

## BSc PHYSICS & BSc GEOPHYSICS SPECIALIZATION & HONORS PROGRAMS

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](http://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 may be used to prepare for admission to professional programs.

### PHYSICS

#### SUGGESTED COURSE SEQUENCE YEAR 1

FALL	WINTER
PHYS 241 (3) <sup>1</sup>	PHYS 247 (3) <sup>1</sup>
MATH 202 or 203 (3) <sup>2</sup>	MATH 204 (3)
Arts Option (3) <sup>3</sup>	MATH 221 (3)
Arts Option (3) <sup>3</sup>	Arts Option (3) <sup>3</sup>
Science Option (3) <sup>4</sup>	Science Option (3) <sup>4</sup>

#### NOTES:

1. Students who do not have Math 31 but wish to enter a Department of Physics program at UofA are advised to take PHYS 205/MATH 202 in the first term and PHYS 247/MATH 204 in the second term. These students are strongly advised to earn a minimum B- in PHYS 205 to be adequately prepared for PHYS 247. A student who successfully completes PHYS 205/226 or PHYS 205/247 and who also completes MATH 202 (or 203) and MATH 204 may apply

for transfer to an Honors or Specialization program in the Department of Physics provided the admission requirements are met. MATH 225 (taken in Year 1 at UofA) will be taken in Year 2 by transfer students.

2. Students with 70% or higher in Math 31: take MATH 203 instead of 202.
  3. **ARTS OPTIONS:** ANTH, ART, CLAS, DRAM, ECON, ENGL, FREN, GEOG (not 230 or 231), HIST, PHIL, POLI, PSYC (not 260), SOCI (not 310 or 312), SPAN
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4. **SUGGESTED SCIENCE OPTIONS:** two of ASTR 205, CHEM 211, 212, 351, GEOG 230, 231; take both GEOG 230 and GEOG 231 if you want credit for EAS 100/105 at UofA.

## GEOPHYSICS

The Department of Physics in the Faculty of Science at UofA offers two programs dealing with solid earth and space physics. The Honors in Geophysics program prepares students for graduate work in geophysics. The Specialization in Geophysics program prepares students with the conceptual and laboratory background required for employment at the BSc level in industry, government and technical schools. Both programs are accredited by the Association of Professional Engineers, Geologists and Geophysicists of Alberta (APEGGA) as they include courses that cover the topics required by APEGGA to meet their professional standards. After obtaining a Geophysics degree from UofA, and completing the required number of years of work in the field, graduates can apply to receive the Professional Geophysicist (P. Geoph.) accreditation. The practice of geophysics in Alberta is regulated by APEGGA.

### SUGGESTED COURSE SEQUENCE YEAR 1

FALL	WINTER
CHEM 211 (3)	CHEM 212 or CHEM 351 (3)
PHYS 241 (3) <sup>1</sup>	PHYS 247 (3) <sup>1</sup>
MATH 202 or 203 (3) <sup>2</sup>	MATH 204 (3)
Arts Option (3) <sup>3</sup>	MATH 221 (3)
Arts Option (3) <sup>3</sup>	Arts Option (3) <sup>3</sup>

#### NOTES:

1. Students who wish to enter a Physics Department program at UofA but do not have Math 31 are advised to take PHYS 205 and MATH 202 in the first term and PHYS 247 and MATH 204 in the second term. These students are strongly advised to earn a minimum B- in PHYS 205 to be adequately prepared for PHYS 247. A student who successfully completes PHYS 205/226 or PHYS 205/247 and who also completes MATH 202 (or 203) and MATH 204 may apply for transfer to an Honors or Specialization program in the Department of Physics provided the admission requirements are met.
2. Students with 70% or higher in Math 31 are advised to take MATH 203 instead of MATH 202.
3. **ARTS OPTIONS:** ANTH, ART, CLAS, DRAM, ECON, ENGL, FREN, GEOG (*not* 230 or 231), HIST, PHIL, POLI, PSYC (*not* 260), SOCI (*not* 310 or 312), SPAN; \*6 in English recommended (ENGL 219/220)
4. Students will take GEOPH 210 in Year 2 at UofA in lieu of GEOPH 110 in the first year (UofA Calendar: 193.16).

#### ALL BSC 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.

## 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 counted towards the Science degree.
2. Students transferring into a **Specialization program in Physics or Geophysics** require a minimum 2.3 GPA on at least \*24 *in each preceding Fall/Winter*. Possession of the minimum GPA does not guarantee admission.
3. Students wishing to pursue an **Honors program in Physics or Geophysics** must have a minimum 3.0 GPA on \*24 *in each preceding Fall/Winter*. Possession of the minimum GPA does not guarantee admission.
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. Transcript deadline for conditional admission: March 15<sup>th</sup>. See UofA website.
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. 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 UofA, take 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 = CMPUT 114 (3) OR AUCSC 1xx (3)

CMPT 261 = 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 UofA.

## HOW TO FIND MORE INFORMATION

### [Science Department](#)

Warren Elgersma, Chairperson  
Office: 1607-E  
403-343-4052  
[warren.elgersma@rdc.ab.ca](mailto:warren.elgersma@rdc.ab.ca)  
[http://www.rdc.ab.ca/about\\_rdc/academic\\_departments/sciences](http://www.rdc.ab.ca/about_rdc/academic_departments/sciences)

### [Academic Advising](#)

Academic Advising Centre: Room 1102  
[advisors@rdc.ab.ca](mailto:advisors@rdc.ab.ca) 403-342-3163  
[http://www.rdc.ab.ca/academic\\_advising](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>

### [Faculty of Science](#)

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

### [Physics Department](#)

<http://phys.ualberta.ca>

### [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 or admission requirements for future programs. 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.