DATA ANALYTICS, BS/ MS ACTUARIAL SCIENCE ACCELERATED PROGRAM

To enable high-achieving and motivated students to earn both a bachelor degree in Data Analytics and a graduate degree in Actuarial Science in five years, we offer a combined accelerated program. Students in the accelerated program can start to take graduate courses in the senior year and finish both the undergraduate degree in Data Analytics and the graduate degrees in Actuarial Science in five years.

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 graduate degree 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 mathematical statistics and have the option to do so for economics and corporate finance.

A student in the BS in Data Analytics 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 Actuarial Science program. Students in the accelerated program should meet the program requirements of both BS in Data Analytics and MS in Actuarial Science programs.

- Major in Data Analytics (http://catalog.roosevelt.edu/undergraduate/health-science/data-analytics-bs/)
- Completion of 60 credit hours of undergraduate course work
- Have and maintain a minimum grade point average of 3.0
- Obtain permission from the MS in Actuarial Science director to take the required MS in Actuarial Science courses as an undergraduate. In addition to the specific math courses for the Data Analytics major, students are required to take ACCT 210 INTRODUCTION TO FINANCIAL ACCOUNTING, MATH 232 CALCULUS II, MATH 233 CALCULUS III, ACSC 347 PROBABILITY THEORY and ACSC 367 FINANCIAL MATH during their undergraduate years as a prerequisite for the graduate degree in Actuarial Science. Note that this would allow a student to declare and complete a mathematics minor (http://catalog.roosevelt.edu/undergraduate/health-science/minor/mathematics-minor/) as part of this process.
- Upon completion of the BS in Data Analytics, apply to the MS in Actuarial Science program under the normal admission process. (http://catalog.roosevelt.edu/graduate/admission/)
- At most two grades of C or C+ are allowed in graduate courses; all other graduate coursework must have a grade of B- or higher, with a graduate GPA of at least 3.0.
- The completed degree requires a total of 33 credit hours of graduate coursework (which includes the 9 credit hours of graduate courses taken while an undergraduate).

Students will take the following three MS in Actuarial Science graduate courses as part of the BS in Data Analytics. These courses are the graduate equivalents of CST 309 DATA MINING, CST 310 GAME THEORY AND APPLICATIONS and MATH 349 REGRESSION & TIME SERIES.

All of the courses will receive credit toward the MS in Actuarial Science degree once the student is admitted to the MS in Actuarial Science program.

Code	Title	Credit Hours
MATH 409	DATA MINING	3
MATH 449	REGRESSION & TIME SERIES	3
MATH 423	GAME THEORY AND APPLICATIONS	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
ENG 101	3	ENG 102	3
FYS 101	1	CST 150	4
BIOL 111 or 112[4]	4	Physical Science[4]	3
MATH 121[6]	3	Ideas of Social Justice	3
Social Science #1[7]	3	MATH 122	3
	14		**16**

Year 2

Fall	Credit Hours	Spring	Credit Hours
MATH 245	3	MATH 246	3
MATH 217	3	CST 280	3
COMM 101	3	Experiential Learning #2[3]	3
Experiential Learning #1[3]	3	Humanities #1	3
MATH 231	5	MATH 232	5
	17		**17**

Year 3

Fall	Credit Hours	Spring	Credit Hours
CST 333	3	CST 311	3
CST 387	3	Major Elective 3XX[2]	3
Major Elective 3XX[2]	3	Major Elective 3XX[2]	3
MATH 233	3	Humanities #2	3
ACSC 347	3	Humanities #3	3
	15		**15**

Year 4

Fall	Credit Hours	Spring	Credit Hours
MATH 409	3	Social Science #3	3

	Credit Hours		Credit Hours
CST 381	3	Major Elective 3XX[2]	3
MATH 449	3	ACCT 210	3
Social Science #2[7]	3	Major Elective 3XX[2]	3
ACSC 367	3	MATH 423	3
	15		**15**

Year 5

Fall	Credit Hours	Spring	Credit Hours
MATH 4XX	3	MATH 4XX, ECON 4XX, or FIN 4XX[5]	3
MATH 4XX, ECON 4XX, or FIN 4XX[5]	3	MATH 480P	3
MATH 4XX, ECON 4XX, or FIN 4XX[5]	3	MATH 448	3
MATH 4XX, ECON 4XX, or FIN 4XX[5]	3	MATH 480FM	3
	12		**12**

Total Credit Hours 148

[1] Or course towards an optional Minor.

[2] Major electives chosen with advisor.

[3] Experiential Learning class must be 200/300 level. Satisfies CORE Experiential Learning requirement.

[4] One Natural Science course must have a lab.

[5] ECON/FIN elective options: ECON 421 MACROECONOMIC THEORY, ECON 423 MICROECONOMIC THEORY, FIN 408 FINANCE FOR DECISION MAKERS, FIN 485 INVESTMENT THEORY

[6] Students should begin the calculus sequence as soon as possible; students who need more support in MATH 121 COLLEGE ALGEBRA may take a corequisite MATH 021 ALGEBRAIC FOUNDATIONS course. Those whose background permits may begin with MATH 122 TRIGONOMETRY AND PRECALCULUS or one of the Calculus courses.

[7] Students are strongly encouraged to take ECON 101 PRINCIPLES OF ECONOMICS I and ECON 102 PRINCIPLES OF ECONOMICS II in order to satisfy the economics portion of the VEE requirements of the actuarial societies.