BACHELOR OF SCIENCE

Biochemistry and Molecular Biology

THE UNIVERSITY OF BRITISH COLUMBIA
Okanagan Campus

Major description

Explore the molecular mechanisms that sustain life in Biochemistry and Molecular Biology, a major that combines chemistry and biology to examine how cells function, how diseases arise, and how science can solve some of today's most pressing challenges. As part of this major, you'll explore the structure and function of essential biomolecules—such as proteins, nucleic acids, carbohydrates, and lipids—to gain a deeper understanding of life at its most fundamental level.

Program highlights

Biochemistry option: Gain insight into the molecular mechanisms of life while exploring interdisciplinary fields like bioinformatics, metabolomics, chemical biology, cellular biophysics, and biocatalysis. Ideal for students interested in research and emerging technologies.

Medical and Molecular Biology option: Focus on medical applications of biochemistry, including pharmacology, virology, microbiology, and the biochemical basis of disease. Great for students pursuing medicine, healthcare, or biomedical research.

Learn more by reviewing the Academic Calendar.

Your career options

Prepare for a career in healthcare, government regulation, veterinary medicine, pharmacy, agriculture, biotechnology, research and more.

Visit the the Biology or Chemistry webpage and scroll down to the "Careers and Outcomes" heading for more employment information.

Looking for support?

UBC Okanagan provides a broad range of support services from admission through to graduation. Visit Student Support and Resources for a full list. Some examples are included below:

- Academic & Career Development provides academic and career support for all undergraduate students
- Indigenous Programs & Services offers services including academic and career advising, experiential learning opportunities, peer mentoring and tutoring for First Nations, Métis, and Inuit students
- International Student Advising supports international students with immigration, employment in Canada, and more
- Faculty Program Advisors provide faculty-specific academic support
- Disability Resource Centre assists with disability-related accommodations and programming initiatives to help remove barriers for students with disabilities and ongoing medical conditions
- Counsellors help students examine and explore their behaviors, relationships, feelings, or thoughts that cause concern or challenges
- Financial support is available to help students learn to budget, pay tuition, or apply for awards and scholarships
- The Student Learning Hub offers free learning supports such as subject tutoring, learning strategies, and writing consultations

How to use the Program Plan:

Tuum est! This Program Plan is designed to help shape your UBC experience, challenge yourself to try new things, and become the person and scholar you want to be to help make your time at UBC Okanagan yours. The Program Plan offers suggestions – you don't have to do it all!

The Program Plan includes four categories:

- **Explore the Major:** Explore what you'll be studying and learning. Make connections between your program and future career or education opportunities and goals.
- **Connect and Build Community:** Making connections will help develop your support network throughout your studies and beyond.
- **Engage Locally and Globally:** Get ready for life beyond UBC by accessing programming and resources aligned with your goals, interests, and career pathways.
- **Develop Skills and Gain Relevant Experience:** Expand your capacity to understand the changing world and embrace different perspectives by seeking out new experiences and opportunities.

Legend

Experiential Education opportunities are highlighted with a ➔ symbol.

Plan ahead! Statements highlighted with a ✔ symbol must be completed during a specific term(s) or have an associated deadline.

Explore the Major

Getting Started
First-year standing

Explore the Biochemistry and Molecular Biology major by visiting the Department of Chemistry or Department of Biology websites and reviewing the Academic Calendar.

Learn more about your major requirements by visiting the Degree Planning webpage and reviewing the First-Year Planning Guides.

Book an appointment with an advisor to discuss program or career-related questions. Find the advisor that is right for you by reviewing advising options available.

Visit the Student Learning Hub throughout your degree for free supports from peers and professionals that include tutoring in math, sciences, languages, and writing.

Participate in Supplemental Learning – free, weekly, peer-facilitated study sessions.

Moving Through your Degree
Second-year standing

Declare the Biochemistry and Molecular Biology major in Workday during the registration period between June and mid-September after completing a minimum of 24 credits.

Find unique courses to fill your elective requirements or add a minor.

Meet with an instructor or TA during office hours: ask a question, discuss an assignment, or go over lecture material.

International Students: Contact International Student Advising to review your study status.

Considering further education? Find graduate programs at UBCO and beyond. Research application requirements, admissions information, and funding options.

✔ Consider applying for the Dual Degree Master of Management.

Moving Through your Degree
Third-year standing

Explore a topic of interest in depth by participating in ✔ ➔ Undergraduate Research. Apply for an NSERC or an Undergraduate Research Award to fund your research.

Explore ✔ ➔ co-op opportunities to strengthen your skills and build your work experience by applying to the Co-operative Education Office. Applications open in September to students with 3rd year standing or higher.

Study abroad by participating in a ✔ ➔ Go Global program such as exchange, faculty-led global seminar, or research abroad.

Apply to the Biochemistry & Molecular Biology honours program at the end of the third year of study (after completing a minimum of 78 credits).

Explore the Certificate in Communications and Rhetoric.

Preparing for Graduation and Your Future
Fourth-year+ standing

Market yourself to employers by reflecting on your UBCO experience and identifying the skills and knowledge you developed through the activities you participated in. Meet with a Career Development Specialist for help with your resume, cover letter, and job search strategy.

Schedule an appointment with an advisor the term before you plan to graduate to ensure that you will meet all academic graduation requirements.

Review graduation eligibility requirements and deadlines before you ✔ apply to graduate and learn about convocation.

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Explore Experiential Education

Participate in hands-on, immersive learning experiences.

Explore high-impact, "learn-by-doing" experiences that take your education beyond the classroom. Whether on- or off-campus, paid or volunteer, participating in directed experiences and focused reflection helps to increase knowledge, develop skills, clarify values, and build your capacity to contribute to your communities.

Experiential Education opportunities are highlighted with a ➔ symbol.

Most opportunities highlighted below can be pursued at any time. Opportunities with timelines or deadlines are noted with a ✔ symbol.

Visit the Experience & Involvement Hub to explore these opportunities and more!

Connect your experiences

Whether you're new-to-UBCO or nearing graduation, reflect on the questions below to help connect your values, interests, and education to your future career or personal goals. Practicing reflection can help deepen your learning, strengthen your connections, and encourage life-long learning. These questions are meant to help you build a UBC Okanagan experience that is unique to you.

- What are you hoping to learn as you progress through your degree?
- What kind of career are you interested in after completing your degree?
- How will the skills and knowledge you acquire during your studies help you in your career after graduation?
- What relationships and experiences are you hoping to gain from your time at university?

A Career Development Specialist can help guide you through the reflection process to bolster the connections between your experiences, skills, and goals. For a deeper reflection, track your experiences in the Experience & Involvement Hub.

Getting Started:
Explore new opportunities and interests.

Develop Interests and Broaden Perspectives:
Get more involved and build your skills and connections.

Immersive Experiences: Take part in unique opportunities and programs. Find ways to immerse yourself in your experiences.

Connect & Build Community

New to UBC? ✔ Participate in orientation and transition programming to connect with other students and get involved in the campus community.

Find on-campus events to meet new people and get involved with the campus community using the Events Calendar.

Follow @UBCOStudents on Instagram for campus tips, opportunities, and event updates.

Attend a Heat Varsity Athletics game. Admission is free with your student UBCcard.

Branch out, get involved in student life, and have fun by joining a student association or the Biochemistry Course Union to meet peers and participate in events and activities.

Get active! UBCO Recreation offers activities like intramural sports, fitness classes, and other special events and activities.

Build your networking skills with alumni working in careers in your desired industry by using Ten Thousand Coffees and LinkedIn or by attending career events and workshops.

Commuting? Visit the Collegia spaces on campus to relax, study, and socialize with others.

Planning to live on campus? ✔ ➔ Apply to join a Living Learning Community.

Explore professional associations such as the Association of Professional Biology for more information about potential careers, networking and professional development opportunities, and more.

Give back to the campus community by volunteering or applying to work on campus: Student & Alumni Job Board.

Create your own student association, study group, or social club to connect with peers.

Develop Skills & Gain Relevant Experience

Use the Events Calendar to find on-campus opportunities for personal and professional development.

Connect with the Academic & Career Development team for support with exploring opportunities that will help you achieve your career or education goals.

Looking to volunteer, intern, or gain work experience? Assess what experience you have and fill any gaps by participating in Career Development workshops and finding opportunities on the Student & Alumni Job Board.

Apply to the ➔ Work Study program to build skills and grow your professional network with paid on-campus positions that work around your class schedule.

✔ Visit Innovation UBC to explore how you can turn ideas into impact through research partnerships, entrepreneurship, commercialization and more.

Book an appointment with a Learning Strategist at any stage in your degree for help with study skills and learning strategies.

Investigate requirements for full-time jobs or other opportunities related to careers of interest by looking at job boards and employer websites.

Develop new research connections, experience and professional skills training by applying to a Mitacs program.

Find other work opportunities or apply to the ✔ ➔ Co-op Program to strengthen your resume.

Summarize and organize your academic and out-of-classroom experiences and accomplishments in a resume, CV, or portfolio with help from a Career Development Specialist.

Gain leadership experience by running for an executive position in a student association or the Student Union Okanagan (SUO).

Engage Locally & Globally

Learn about UBCO's commitments to Truth and Reconciliation and Indigenous initiatives.

Explore course options and electives that broaden your own perspectives and worldviews.

Learn about programs and supports available through the Equity & Inclusion Office.

Participate in cross-cultural initiatives organized by the Global Engagement Office (GEO) to increase cultural awareness and grow professionally.

Get involved with Student Union Okanagan (SUO) resource groups:
- Indigenous Peoples Collective (IPC)
- Peer Support Network (PSN)
- Pride Resource Centre (PRC)
- Women's Resource Centre (WRC)
- Disability United Collective Okanagan (DUC-O)

Attend Kelowna community events to get connected and learn about different cultures, activities, and experiences that make the Okanagan unique.

Engage with your community in a meaningful way and help to create social change by participating in the ✔ ➔ Community Service Learning program.