Currently Approved Supporting Area Courses for GIS/Cartography Concentration

**Art Studio**
Artt 255—Intro to Digital Art & Design Processes

**Atmospheric and Oceanic Science**
Aosc 200 -- Weather and Climate
Aosc 201 -- Weather and Climate Laboratory
Aosc 375 -- Introduction to the Blue Ocean
Aosc 400 -- The Atmosphere
Aosc 401 -- Global Environment
Any AOSC 300 or Above

**Biology**
Bsci 103 -- The World of Biology
Bsci 105 -- Principles of Biology
Bsci 106 -- Principles of Biology II
Bsci 124 -- Plant Biology for Non-Science Students
Bsci 125 -- Laboratory in Plant Biology
Bsci 361 -- Principles of Ecology

**Business and Management**
Bmgt 230 -- Business Statistics

**Civil Engineering**
Ence 200 -- Engineering Information Processing I
Ence 201 -- Engineering Information Processing II

**Computer Science**
Cmsc 122 -- Intro to Computer Programming via the Web
Cmsc 131 -- Object-Oriented Programming
Cmsc 132 -- Object-Oriented Programming
Cmcs 198A -- Special Topics in Computer Science for Non-Majors (Winter Only)

**Environmental Science and Technology**
Any ENST 300 or above

**Math and Statistics**
Stat 300 or higher -- Elementary Statistics and Probability
Math 130 -- Calculus I for the Life Sciences
Math 140 or higher -- Calculus I
Math 220 or Higher -- Elementary Calculus I

**Physics**
Phys 106 -- Light, Perception, and Phenomena
Phys 107 -- Light, Perception, and Visual Phenomena
Phys 115 -- Inquiry to Physics
Phys 121 -- Fundamentals of Physics I
Phys 122 -- Fundamentals of Physics II
Phys 260 -- Vibrations, Waves, Heat, Elect, Magnetism
Phys 261 -- Vibrations, Waves, Heat, Elect, Magnetism
Phys 270 -- Electrodynamics, Light, Relativity and Modern
Phys 271 -- Electrodynamics, Light, Relativity and Modern
Phys 272 -- Introductory Physics: Fields

**Technical Courses Recommended for Remote Sensing**
GEOG 372, GEOG 472, GEOG 498R

**Technical Courses Recommended for GIS**
GEOG 373, GEOG 473, GEOG 475

**GIS Course Schedule Offering**

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<th>Spring</th>
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<td>Geog 306*</td>
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| Special Course Information |
*Geog 306: Intro to Quantitative Methods for the Geographic Environmental
*Geog 376: Intro to Computer Programming (offered only in Spring) is mandatory for GIS concentration
*Geog 476: Object-Oriented Computer Programming (offered every other fall)

Note: Courses not on this list must be approved by Advising Office to ensure credit. (Revised 08/13)