

PROGRAM COURSE CHECKLIST**B. S. ENVIRONMENTAL, GEOGRAPHICAL, & GEOLOGICAL SCIENCES: GIS AND SPATIAL ANALYSIS**

Total of 58 Credits		Credits	Semester Taken
Core Requirements (7 credits)			
EGGS 100	Environmental Science*	3	
EGGS 120	Physical Geology	4	
EGGS 150	Quantitative Methods in Earth Science*	3	
EGGS 242	Map Use and Analysis	3	
Ethics Requirement: Choose 1 (0 credits)			
PHIL 295	Business Ethics*	3	
PHIL 297	Ethics*	3	
PHIL 298	Environmental Ethics*	3	
Mathematics Requirements: Choose 1 (3 credits)			
MATH 123	Essentials of Calculus *	3	
MATH 141	Introduction to Statistics*	3	
MATH 180	Discrete Mathematical Structures	3	
MATH 185	Discrete Mathematics	3	
Spatial Analysis Requirements (27+ credits)			
EGGS 160	Digital Earth*	3	
EGGS 320	Remote Sensing of the Earth	3	
EGGS 360	Principles of GIS 1	3	
EGGS 361	Principles of GIS 2	3	
EGGS 364	Digital Cartography	3	
EGGS 440	Advanced Topics in GIS	3	
EGGS 496	Internship in EGGS	9+	
EGGS 498	Geography and Planning Seminar	3	
Computer Science Requirements: (15+ credits)			
Required			
COMPSCI 115	Python Programming	3	
COMPSCI 215	Advanced Python	3	
COMPSCI 357	Principles of Database Design	3	
Choose 1			
COMPSCI 212	Web Programming	3	
WDD120	Introduction to Web Programming	3	
INSTECH 470	Introduction to Website Development	3	
Choose 2			
COMPSCI 121	Object-Oriented Programming with Java	4	
COMPSCI 122	Graphical User Interfaces in Java	4	
COMPSCI 130	Accelerated Introduction to Java	4	
DIGFOR 275	Introduction to Computer Networks	3	
WDD 170	Introduction to JavaScript	3	
Degree Electives: Choose at least 2 (6+ credits)			
ARTSTDIO 295	Introduction to Graphic Design	3	
COMPSCI 221	Advanced Java	4	
COMPSCI 345	Mobile Device Application Development	3	
COMPSCI 457	Advanced Database Design	3	
DATASCI 210	Data Visualization	3	
DATASCI 310	Databases for Big Data	3	
EGGS 250	Elements of Planning	3	
EGGS 350	Advanced Planning	3	

EGGS 462	Techniques of Geographic Measurements	3	
ENGTECH 180	Comp Aided Design and Engineering Graphics	3	
WDD 220	Advanced JavaScript	3	

*Count toward General Education and are not counted against the major credits.