Chemistry is the branch of science that studies the nature and characteristics of substances and the changes they undergo. Chemistry is fundamental to most scientific disciplines and technology. Chemistry is concerned with the building blocks of all materials -- atoms and molecules. Chemists are employed in manufacturing firms in research and development, testing, regulatory, and quality assurance. They work in many industries, including the chemical, pharmaceutical and food industries. Chemists also work for state and local governments and for federal agencies.

Chemistry majors at Pitt-Bradford take courses in Organic, Physical and Analytical Chemistry, Calculus, and Physics. Chemistry majors have the opportunity to become directly involved in research as part of their undergraduate studies.

**Employment Opportunities:**
- Analytical Chemist
- Bench Chemist
- Biochemist
- Chemical Engineer
- Clinical Technician/Specialist
- Color Development Chemist
- Conservation Officer
- Drug Application Reviewer
- Energy Conservation Technician
- Environmental Inspector
- Environmental Technician
- EPA Inspector
- FDA Inspector
- Fiber Technologist
- Fire Protection Engineer
- Food Scientist/Technologist
- Forensic Chemist
- Forensic Scientist
- Genetic Engineer
- Geochemist
- Laboratory Equipment Salesperson
- Laboratory Research Assistant
- Laboratory Technician
- Medical Technologist
- Metallurgical Engineer
- Molecular Biologist
- Natural Resource Manager
- Patent Engineer/Agent
- Patent Examiner
- Pharmaceutical Sales Rep
- Pharmacy Technician
- Pollution Control Technician
- Polymer Chemist
- Product Development Manager
- Quality Control Technician
- Regulatory Affairs Specialist
- Science Writer
- Teacher, Science
- Toxicologist
- Water Purification Chemist

**Required Skills:**
- Observation
- Critical Thinking
- Decision Making
- Operate Scientific Experiment
- Organization
- Record Keeping
- Knowledge of Scientific Research
- Reading, Writing, Speaking, and Memorization
- Sensitivity to the Health and Safety of Others

**Possible Employers:**
- Research Laboratory
- Pharmaceutical Industry
- Manufacturing Industry
- Government
- Healthcare Industry
- Academia
- Electronics
- Energy Industries
- Environmental Protection Organizations

**PROFESSIONAL ORGANIZATIONS:**
- American Chemical Society [www.acs.org](http://www.acs.org)
- American Institute of Chemist [www.theaic.org](http://www.theaic.org)
- Council for Chemical Research [www.ccrhq.org](http://www.ccrhq.org)
- Chemical Heritage Foundation [www.chemheritage.org](http://www.chemheritage.org)

**FIND OUT MORE ABOUT CAREERS IN CHEMISTRY AT:**
- American Chemical Society [www.acs.org/careers](http://www.acs.org/careers)
- Sciencejobs.org [www.sciencejobs.org](http://www.sciencejobs.org)
- Sloan Career Cornerstone Center [www.careercornerstone.org/chemistry](http://www.careercornerstone.org/chemistry)
- Occupational Outlook Handbook [www.bls.gov/k12/science01.htm](http://www.bls.gov/k12/science01.htm)
### Chemistry (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 II or Higher *(see Major)*

### THE HUMAN EXPERIENCE

Students are required to complete two courses designated as “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)
- Life Science
- (see major)
- Lab (see major)

### PHYSICAL EDUCATION

- [ ] PEDC

### REQUIRED MAJOR COURSES:

- CHEM 0101 General Chemistry I GE
- CHEM 0102 General Chemistry II GE
- CHEM 0201 Introduction to Analytical Chemistry
- CHEM 0206 Organic Chemistry I
- CHEM 0207 Organic Chemistry I Lab
- CHEM 0208 Organic Chemistry II
- CHEM 0209 Organic Chemistry II Lab
- CHEM 1301 Physical Chemistry I
- CHEM 1302 Physical Chemistry II
- CHEM 1305 Analytical Instrumentation
- CHEM 1451 Capstone: Chemistry
- Chemistry upper-level electives (6-8 credits)

### OTHER REQUIRED COURSES:

- MATH 0140 Calculus I GE
- MATH 0150 Calculus II
- MATH 0201 Calculus III
- PHYS 0201 Foundations of Physics I GE
- PHYS 0203 Physics I Lab GE
- PHYS 0202 Foundations of Physics II
- PHYS 0204 Physics II Lab

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

---

**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.