ACCELERATED DUAL-DEGREE BS IN BIOCHEMISTRY/MS IN MOLECULAR AND CELL BIOLOGY (3+1)

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For highly qualified students, the Accelerated Dual-Degree BS in Biochemistry/MS in Molecular and Cell Biology (3+1) provides an opportunity for students to achieve both a Bachelor of Science in Biochemistry and a Master of Science within the field of Molecular and Cell Biology within a 4-year time frame typically associated with only an undergraduate education. The 3+1 program provides an excellent foundation for students intending to pursue studies in professional healthcare fields and doctoral programs. It also offers a competitive edge for students wishing to pursue a career in the biotechnology and biopharmaceutical industries.

The requirements and policies for the undergraduate degree are the same as described on the Bachelor of Science in Biochemistry (https://catalog.qu.edu/arts-sciences/chemistry-physical-sciences/biochemistry-bs/)page, except that students in the 3+1 combined BS/MS program are expected to maintain a GPA of at least 3.00 at the end of each school year for continued participation in the program. The requirements and policies for the graduate degree are the same as described on the Master of Science in Molecular and Cell Biology (http://catalog.qu.edu/graduate-studies/arts-sciences/molecular-cell-biology-ms/) page.

Accelerated Dual-Degree BS in Biochemistry/MS in Molecular and Cell Biology (3+1) Recommended Curriculum

The minimum number of credits required for the undergraduate degree is 120, and the minimum number of credits required for the graduate degree is 34. A maximum of 12 graduate credits may be used to fulfill both undergraduate and graduate requirements. Students must use UC electives to satisfy the Modern Language requirement. Students in pre-medical programs are advised to take CHE 210, CHE 210L, CHE 211, CHE 211L, PHY 110, PHY 110L, PHY 111 and PHY 111L in an on-ground modality. MA 153 and MA 154 are not required to complete this program but are highly recommended.

Code	Title	Credits
Year One: Fall Semester		
BIO 150	General Biology for Majors	4
BIO 150L	General Biology for Majors Laboratory	
CHE 110	General Chemistry I	3
CHE 110L	General Chemistry I Lab	1
EN 101	Introduction to Academic Reading and Writing	3
FYS 101	First-Year Seminar	3
MA 140	Pre-Calculus	3
Year One: January Term		
UC Elective		3
Year One: Spring Term		
BIO 151	Molecular and Cell Biology and Genetics	4
BIO 151L	Molecular and Cell Biology and Genetics Lab	
CHE 111	General Chemistry II	3
CHE 111L	General Chemistry II Lab	1
EN 102	Academic Writing and Research	3
MA 141	Calculus of a Single Variable [1]	3
UC Elective		3
Year One: Summer Term		
UC Elective		3
UC Elective		3
Year Two: Fall Term		
CHE 210	Organic Chemistry I	3
CHE 210L	Organic Chemistry I Lab	1
CHE 215	Analytical Chemistry	3
CHE 215L	Analytical Chemistry Lab	1
PHY 110	General Physics I [2]	3
PHY 110L	General Physics I Lab	1
UC Elective		3
Year Two: January Term		
UC Elective		3
Year Two: Spring Term		
BIO 515	Advanced Biochemistry	4
CHE 211	Organic Chemistry II	3
CHE 211L	Organic Chemistry II Lab	1
CHE 305	Instrumental Analysis	3
CHE 305L	Instrumental Analysis Lab	1
CHE 315L	Biochemistry I Lab	1
PHY 111	General Physics II [3]	3
PHY 111L	General Physics II Lab	1
Year Two: Summer Term		
UC Elective		3
UC Elective		3
Year Three: Fall Term		
BIO 571	Molecular Genetics	4
CHE 301	Physical Chemistry I	3
CHE 301L	Physical Chemistry I Lab	1
CHE 475	Chemistry Seminar I	1
CHE 490	Chemistry Research I	3
CHE Elective		3
Year Three: January Term		
UC Elective		3
Year Three: Spring Term		
BIO 605	DNA Methods Laboratory	4
CHE 302	Physical Chemistry II	3
CHE 302L	Physical Chemistry II Lab	1
CHE 316	Biochemistry II	3
CHE 420	Chemistry Integrative Capstone	3
CHE 476	Chemistry Seminar II	1
CHE 491	Chemistry Research II	3
Year Three: Summer Term		

Independent Study		3
Year Four: Fall Term		
BIO 568	Molecular and Cell Biology	4
BIO 606	Protein Methods Laboratory	4
Graduate Elective		3
Year Four: Spring Term		
BIO 675	Comp Exam in Molecular and Cell Biology	2
Graduate Elective		3
Graduate Elective		3
Total Credits		**120**

[1] MA 151 may be substituted for MA 141.
[2] PHY 121 may be substituted for PHY 110 and PHY 110L.
[3] PHY 122 may be substituted for PHY 111 and PHY 111L.

The accelerated dual-degree (3+) program is designed for outstanding students. First-year applicants will be considered for an accelerated dual-degree program based on demonstrated academic achievement to complete the bachelor's degree at an accelerated pace.

While scores are not required, if a student wants to submit, they should have at least a 1200 SAT or 25 ACT to be considered

For detailed admission requirements, including required documents, please visit the Admissions page (http://catalog.qu.edu/general-information/admissions/) of this catalog. You can also learn more about accelerated dual-degrees (https://www.qu.edu/academics/about-our-programs/accelerated-dual-degree/) on qu.edu