PURDUE
U N I V E R S I T Y

Mathematics with Computer Science
College of Science

MATH-BS
Code-MACS

Departmental/Program Major Courses (79-102 credits)
Required Major Courses (43-46 credits): Average GPA in courses must be 2.00

(4-5)	Calculus I Selective – Select from MA 16100, MA 16500 *(satisfies Quantitative Reasoning for core)* 🚩
(4-5)	Calculus II Selective – Select from MA 16200, MA 16600, MA 17300, MA 18100 *(satisfies Quantitative Reasoning for core)*
(4-5)	Calculus III Selective – Select from MA 26100, MA 17400, MA 18200, MA 27100 *(satisfies Quantitative Reasoning for core)*
(3)	MA 35100 Elementary Linear Algebra 🚩
(3)	MA 37500 Introduction To Discrete Mathematics
(4)	MA 36600 Ordinary Differential Equations
(3)	CS 24000 Programming In C
(6)	MACS Math Selective: MA 35300 - Linear Algebra II With Applications/MA 38500 - Introduction To Logic / MA 45300 - Elements Of Algebra I or MA 45000 - Algebra Honors
(3)	CS 25100 Data Structures And Algorithms
(3)	CS 31400 Numerical Methods
(3)	MA/STAT Selective: MA 34100 - Foundations Of Analysis/MA 36200 - Topics In Vector Calculus/MA or STAT 41600 – Probability/MA 42100 - Linear Programming And Optimization Techniques/MA 42500 - Elements Of Complex Analysis/MA 46200 - Elementary Differential Geometry/STAT 42000 – Introduction to Time Series/MA 45300 - Elements Of Algebra I or MA 45000 - Algebra Honors/MA 44000 - Real Analysis Honors/MA 44200 - Multivariate Analysis I Honors/MA 51800 - Advanced Discrete Mathematics
(3)	CS Selective: CS 38100 - Introduction To The Analysis Of Algorithms/CS 33400 - Fundamentals Of Computer Graphics/CS 48300 - Introduction To The Theory Of Computation/CS 51400 - Numerical Analysis/CS 51500 -Numerical Linear Algebra/CS 52000 - Computational Methods In Optimization

Other Departmental /Program Course Requirements (36-56 credits)

(3-4)	ENGL 10600 or ENGL 10800 - *(satisfies Written Communication and Information Literacy for core)*
(3-4)	Language I Selective –LINK
(3-4)	Language II Selective – LINK
(3-4)	Language and Culture III Selective –*LINK* *(Select courses COULD satisfy Human Cultures Humanities for core)*
(0-3)	Technical Writing Selective LINK *(Select courses COULD satisfy Oral Communication for core)*
(0-3)	Technical Presenting Selective LINK *(Select courses COULD satisfy Oral Communication for core)*
(3-4)	Laboratory Science I Selective LINK *(satisfies Science Selective for core)*
(3-4)	Laboratory Science II Selective LINK *(satisfies Science Selective for core)*
(3)	General Education Selective LINK *(Select courses COULD satisfy Human Culture Behavioral/Social Science for core)*
(3)	General Education I Selective LINK *(Select courses COULD satisfy Human Culture Behavioral/Social Science for core)*
(3)	General Education II Selective LINK *(Select courses COULD satisfy Human Culture Behavioral/Social Science for core)*
(3)	STAT 35000 Introduction To Statistics
(3-4)	Computing Selective LINK
(0-3)	Teambuilding Experience LINK
(0-4)	Multidisciplinary Experience LINK *(Select courses COULD satisfies Science, Technology, and Society Selective for core)*
(3)	Great Issues Selective LINK

Electives (18-41 credits)

_____ ( ) _____   ___ ( ) _____   ___ ( ) _____   ___ ( ) _____
_____ ( ) _____   ___ ( ) _____   ___ ( ) _____   ___ ( ) _____

University Core Requirements LINK

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 is knowledge source for specific requirements and completion

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Mathematics with Computer Science
http://www.science.purdue.edu/Current_Students/majors/index.html

Suggested Arrangement of Courses:

Credits	Fall 1st Year	Prerequisite	Credits	Spring 1st Year	Prerequisite
4-5	Calculus I Selective 🚩	ALEKS 85	4-5	Calculus II Selective	Calculus I
3-4	ENGL 10600/10800		4	CS 18000	
3-4	Language I Selective		3-4	Language II Selective	Language 10100
1	Free Elective MA 10800		0	Teambuilding Experience	
4	Free Elective CS 17700		3	Free Elective	
			1	Free Elective	
15-18			**15-17**		

Credits	Fall 2nd Year	Prerequisite	Credits	Spring 2nd Year	Prerequisite
4-5	Calculus III Selective	Calculus II	3	MA 35100 🚩	Calculus III
3	STAT 3500	Calculus II	3	MA 37500	Calculus III
3-4	Language Selective III	See Course Info	3	COM 21700	
3	General Education Selective I		3	General Education Selective II	
2	Free Elective		3	Free Elective	
15-17			**15**		

Credits	Fall 3rd Year	Prerequisite	Credits	Spring 3rd Year	Prerequisite
4	MA 36600	Calculus III; co-req or pre MA 35100	3	MACS Math Selective	Varies by Class
3	CS 24000	CS 18000	3	CS 25100	CS 24000
3-4	Laboratory Science Selective I		3-4	Laboratory Science Selective II	Lab Sci Selective I
3	Free Elective		6	Free Elective	
2	Free Elective				
15-16			**15-16**		

Credits	Fall 4th Year	Prerequisite	Credits	Spring 4th Year	Prerequisite
3	CS 31400	CS Programming and MA 35100	3	MA/STAT Selective	Varies by Class
3	MA Selective I	Varies by Class	3	CS Selective	Varies by Class
3	General Education Selective		0-4	Multidisciplinary	
6	Free Elective		3	Great Issues Selective	Jr/Sr Standing; may require COM or ENGL
			3-6	Free Elective	
15			**15-18**		

🚩 Identified as a critical course. Student should earn minimum of a B- see advisor for further details.

Students must earn a 2.0 average in MATH/STAT/CS courses required for major.
120 semester credits required for Bachelor of Science degree.
2.0 Graduation GPA required for Bachelor of Science degree.