

CHEMISTRY

COURSE 5

DEPARTMENT CONTACT

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[Chemistry Education Office](#)

DESCRIPTION

Chemistry majors use theory, mathematics, and experimentation to study matter and how it behaves. Chemists work with matter at a fundamental, molecular level to observe its composition, properties, and transformation into new substances. Chemistry significantly impacts many other fields including medicine, materials science, genetics, biology, pharmacy, food science, and environmental science. With a Bachelor of Science Degree in Chemistry or Chemistry and Biology, students are prepared to pursue an advanced degree and/or a career in many fields, including (but not limited to!) Chemistry, Biology, Law, Medicine, Consulting, Research, and Education.

INSIDE [COURSE 5](#)

5	Chemistry & Chemistry w/ ChemFlex Option	Undergraduates: 30
5-7	Chemistry and Biology	Undergraduates: 18

INTRODUCTORY CLASSES

5.12	Organic Chemistry I Introduction to organic chemistry. Development of basic principles to understand the structure and reactivity of organic molecules. Emphasis on substitution and elimination reactions and chemistry of the carbonyl group. Introduction to the chemistry of aromatic compounds.
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COURSE 5-FRIENDLY UROP AREAS

Broad Institute (BI)

STUDENT GROUPS

ClubChem <http://web.mit.edu/clubchem/www/>

SKILLS

Research skills and independent thinking
Strong report-writing and analytical skills
Safe handling of chemical materials and equipment
Strong time management and organization

POSSIBLE FUTURE POSITIONS

- **Formulation chemist:** Work mainly in a laboratory setting, adjusting chemical compounds and recording information to test and develop pharmaceuticals, health products, foods, cosmetics and cleaning products.
- **Lab technician/analyst:** Conduct analytical or lab-based tests for quality assurance,

safety inspection, regulatory adherence, environmental impact or sample testing.

- **Research & Development chemist:** Create new products and technologies by conducting tests with chemicals, chemical compounds, and chemical processes.

CAREER INDUSTRY EXAMPLES

Consulting	Non-profit agency	Pharmaceuticals
Education	Research and development	
Government	Product development	

SAMPLE EMPLOYERS

APEX Systems	Kronos Bio	Novartis
Biogen	Sage Therapeutics	Sage Therapeutics
Blueprint Medicines	Lockheed Martin	Silicon Therapeutics