Interdisciplinary Science – Concentration in Mathematics
College of Science

SCI-INTRD-BS
Code-IDSC, MATH
120 Credits
Fall 2016

PURDUE
UNIVERSITY

Departmental/Program Major Courses (89-112 credits)

    Required Interdisciplinary Core Courses (71-81 credits):

        Required Biology Courses (7-8 credits):
- (4) BIOL 11000 Fundamentals of Biology *(satisfies Science Selective for core)*
- (4) BIOL 11100 Fundamental of Biology *(satisfies Science Selective for core)*
  OR
- (2) BIOL 12100 Biology I: Diversity, Ecology, and Behavior *(satisfies Science Selective for core)*
- (3) BIOL 13100 Biology II: Development, Structure, and Function of Organisms *(satisfies Science Selective for core)*
- (2) BIOL 13500 First Year Biology Laboratory *(satisfies Science Selective for core)*

        Required Chemistry Courses (5-10 credits):
- (4-5) CHM 11500 General Chemistry or CHM 12500 Introduction to Chemistry I *(satisfies Science Selective for core)*
- (4-5) CHM 11600 General Chemistry or CHM 12600 Introduction to Chemistry II or CHM 13600 General Chemistry Honors *(satisfies Science Selective for core)*

  OR
- (5) CHM 12901 General Chemistry with Biology Focus

        Required Computing Option (3-4 credits):
- (3-4) CS 15800 C Programming or CS 15900 Programming Applications for Engineers or CS 17700 Programming With Multimedia Objects or CS 18000 Problem Solving and Object-Oriented Programming

        Required Earth, Atmospheric, and Planetary Science Courses (3 credits):
- (3) EAPS 10000 Planet Earth or EAPS 10900 The Dynamic Earth or EAPS 11100 Physical Geology or EAPS 22100 Survey of Atmospheric Science or EAPS 22500 Science of The Atmosphere *(Select courses COULD satisfy Science Selective for core)*

        Required Mathematics Courses (8-10 credits):
- (4-5) MA 16100 Plane Analytic Geometry And Calculus I or MA 16500 Analytic Geometry And Calculus I *(satisfies Quantitative Reasoning for core)*
- (4-5) MA 16200 Plane Analytic Geometry And Calculus II or MA 16600 Analytic Geometry And Calculus II *(satisfies Quantitative Reasoning for core)*

        Required Physics Selective Courses (8 credits):
- (4) PHYS 22000 General Physics *(satisfies Science Selective for core)*
- (4) PHYS 22100 General Physics *(satisfies Science Selective for core)*
  OR
- (4) PHYS 17200 Modern Mechanics *(satisfies Science Selective for core)*
- (4) PHYS 27200 Electric and Magnetic Interactions or PHYS 24100 Electricity and Optics AND PHYS 25200 Electricity and Optics Laboratory *(satisfies Science Selective for core)*
  OR
- (4) PHYS 23300 Physics For Life Sciences I
- (4) PHYS 23400 Physics For Life Sciences II

        Required Statistics Courses (3 credits):
- (3) STAT 35000 Introduction to Statistics or STAT 50300 Statistical Methods For Biology or STAT 51100 Statistical Methods

    Required MATHEMATICS Primary Area Courses (16-17 credits):
- (4) MA 26100 Multivariate Calculus or MA 27101 Honors Multivariate Calculus
- (3) MA 35100 Elementary Linear Algebra
- (3-4) MA 36600 or MA 26200 Linear Algebra and Differential Equations
- (3) MA 34100 Foundations of Analysis or MA 44000 Real Analysis Honors or MA 45300 Elements of Algebra I or MA 45000 Algebra Honors
- (3) MA Elective at or above 30000 Level

Required Supporting Area Courses (18 credits): MUST BE APPROVED BY COLLEGE

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Other Departmental /Program Course Requirements (18-31)

_____ Within Major   Calculus I Option – Select from MA 16100, MA 16500 *(satisfies Quantitative Reasoning for core)* CC

_____ 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)*

_____ Within Major   Laboratory Science I Option *(satisfies Science Selective for core)*

_____ Within Major   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)*

_____ (3)   General Education II Option *(Select courses COULD satisfy Human Culture Behavioral/Social Science or Humanities for core)*

_____ Within Major   STAT 35000 Introduction To Statistics

_____ Within Major   Computing Option

_____ (0-4)   Teambuilding and Collaboration Experience*

_____ (3)   Great Issues Option

_____ (0-3)   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 (8-31 credits)

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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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Interdisciplinary Science – Concentration in Mathematics

Suggested Arrangement of Courses:

Credits	Fall 1st Year	Prerequisite	Credits	Spring 1st Year	Prerequisite
4-5	MA 16100 or MA 16500	85 ALEKS	4-5	MA 16200 or MA 16600	MA 16100 or 16500 C- or higher
3-4	ENGL 10600/10800		3-4	Language II Option	Language I
3-4	Language I Option		3	Free Elective	
4	Physics Selective I	ALEKS 85	4	Physics Selective II	Physics I
1	Free Elective		1	Free Elective	
15-18			**15-17**		

Credits	Fall 2nd Year	Prerequisite	Credits	Spring 2nd Year	Prerequisite
4	MA 26100 or MA 27101	MA 16200 or 16600 C- or higher	3	MA 35100	MA 26100 C- or higher
3	Supporting Area Course		3	Supporting Area Course	
3-4	Language III/Culture/Diversity Option	See Course Info	3	STAT 35000/50300/51100	Calculus II C- or higher
3	EAPS Selective		3	Technical Presentation (COM 21700)	
0	Teambuilding and Collaboration Experience		3	General Education I Option	
3-4	Computing Option				
16-18			**15**		

Credits	Fall 3rd Year	Prerequisite	Credits	Spring 3rd Year	Prerequisite
3-4	MA 36600 or MA 26200	Varies	3	MA Elective 30000+	Varies
3	Supporting Area Course		3	Supporting Area Course	
4-5	General Chemistry Selective I	Co-req Calc	4-5	General Chemistry Selective II or free elective	Varies
3	General Education II Option		3	General Education III Option	
1	Free Elective		3	Free Elective	
14-16			**16-17**		

Credits	Fall 4th Year	Prerequisite	Credits	Spring 4th Year	Prerequisite
3	MA 45300 or 45000 or 34100 or 44000	MA 35100 C- or higher	3	Great Issue Option	Jr/Sr Standing; may require COM or ENGL
3	Supporting Area Course		3	Supporting Area Course	
3	Multidisciplinary Experience		3-4	Biology Selective II	Biology I
4	Biology Selective I		2	Biology Selective II or Free Elective	
3	Technical Writing or Free Elective		3	Free Elective	
16			**14-15**		

( ) = recommended courses

120 semester credits required for Bachelor of Science degree.
2.0 Graduation GPA required for Bachelor of Science degree.

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