

CHEMICAL AND BIOMOLECULAR SCIENCE, BA

2nd Major for College Students only.

College Students can apply for Chemical and Biomolecular Science (CBS) as a second major within the College. Under this program, a College student will receive one diploma from the College of Arts and Sciences with a dual major (not that this option is only for students in the College of Arts and Sciences, not Engineering students)

For more information: <https://cbe.seas.upenn.edu/undergraduate/second-major-in-cbs/>

Curriculum

Code	Title	Course Units
CBE 1600	Introduction to Chemical Engineering (can be replaced with a CBE Elective)	1
CBE 2300	Material and Energy Balances of Chemical Processes	1
CBE 2310	Thermodynamics of Fluids	1
CBE 3500	Fluid Mechanics	1
CBE 3510	Heat and Mass Transport	1
CBE 3530	Molecular Thermodynamics and Chemical Kinetics	1
CBE 3600	Chemical Process Control	1
CBE 3710	Separation Processes	1
CBE 4000	Introduction to Product and Process Design	1
CBE 4510	Chemical Reactor Design	1
CBE Upper Level Elective (3000+)		1
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Total Course Units		12

The degree and major requirements displayed are intended as a guide for students entering in the Fall of 2025 and later. Students should consult with their academic program regarding final certifications and requirements for graduation.
