APPLIED STATISTICS (BS/MS)

The BS/MS (4+1) program in Applied Statistics is a five-year program that gives academically successful Loyola undergraduates the opportunity to pursue the MS degree in Applied Statistics while completing their BS degree. The applicant can be pursuing any of the BS degrees offered by the Department of Mathematics and Statistics. There are several advantages to enrolling in the BS/MS program.

- The MS program requirement to take the GRE is waived for students applying to the BS/MS program. The application fee to the program is also waived.
- Students can begin taking their Masters courses during their senior year of undergraduate study.
- The MS program in Applied Statistics requires 30 credits of graduate courses. This generally takes one and a half years to complete.
- Students in the BS/MS program are permitted to “double count” up to three of their Loyola 400-level STAT courses for both their BS and MS degrees; since this depends upon whether the BS is in Data Science, Mathematics or Statistics, speak with the Director for further details. Hence BS/MS students are required to take as few as 21 credits (instead of 30 credits) of additional 400-level classes in the fifth year, and can finish the program in five years.

Further Information

If you have additional questions about the program, please contact Timothy O’Brien (https://www.luc.edu/math/ft/faculty/orientimothy.shtml/), Graduate Program Director for Applied Statistics.

Curriculum

Requirements for Completion of the BS/MS Program

After admission to the BS/MS program, students may take up to three 3-credit 400-level STAT course during their senior year. These credits are then “double counted” for both the BS and MS requirements. Students generally take the remaining 21-credits of 400-level classes during their fifth year. This schedule can occasionally be modified for students with AP or transfer credit or for students willing to take a 400-level STAT course as an undergraduate general elective course who desire to finish the combined program in less than five years. Students in the program are expected to consult regularly with the Graduate Program Director to insure that they are on track for completion of both the BS and MS degrees. The following are required to complete the BS/MS degree program in Applied Statistics:

- Successful completion of one of the BS degrees in the Department of Mathematics and Statistics; these include Data Science, Mathematics and Statistics. It is expected that the student complete all degree requirements for their chosen BS degree two semesters before completing the MS degree;
- All 400-level graduate statistics courses (https://catalog.luc.edu/course-descriptions/) (including the core graduate statistics courses STAT 401 Introduction to Applied Statistics Using R, STAT 403 SAS Program & Appl Stat, STAT 404 Probability & Statistics I, STAT 405 Probability & Statistics II, STAT 407 Statistical Design, STAT 408 Applied Regression Analysis, and STAT 495 Statistical Consulting Capstone and the remaining 3-credit 400-level STAT electives) must be completed with a GPA of 3.0 or higher;
- 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.

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.

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.
Programs that have specialized accreditation will adhere to the admissions criteria provided by, or approved by, their specialized accreditors.

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.

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. 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”).

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.

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

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 In rare cases, the Graduate Director may authorize enrollment in 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 For example, if a particular course is only offered once every 2-3 years, and a student has demonstrated the necessary ability to be successful, the Graduate Director may allow a student to take a graduate level course to be shared prior to the student being formally admitted to the graduate program. See, also, footnote 4.
5 Students should not, for example, attempt to negotiate themselves out of a writing intensive requirement on the basis of admission to a graduate program.

Graduation

Degrees are awarded sequentially. All details of undergraduate commencement are handled in the ordinary way as for all students in the School/College/Institute. Once in the graduate program, students abide by the graduation deadlines set forth by the graduate program. Students in these programs must be continuously enrolled from undergraduate to graduate degree program unless given explicit permission by their program for a gap year or approved leave of absence.