Sample Chemistry Curriculum for the 3-2 Program

Updated Fall 2023

Below is a sample schedule for students majoring in chemistry and pursuing the 3-2 program with Columbia.

Some general notes for all 3-2 students:

1. Specific classes for specific engineering majors are not included here, so be sure to review the Columbia guide for other requirements.
2. Any core courses without numbers below are **attributes**, and thus there are many courses that satisfy those requirements. When searching for such courses, search by the given attributes.
3. One of the core courses during the first year must have the *Eloquentia Perfecta 1* attribute.
4. Some courses can be taken during different semesters, although the major courses are often only offered in the semesters mentioned below.
5. Some courses mentioned below depend upon placement (such as ENGL 1102 or MATH 1206), so be sure to consider this when making your three-year plan.
6. The attributes Global Studies and Pluralism are not explicitly included but must be taken. Be sure these are attributes on core courses you take.
7. Upper-level electives should match with those requirements for the specific engineering major chosen when transfering to Columbia whenever relevant.
8. Requirements for Columbia are similar to, but distinct from, those for Case Western. Students interested in either program should refer to the 3-2 Engineering site for more information.

- The chemical engineering option at Columbia has the most overlap with the chemistry major here. With many others, there are additional courses not listed here that are needed, and might require summer classes.
- Note that one of the upper-level core courses (such as PHIL 3000 or the Advanced Core Course) should have the EP3 attribute.

First year

Fall		Spring	
CHEM 1321	General Chemistry I	CHEM 1322	General Chemistry II
CHEM 1311	General Chemistry I Recitation	CHEM 1312	General Chemistry II Recitation
CHEM 1331	General Chemistry I Lab	CHEM 1332	General Chemistry II Lab
MATH 1206	Calculus I	MATH 1207	Calculus II
ENGL 1102	Composition II	CISC 1600	Computer Science I
ECON 1100/1200	Basic Macro/Microeconomics	CISC 1610	Computer Science I Lab
THEO 1000	Faith and Critical Reason	PHIL 1000	Philosophy of Human Nature
		—	Understanding Historical Change

Second year

Fall		Spring	
CHEM 2511	Organic Chemistry I	CHEM 2512	Organic Chemistry II
CHEM 2521	Organic Chemistry I Recitation	CHEM 2522	Organic Chemistry II Recitation
CHEM 2541	Organic Chemistry I Lab	CHEM 2542	Organic Chemistry II Lab
PHYS 1701	Physics I	PHYS 1702	Physics II
PHYS 1703	Physics I Recitation	PHYS 1704	Physics II Recitation
PHYS 1511	Physics I Lab	PHYS 1512	Physics II Lab
MATH 2004	Multivariable Calculus I	MATH 2005	Multivariable Calculus II
—	Fine and Performing Arts	—	Sacred Texts & Traditions
—	Texts and Contexts (EP 2)	PHIL 3000	Philosophical Ethics

Third year

Fall		Spring	
CHEM 3621	Physical Chemistry I	CHEM 3622	Physical Chemistry II
CHEM 3631	Physical Chemistry I Lab	CHEM 3632	Physical Chemistry II Lab
CHEM 3721	Quantitative Analysis	CHEM 3722	Instrumental Analysis
CHEM 4422	Inorganic Chemistry	MATH 3002	Differential Equations
—	Advanced Core Course	CHEM 4221	Biochemistry 1
—	Senior Values (EP 4)	—	Upper-level elective