

BSc BIOLOGICAL SCIENCES

HONORS OR SPECIALIZATION PROGRAM
FACULTY OF SCIENCE

UPDATED FEBRUARY 2012

This Academic Planning Guide highlights major points only regarding admission and transfer. Students are advised to read the university and RDC calendars and the Alberta Transfer Guide for other necessary information. Some courses listed may have prerequisites; refer to [Course Descriptions](#). Access this guide online: www.rdc.ab.ca/academic_advising.

THE DIFFERENCE BETWEEN BSC HONORS, SPECIALIZATION, AND GENERAL PROGRAMS AT UOFA

The 4-year **Honors programs** are the most desired route for students continuing to Master of Science (MSc) or Doctor of Philosophy (PhD) and a research or academic career. Honors students focus on their major field of study, and are expected to maintain a higher standard of academic achievement than those in a Specialization or General program.

The 4-year **Specialization programs** do not concentrate on one subject to the same extent as the Honors programs. Specialization students take most of their courses in the major field of study, and are expected to maintain a higher standard of academic achievement than those in a General program. The Specialization degree can provide the background to help you proceed to a higher degree but its primary function is to provide a comprehensive education at the undergraduate level.

Transfer admission to Honors and Specialization programs requires a minimum course load and GPA in each year of post-secondary study preceding admission. Students wishing to move into these programs must meet the requirements regardless of their original/current program of study.

The 4-year **General program** provides a diverse education in more than one branch of study. Each student must complete a Science major and also a second Science major *or* complete a minor. The minor may be in Science or in Agricultural, Life & Environmental Science, Arts or Business. The General program allows for subsequent transfer to Specialization and Honors programs and preparation for admission to professional programs.

The eight concentrations in the BSc Biological Science program are:

Animal Biology	Microbiology
Bioinformatics	Molecular Genetics
Ecology	Physiology & Developmental Biology
Evolutionary Biology	Plant Biology

RDC does not offer Year 1 in the Bioinformatics program; students may wish to take Year 1 of this concentration at UofA. RDC offers the first year coursework but not the second year for concentrations in Physiology & Developmental Biology and Plant Biology; these students would apply to UofA for Year 2. Year 2 coursework is available at RDC for the other five concentrations. Students declare their area of concentration in BSc Biological Sciences when applying to UofA for Year 2.

SUGGESTED PATTERN OF COURSES FOR YEAR 1

FALL TERM	WINTER TERM
BIOL 218	BIOL 217
CHEM 211	CHEM 351
Science Option ^{3 to 6}	Science Option or CHEM 212 ^{1 to 6}
Arts Option (ENGL 219 recommended)	Arts Option (ENGL 220 recommended)
One of: MATH 202 or 203, MATH 221 ⁶	STAT 251

NOTES:

1. CHEM 212 is not a program requirement for concentrations in **Animal Biology, Ecology, Evolutionary Biology, Physiology & Developmental Biology, or Plant Biology**; choose one Science Option from #5.
2. Students who will apply to a concentration in **Microbiology or Molecular Genetics**: take CHEM 212 in Year 1.
3. Students in **Ecology** concentration: take GEOG 230/231 as Science Options. You are strongly advised to complete *both* GEOG 230 and GEOG 231 at RDC because GEOG 230 *and* GEOG 231 are required to receive transfer credit for EAS 100/105 at UofA. Ecology students (and others wishing credit in EAS 100/105) transferring with only one of these GEOG courses will be required to take *both* EAS 100 and EAS 105 at UofA.
4. Students taking this degree program while preparing for admission to a professional program (i.e. Chiropractic, Medicine, Optometry, etc.) must fulfill chemistry coursework to meet requirements for both programs.
5. **Science Options** choose from the following courses (do not take a course as an option if it is part of year 2 in your concentration): ASTR 205; BIOL 301, CHEM 212, CMPT 201, GEOG 230, 231 (see #3 above); MATH 202 (or 203), 204, 221, PHYS 205, 226; PHYS 241, 247; PSYC 260.
6. Students taking calculus who earned a grade of 70% or higher in Math 31 are advised to take MATH 203 instead of MATH 202.
7. Please note that taking first year courses in Year 2 may cause scheduling problems in Year 2.

SUGGESTED COURSES BY CONCENTRATION FOR YEAR 2

ANIMAL BIOLOGY

- BIOL 301, BIOL 317 and BIOL 318 (9)¹
- BIOC 301 or BIOC 393 (3)
- GENE 370 or ARTS OPTION (3)^{2,3}
- ZOOL 342 and ZOOL 325 (6)
- 3 ARTS OPTIONS (9)³ _____

NOTES:

1. BIOL 317 must be taken in Fall term if ZOOL 342 will be taken in the Winter term.
2. ZOOL 325 fits into Years 3 and 4.
3. Arts Options: See page 3.

ECOLOGY

- BIOL 317¹ and BIOL 318 (6)
- BIOC 301 or BIOC 393 (3)
- GENE 370 or ZOOL 342 (3)
- MICR 365 (3)
- ZOOL 325 (3)
- 4 ARTS OPTIONS (12)² _____

NOTES:

1. BIOL 317 is the prerequisite for GENE 370 and ZOOL 342. Take BIOL 317 in Fall term.
2. Arts Options: See page 3.

EVOLUTIONARY BIOLOGY

- BIOL 317¹ and BIOL 318 (6)
- BIOC 301 or BIOC 393 (3)
- ZOOL 342 (3)²
- MICR 365 (3)
- ARTS OPTION (3)³ _____
- Plus four of: GENE 370², ZOOL 325², GEOG 230 and 231 (see Item 3, page 2), up to two Arts Options (12)³
-

NOTES:

1. BIOL 317 must be taken in fall term if GENE 370 will be taken in the Winter term.
2. GENE 370 and ZOOL 325 will fit into Years 3 and 4.
3. Arts Options: See below.

MICROBIOLOGY

- BIOC 301 or BIOC 393 (3)
- BIOL 317¹ and BIOL 318 (6)
- BIOL 301² or ARTS OPTION (3)
- CHEM 352 (3)
- GENE 370 (3)
- MICR 365 (3)³
- 1 SCIENCE OPTION (3)⁴ _____
- 2 ARTS OPTIONS (6)⁵ _____

NOTES:

1. BIOL 317 must be taken in Fall term.
2. BIOL 301 is highly recommended in Year 2.
3. A minimum grade of B– is required in MICR 365 for students wishing to transfer to the Microbiology Honors program.
4. Science Options: CHEM 311, CMPT 201, PHYS 241, PSYC 260
5. Arts Options: See below.

MOLECULAR GENETICS

- BIOC 301 or BIOC 393 (3)
- BIOL 301, BIOL 317^{1,2} and BIOL 318 (9)
- CHEM 352 (3)¹
- GENE 370 (3)²
- MICR 365 (3)
- 1 SCIENCE OPTION (3)³ _____
- 2 ARTS OPTIONS (6)⁴ _____

NOTES:

1. BIOL 317 must be taken in the fall term as it is the prerequisite for GENE 370 in the winter term.
2. BIOL 317 and GENE 370 must be completed by the end of Year 2 to permit completion of this program in four years.
3. Science Options: ASTR 205; CHEM 311, CMPT 201; GEOG 230, 231 (see item 3, page 2); MATH 202 (or 203), 204, 221; PHYS 205, 226; PHYS 241, 247; PSYC 260, ZOOL 325, 342.
4. Arts Options: See below.

ARTS OPTIONS

- Choose courses from transferable ANTH, CLAS, ECON, ENGL, FILM, FREN, GEOG (not GEOG 230 or 231), HIST, PHIL, POLI, PSYC (not PSYC 260, 312, 369, 375, 377 or 381), SOCI (not SOCI 310 or 312), SPAN.
- A maximum of *42 (42 credits) may be taken at a junior level (100-level at UofA). Use the Alberta Transfer Guide to check course transfer to UofA.

ALL BACHELOR OF SCIENCE STUDENTS ARE STRONGLY ADVISED TO:

1. Consult [Course Descriptions](#) for possible course prerequisites,
2. Check [Alberta Transfer Guide](#) concerning course credit transfer to UofA, and
3. Consult the [University of Alberta Calendar](#) for admission and program information.

BIOLOGICAL SCIENCES BLOCK TRANSFER AGREEMENT

Most Alberta post-secondary institutions have determined that a Biological Sciences student requires specific courses and credits in the first two years of a [Biological Sciences program](#) and that those students should be able to transfer to any post-secondary institution included in the articulation agreement. A student may obtain up to *60 towards a Biological Sciences program at one of the post-secondary institutions offering Bachelor's Degrees in Biological Sciences by completing a specific block of courses. Transfer admission requirements must be met.

TRANSFER CHECKLIST

1. **Junior Level Courses:** Not more than *42 (42 credits) of all courses taken can be at the junior level (100-level at UofA). Any junior course in excess of *42 will not be credited towards a degree in Faculty of Science.
2. **Honors Program:** Students who intend to transfer to this Honors program require a minimum GPA of 3.0 on a minimum of *24 *in each preceding Fall/Winter*. Note: a minimum grade of B- is required in MICR 365, if taken, in order to transfer into the Microbiology Honors program.
3. **Specialization Program:** Students transferring into this Specialization program require a minimum GPA of 2.3 on a minimum of *24 *in each preceding Fall/Winter*.
4. **Spring term courses:** a spring term course may be taken in year of transfer if it is not required for admission to the program. The grade will not be calculated in the AGPA nor will it count towards Fall/Winter course load. Ensure the transcript submitted shows registration in the spring course.
5. **A minimum grade of C-** must be achieved in order for course credit to be transferable. However, while courses with grades of D or F will not transfer, they remain on your transcript and will be used in calculation of your GPA.
6. **Conditional Admission:** If you have higher than average standing in your post-secondary courses, you may be eligible for conditional admission. Official high school transcripts and unofficial transcripts of all post-secondary course work to date, including all final grades, first/Fall term results and second/Winter term registration are required by March 15th for conditional admission.
7. **Course Attempts:** Students attending UofA are allowed to attempt a course no more than two times and cannot retake a course in which a passing grade was received. However, UofA honours the decisions of other institutions with respect to their students, so if a student attempts a course twice at RDC (withdrawal, failing grade or non-transferable grade), UofA will accept the third attempt (if it is a C- or better) when determining transfer credit.

When calculating the AGPA, UofA will use all grades obtained in the most recent terms containing at least *24, including both a failing/non-transferable grade and a transferable grade in the same course. The first grade of C- or better received in a course is the only grade accepted for that course. Therefore, repeating a course for a higher grade is not advisable. If a student truly believes that he/she needs to repeat a course (in which a transferable grade was already earned) to master the material sufficiently to successfully continue in the program, it is recommended that the student audit the course.

8. **Academic Standing:** If you earn or have earned a GPA below 2.0 in any academic year of post-secondary education you are strongly advised to consult the UofA Calendar and contact the Faculty of Science **now** concerning your future admission to programs in the faculty. See [UofA Calendar](#) 15.15.7(3) and 15.15.7(4) and contact information in *How to Find more Information*.
9. **Application deadline:** May 1st **Transcript deadline for transfer students:** June 15th
10. **Regarding course transfer to the University of Alberta & Augustana Faculty:** When checking course transfer to the University of Alberta, please note that courses which have *AU* as the first two letters of the course abbreviation in the Alberta Transfer Guide will transfer only to the UofA Augustana Faculty in Camrose. In order for a course to also transfer to other UofA faculties, there must be another entry indicating transfer as a course not beginning with *AU*. See example below.

CMPT 214 = UofA CMPT 114 (3) OR AUCSC 1xx (3)
CMPT 261 = UofA AUCSC 1xx (3)

CMPT 214 is transferable to all UofA faculties, including Augustana. CMPT 261 is accepted by Augustana Faculty only and will not transfer to other faculties at the UofA.

HOW TO FIND MORE INFORMATION

[Science Department](#)

Warren Elgersma, Chairperson
Office: 1607-E 403-343-4052
warren.elgersma@rdc.ab.ca
http://www.rdc.ab.ca/about_rdc/academic_departments/sciences

[Academic Advising](#)

Academic Advising Centre: Room 1102
advisors@rdc.ab.ca 403-342-3163
http://www.rdc.ab.ca/academic_advising

[RDC Website](#)

<http://www.rdc.ab.ca>

[RDC Timetable](#)

<http://www.rdc.ab.ca/timetable>

[Alberta Transfer Guide](#)

<http://www.acat.gov.ab.ca>

ACAT [Biological Sciences Transfer Agreement](#) <http://alis.alberta.ca/ps/ep/aas/ta/transinformation.html>

[Department of Biological Sciences](#)

<http://www.biology.ualberta.ca>

[Faculty of Science](#)

<http://www.science.ualberta.ca> 1-800-358-8314

[University of Alberta](#)

<http://www.registrar.ualberta.ca>

PLEASE NOTE:

Be aware that you are responsible for ensuring that your registration is complete and appropriate and that your course choices comply with the program to which you have been admitted at RDC and/or to the university to which you wish to transfer.

You are cautioned that any changes to your courses, your major or your transfer destination may adversely affect your transferable credit, admission requirements for future programs, or eligibility to graduate from RDC. Consult with an academic advisor if you have any questions.

The function of academic advisors is to provide students with information and resources that enable them to make informed decisions relevant to their education. These resources include the RDC Calendar, the Academic Planning Guide for your chosen program and destination university, the Alberta Transfer Guide and the calendar and contact information for your destination university. Academic advisors will assist you in interpreting information from these resources or refer you to your destination university if appropriate. Students in university transfer programs are strongly advised to refer to the calendar of the university to which they wish to transfer and should contact appropriate university departments as required.