Science & Math MINORS (2019-2020)

For more info on these minors, prerequisites & course descriptions, please refer to the current JU Academic Catalog

BIOLOGY

BIOL 180 Biological Diversity	4 hours
BIOL 190 Biological Unity	3
BIOL 280 Methods in Field Biology **or** BIOL 290 Basic Lab Techniques	3
MATH 206 Statistical Methods Science	4
BIOL xxx One 300 or 400 level 4-credit BIOL lab course	4
BIOL xxx One 300 or 400 level 3 or 4 credit BIOL course.	3-4

Total: 21-22 hours

CHEMISTRY

CHEM 103 General Chemistry I	4 hours
CHEM 104 General Chemistry II	4
CHEM 322 Analytical Chemistry	4
CHEM xxx Two CHEM courses numbered above 300 for minimum of 20 credit hours.	8

Total: 20 hours

COMPUTING SCIENCE

CS 158 Application Development I	4 hours
CS 160 Application Development II	4
CS 360 Database Design & Devel'mt	3
CS xxx Additional six (6) credit hours of CS course electives -- (three (3) credit hours numbered 300 or above)	6

Total: 17 hours

CYBERSECURITY

CS 158 Application Development I	4 hours
CS 160 Application Development II	4
CS 301 Introduction to Cybersecurity	3
CS 303 Operating Systems	3
CS xxx Two CS elective courses from CS 345, CS 362, CS 414 and/or CS 427.	6

Total: 20 hours

DATA SCIENCE

MATH 270 Intro to Data Science	3
MATH 316 Applied Statistics	3
MATH 320 Linear Algebra	3
Choose two (2)	3
MATH 420 Linear Algebra II	
MATH 470 Machine Learning Algorithms	
MATH 475 Models & Simulation for Data Sci	
Choose one (1)	4-3
CS 160 Appl Development II	
CS 170 Intro to Scientific & Engr Prog	

Total: 18-19 hours

MARINE SCIENCE

MSC 111 Intro to Oceanography	3 hours
MSC 112 Intro to Oceanography Lab	3
MSC 113 Intro to Marine Biology	3
MSC 114 Intro to Marine Biology Lab	3
MSC 306 Marine Geology	4
MSC xxx One 300 or 400 level MSC Lab course	4

Total: 20 hours

MATHEMATICS

MATH 220WI Math & Reasoning	3 hours
MATH 300 Calculus III	4
MATH 3xx At least six additional credit hours in math courses numbered above 300	6
MATH xxx Additional 5 credit hours in mathematics courses	5

Total: 18 hours

APPLIED MATHEMATICS

MATH 300 Calculus III	4 hours
MATH 320 Linear Algebra	3
MATH 331 Differential Equations	3
MATH 3xx At least 3 additional credit hours in math courses numbered above 300	3
MATH xxx Additional 5 credit hours in mathematics courses	5

Total: 18 hours

PHYSICS

PHYS 101	Freshman Physics Seminar	1 hour
PHYS 151	Gen Phys: Mechanics	4
PHYS 152	Gen Phys: Elec/Magnetism	4
PHYS xxx	Additional six credit hours of physics courses numbered 200 or higher for a minimum of 17 credit hours.	6
Any one(1) of:		2
PHYS 251RI	Computational Res Meth	
PHYS 252RI	Experimental Res Meth	
PHYS 253RI	Theoretical Res Meth	

Total: 17 hours