

**New Graduate Program (Majors, Sequences, Certificates) Proposal
Illinois State University - Graduate Curriculum Committee**

Program Department Mathematics

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Title of New Program Mathematics Actuarial Science Online Masters Sequence

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Campus Address 4520 Mathematics

Version 4 **ID** 178

Proposed Starting Catalog Year 2023-2024

1. Proposed Action

- New Major
- ✓ New Sequence
- New Certificate
- ✓ More than 50% of courses in this program are Distance Education

Sequence Major

Mathematics-Actuarial Science

2. Provide Graduate Catalog copy for new program.

Master of Science in Mathematics: Actuarial Science Online Sequence

Option I — Non-Thesis

This 32-hour option requires:

- 1 course selected from: MAT 336, MAT 337, MAT 347
- 12 hours: 3 courses selected from: MAT 355, MAT 380, MAT 381, MAT 383, MAT 384, MAT 480, or MAT 483
- 3 hours: culminating experience in the form of MAT 490 or MAT 498
- 14 credit hours of electives:
 - Electives outside of the department are eligible to satisfy this requirement. A maximum of 6 credit hours can be taken outside of the department. No more than one graduate level course outside of mathematics allowed. Please see your academic adviser.

Notes:

- The Department reserves the right to enforce professional standards of practice as specified by the Society of Actuaries and the Casualty Actuarial Society. These standards may be taken into consideration in program retention decisions.
- A minimum of 12 hours of MAT must be taken at the 400 level. Please see your academic advisor.
- 50% of the program needs to be at the 400 level
- At least 3 courses need to be at MAT 407 or higher (excluding 409, 421, 422, 490, 498, 499)

Option II — Thesis

This 30-hour option requires:

- 1 course selected from: MAT 336, MAT 337, MAT 347
- 12 hours: 3 courses selected from: MAT 355, MAT 380, MAT 381, MAT 383, MAT 384, MAT 480, or MAT 483
- 4-6 credit hours: MAT 499
- 11-13 credit hours of electives:
 - Electives outside of the department are eligible to satisfy this requirement. A maximum of 6 credit hours can be taken outside of the department. No more than one graduate level course outside of mathematics allowed. Please see your academic adviser.

Notes:

- The Department reserves the right to enforce professional standards of practice as specified by the Society of Actuaries and the Casualty Actuarial Society. These standards may be taken into consideration in program retention decisions.
- A minimum of 10 hours of MAT must be taken at the 400 level. Please see your academic advisor.
- 50% of the program needs to be at the 400 level
- At least 3 courses need to be at MAT 407 or higher (excluding 409, 421, 422, 490, 498, 499)

3. Provide a description for the proposed program.

This program is the same as the existing program for the Master of Mathematics: Actuarial Sequence program except that all of the courses have been re-designed to make them available in an online format. The content of the courses is the same. Degree requirements are exactly the same as in the existing Master degree in Mathematics, Actuarial Sequence, offered through regular live/in-person classes.

4. Provide a rationale of proposed program.

The rationale for this proposed addition of an online version of the existing Master of Mathematics: Actuarial Sequence is twofold:

(1) Illinois State University has made the development of online education and global presence into priorities in building the future of the university, and we hope to contribute to the fulfillment of the mission of the university with this online expansion of an existing program. It should be noted that our Actuarial Program started offering online seminars for professional actuarial examinations in 2012 already, and we have been steadily building our online presence and online resources.

(2) Illinois State University is a leader in Actuarial Science education (a Society of Actuaries Center of Actuarial Excellence since 2009, winner of the Casualty Actuarial Society University Award in 2016 and 2019), and many students across the country, and globally, are interested in pursuing an actuarial degree with us and this online offering will allow us to expand our program.

The rationale for this change needing a formal revision is that this program sequence has been re-designed and proposed as a new online sequence of courses to allow us to administer this sequence separately from the in-person sequence of courses already in place. This will enable administrators to bill students at different rates for the two sequences (in-person versus online). The new, proposed online sequence will be billed at a higher rate of tuition and fees than the in-person sequence that is already in place. These additional resources are needed for continuous online expansion and for potential personnel needs for online offerings.

5. Describe the expected effects of the proposed program on existing campus programs (if applicable).

No effect is expected because the program sequence will draw on a new pool of applicants via distance education.

6. Describe the expected curricular changes required, including new courses. If proposals for new courses that will be or have been submitted, please reference those related proposals here:

No courses are new. The curriculum is the same, other than being transferred into an online format.

7. Anticipated funding needs and source of funds.

No further funding is expected. The masters program director in the department of mathematics should be expected to support any growth in the size of the masters program cohort of students.

8. No Does this program count for teacher education?**9. The following questions must be answered.**

No Have you confirmed that Milner Library has sufficient resources for the proposed program?

Explain why Milner Library has not been contacted.

The sequence does not introduce any changes to our expected use of resources at Milner Library, because the sequence merely duplicates an existing sequence.

Yes Have letter(s) of concurrence from affected departments/schools been obtained?

A departments/school is affected if it has a program with significant overlap or if it teaches a required or elective course in the program.

