ACTUARIAL SCIENCE, BA/ MS COMPUTER SCIENCE ACCELERATED PROGRAM

The Mathematics and Actuarial Science faculty at Roosevelt have joined with the Computer Science faculty to offer an accelerated BA in Actuarial Science (http://catalog.roosevelt.edu/undergraduate/health-science/actuarial-science-ba/)/MS in Computer Science (http://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 BA 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 BA in Actuarial Science and MS in Computer Science will complete the BA in Actuarial Science with a minor in Finance in their first four years. In their fifth year they will complete the MS degree in Computer Science.

Requirements

- Major in Actuarial Science (http://catalog.roosevelt.edu/undergraduate/health-science/actuarial-science-ba/)
- 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 BA degree in Actuarial Science with an accelerated MS requires both a minor in Finance (http://catalog.roosevelt.edu/undergraduate/business/minor/finance-minor-non-business-majors/) and additional courses in Computer Science (http://catalog.roosevelt.edu/undergraduate/health-science/minor/computer-science-minor/). In addition to the specific computer science courses for the Actuarial Science major, students are required to take CST 250 COMPUTER SCIENCE II, CST 280 INTRODUCTION TO ALGORITHMS, and CST 317 OPERATING SYSTEMS .
- Obtain permission from the MS in Computer Science director to take the required MS in Computer Science courses as an undergraduate.
- Upon completion of the BA in Actuarial Science (http://catalog.roosevelt.edu/undergraduate/health-science/actuarial-science-ba/), apply to the MS in Computer Science (http://catalog.roosevelt.edu/graduate/health-science/computer-science-ms/) program under the normal admission process. (http://catalog.roosevelt.edu/graduate/admission/)

The student will take the following three MS graduate courses as part of the Actuarial Science BA. 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	COOPERATION AND COMPETITON -- 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
Physical Science[4]	3	MATH 122	3
MATH 121[3]	3	Humanities #1	3
ACSC 101	1		
	14		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	BIOL 111 or 112[4]	4
	14		15

Year 3

Fall	Credit Hours	Spring	Credit Hours
CST 150	4	ACSC 380FM or 380P	3
MATH 233	3	FIN 321	3
FIN 311	3	Social Science #3 (ECON 234 recommended)	3
Humanities #3	3	CST 250	4
ACSC 347	3	ACSC 348	3
	16		16

Year 4

Fall	Credit Hours	Spring	Credit Hours
CST 421	3	CST 280	3
CST 423	3	CST 457	3
CST 317	3	FIN 3XX[2]	3
ACSC 349 (EXL course)	3	General Elective	3
ACSC 367	3	EXL 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 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 extra support in MATH 121 COLLEGE ALGEBRA should also register for the co-requisite MATH 021 ALGEBRAIC FOUNDATIONS course.

[4]

One Natural Science course must be a lab course.

[5]

Students must take a professional exam, ideally in the end of their junior year.