You’ll love our designer genes.

Make an impact in areas such as commercialized biotechnology, medical diagnostics, or pollution monitoring by applying your science knowledge with skills in economics.

Understand the theories and principles surrounding the production, distribution, and consumption of goods and services. Industry requires talented economists that can forecast the direction of scientific developments in manufacturing, resource requirements, and new research. Combine that with biotechnology expertise and apply biological processes to technological advances and you’ll be a leader in generating innovative solutions to our most pressing issues.

In this exciting industry, being a leader means understanding the foundational science behind biotechnology, and going a step further by applying that expertise in key business situations.

Biotechnology is positioned to be a dominant technology for the next 50 years.

REAL-WORLD RELEVANCE

Biotechnology/Economics ensures you gain a solid foundation in economic theory, while sharpening your business acumen, all while you build your expertise in biotechnology – an exciting, high-demand field that includes personalized medicine, medical devices, and pollution abatement.

SCIENCE AND BUSINESS WORKSHOPS

The workshops are a set of courses that specifically highlight how analytical thinking and scientific rigor intersect in business. Focus on:

› Technology innovation
› Strategic development
› Management and marketing of scientific and technical advances
› Organizational management of scientific organizations

Taught by uniquely qualified and seasoned individuals grounded in the often contrary worlds of academic, industrial, entrepreneurship, and public policy you’ll develop the special skills that set Biotechnology/Economics students apart.

SKILLS ATTAINED WITHIN THIS MAJOR

› Market and corporate analysis
› Communications
› Leadership
› Commodity trend analysis
› Critical thinking

EXAMPLES OF BIOTECHNOLOGY

› Personalized medicine
› Bacterial remediation in soil
› Medical implants
› Artificial skin
› Insulin pumps
› Contact lenses that monitor patient health

GENERALIZED PROGRAM BREAKDOWN – COURSES

- Science
- Economics
- SCBUS workshop
- Other

100% Co-op employment rate

GAIN 20 MONTHS of paid co-op work experience

Available in the CO-OP STREAM of study only

Apply directly to the BIOTECHNOLOGY/ ECONOMICS entry program on OUAC

ONLY PROGRAM of its kind in NORTH AMERICA
COURSE OUTLINE

SAMPLE FIRST-TERM SCHEDULE

MONDAY  TUESDAY  WEDNESDAY  THURSDAY  FRIDAY

Chemistry  1 hr  Cell Biology  1.5 hrs  Cell Biology  1 hr  Chemistry  1 hr

Science and Business Workshop  3 hrs

Chemistry  1 hr

Cell Biology  1.5 hrs

Microbiology  1 hr

Science Communications  1.5 hrs

Microbiology  3 hrs

Microbiology  1 hr

Science Communications  1.5 hrs

Microbiology  3 hrs

YEAR 1 (FALL)

BIOL 130 Introductory Cell Biology
BIOL 240/240L Fundamentals of Microbiology/Lab
CHEM 120/120L General Chemistry 1/Lab
SCBUS 123 Science and Business
ENGL/SPCOM 193 Communication in the Sciences

YEAR 1 (WINTER)

BIOL 239 Genetics
BIOL 241 Introduction to Applied Microbiology
CHEM 123/123L General Chemistry 2/Lab
ECON 101 Introduction to Microeconomics
ECON 102 Introduction to Macroeconomics
CS 100 Introduction to Computing through Applications

YEAR 2

BIOL 308 Principles of Molecular Biology
BIOL 309 Analytical Methods in Molecular Biology
CHEM 266/266L Basic Organic Chemistry 1/Lab
ECON 211 Introduction to Mathematical Economics
ECON 221 Statistics for Economists
ECON 290 Models of Choice in Competitive Markets
ECON 322 Econometric Analysis I
MGMT 220 Entrepreneurship and the Creative Workplace
SCBUS 223 Strategies Behind Technological Innovation
1 Biology Elective

YEAR 3

BIOL 331 Advanced Cell Biology
BIOL 342 Molecular Biotechnology 1
BIOL 361 Biostatistics and Experimental Design
CHEM 237 Introductory Biochemistry
ECON 306 Macroeconomics
ECON 323 Econometric Analysis II
ECON 371 Business Finance 1
ECON 391 Equilibrium in Market Economics
SCBUS 323 Technology Development
1 Chemistry Elective

YEAR 4

BIOL 432 Molecular Biotechnology 2
BIOL 443 Fermentation Biotechnology
ECON 393 Market Failures
SCBUS 423 Strategic Management of Science and Business
3 Biology Electives
1 Economics Elective
1 of the following:
> ECON 406 Money and Banking II
> ECON 407 Economic Growth and Development II
> ECON 408 Business Cycles
> ECON 409 Workers, Jobs, and Wages

Course outline and schedule are subject to change at any time. Course sequence may vary due to co-op term requirements.

ugradcalendar.uwaterloo.ca/group/uwaterloo-faculty-of-science

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