ACTUARIAL SCIENCE, BS/ MS COMPUTER SCIENCE ACCELERATED PROGRAM

The Mathematics and Actuarial Science faculty at Roosevelt have joined with the Computer Science faculty to offer an accelerated BS in Actuarial Science (https://catalog.roosevelt.edu/undergraduate/health-science/actuarial-science-bs/)/MS in Computer Science (https://catalog.roosevelt.edu/graduate/health-science/computer-science-ms/) program to eligible students. Students entering this program can earn both bachelor's and master's degrees in less time than earning these degrees separately would require.

Risk analysts and actuaries earn professional designation from either the Society of Actuaries (http://www.soa.org) (life and health insurance) or the Casualty Actuarial Society (http://www.casact.org) (property and casualty insurance). These societies administer a series of examinations that lead to the risk analyst designation or actuaries, first to the designation of associate and then to fellow. The initial exams are the same for both societies. The courses required for the major and the minor will aid the student in preparing for the first two of the professional societies' examinations. They will also satisfy their Validation by Educational Experience (VEE) (https://www.soa.org/education/exam-req/edu-vee.aspx) requirements in economics, corporate finance, and mathematical statistics.

A student in the BS in Actuarial Science program needs to apply for the accelerated program by the end of the semester prior to the senior year. The admission standard to the Accelerated Program should be consistent with the MS in Computer Science program. Students completing the accelerated BS in Actuarial Science and MS in Computer Science will complete the BS in Actuarial Science with minors in both Finance and Computer Science in their first four years. In their fifth year they will complete the MS degree in Computer Science.

Requirements

- Major in Actuarial Science (https://catalog.roosevelt.edu/undergraduate/health-science/actuarial-science-bs/),
- Completion of 60 credit hours of undergraduate course work
- Have and maintain a minimum grade point average of 3.0
- All courses presented for the undergraduate major must be completed with C- or higher grades; a maximum of two grades of C- may be presented for the undergraduate major.
- The BS degree with an accelerated MS requires both a minor in Finance (https://catalog.roosevelt.edu/undergraduate/business/minor/finance-minor-non-business-majors/) and an additional minor in Computer Science (https://catalog.roosevelt.edu/undergraduate/health-science/minor/computer-science-minor/). In order to have the appropriate background in computer science, students should take CST 250 COMPUTER SCIENCE II, CST 280 INTRODUCTION TO ALGORITHMS, and CST 317 OPERATING SYSTEMS as part of their computer science minor.
- Obtain permission from the MS in Computer Science director to take the required MS in Computer Science courses as an undergraduate.
- As part of their undergraduate degree, students must take a minimum of their last 30 credit hours at Roosevelt University or complete a minimum of 60 hours in-residence at Roosevelt University excluding the number hours in the exception request.
- Upon completion of the BS in Actuarial Science (https://catalog.roosevelt.edu/undergraduate/health-science/actuarial-science-bs/), apply to the MS in Computer Science (https://catalog.roosevelt.edu/graduate/health-science/computer-science-ms/) program under the normal admission process. (https://catalog.roosevelt.edu/graduate/admission/)

The student will take the following three MS graduate courses as part of the Actuarial Science BS. All of the courses will receive credit toward the Master's in Computer Science degree once the student is admitted to the MS program.

Required Courses

Code	Title	Credit Hours
CST 421	DATA MINING	3
CST 423	GAME THEORY AND APPLICATIONS	3
CST 457	SYSTEMS PROGRAMMING	3

Your degree map is a general guide suggesting courses to complete each term on the academic pathway to your degree. It is based on the most current scheduling information from your academic program. Your program's degree map is reviewed annually and updated as schedules change (although you retain the same course requirements as long as you are continuously enrolled in your degree program).

Always work closely with your academic advisor to understand curriculum requirements and scheduling, as each student's academic plan can look slightly different.

Year 1

Fall	Credit Hours	Spring	Credit Hours
FYS 101	1	Ideas of Social Justice	3
ENG 101	3	ENG 102	3
ECON 101	3	ECON 102	3
MATH 121[5]	3	Humanities #1	3
ACSC 101	1	MATH 122	3
BIOL 111 or 112[4]	4		
	15		**15**

Year 2

Fall	Credit Hours	Spring	Credit Hours
ACCT 210	3	FIN 301	3
MATH 231	5	MATH 232	5
Humanities #2	3	ACSC 246	3
COMM 101	3	CST 250	4
CST 150	4		
	18		**15**

Year 3

Fall	Credit Hours	Spring	Credit Hours
FIN 311	3	ACSC 380FM or 380P	3
Social Science #3 (ECON 234 recommended)	3	FIN 321	3

MATH 233	3	Physical Science[4]	3
CST 280	3	ACSC 348	3
ACSC 347	3		
	15		**12**

Year 4

Fall	Credit Hours	Spring	Credit Hours
CST 421	3	Humanities #3	3
CST 423	3	CST 3XX	3
CST 317	3	FIN 3XX[2]	3
ACSC 349 (EXL #1)	3	CST 457	3
ACSC 367	3	Experiential Learning Course #2	3
	15		**15**

Year 5

Fall	Credit Hours	Spring	Credit Hours
CST 408	3	CST 449	3
CST 411	3	CST 499	3
CST 485	3	CST 4XX	3
CST 4XX	3		
	12		**9**

Total Credit Hours 141

1 ACSC 390 recommended.
2 Any 300-level FIN course
3 Students must take a professional exam, ideally in the end of their junior year.
4 One Natural Science course must be a lab course.
5 Students should begin taking the calculus sequence in order based on their placement. Students who place into MATH 122 TRIGONOMETRY AND PRECALCULUS, MATH 231 CALCULUS I, MATH 232 CALCULUS II, or MATH 233 CALCULUS III should begin in that course in their first semester, taking subsequent courses each following semester until this sequence is complete. Students who need additional support in MATH 121 COLLEGE ALGEBRA should register for the co-requisite MATH 021 ALGEBRAIC FOUNDATIONS.