PURDUE UNIVERSITY

Mathematics with Computer Science

College of Science

2018-2019

Program Progression Guide

Disclaimer: The 2018-2019 Purdue West Lafayette catalog is considered the source for academic and programmatic requirements for students entering programs during the Fall 2018, Spring 2019, and Summer 2019 semesters. The Program Progression Guide assists students in the development of an individualized 8-semester plan. Students are encouraged to use this guide, myPurduePlan* (online degree auditing tool) and the Student Educational Planner (SEP) as they work with their academic advisor towards the completion of their degree requirements.
Notification: Each student is ultimately responsible for knowing, monitoring and completing all degree requirements.

An undergraduate degree in the College of Science requires completion of the following degree requirements.

University Degree Requirements		
Minimum 2.0 Cumulative GPA	Minimum 120 Credits that fulfill degree requirements	32 Residency Credits (30000 and above) at a Purdue University campus

University Core Curriculum**	
• Human Cultures: Behavioral/Social Science • Human Cultures: Humanities • Information Literacy • Oral Communication	• Quantitative Reasoning • Science • Science, Technology & Society Selective • Written Communication

Required Major Program Courses
A minimum of 32 semester credits of upper level (30000+) required. Students must earn a 2.0 average GPA among required MA/STAT/CS courses required for major.

College of Science Core Curriculum		
• Freshman Composition: 3-4 credits • Technical Writing and Presentation: 3-6 credits • Teaming & Collaboration (NC) • General Education - 9 credits	• Foreign Language & Culture: 0-9 credits • Great Issues - 3 credits • Laboratory Science: 6-8 credits • Multidisciplinary: 0-3 credits	• Mathematics: 6-10 credits • Statistics: 3 credits • Computing: 3-4 credits

Degree Electives
Any Purdue or transfer course approved to meet degree requirements in accordance with individual departmental policies. Consult the No Count course list for courses which may not be used to meet any College of Science degree requirement.

* This audit is not your academic transcript and it is not official notification of completion of degree or certificate requirements.

** University Core Curriculum Outcomes may be met through completion of the College of Science Core curriculum. Students should consult with their academic advisors and myPurdue Plan for course selections.

2018-19 Mathematics with Computer Science Degree Progression Guide

The Mathematics Department has *suggested* the following degree progression guide for the Mathematics with Computer Science Degree. Students will work with their academic advisors to determine their best path to degree completion. Course pre-requisites are specific to this degree plan. Courses meeting the College of Science Core Curriculum requirements are marked with "SCC" and a letter corresponding to the legend below:

College of Science Core Curriculum (SCC)

A. Freshman Composition
B. Technical Writing and Presentation
C. Teaming and Collaboration
D. General Education
E. Foreign Language and Culture
F. Great Issues
G. Laboratory Science
H. Multidisciplinary
I. Mathematics
J. Statistics
K. Computing

Credits	Fall 1st Year	Prerequisite	Credits	Spring 1st Year	Prerequisite
4-5	Calculus I Option CC SCC-I	ALEKS 85+	4-5	Calculus II Option SCC-I	Calculus I, C- or higher
3-4	ENGL 10600 or ENGL 10800 SCC-A		4	CS 18000 – CS 18000 Prob. Solving & O-O Programming (meets Computing / Teambuilding & Collaboration) SCC-K	Calculus I, C- or higher or co-req
3-4	Language I Option SCC-E		3-4	Language II Option SCC-E	Language 10100
1	Free Elective (MA 10800)		3	Free Elective	
4	Free Elective or Computing Option (CS 17700)		1	Free Elective	
15-18			**15-17**		

Credit	Fall 2nd Year	Prerequisite	Credits	Spring 2nd Year	Prerequisite
4-5	Calculus III Option	Calculus II, C- or higher	3	MA 35100 CC Elementary Linear Algebra	Calculus III, C- or higher
3	STAT 35000 Introduction To Statistics SCC-J	Calculus II, C- or higher	3	MA 37500 Introduction To Discrete Mathematics (used as CS 18200 pre-requisite)	Calculus III, C- or higher
3-4	Language III/Culture/Diversity Option SCC-E	See Course Info	3-6	Technical Writing Option and Technical Presenting Option (COM 21700) SCC-B	
3	General Education I Option SCC-D		3	General Education II Option SCC-D	
2	Free Elective		0-3	Free Elective	
15-17			**15**		

Credit	Fall 3rd Year	Prerequisite	Credit	Spring 3rd Year	Prerequisite
4	MA 36600 Ordinary Differential Equations	Co-req or pre MA 35100 C- or higher	3	MACS Math Selective I	Varies by Class
3	CS 24000 Programming In C	CS 18000 and MA 37500 C or higher	3	CS 25100 Data Structures And Algorithms	CS 24000 and MA 37500, C or higher
3-4	Laboratory Science I Option SCC-G		3-4	Laboratory Science II Option SCC-G	Lab Sci Option I
3	Free elective		6	Free Elective	
2	Free Elective				
15-16			**15-16**		

Credit	Fall 4th Year	Prerequisite	Credit	Spring 4th Year	Prerequisite
3	CS 31400/MA 51400 Numerical Methods	CS Programming and MA 35100, C or higher	3	MA/STAT Selective	Varies by Class
3	MACS Math Selective II	Varies by Class	3	CS Selective	Varies by Class
3	General Education III Option SCC-D		0-4	Multidisciplinary Experience SCC-H	
6	Free Elective (Science, Technology & Society Selective Course)		3	Great Issues Option SCC-F	Jr/Sr Standing; may require COM or ENGL
			3-6	Free Elective	
15			**15-18**		

Superscript of CC (eg Calculus I Option CC) indicates a Critical Course. Student should earn minimum of a B-. See advisor for further details.
Courses in ( ) are recommended.