GEOSPATIAL INTELLIGENCE, MASTER OF SCIENCE

MS in Geospatial Intelligence

Geospatial intelligence informs and influences policy, military, diplomatic, environmental, and disaster relief and recovery decisions and operations by governments at every level. Increasingly, in non-governmental sectors, it is informing and influencing public health, business, infrastructure, energy, regulatory, and advocacy decisions.

The MS in Geospatial Intelligence program unites three fields of study: the history of geospatial intelligence; the science and mathematics of digital geography and its related databases; and the art of converting geospatial data into written, spoken, and visual intelligence. Students analyze historical intelligence examples to understand the development of the concepts and practices behind collection, analysis, reporting, and technology. They also focus on current challenges in the profession, among them the analytics and technology needed for the volume of current and future collection, the challenges of new sensors, and the development of new non-governmental geospatial communities.

Please note that this entry is for currently enrolled students only. The MS in Geospatial Intelligence program is not currently accepting new students.

Admissions Criteria for All Advanced Academic Programs (https://e-catalogue.jhu.edu/arts-sciences/advanced-academic-programs/Admission/#admissionrequirementstext)

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Program Requirements

Students complete 12 courses to earn their degree:

- Eight required core courses
- One customizable core course
- Three elective courses

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Code	Title	Credits
Core Courses - Required:		
AS.472.600	Introduction to Geospatial Intelligence	3
AS.430.601	Geographic Information Systems (GIS)	3
AS.430.603	Geospatial Statistics	3
AS.430.604	Spatial Analytics	4
AS.473.600	The Art & Practice of Intelligence	3
AS.430.612	Cartographic Design and Visualization	3
AS.472.613	Geospatial Law and Ethics	3
AS.472.800	Capstone in Geospatial Intelligence	3
Core Courses - Customizable:		**3**
Select one of the following:		
AS.473.644	Technical Collection of Intelligence	
AS.430.602	Remote Sensing: Systems and Applications	
Electives		**9**
Select three of the following:		
AS.430.600	Web GIS	
AS.430.606	Programming in GIS	
AS.430.609	Spatial Data Management: Quality and Control	
AS.430.613		
AS.430.615	Big Data Analytics: Tools and Techniques	
AS.430.618		
AS.430.619	Web Application Development	
AS.430.627	Artificial Intelligence and Machine Learning in Geospatial Technology	
AS.430.629	Drones in Geospatial Decision Making	
AS.430.621	GIS for Emergency Management	
AS.470.601	Climate Change and National Security	
AS.470.667	Machine Learning Methods and Applications	
AS.470.657	Energy, Security, and Defense	
AS.472.610	Commercial Imagery and the Impact of Small Satellites	
AS.472.611	Analyzing Social Media and Geospatial Information	
AS.472.612	Geospatial Analysis: Communicating with Multiple Audiences	
AS.473.604	Applied Critical Thinking and Analysis	
AS.473.607	Intelligence Ethics	
AS.473.602	Intelligence Analysis	
Total Credits		**37**

Learning Outcomes

The MS in Geospatial Intelligence weaves the history, science, mathematics, and art of geospatial analysis into a program that will enable its graduates to lead and shape this rapidly-growing intelligence discipline. The program combines recognized faculty with extensive geospatial experience and publications, an interactive and online curriculum, and the research resources, tools, and opportunities for its students to:

- Understand the history and evolution of geospatial intelligence and its enduring challenges.
- Develop the habits of mind and the conceptual framework to thrive as analysts, researchers, program leaders, and managers in the geospatial communities.
- Employ the appropriate mathematical models and scientific sensor knowledge necessary to design advanced commercial geospatial collection management for big data and small data problems, and to design geospatial databases for complex issues.
- Develop analytic processes and products as well as demonstrate the ability to communicate geospatial information and analysis accurately and persuasively in writing and briefing.
- Produce original research on the history and methodologies of geospatial intelligence.

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