB electives that pique your interests. Complete your PLS requirements.



Plan for Year 4 and beyond

Review the degree planner and chart your remaining courses. Are you interested in a fifth year at Clark in the accelerated degree program (ADP)? Stay tuned for info sessions and deadlines. Graduate school application deadlines can be in the fall or early winter of Year 4.



Share your expertise

Consider being a tutor through the Chemistry Club or a Peer Learning Assistant (PLA) for introductory science classes.



Test-fly your career

Explore on- and off-campus research experiences and internships. Talk with BCMB faculty about funding opportunities for summer research. Enroll in short chemistry courses that explore careers and develop professional skills. Refine and update your resume.



Grow your professional network

Learn about the many paths you can take in a BCMB career by connecting with Clark alumni on ClarkCONNECT.



No regrets!

Make your Clark "Bucket List" and start checking things off. Consider where you are confident, and where you still need to build skills and experience.

YEAR 4



Finish strong!

Enroll in Biophysical Chemistry and complete your BCMB electives. Continue building your techniques skill set with short courses in chemistry.



Expand your horizons

Take some of the courses you always wanted to take at Clark. Offer your voice to interdisciplinary conversations, and explore new interest like creative writing, painting, or music.



Bring it all together

Your capstone draws on your expertise and experiences at Clark. You may find yourself engaged in research or in a course that challenges you and your peers to practice problem-solving and effective communication.



Reinforce your network

Continue to attend departmental seminars and take advantage of opportunities to speak with the presenters.



Share what you've learned

Present your research at ClarkFEST, or in the Scholarly Journal of Undergraduate Research.

Become a PLA or student leader in a club or organization.



Prepare for life after Clark

Work with your career adviser to update your resume, LinkedIn profile, and Handshake account. Share your career goals and aspirations with faculty and mentors. Schedule a mock interview to practice and prepare.



Answer the big questions

Reflect on your time at Clark and your next steps. What have you learned that you value? What have you excelled at?



AMPLIFY YOUR MAJOR!

BCMB students and alumni are making a difference here in Worcester and around the globe.

Take advantage of research opportunities in a region with a national and international reputation for excellence in biomedical innovation and education. Worcester is home to burgeoning life sciences and biotechnology sectors. Meet industry professionals from AbbVie, Massachusetts Biotechnology Incubator, MustangBio, and Charles River Laboratories through career-related and alumni events.

CONNECT WITH US!

**The Lasry Center for Bioscience &
Arthur M. Sackler Sciences Center**

950 Main Street, Worcester, MA 01610

clarku.edu/departments/biochemistry-and-molecular-biology/ | 508-793-7116

Advising

The BCMB faculty are here to help!

Whether you have questions about courses or careers, feel free to contact the BCMB program director or any of the affiliated faculty.

**CLARK
UNIVERSITY**



Challenge Convention.
Change Our World.

950 Main St.
Worcester, MA 01610
508-793-7711

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