

# GENERAL SCIENCE

College of Natural Science and Mathematics  
Department of Physics  
907-474-6108  
[www.uaf.edu/physics/](http://www.uaf.edu/physics/)

## B.S. Degree

Minimum Requirements for Degree: 130 credits

The B.S. degree program in general science provides a broad background in the natural sciences. The program allows specialization in at least two disciplines within the natural sciences as well as an additional area of associated interest. This degree offers more breadth in the natural sciences than other degree programs and may be classified as an interdisciplinary degree.

### Major — B.S. Degree

1. Complete the general university requirements (page 132).
2. Complete the B.S. degree requirements (page 137).
3. Complete the following program (major) requirements:
 

|  |   |
|--|---|
| BIOL F115X—Fundamentals of Biology I.....      | 4 |
| BIOL F116X—Fundamentals of Biology II .....    | 4 |
| CHEM F105X—General Chemistry*** .....          | 4 |
| CHEM F106X—General Chemistry*** .....          | 4 |
| GEOS F101X—The Dynamic Earth .....             | 4 |
| GEOS F112X—The History of Earth and Life ..... | 4 |
| MATH F107X—Functions for Calculus.....         | 4 |
| MATH F108—Trigonometry.....                    | 3 |
| MATH F200X—Calculus** .....                    | 4 |
| PHYS F103X—College Physics*** .....            | 4 |
| PHYS F104X—College Physics*** .....            | 4 |
4. Select one of the following by the start of the junior year:\*\*\*\*
  - a. Two majors.
  - b. One major and two minors.
5. Complete one major from the following: biological sciences, chemistry, geosciences or physics. The major requires the completion of at least 20 credits in addition to the foundation courses in the discipline.\* .....

6. Complete one of the following\*:
    - a. Complete a second major from the following: biological sciences, chemistry, geosciences, physics or mathematics. The major requires the completion of at least 20 credits in addition to the foundation courses in the discipline..... 20
    - b. Complete two minors, one of which must be in the natural sciences or mathematics, while the other may be selected from the following disciplines: anthropology, English, French, German, Spanish, Russian, history, political science or economics. The minor must include 12 or more credits in addition to the foundation courses in that discipline. .... 24
  7. Minimum credits required ..... 130
- \* Students must earn a C grade (2.0) or better in each course.  
 \*\* A student does not need to take MATH F107X and MATH F108 if the student completes MATH F200X with a C or better. Complete a B.S. degree mathematics elective for 3 credits if MATH F107X and MATH F108 are not taken.  
 \*\*\* PHYS F211X, F212X and F213X may substitute for PHYS F103X and F104X. CHEM F212 may substitute for CHEM F105X and F106X.  
 \*\*\*\* A general science student, after meeting with his/her general science advisor, should contact the head of the major/minor department as early as possible to determine course requirements in that discipline. These courses will be determined by the department head of the discipline and will reflect the student's needs as well as the intent of the general science program.

### Requirements for General Science Teachers (grades 7 – 12)

1. Complete all the requirements of the general science B.S.
  2. If the student opts for one major and two minors, all must represent science or mathematics disciplines:
  3. All prospective science teachers must complete the following:
 

|  |   |
|--|---|
| PHIL F481—Philosophy of Science (3)..... | 3 |
|--|---|
- Note: We strongly recommend that prospective secondary science teachers seek advising from the UAF School of Education early in your undergraduate degree program so that you can be appropriately advised of the state of Alaska requirements for teacher licensure. You will apply for admission to the UAF School of Education's post-baccalaureate teacher preparation program, a one-year intensive program, during your senior year. Above requirements apply to all candidates who apply to the UAF School of Education Spring 2006 or later for licensure in General Science.

All degrees (e.g. B.A., B.S., etc.) require additional courses. Refer to specific degree and program requirements.

## Baccalaureate Core Requirements

(Note: all courses for Core must be at C- or higher.)

### COMMUNICATION (9)

#### Complete the following:

ENGL F111X .....(3) \_\_\_\_\_  
ENGL F190H may be substituted.

#### Complete one of the following:

ENGL F211X OR ENGL F213X .....(3) \_\_\_\_\_

#### Complete one of the following:

COMM F131X OR COMM F141X .....(3) \_\_\_\_\_

### PERSPECTIVES ON THE HUMAN CONDITION (18)

#### Complete all of the following four courses:

ANTH F100X/SOC F100X .....(3) \_\_\_\_\_  
ECON F100X OR PS F100X .....(3) \_\_\_\_\_  
HIST F100X .....(3) \_\_\_\_\_  
ENGL/FL F200X .....(3) \_\_\_\_\_

#### Complete one of the following three courses:

ART/MUS/THR F200X, HUM F201X OR ANS F202X .... (3) \_\_\_\_\_

#### Complete one of the following six courses:

BA F323X, COMM F300X, JUST F300X, NRM F303X,  
PS F300X OR PHIL F322X .....(3) \_\_\_\_\_

#### OR complete 12 credits from the above courses PLUS

- two semester-length courses in a single Alaska Native language or other non-English language **OR**
- three semester-length courses (9 credits) in American Sign Language taken at the university level.

### MATHEMATICS (3)

#### Complete one of the following:

MATH F103X, MATH F107X, MATH F161X OR  
STAT F200X .....(3 – 4) \_\_\_\_\_  
\* No credit may be earned for more than one of MATH F107X or F161X.

#### OR complete one of the following:\*

MATH F200X, MATH F201X, MATH F202X,  
MATH F262X OR MATH F272X .....(4) \_\_\_\_\_  
\*Or any math course having one of these as a prerequisite.

### NATURAL SCIENCES (8)

#### Complete any two (4-credit) courses:

ATM F101X .....(4) \_\_\_\_\_  
BIOL F100X .....(4) \_\_\_\_\_  
BIOL F103X .....(4) \_\_\_\_\_  
BIOL F104X .....(4) \_\_\_\_\_  
BIOL F111X .....(4) \_\_\_\_\_  
BIOL F112X .....(4) \_\_\_\_\_  
BIOL F115X .....(4) \_\_\_\_\_  
BIOL F116X .....(4) \_\_\_\_\_  
CHEM F100X .....(4) \_\_\_\_\_  
CHEM F103X .....(4) \_\_\_\_\_  
CHEM F104X .....(4) \_\_\_\_\_  
CHEM F105X .....(4) \_\_\_\_\_  
CHEM F106X .....(4) \_\_\_\_\_  
GEOG F111X .....(4) \_\_\_\_\_  
GEOS F100X .....(4) \_\_\_\_\_  
GEOS F101X .....(4) \_\_\_\_\_  
GEOS F112X .....(4) \_\_\_\_\_  
GEOS F120X .....(4) \_\_\_\_\_  
GEOS F125X .....(4) \_\_\_\_\_  
MSL F111X .....(4) \_\_\_\_\_  
PHYS F102X .....(4) \_\_\_\_\_  
PHYS F103X .....(4) \_\_\_\_\_  
PHYS F104X .....(4) \_\_\_\_\_  
PHYS F115X .....(4) \_\_\_\_\_  
PHYS F116X .....(4) \_\_\_\_\_  
PHYS F175X .....(4) \_\_\_\_\_  
PHYS F211X .....(4) \_\_\_\_\_  
PHYS F212X .....(4) \_\_\_\_\_  
PHYS F213X .....(4) \_\_\_\_\_

### LIBRARY AND INFORMATION RESEARCH (0 – 1)

Successful completion of library skills competency test **OR**  
LS F100X or F101X prior to junior standing.....(0 – 1) \_\_\_\_\_

### UPPER-DIVISION WRITING AND ORAL COMMUNICATION (0)

#### Complete the following:

Two writing intensive courses designated (W) .....(0) \_\_\_\_\_  
and one oral communication intensive course  
designated (O).....(0) \_\_\_\_\_

**OR** two oral communication intensive courses designated  
(O/2), at the upper-division level (see degree and/or major  
requirements).....(0) \_\_\_\_\_

**CORE CREDITS REQUIRED ..... 38 – 39**

**Minimum credits required for degree ..... 120**



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Admissions and the Registrar • P.O. Box 757480 • Fairbanks, AK 99775-7480 • admissions@uaf.edu • www.uaf.edu

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