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

Program Contact: Robert Collins (robert.collins@qu.edu) 203-582-6407

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 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 not required to complete this program in an on-ground 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-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.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>Year One: Fall Semester</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BIO 150</td>
<td>General Biology for Majors</td>
<td>4</td>
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<tr>
<td>BIO 150L</td>
<td>General Biology for Majors Laboratory</td>
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</tr>
<tr>
<td>CHE 110</td>
<td>General Chemistry I</td>
<td>3</td>
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<tr>
<td>CHE 110L</td>
<td>General Chemistry I Lab</td>
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</tr>
<tr>
<td>EN 101</td>
<td>Introduction to Academic Reading and Writing</td>
<td>3</td>
</tr>
<tr>
<td>FYS 101</td>
<td>First-Year Seminar</td>
<td>3</td>
</tr>
<tr>
<td>MA 140</td>
<td>Pre-Calculus</td>
<td>3</td>
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<tr>
<td>Year One: January Term</td>
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<tr>
<td>UC Elective</td>
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<td>3</td>
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<tr>
<td>Year One: Spring Term</td>
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</tr>
<tr>
<td>BIO 151</td>
<td>Molecular and Cell Biology and Genetics</td>
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BIO 151L Molecular and Cell Biology and Genetics Lab
CHE 111 General Chemistry II
CHE 111L General Chemistry II Lab
EN 102 Academic Writing and Research
MA 141 Calculus of a Single Variable
UC Elective

Year One: Summer Term
UC Elective

Year Two: Fall Term
CHE 210 Organic Chemistry I
CHE 210L Organic Chemistry I Lab
CHE 215 Analytical Chemistry
CHE 215L Analytical Chemistry Lab
PHY 110 General Physics I
PHY 110L General Physics I Lab
UC Elective

Year Two: January Term
UC Elective

Year Two: Spring Term
BIO 515 Advanced Biochemistry
CHE 211 Organic Chemistry II
CHE 211L Organic Chemistry II Lab
CHE 305 Instrumental Analysis
CHE 305L Instrumental Analysis Lab
CHE 315L Biochemistry I Lab
PHY 111 General Physics II
PHY 111L General Physics II Lab
UC Elective

Year Three: Fall Term
BIO 571 Molecular Genetics
CHE 301 Physical Chemistry I
CHE 301L Physical Chemistry I Lab
CHE 475 Chemistry Seminar I
CHE 490 Chemistry Research I
CHE Elective

Year Three: January Term
UC Elective

Year Three: Summer Term
Independent Study

Year Four: Fall Term
The Accelerated Dual-Degree BS/MS program is designed for outstanding applicants. Students are offered acceptance into the program upon admission to Quinnipiac University.

**Admission Requirements: College of Arts and Sciences**

The requirements for admission into the undergraduate College of Arts and Sciences programs are the same as those for admission to Quinnipiac University.

Admission to the university is competitive, and applicants are expected to present a strong college prep program in high school. Prospective first-year students are strongly encouraged to file an application as early in the senior year as possible, and arrange to have first quarter grades sent from their high school counselor as soon as they are available.

For detailed admission requirements, including required documents, please visit the Admissions (http://catalog.qu.edu/general-information/admissions/) page of this catalog.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>BIO 568</td>
<td>Molecular and Cell Biology</td>
<td>4</td>
</tr>
<tr>
<td>BIO 606</td>
<td>Protein Methods Laboratory</td>
<td>4</td>
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<tr>
<td>Graduate Elective</td>
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<td>3</td>
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**Year Four: Spring Term**

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<th>Course Title</th>
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<tr>
<td>BIO 675</td>
<td>Comp Exam in Molecular and Cell Biology</td>
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<tr>
<td>Graduate Elective</td>
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<td>3</td>
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<tr>
<td>Graduate Elective</td>
<td></td>
<td>3</td>
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**Total Credits**: 120

Footnotes:

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.