BIOLGY (BS/MBA)

With contemporary life sciences playing an ever-larger role in the economy, there is an increasing demand by employers for individuals with rigorous training in biology as well as business. Career opportunities in the biotechnology and pharmaceutical industries are expanding significantly, and are likely to continue to do so for the foreseeable future as applications of modern biological research continue to grow.

The BS in Biology/MBA dual-degree program provides the type of broad training that contemporary employers in these industries value. It is the first program of its type in the Chicago area.

Curriculum

Program Requirements

Students will complete all the normal requirements for the BS in Biology (https://catalog.luc.edu/undergraduate/arts-sciences/biology/biology-bs/). The MBA program is an 18-course program, including the following required courses:

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCT 400</td>
<td>Financial Acct for Bus Decisions</td>
<td>3</td>
</tr>
<tr>
<td>MARK 460</td>
<td>Marketing Management</td>
<td>3</td>
</tr>
<tr>
<td>ISSCM 400</td>
<td>Quantitative Methods</td>
<td>0</td>
</tr>
<tr>
<td>ISSCM 491</td>
<td>Managerial Statistics</td>
<td>3</td>
</tr>
<tr>
<td>ECON 420</td>
<td>Managerial Economics</td>
<td>3</td>
</tr>
<tr>
<td>Total Hours</td>
<td></td>
<td>12</td>
</tr>
</tbody>
</table>

Biology majors who have been admitted to the five-year program can be waived from certain MBA courses, given the following:

- **Waived from: ISSCM 400 Quantitative Methods**
  - If: Student receives grades of B or higher in MATH 131 Applied Calculus I & MATH 132 Applied Calculus II

- **Waived from: ISSCM 491 Managerial Statistics**
  - If: Student receives grade of B or higher in BIOL 335 Intro to Biostatistics

- **Waived from: ECON 420 Managerial Economics**
  - If: Student receives grades of B or higher in ECON 201 Principles of Microeconomics & ECON 202 Principles of Macroeconomics

1 ECON 201 Principles of Microeconomics & ECON 202 Principles of Macroeconomics also fulfill the social science requirement of the Core Curriculum (https://catalog.luc.edu/undergraduate/university-requirements/university-core/).

Biology majors admitted to the five-year program can take up to three of the required MBA courses listed above during their senior year. The MBA courses are taught in the evening on a quarter system, with the first quarter beginning at approximately the same time as the fall semester.

Course waivers are determined upon admission to the MBA program. Ideally, biology majors will be waived from ISSCM 400 Quantitative Methods, ISSCM 491 Managerial Statistics and ECON 420 Managerial Economics. Thus, they will take ACCT 400 Financial Acct for Bus Decisions and MARK 460 Marketing Management during their senior year. These graduate courses can be applied as six hours of free electives toward the BS in Biology degree.

Progress Through the Program

In addition to completing the normal requirements for the BS in Biology (https://catalog.luc.edu/undergraduate/arts-sciences/biology/biology-bs/), students planning to enter the MBA program should do the following:

**Freshman/Sophomore Years:** Arrange their undergraduate course scheduling to preserve six hours of free electives until their senior year. The majority of biology majors have math and foreign language placements upon entrance that already give them the six hours of free electives. Through use of summer school, the remaining students can also readily have the free elective hours by the time they are seniors.

During their first two years, students should take ECON 201 Principles of Microeconomics and ECON 202 Principles of Macroeconomics, which will satisfy the social science requirement of the Core Curriculum and allow the student to waive out of ECON 420 Managerial Economics.

**Junior Year (2nd semester):** Take the GMAT and make formal application to the MBA program. Take BIOL 335 Intro to Biostatistics. Biostatistics, which counts as an upper-level elective in the biology major and allows the student to waive out of ISSCM 491 Managerial Statistics.

**Senior Year:** Take ACCT 400 Financial Acct for Bus Decisions and MARK 460 Marketing Management, which will count as free electives toward the BS degree. Complete all requirements for the BS in Biology.

**Fifth Year:** During the fifth year, students who have followed the above directions will have a total of 13 MBA courses remaining. These courses can be completed full-time at the rate of three or four per quarter (including the summer quarter). Students also have the option to complete the MBA program on a part-time basis (usually one or two courses per quarter).

Guidelines for Accelerated Bachelor’s/ Master’s Programs

Terms

- **Accelerated Bachelor’s/Master’s programs:** In this type of program, students share limited credits between their undergraduate and graduate degrees to facilitate completion of both degrees.
- **Shared credits:** Graduate level credit hours taken during the undergraduate program and then applied towards graduate program requirements will be referred to as Shared credits.

Admission Requirements

Accelerated Bachelor’s/Master’s programs are designed to enhance opportunities for advanced training for Loyola’s undergraduates. Admission to these programs must be competitive and will depend upon a positive review of credentials by the program’s admissions committee. Accordingly, the admission requirements for these programs may be higher than those required if the master’s degree were pursued entirely after the receipt of a bachelor’s degree. That is, programs may choose to have more stringent admissions requirements in addition to those minimal requirements below.

Requirements:

- Declared appropriate undergraduate major,
- By the time students begin taking graduate courses as an undergraduate, the student has completed approximately 90 credit
hours, or the credit hours required in a program that is accredited by a specialty organization,¹

- A minimum cumulative GPA for coursework at Loyola that is at or above the program-specific requirements, a minimum major GPA that is at or above the program-specific requirements, and/or appropriate designated coursework for evaluation of student readiness in their discipline.²

Students not eligible for the Accelerated Bachelor's/Master's program (e.g., students who have not declared the appropriate undergraduate major) may apply to the master's program through the regular admissions process. Students enrolled in an Accelerated Bachelor's/Master's program who choose not to continue to the master's degree program upon completion of the bachelor's degree will face no consequences.³

Ideally, a student will apply for admission (or confirm interest in proceeding towards the graduate degree in opt-out programs) as they approach 90 credit hours. Programs are encouraged to begin advising students early in their major so that they are aware of the program and, if interested, can complete their bachelor's degree requirements in a way that facilitates completion of the program. Once admitted as an undergraduate, Program Directors should ensure that students are enrolled using the plan code associated with the Accelerated Bachelor's/Master's program. Using the plan code associated with the Accelerated Bachelor's/Master's program will ensure that students may be easily identified as they move through the program. Students will not officially matriculate into the master's degree program and be labeled as a graduate student by the university, with accompanying changes to tuition and Financial Aid (see below), until the undergraduate degree has been awarded. Once admitted to the graduate program, students must meet the academic standing requirements of their graduate program as they complete the program curriculum.

¹ Programs that have specialized accreditation will adhere to the admissions criteria provided by, or approved by, their specialized accreditors.
² The program will identify appropriate indicators of student readiness for graduate coursework (e.g., high-level performance in 300 level courses). Recognizing differences between how majors are designed, we do not specify a blanket requirement.
³ If students choose not to enroll in the Accelerated Bachelor's/Master's program, they still must complete all of the standard requirements associated with the undergraduate degree (e.g., a capstone).

Curriculum

Level and progression of courses. The Accelerated Bachelor’s/Master’s programs are designed to be competitive and attractive to our most capable students. Students admitted to Accelerated Bachelor's/Master's programs should be capable of meeting graduate level learning outcomes. Following guidance from the Higher Learning Commission, only courses taken at the 400 level or higher (including 300/400 level courses taken at the 400 level) will count toward the graduate program.¹,²

Up to 50% of the total graduate level credit hours, required in the graduate program, may come from 300/400 level courses where the student is enrolled in the 400 level of the course. Further, at least 50% of the credit hours for the graduate program must come from courses that are designed for and restricted to graduate students who have been admitted to a graduate program at Loyola (e.g., enrolled in plan code that indicates the Accelerated Bachelor's/Master's program, typically ending with the letter "D").³

In general, graduate level coursework should not be taken prior to admission into the Accelerated Bachelor's/Master's program. Exceptions may be granted for professional programs where curriculum for the Accelerated Bachelor's/Master's program is designed to begin earlier. On the recommendation of the program's Graduate Director, students may take one of their graduate level courses before they are admitted to the Accelerated Bachelor's/Master's program if they have advanced abilities in their discipline and course offerings warrant such an exception.⁴

Undergraduate degree requirements outside of the major are in no way impacted by admission to an Accelerated Bachelor's/Master's program.⁵

Shared credits. Undergraduate courses (i.e., courses offered at the 300 level or below) cannot be counted as shared credits nor count towards the master's degree. Up to 50% of the total graduate level credit hours, required in the graduate program, may be counted in meeting both the undergraduate and graduate degree requirements. Of those shared credits, students in an Accelerated Bachelor's/Master's program should begin their graduate program with the standard introductory course(s) for the program whenever possible. So that students may progress through the Accelerated Bachelor's/Master's program in a timely manner, undergraduate programs are encouraged to design their curriculum such that a student can complete some required graduate credit hours while completing the undergraduate degree. For instance, some of the graduate curriculum should also satisfy electives for the undergraduate major.

The program's Graduate Director will designate credit hours to be shared through the advising form and master's degree conferral review process. Shared credit hours will not be marked on the undergraduate record as having a special status in the undergraduate program. They will be included in the student's undergraduate earned hours and GPA. Graduate credit hours taken during the undergraduate program will not be included in the graduate GPA calculation.

¹ If students wish to transfer credits from another university to Loyola University Chicago, the program’s Graduate director will review the relevant syllabus(es) to determine whether it meets the criteria for a 400 level course or higher.
² Programs with specialized accreditation requirements that allow programs to offer graduate curriculum to undergraduate students will conform to those specialized accreditation requirements.
³ If a particular course is only offered once every 2-3 years, or if students do not have adequate participation in the course to meet the criteria for a 400 level course for a highly qualified and highly motivated undergraduate, ensuring that the undergraduate's exceptional participation in the graduate class will not diminish in any way the experience of the graduate students regularly enrolled.
⁴ Students should not, for example, attempt to negotiate themselves out of a writing intensive requirement on the basis of admission to a graduate program.
⁵ Students not eligible for the Accelerated Bachelor's/Master's program (e.g., students who have not declared the appropriate undergraduate major) may apply to the master's program through the regular admissions process. Students enrolled in an Accelerated Bachelor's/Master's program who choose not to continue to the master's degree program upon completion of the bachelor's degree will face no consequences.
to graduate degree program unless given explicit permission by their program for a gap year or approved leave of absence.