

Geospatial Data Sciences

			Geospatia	Data Sciences	
	Requirements	Notes	Course	Credits	Term
GDS Core	Geospatial Data Sciences Core courses	EAS 541.001 Remote Sensing EAS 531.001 Principles of GIS			
SEAS Core	EAS 509 (Natural Systems Core) EAS 510 (Social Systems Core) or a course from the Social Systems distribution list*				
	IAMS Requirement * Two courses; 3CR minimum Please see other side of form for approved courses.				
Electives		Must be a graduate level course at 400-level and above. At least 6 GDS credits taken from the following course: EAS 501.034			
	Electives	EAS 548/648 EAS 635 EAS 534 EAS 540 EAS 543 EAS 545 EAS 545 EAS 549 EAS 544/644 EAS 687 Full list of non-SEAS elective courses on 2 nd page			
Analytics	Statistics	EAS 538 Nat Resource Statistics or equivalent			
Capstone or Non-capstone	Capstone	Option 1: Option 1: At most 6 credit hours of EAS 701 (Master's Project) or EAS 702 (Master's Practicum) or At most 12 credits of EAS 700 (Master's Thesis).			
	Non-capstone	Option 2: Additional approved courses to total 42 credits.			
TOTALS	TOTAL "EAS" CREDIT HOURS	Minimum 25 of 42 credit hours			
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^{*} IAMS and Social Systems Distribution courses can double-count with Core requirements but we do not double-count the actual credits.

^{**}Any waiver or substitution of degree requirement must be approved by both the faculty advisor and GDS Program Coordinator and submitted to OAP.

Course List

Geospatial Data Sciences Core Courses

EAS 541.001 Remote Sensing W (4) EAS 531.001 Principles of GIS F & W (4)

Elective Courses:

EAS 635 "Multivariate Statistics for Environmental Science"

EAS 687 "Modeling for Landscape Planning"
EAS 544 "Introduction to Python for GDS"

EAS 644 "Interm Python for GDS"

EAS 501.034 "Field Remote Sensing & Analysis

EAS 620 "AR/VR for Sustainability"

EAS 534 GIS and Landscape Modeling

EAS 540 GIS and Natural Resource Applications

EAS 543 Environmental Spatial Data Analysis

EAS 545 Applied Ecosystem Modeling

EAS 549 Analysis and Modeling of Environmental Data

CMPLXSYS 511 "Theory of Complex Systems"

CMPLXSYS 530 "Computer Modeling of Complex Systems" CMPLXSYS 575 "Sensors, Data, and Intelligent Systems"

EECS 430 "Wireless Link Design"

EECS 532 "Microwave Remote Sensing I: Radiometry"

EAS 506 "Intro to R"

EAS 548/648 "Geovisualization of Environ & Society"
CLIMATE 585 "Intro to Remote Sensing & Inverse Theory"

SI 506 "Programming I"

SI 507 "Intermediate Programming"
SI 538 "Citizen Interaction Design"
SI 618 "Data Manipulation and Analysis"

SI 649 "Information Visualization"

SI 671 "Data Mining: Methods and Applications"

SI 696 "Big Data Analytics"

CLIMATE 585 "Intro to Remote Sensing & Inverse Theory"

To count toward GDS Field of Study-specific elective requirement, EAS 639 seminar must be approved by the GDS Specialization Coordinator.

Integrated Analytic Methods and Skills Requirement

Students are required, at some point during their time enrolled in the program, to take 2 courses composing at least 3 credits from a faculty-approved list of courses that focus on integrative analytic methods and skills. IAMS courses can double-count with Core requirements but we do not double-count the actual credits.