The major in Physical Sciences develops an understanding of the natural world by the integrated study of biology, chemistry, mathematics and physics. Students will select a concentration in biology or chemistry. With the major, students are prepared for employment in technical phases of government and industry, as well as for graduate study in the sciences.

Physical science majors at Pitt-Bradford take courses in biology, chemistry, physics and calculus. Students receive hands-on experience by working in the lab and/or field. Students also have the opportunity to become directly involved in research as part of their undergraduate studies.

**Required Skills:**
- Observation
- Critical Thinking
- Decision Making
- Operate Scientific Equipment
- Organization
- Record Keeping
- Communication (Oral & Written)
- Knowledge of Scientific Research

**Possible Employers:**
- Petroleum Industry
- Construction Firm
- State & Federal Government
- Environmental Organization
- Academia
- Museum
- Law Firm

**Professional Organizations:**
- American Physical Society [www.aps.org](http://www.aps.org)
- American Public Works Association [www.apwa.net](http://www.apwa.net)
- National Association of Environmental Management [www.naem.org](http://www.naem.org)
- The American Society of Forensic Sciences [www.aafs.org](http://www.aafs.org)
- American Institute of Physics [www.aip.org](http://www.aip.org)

**FIND OUT MORE ABOUT CAREERS IN PHYSICAL SCIENCES AT:**
- Sciencejobs.org [www.sciencejobs.org](http://www.sciencejobs.org)
- Science Buddies [www.sciencebuddies.org](http://www.sciencebuddies.org)
- Career Services [www.upb.pitt.edu/career.aspx](http://www.upb.pitt.edu/career.aspx)

Consistent with the overall mission of the University of Pittsburgh at Bradford, the Bachelor of Science degree in Physical Science includes a liberal arts core curriculum, much of which is taken during the first two years of study.

**Employment Opportunities:**
- Forester
- Ecologist
- Ecotoxicologist
- Environmental Planner
- Natural Resource Manager
- Park Ranger
- Pollution control technician
- Teacher
- Researcher
- Technical Writer/Editor
- Scientific Consultant
- Astronautic Engineer
- Astronomer
- Biophysicist
- Geophysicist
- Health Physicist
- Health Inspector
- Nuclear Physicist
- Quality Control Specialist
- Operations Manager
- Computer Software Developer
- Industrial Hygienist
- Computer Technologist
- Geologist
- Paleontologist
- Mineralogist
- Geochemist
- Sedimentologist
Physical Sciences (BS) – Curriculum Guide

Student Name:       Advisor:

GENERAL EDUCATION REQUIREMENTS

COMPETENCIES
(Minimum grade of C- required in all competencies)
☐ FS 0102 Freshman Seminar
   (if transferring in fewer than 18 credits)

Writing
☐ ENG 0101 English Composition I
☐ ENG 0102 English Composition II

Mathematics
☐ * MATH 0098 College Algebra or Higher (see major)

THE HUMAN EXPERIENCE
☐ Students are required to complete two courses designated
   “Global”

ARTS & LETTERS (ONE course MUST be literature;
ONE course MUST be a creative, fine or performing Arts course)
☐ Literature
☐ Arts
☐ Literature, Arts, Language

BEHAVIORAL, ECONOMIC, & POLITICAL SCIENCES
(Two different categories must be represented)

HISTORY, CULTURES, & PHILOSOPHICAL INQUIRY
(ONE course MUST be History, and ONE course must be Cultures
or Philosophical Inquiry)
☐ HIST

PHYSICAL, LIFE, & COMPUTATIONAL SCIENCES
(ONE course must be a Physical Science, ONE must be a Life
Science and ONE must include a lab)
☐ (see major)
☐ (see major)
☐ (see major)
☐ Lab (see major)

PHYSICAL EDUCATION
☐ PEDC

* MATH 0098 does not meet the mathematics competency
   at the Pittsburgh campus

REQUIRED MAJOR COURSES
☐ BIOL 0101 Introduction to Cell and Molecular
☐ BIOL 0102 Introduction to Biodiversity
☐ CHEM 0101 General Chemistry I
☐ CHEM 0102 General Chemistry II
☐ GEOL 0101 Physical Geology
☐ MATH 0140 Calculus I
☐ MATH 0150 Calculus II
☐ MATH 0201 Calculus III
☐ PHYS 0101 Introduction to Physics I &
☐ PHYS 0102 Introduction to Physics II OR
☐ PHYS 0201/0203 Foundations of Physics I and Lab &
☐ PHYS 0202/0204 Foundations of Physics II and Lab

CONCENTRATION AREA: Student MUST complete
required courses in one of the following concentrations:

BIOLOGY
☐ BIOL 0203 Genetics
☐ BIOL 1302 Microbiology
☐ BIOL 1320 Cell Biology
☐ CHEM 0206 Organic Chemistry I
☐ CHEM 0207 Organic Chemistry I Lab
☐ UP Level BIOL Elective (4 hours)
☐ BIOL 1451 Capstone: Ecology

CHEMISTRY
☐ CHEM 0201 Introduction to Analytical Chemistry
☐ CHEM 0206/0207 Organic Chemistry I & Lab
☐ CHEM 0208/0209 Organic Chemistry II & Lab
☐ CHEM 1301 Physical Chemistry I
☐ CHEM 1302 Physical Chemistry II
☐ CHEM 1451 Capstone: Chemistry
☐ UP Level CHEM Elective (3-4 Hours)

According to your Degree Progress Report in MY.PITT.EDU
upon successful completion of the current term:

You will have EARNED _________ credit hours
You NEED _________ for 120 credit hours required for graduation.
You will have earned _________ credit hours of Upper Level course work.
You NEED ______ for the 30 credit hours required for graduation.

NOTE: This guide is unofficial. Completing the requirements on this sheet
does NOT guarantee degree completion. Official degree completion
information can be found in MY.PITT.EDU. Contact your Faculty
Advisor and/or the Registrar’s Office with questions or concerns.