Biochemistry Concurrent BS/Graduate Certificate – 4 year plan
Sample Curriculum for the College of Liberal Arts and Sciences[1]

Freshman

Fall
Total: 15 UG credits
1 BBMB 101. Intro to Biochemical Activities
5 CHEM 201*. Advanced Chemistry
1 CHEM 201L*. Advanced Chemistry Lab
4 MATH 165. Calculus I
3 ENGL 150[2]
1 LIB 160. Library Instruction

Spring
Total: 16 UG credits
1 BBMB 102. Intro Biochemistry
2 CHEM 211. Quantitative & Environmental Analysis
2 CHEM 211L. Lab
4 MATH 166. Calculus II
3 BIOL 211 Principles of Biology
1 BIOL 211L. Lab
3 General Education Requirement

Sophomore

Total: 15-17 UG credits
3 CHEM 331. Organic Chemistry I
1-2 CHEM 331L or CHEM 333L. Lab
3-4 Math 265. Calculus III (4 cr) –or- Math 266 Elementary Differential Equations (3 cr)
3 BIOL 212. Principles of Biology II
5 PHYS 221. Classical Physics I

Total: 17-18 UG credits
2 BBMB 201. Chemical Principles in Biological Systems
3 CHEM 332. Organic Chemistry II
1-2 CHEM 332L (1 cr) –or- CHEM 334L Physical Chemistry (1 cr). Lab
5 PHYS 222. Classical Physics II
3 ENGL 250[2]
3 Elective

Junior[1,4] – Enroll in Concurrent BS/Graduate Certificate Program

Total: 12 UG, 4 Graduate: 16 credits
2 BBMB 504 Amino Acids & Proteins
2 BBMB 505 Bioenergetics & Metabolism
3 BIOL 313. Principles of Genetics
3 General Education Requirement
3 General Education Requirement
3 Elective

Total: 13 UG, 4 Graduate: 17 credits
2 BBMB 506 Membrane Biochemistry
2 BBMB 507 Biochemistry of Nucleic Acids
1 BBMB 593. Stupka Symposium. (for BS)
3 BIOL 314. Principles of Cellular Biology
3 General Education Requirement
3 General Education Requirement
3 Elective

Senior (Complete 120 UG credits to earn BS, 12 graduate credits for Graduate Certificate)[5]

Total: 18 UG credits
4 BBMB 411 Techniques in Biochemical Research (as advanced communications[3])
3 CHEM 324. Physical Chemistry I
3 General Education Requirement
3 General Education Requirement
3 Elective
2 BBMB 499 Undergraduate Research

Total: 12 UG, 4 Graduate: 16 credits
2 BBMB 561 Molecular Biophysics
2 BBMB 561L. Lab
3 CHEM 325 Chemical Thermodynamcis
3 Biological Science Elective
3 BBMB 499 Undergraduate Research
3 Elective

Footnotes:

[1] Fulfillment of the foreign language requirement in high school is assumed.
[2] Credit for English 150 comes with a grade of C or better in English 250.
[3] Advanced communications requirement (3 credits) is fulfilled by a grade of C or better in BBMB 411.
[4] US Diversity and International Perspectives courses are recommended in the junior year. Students will have registration priority and access to courses that simultaneously fulfill university and college general education requirements.
[5] Total credit minimum of 132 for the concurrent BS/Graduate Certificate: 120 for BS (black letters); 12 for Graduate Certificate (green letters). At least 45 credits are at the 300-level or higher. The Graduate Certificate requires BBMB 504-507, 561 and 561L. Students can transition into M.S. with thesis (30 graduate credits minimum) or Ph.D. with thesis (72 graduate credits minimum) degrees with Graduate Certificate.