

HOW TO USE THIS MAP

- UToledo's Major Map is a guide for you to plan for future success while you explore your University experience. The five rows of the map provide a step-by-step guide to integrate your academic courses with experiences on and off-campus that will help build your career readiness.
- Start thinking about life beyond college now and use the map to set short- and long-term goals, such as preparing for graduate or professional schools, preparing for your first career-track job and networking with others in your profession.

RESOURCES FOR SUPPORT

From orientation to graduation, there are many resources to support your University experience.

Your success coach is like your personal GPS. As you navigate from where you are to where you want to be, coaches offer one-on-one guidance and support through referrals to academic support services and other campus resources, and connections to campus engagement and experiential learning opportunities. Visit utoledo.edu/success-coach to connect with your success coach.

Career Services provides comprehensive career planning and preparation services for all UToledo students in order to clarify and implement their academic and career goals. Connect with Career Services during your first year and continue working with them often throughout your academic career. Visit utoledo.edu/career to learn more about the programs, services and events to support your success.



TOP FIVE REASONS TO STUDY BIOCHEMISTRY AT UTOLEDO

- 1** Choose a Bachelor of Science (B.S.) or Bachelor of Arts (B.A.) degree. The B.S. degree is certified by the American Chemical Society, the world's largest scientific society, and meets the standards set for becoming a professional biochemist.
- 2** Gain hands-on experience that is often not possible at larger institutions. UToledo biochemistry students use advanced equipment that prepare them for careers in academic and corporate research facilities.
- 3** Obtain experiential learning through undergraduate research, as early as your first year, working directly with faculty who are experts in their field.
- 4** Fulfill both your majors course requirements and the requirements of a pre-health concentration (e.g., pre-med) without taking extra classes.
- 5** Study abroad during your junior year in a yearlong exchange program with The University of Salford in Manchester, England. All courses transfer seamlessly.

PUTTING YOUR DEGREE TO WORK

- Applied Research & Product Development
- Biotechnology
- Business & Sales
- Dentistry & Optometry
- Education
- Environmental
- Forensics
- Government Policy
- Health Care & Medicine
- Pharmaceutical
- Science



BUILD YOUR EXPERIENCE BEYOND THE CLASSROOM

Experiential learning adds significant value to your degree in biochemistry whether it's undergraduate research or community outreach. Specialized hands-on training focused on research designed to discover new scientific knowledge sharpens your creative and critical thinking skills. Undergraduate research often leads to students becoming co-authors on scientific publications and opportunities to attend and present the results at scientific conferences. Participation in service learning through the award winning UToledo American Chemical Society student organization is a rewarding experience to share the excitement of chemistry with others and network with professionals in the field. Getting involved beyond the classroom helps your resume and applications to graduate and professional schools stand out. This degree will set you apart and launch your career!

AMPLIFY YOUR MAJOR

- Biochemistry students often double-major in biology or chemical engineering.
- Get involved in undergraduate research, it will make you stand out, and you may also have the opportunity to present and publish your research results in scientific literature and at conferences.

"I was amazed at the wealth of resources available...from extremely knowledgeable instructors and graduate students to the chemistry help center, Learning Enhancement Center and camaraderie of students around me. This continued in my pursuit of research in Dr. Wei Li's lab. It seemed like the possibilities of what a student could desire were endless yet could all be met at UToledo."

NATHAN GEMBRESKA, Medical Student, UTMCM, B.S. Biochemistry, pre-med, '21

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FUELING TOMORROWS

2022-23

Biochemistry

Department of Chemistry and Biochemistry



1ST YEAR

2ND YEAR

3RD YEAR

4TH YEAR

EXPLORE YOUR MAJOR AND CAREER PATHWAYS



In the first year, you will have the chance to explore the foundations of Biochemistry with courses such as:

CHEM 1230 General Chemistry I
CHEM 1280 General Chemistry Lab I
CHEM 1910 Survey of Research

Meet with your [academic advisor](#) to learn more about your [plan of study](#).

Start to dive deeper into the discipline of Biochemistry by focusing on Organic Chemistry (e.g., CHEM 2480) – a unique organic laboratory for majors introduces you to specialized instrumental techniques.

Explore [undergraduate research](#) opportunities or consider volunteer opportunities available with the UToledo student chapter of the [American Chemical Society \(ACS\)](#).

Meet with your [academic advisor](#) to make sure you are on track for graduation and have planned out your courses for the next year.

Talk to your advisor and other faculty members about a potential honors thesis project or internship.

Continue working on major and core requirements.

Consider specialized advanced electives to broaden your knowledge and prepare you for your career post-graduation.

Participate in seminars and research-based courses that can lead to graduate school or your future career path.

Explore networking opportunities at scientific meetings.

Need to take the GRE? Start [here](#).

CONNECT WITH OTHERS AND BUILD COMMUNITY



Attend the Student Involvement Fair in early fall; explore over 400 [student organizations](#) and attend [campus events](#).

Consider joining a fraternity or sorority and getting involved in [Greek Life](#).

Working on campus is a great way to meet others. Attend the [Job Fair](#) to learn about campus jobs!

Explore organizations that complement your major such as UToledo ACS Student Chapter or [UToledo Green Fund](#). Many colleges have academic-focused organizations. Learn more on [InvoNet](#).

Community service is a great way to get experience as well as give back to the community. Consider joining a [volunteer organization](#).

Consider doing research with a faculty member. UToledo students often apply for and receive funding for their research and present their results at conferences. Check out the [Office of Undergraduate Research](#) to learn more.

Join a professional association related to your interests.

Present your research at a research exhibition on campus. Consider attending and presenting your work at a regional or national conference with a faculty member for networking and exploring career opportunities.

Be sure to include these experiences in your resume: community service, student leadership, organization membership and philanthropic efforts.

BUILD YOUR SKILLS THROUGH EXPERIENCE



Meet with a [Biochemistry faculty member](#) to discuss creative ways to volunteer or intern in your area of interest.

Consider opportunities outside of the classroom. Join a student organization such as:

- [American Chemical Society \(ACS\) Student Chapter](#)
- [Building Ohio's Sustainable Energy Future \(BOSEF\)](#)

Improve your study strategies and visit the [Learning Enhancement Center](#).

Explore summer job opportunities related to your major by scheduling a meeting with [Career Services](#).

Consider applying to the Office of Undergraduate Research [Summer Research and Creative Activities Program](#) to earn a research scholarship.

Interested in undergraduate research? Apply for funding through the [Office of Undergraduate Research](#).

Participate in a [yearlong exchange program](#) with The University of Salford in Manchester, England. All courses transfer seamlessly.

"Employment of biochemists and biophysicists is projected to grow 5 percent from 2020 to 2030... The [median annual wage for biochemists and biophysicists was \\$102,270 in May 2021](#)." - BLS

Investigate internships or full-time jobs related to careers of interest by attending events for graduating seniors sponsored by [Career Services](#).

ENGAGE IN AN INCLUSIVE GLOBAL PERSPECTIVE



Get to know people who are different from you. Connect with the [Office of Multicultural Student Success \(OMSS\)](#) by attending OMSS [History and Heritage Month](#) events.

Learn another language or culture to develop new perspectives and build your marketable skills. Visit [World Languages and Cultures](#) for more information.

Connect with the [Education Abroad Office](#) to learn more about the opportunities to live and learn in a different country. Meet with your advisor to see how your credit will transfer and discuss the best time to study away.

Consider completing the OMSS [Student Diversity Certificate](#) program.

Attend events sponsored by the [Office of Diversity, Equity and Inclusion](#).

Join an international student organization to learn more about other cultures.

Attend the I-Village event or I-Dinner, two premier UToledo international events.

Build your intercultural competencies by learning more about diversity, equity and inclusion through OMSS and the Office of Diversity, Equity and Inclusion programs.

PREPARE FOR POST-GRADUATION



Complete your [Handshake Profile](#) (use your UTAD log-in credentials).

Explore [What Can I Do With This Major?](#) and [Candid Career](#) to learn about career paths and employers within your field of study.

Meet with [Career Services](#) to begin developing your resume and a plan to get career ready.

Utilize Handshake and InvoNet to find opportunities to meet employers and expand your network by attending career fairs and other events.

Meet with Career Services to update your [resume](#) and LinkedIn profile.

Use Handshake to apply to part-time jobs, internships or externships to gain practical and relevant experience.

Gain interviewing skills with [Big Interview](#) or schedule an appointment with Career Services for a mock interview.

Join groups on LinkedIn reflecting specific careers or topics of interest in biochemistry.

Solidify post-graduate plans.

Get help from your academic advisor, faculty and Career Services with job searching, resumes, interviews and graduate school applications.

Learn about co-op's, internships and more through the [American Chemical Society \(ACS\)](#).

WHAT WILL I LEARN?

Develop your career readiness competencies to ensure you are prepared to launch your career upon graduation:

- Career & Self Development
- Communication
- Critical Thinking
- Equity & Inclusion
- Leadership
- Professionalism
- Teamwork
- Technology

HOW WILL I USE IT?

Use your degree to attain career positions such as:

- Biochemist
- Biological scientist
- Chemical safety specialist
- Clinical research assistant
- D.D.S. candidate
- Forensic science technician
- Forensic scientist
- Lab manager
- Lab specimen processor
- Laboratory biochemist
- M.D. candidate
- Medical scientist
- Patient service specialist
- Professor
- Registered nurse
- R & D formulation chemist
- Research scientist
- Science technician
- Scientist