Core Courses: All CBBI students must take Chemical Biology (CHEM60560, 3 credits, taught in the Spring semester, counts as a quantitative course), CHEM60680: Biomedical Research Ethics (1 credit, taught in the Spring semester), CHEM60616: Rigor and Reproducibility (1 credit, taught in Spring Semester) CHEM/BIOS93651/CHEM/BIOS93652: Chemistry & Biology Interface Seminar.

Elective Courses: In addition to the core courses, CBBI students take additional 3 credits of courses in the other discipline (e.g., chemistry students take 3 credits of biological disciplines courses, biochemistry students take 3 credits of chemistry courses, and biology students take 3 credits of chemistry courses. At least 3 credits must be from a quantitative course.

Chemistry Courses	**Biological Disciplines Courses**
CHEM60529 Enzyme and Coenzyme Mechanisms (1)	CHEM/BIOS 50531 Molecular Biology I (3)
CHEM60532 Optical Spectroscopy (3)	CHEM/BIOS50532 Molecular Biology II (3)
CHEM60535 Medicinal Chemistry (3)	CHEM60520 Principles of Biochemistry (3)
CHEM60614 Advanced Inorganic Chemistry (3)	CHEM60526 Biochemical Equilibria (1)
CHEM60618 Chemical Crystallography (3)	CHEM60527 Protein Structure & Folding (1)
CHEM90620 Bioinorganic Chemistry (3)	CHEM60528 Biochemical Methods (1)
CHEM60630 Intermediate Organic Chemistry (3)	CHEM 60531 Hallmarks of Cancer & Therapy
CHEM60631 Advanced Organic Chemistry I (3)	CHEM60534 Methods in Biochemistry (2)
CHEM60632 Advanced Organic Chemistry II (3)	CHEM60536 Enzyme Kinetics & Mechanism (1)
CHEM60533 Advanced Analytical Chemistry (3)	CHEM60537 Carbohydrates & Glycobiology (1)
CHEM60634 Structure Elucidation (3)	CHEM60538 Lipids & Membranes (1)
CHEM60635 Heterocyclic Chemistry (3)	CHEM60539 Molecular Metabolism (1)
CHEM60618 Chemical Crystallography (3)	CHEM60540 Signal Transduction (1)
CHEM90620 Bioinorganic Chemistry (3)	CHEM60541 Genomics & Proteomics (3)
CHEM90626 NMR Spectroscopy in Chemistry and Biochemistry (3)	CHEM60542 Molecular Pharmacology (3)
CHEM90628 Special Topics Bioanalytical Chemistry (3)	CHEM60624 Advanced Biochemical Techniques (4)
CHEM90638: Biomolecule Recognition (3)	CHEM 90625 Molecular Biophysics (3)
CHEM90638 Special Topics Industrial Organic Chemistry (3)	CHEM 90627 Practical Bioinformatics Protein Structure & Function (3)
CHEM90639 Synthetic Organic Chemistry (3)	BIOS60530 Immunobiology of Infectious Disease (3)
CHEM60641 Statistical Mechanics (3)	BIOS60539 Advanced Cell Biology I (3)
CHEM60649 Quantum Mechanics (3)	BIOS60540 Advanced Cell Biology II (3)
CHEM90650 Computational Chemistry I (3)	BIOS60556 Biomedical Histology (3)
	BIOS60560 Topics Microbiology (V)
	BIOS60566 Topics Immunology (V)
	BIOS60669 Topics Infectious Diseases (V)
	BIOS60670 Topics Cell Biology (V)
	BIOS60571 Topics Physiology: Bone Biology (3)
	BIOS60576 Topics Biocomp: Adv Biostatistics (3)
	BIOS60577 Topics Genetics/ Molecular Biology (3)
	BIOS60578 Topics Mathematical Biology (V)
	BIOS60610 Water, Disease & Global Health (3)
	BIOS80301 Histology (4)
	CSE60531 Comp Biophysics & Systems Biol (3)

**BIOS60568: Topics in Infectious Disease- Translational Research: Bringing Lab Work to Human Health does not qualify as a biological disciplines course.
**CHEM90628: Special Topics can be considered chemistry or biology-related depending on the topic and the instructor
**If a course is not listed, please contact Professor Melander to see if the course is considered chemistry or biology-related.

Quantitative Courses	
CHEM60520 Principles of Biochemistry (3) CHEM60527 Protein Structure & Folding (1) CHEM60528 Biochemical Methods (1) CHEM60529 Bio-organic Chemistry (1) CHEM60532 Optical Spectroscopy (3) CHEM60535 Medicinal Chemistry (3) CHEM60536 Enzyme Kinetics & Mechanism (1) CHEM60541 Genomics & Proteomics (3) CHEM60542 Molecular Pharmacology (3) CHEM60630 Intermediate Organic Chemistry (3) CHEM60631 Advanced Organic Chemistry I (3) CHEM60632 Advanced Organic Chemistry II (3) CHEM60634 Structure Elucidation (3) CHEM60618 Chemical Crystallography (3) CHEM60641 Statistical Mechanics (3) CHEM60649 Quantum Mechanics (3) CHEM90620 Bioinorganic Chemistry (3) CHEM 90625 Molecular Biophysics (3) CHEM90626 NMR Spectroscopy in Chemistry and Biochemistry (3) CHEM90628 Special Topics Bioanalytical Chemistry (3) CHEM90638 Special Topics Industrial Organic Chemistry (3) CHEM90639 Synthetic Organic Chemistry (3) CHEM90650 Computational Chemistry I (3)	BIOS60423 Topics Molecular Genetics: Genomics Sequence to Organism (V) BIOS60529 Theoretical Population Ecology (3) BIOS60563 Topics in Epidemiology: Research Methods in Global Health Science (V) BIOS60563 Topics in Epidemiology: Global Health Challenges (V) BIOS60569 Topics in Infectious Diseases: Epidemiology and Ecology of Infectious Diseases (V) BIOS60576 Topics Biocomp: Adv Biostatistics (3) BIOS60578 Topics Mathematical Biology (V) CSE60532 Bioinformatics Computing (3) CSE60531 Comp Biophysics & Systems Biol (3) ACMS60850 Applied Probability (3) ACMS60852 Stat Methods Bio and Health Sci (3) ACMS70860 Stochastic Analysis (3)

Quantitative courses: courses that involve measurement of quantity or amount, analysis using mathematical or computational methods, manipulation of data using statistical, mathematical or computational methods

Quantitative research: systematic investigation using statistical, mathematical or computational techniques, including collection of numerical data, analysis using mathematical methods, development of instruments and methods for measurement, modeling and analysis of data.