

## BACHELOR OF ARTS IN CHEMISTRY MAJOR PLANNER

**Requirements for chemistry majors include the course requirements of the Chemistry Department and College Residency Requirements. Requirements for the BA degrees are presented. This form is yours to keep. Please bring it with you when you come to see the departmental advisor. You should meet with the advisor at least once every other semester to review your progress.**

### Bachelor of Arts in Chemistry

**All** of the following courses are required – {F} = Fall offerings; {S} = Spring offerings; \* = Writing Intensive

- Chem 1100 – General Chemistry I (or Chem 1050 & Chem 2050 – General Chemistry IA&IB)
- Chem 2100 – General Chemistry II
- Chem 3415W\* – Writing Intensive Analytical Chemistry (or Chem 3410 – Analytical Chemistry)
- Chem 3511 / 3512 – Organic Chemistry I Lecture / Lab (or Chem 3510 – Organic Chemistry I)
- Chem 3521 / 3522 – Organic Chemistry II Lecture / Lab (or Chem 3520 – Organic Chemistry II)
- Chem 4600{S} – Physical Chemistry for Health Professionals (or Chem 4610{F} – Physical Chemistry I)
- Phys 1150 – General Physics I (or Phys 1100 – General Physics I)
- Phys 2150 – General Physics II (or Phys 2100 – General Physics II)
- Math 1201 – Calculus I
- Math 1206 – Calculus II

**5 Credits** from the following list of Advanced Courses are required – {F} = Fall offerings; {S} = Spring offerings

- Chem 2700 {F} – Introduction to Inorganic Chemistry (3 credits)
- Chem 3420 {F} – Instrumental Analysis (5 credits)
- Chem 4530 {S} – Advanced Organic Lab Techniques (5 credits)
- Chem 4550 {S} – Advanced Organic Chemistry (3 credits)
- Chem 4570 {F} – Biochemistry (5 credits) (or Chem 4571– Biochemistry Lectures (3 credits))
- Chem 4581 {S} – Biochemistry II Lectures (3 credits)
- Chem 4620 {S} – Physical Chemistry II (5 credits)
- Chem 4640 {F} – Quantum Chemistry (3 credits)
- Chem 4760 {S} – Inorganic Chemistry (5 credits) (or Chem 4761 {S} – Inorganic Chemistry (3 credits))
- Chem 4780 {S} – Environmental Chemistry

### Elective Courses

- Chem 5010, 5020, 5030 – Independent Research
- Chem 5110, 5120, 5130 – Independent Research (Honors)
- Chem 5210, 5220, 5230 – Seminar
- Chem 5400 – Industrial Internship in Chemistry

### Writing Intensive Requirement

Chemistry majors must take a writing intensive course (denoted by \*) in an area relevant to the major

### Residency Requirement

15 credits in advanced Chemistry courses must be earned at Brooklyn College with a grade of C<sup>-</sup> or better.

### PLANNED SCHEDULE FOR CHEMISTRY COURSES

Fall	Spring	Fall	Spring	Fall	Spring	Fall	Spring

**General Information:** Information on careers in chemistry is available at the Chemistry Department office (359 NE); ask the secretary for permission to look at the file. Some information is also available on the departmental website at

<http://www.brooklyn.cuny.edu/web/academics/schools/naturalsciences/undergraduate/chemistry.php>

**Courses of Study:** Students interested in medical or other professional careers are generally advised to take the Bachelor of Arts degree, which is excellent scientific preparation for those careers but leaves time to pursue additional coursework in biology and extracurricular activities necessary to prepare for professional programs. Students interested in teaching at the high school level after graduation should contact the department about the Bachelor of Arts: Chemistry Teacher degree.

**Preprofessional Advisement:** The campus pre-professional advisor is Dr. Steven Silbering ([silbering@brooklyn.cuny.edu](mailto:silbering@brooklyn.cuny.edu)). Students interested in medical or other professional schools are strongly urged to speak to him as soon as possible to plan their course of study.

**Research Experience:** Students may obtain research work in any laboratory that agrees to host them, and may begin at any time. Students are encouraged to look for mentors on campus and at the many medical and research institutions around New York City. Some institutions offer paid summer research internships in which students live and work on site for 8-10 weeks, e.g. the National Science Foundation Research Experiences for Undergraduates program. The Chemistry Department maintains a file on such opportunities; inquire at the Chemistry office.

Those seeking academic credit for research within the Department of Chemistry should register either for the Chem 5010 – 5030 (2 credits) or Chem 5110 – 5130 series (3 credits, Honors). Chem 5110 - 5130 require a GPA of 3.2 or better within the major to register. Students seeking to register for these courses must work with a chemistry department faculty member; those working with faculty outside the department should register for an independent study course in that program.

The format for Chem 5010 and 5110 is very much the same. Prospective students should find a faculty member whose work interests them; a list of faculty and their research interests is available on the Brooklyn College website. Once students have found a mentor, they should contact the faculty member to discuss possibilities. If the student and mentor agree on a project and a set of expectations, the mentor will grant the student permission to register for the course.

Research requires time, and students should be sure they can follow through on their commitment before registering for credit. Students may choose to work in a lab without registering for a course, provided the mentor allows it. However, a student working in that position is still obligated to meet the mentor's expectations, and should communicate openly about possible problems with time or scheduling and work with the mentor to resolve them.

**Residency Requirement:** Only Chemistry courses taken at Brooklyn College can be used to meet the 15 credit residency requirement. Course taken elsewhere or in other departments can not be used to satisfy this requirement.

**Degree Audit:** At the end of their junior year, students should go to the Registrar's office and request an official Degree Audit. This represents a list of all requirements the student must fulfill to graduate and commits the college to confer the degree once the specified work is completed. This is far superior to DegreeWorks (WebSIMS).

**Departmental Honors:** Students who graduate with a GPA of 3.50 or better within the Chemistry Department, and have completed 3 or more credits in honors courses in Chemistry, are eligible for departmental honors. Honors courses in Chemistry include Chem 5110 and Chem 5120. Students who believe they may be eligible for honors should contact the departmental advisor during their senior year.

**Graduating:** Throughout your college career, come to see your undergraduate advisor at least once a year, and more often if you have questions. Bring this schedule with you to save time.

*At the end of your junior year:* Request a Degree Audit (see above) to insure a timely graduation.

*Do not leave INC or ABS grades sitting:* If you receive an ABS or an INC grade, work with the appropriate department to resolve it quickly. Check your transcript periodically to make sure it is cleared. Your graduation can be delayed by pending INC/ABS grades.

**Job Hunting:** Good opportunities exist for chemists, both at the bachelors level and for those with higher degrees. The department has a folder on such opportunities in 359NE. Students should also go to the Magner Center for advice on job-seeking and other issues, such as resumé writing and dressing for success.