

2009-2010

B.A. in Chemistry

College of Sciences and Technology

What Is the Study of Chemistry?

The programs of study within the Chemistry major provide many benefits to students. There are a wide variety of accredited programs that are designed to meet diverse career goals. There is close student-faculty contact and relatively small classes. The students have direct access to modern laboratory equipment and instrumentation, and there are opportunities for research work under the direction of a faculty advisor.

Why Should I Consider This Major?

The Department of Chemistry, in addition to its core of fundamental studies in Physical, Inorganic, Organic, Analytical and Biochemistry, has added a variety of elective courses that offer diversity in training, study and research at the undergraduate level. Within the Department, faculty members are active in many research areas including Organometallic Chemistry, Organic Synthesis, Photochemistry, Protein and Nucleic Acid Biochemistry, Molecular Biology of Viruses, Electrochemistry, Molecular Spectroscopy, Reaction Kinetics, Atmospheric and Environmental Chemistry, Surface Chemistry and Catalysis, and new areas of computer applications.

How to Declare:

Students planning to major in Chemistry are advised to consult the Department at the beginning of their first quarter on campus to arrange for proper sequence of courses.

Mid-Program Checkpoint:

Students intending to complete a Bachelor's of Arts degree in Chemistry within four years should complete the following courses by the start of their junior year. Students are expected to follow all prerequisite requirements for courses and seek early departmental advisement regarding choice of major.

Coursework:

Postpone non-science GUR courses until junior and senior years.

Calculus sequence

General Chemistry sequence

Organic Chemistry sequence

Physics sequence

Other Activities:

Meet with departmental advisor or Academic Advising Center by the time you reach 60 credits.

Contact Information:

Chemistry Department Website:
<http://www.chem.wvu.edu/dept/wwuchem.html>

Chemistry Department Office
CB 270
360-650-3070
chemdept@chem.wvu.edu

Chemistry Department Chair:
Steve Gammon
CB 270A
360-650-3070
gammon@chem.wvu.edu

Sample Careers:

Chemical/Pharmaceutical
Sales

Crime Lab Analyst

High School Teacher

Industrial Chemist

Physician

Technical Writing

Forensic Scientist

Quality Assurance Specialist

Research Scientist

Occupational Safety Specialist

Science Lab Technician

Environmental Scientist/
Consultant

Biotechnology Scientist

College Professor



B.A. in Chemistry Major Requirements: 86 Credits

CHEM 121 General Chemistry I (5)

CHEM 122 General Chemistry II (5)

CHEM 123 General Chemistry III (4)

CHEM 333 Analytical Chemistry (5)

Or CHEM 125 General Chemistry, Honors I (5)

CHEM 126 General Chemistry, Honors II (5)

CHEM 225 General Chemistry, Honors III (5)

(replaces CHEM 121, 122, 123, and 333)

CHEM 351 Organic Chemistry (4)

CHEM 352 Organic Chemistry (4)

CHEM 353 Organic Chemistry (3)

CHEM 354 Organic Chemistry Laboratory I (2)

CHEM 355 Organic Chemistry Laboratory II (2)

CHEM 375 Elements of Biochemistry (4)

Or CHEM 471 Biochemistry and Molecular Biology (3)

And CHEM 472 Biochemistry and Molecular Biology (3)

CHEM 441 Advanced Inorganic Chemistry (4)

CHEM 461 Physical Chemistry (4)

CHEM 462 Physical Chemistry (4)

CHEM 463 Physical Chemistry (3)

CHEM 464 Physical/Inorganic Chemistry Laboratory I (3)

MATH 124 Calculus and Analytic Geometry (5)

MATH 125 Calculus and Analytic Geometry (5)

Or MATH 134 Honors Calculus I (5)

And MATH 135 Honors Calculus II (5)

Or Math 138 Accelerated Calculus

(replaces Math 124 and 125)

MATH 224 Multivariable Calculus and Geometry (5)

One year of college Physics, recommended sequence:

PHYS 121/131 Physics with Calculus I w/lab (4/1)

PHYS 122/132 Physics with Calculus II w/lab (4/1)

PHYS 123/133 Electricity and Magnetism w/lab (4/1)

Other Chemistry Options:

B.S. Chemistry (106 credits)

B.S. Biochemistry (108 credits)

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B.A. Ed. Chemistry/Mathematics (106-120 credits)

B.A. Ed. Chemistry/Physics (102-115 credits)

B.A. Ed. Chemistry/Biology (103-104 credits)

Minor in Chemistry (30-32 credits)

These courses are offered within this major and may be used to satisfy GUR or Writing Proficiency requirements.

QSR: MATH 124, 125

LSCI: CHEM 121, 122, 123 (or 125, 126, 225);

PHYS 121, 122, 123

WP: Three Writing Proficiency points are required for graduation (they are noted as WP1, WP2, and WP3).

Check [Classfinder](#) or [Online Timetable](#) for departmental offerings each quarter.