PURDUE UNIVERSITY

Actuarial Science
College of Science

MATH-BS
Code-ACSC
120 credits

Departmental/Program Major Courses (84-110 credits)

Required Major Courses (57-60 credits): Average GPA in courses must be 2.50 excluding Calculus I, II and III

_____ (4-5) Calculus I Option – Select from MA 16100, MA 16500 ***(satisfies Quantitative Reasoning for core)*** CC
_____ (4-5) Calculus II Option – Select from MA 16200, MA 16600 ***(satisfies Quantitative Reasoning for core)***
_____ (4-5) Calculus III Option – Select from MA 26100, MA 27101 ***(satisfies Quantitative Reasoning for core)***
_____ (3) MA 35100 Elementary Linear Algebra
_____ (4) MA 37300 Financial Mathematics ***(satisfies Multidisciplinary Experience)*** CC
_____ (3) MA/STAT 41600 Probability CC
_____ (4) STAT 47201 Actuarial Models- Life Contingencies
_____ (3) STAT 41700 Statistical Theory
_____ (3) STAT 47301 Introduction To Arbitrage-Free Pricing Of Financial Derivatives
_____ (4) MA 36600 Differential Equations
_____ (3) STAT 51200 Applied Regression Analysis
_____ (3) STAT 42000 Introduction To Time Series
_____ (3) MGMT 20000 Introductory Accounting
_____ (3) MGMT 20100 Management Accounting I
_____ (3) MGMT 31000 Financial Management or MGMT 30400 Introduction To Financial Management
_____ (3) ECON 25100 Microeconomics ***(satisfies General Education Selective)***
_____ (3) ECON 25200 Macroeconomics

Other Departmental /Program Course Requirements (35-60 credits)

_____ Met within Major Calculus I Option – Select from MA 16100, MA 16500 ***(satisfies Quantitative Reasoning for core)*** CC
_____ Met within Major Calculus II Option – Select from MA 16200, MA 16600 ***(satisfies Quantitative Reasoning for core)***
_____ (3-4) ENGL 10600 or ENGL 10800 - ***(satisfies Written Communication and Information Literacy for core)***
_____ (0-4) Language I Option* ***(Select courses COULD satisfy Human Cultures Humanities for core)***
_____ (0-4) Language II Option* ***(Select courses COULD satisfy Human Cultures Humanities for core)***
_____ (0-4) Language III/Culture/Diversity Option* ***(Select courses COULD satisfy Human Cultures Humanities for core)***
_____ (3-6) Technical Writing Option and Technical Presenting Option ***(Select courses COULD satisfy Oral Communication for core)***
_____ (3-4) Laboratory Science I Option ***(satisfies Science Selective for core)***
_____ (3-4) Laboratory Science II Option ***(satisfies Science Selective for core)***
_____ (3) General Education I Option ***(Select courses COULD satisfy Human Culture Behavioral/Social Science or Humanities for core)***
_____ (3) General Education II Option ***(Select courses COULD satisfy Human Culture Behavioral/Social Science or Humanities for core)***
_____ Met within Major General Education II Option ***(Select courses COULD satisfy Human Culture Behavioral/Social Science or Humanities for core)***
_____ (3) STAT 35000 Introduction To Statistics
_____ (3-4) Computing Option
_____ (0-4) Teambuilding and Collaboration Experience*
_____ (3) Great Issues Option
_____ Met within Major Multidisciplinary Experience* ***(Select courses COULD satisfies Science, Technology, and Society Selective for core)***

*Requirement may be met with a zero credit experiential learning option. See your advisor for more information

Electives (10-36 credits)

_____ ( ) _____ _____ ( ) _____ _____ ( ) _____ _____ ( ) _____
_____ ( ) _____ _____ ( ) _____ _____ ( ) _____ _____ ( ) _____

University Core Requirements

Human Cultures Humanities	☐	_____	*Science, Technology & Society Selective*	☐	_____
Human Cultures Behavioral/Social Science	☐	_____	*Written Communication*	☐	_____
Information Literacy	☐	_____	*Oral Communication*	☐	_____
Science Selective	☐	_____	*Quantitative Reasoning*	☐	_____
Science Selective	☐	_____			

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The student is ultimately responsible for knowing and completing all degree requirements.

(Degree Works) MyPurduePlan is knowledge source for specific requirements and completion

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Actuarial Science

Suggested Arrangement of Courses:

Credits	Fall 1st Year	Prerequisite	Credits	Spring 1st Year	Prerequisite
4-5	Calculus I Option	ALEKS 85	4-5	Calculus II Option	Calculus I, C- or higher
3-4	ENGL 10600/10800		4	MA 37300 [cc] Financial Mathematics - meets Multidisciplinary Experience	Calculus I, C- or higher
3-4	Language I Option		3-4	Computing Option (rec. CS 17700 & meets Teambuilding and Collaboration Experience)	
2	Free Elective (MA/STAT 17000)	Co-req Calc I	3-4	Language II Option	Language 10100
3	Free Elective		1	Free Elective	
15-18			**15-18**		

Credits	Fall 2nd Year	Prerequisite	Credits	Spring 2nd Year	Prerequisite
4-5	Calculus III Option	Calculus II, C- or higher	3	MA 35100 Elementary Linear Algebra	Calculus III, C- or higher
3	MGMT 20000 Introductory Accounting		3	MA/STAT 41600 [cc] Probability	Calculus III, C- or higher
3	ECON 25100 Microeconomics		3	MGMT 20100 Management Accounting I	MGMT 20000, C- or higher
3	STAT 35000 Introduction To Statistics	Calculus II, C- or higher	3	ECON 25200 Macroeconomics	
3-4	Language III/Culture/Diversity Option	See Course Info	3-6	Technical Writing Option and Technical Presenting Option (COM 21700)	
16-18			**15-18**		

Credits	Fall 3rd Year	Prerequisite	Credits	Spring 3rd Year	Prerequisite
4	STAT 47201 Actuarial Models- Life Contingencies	MA 37300 and MA/STAT 41600, each C- or better	3	STAT 47301 Introduction To Arbitrage-Free Pricing Of Financial Derivatives	MA 37300 and MA/STAT 41600, each C- or better
3	STAT 41700 Statistical Theory	STAT 35000 and MA/STAT 41600, each C- or higher	3-4	Laboratory Science II Option	Lab Sci Option I
3	MGMT 31000 or MGMT 30400	ECON 25100 & MGMT 20100 & STAT 35000 or STAT 41600, C- or higher / MGMT 30400 no restrictions	3	General Education I Option	
3-4	Laboratory Science I Option		3	Free Elective	
2	Free Elective		2	Free Elective	
15			**15**		

Credits	Fall 4th Year	Prerequisite	Credits	Spring 4th Year	Prerequisite
4	MA 36600 Differential Equations	MA 35100, C- or higher/ may be concurrent	3	STAT 42000 Introduction To Time Series	STAT 35000 and MA/STAT 41600, each C- or higher
3	STAT 51200 Applied Regression Analysis	Jr/Sr Standing; STAT 35000, C- or higher	3	Great Issue Option	Jr/Sr Standing; may require COM or ENGL
3	Free Elective (MGMT 41100)	MGMT 31000 or MGMT 30400, C or higher	3	General Education II Option	
3	Free Elective (Science, Technology & Society Selective Course)		3	Free Elective (STAT 47900)	MA/STAT 41600 and STAT 41700, each C- or higher
3	Free Elective		2	Free Elective (STAT 49000 - Life Contingencies II)	STAT 47201
16			**14**		

[cc] Identified as a critical course. Student should earn minimum of a C in one or both courses.
Courses in ( ) are recommended.

Students must earn a 2.5 average GPA among required MA/STAT/MGMT/ECON courses excluding Calculus I, II, III, and STAT 35000.

120 semester credits required for Bachelor of Science degree.

2.0 Graduation GPA required for Bachelor of Science degree.

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