

# GIS-PUBLIC SAFETY LETTER OF RECOGNITION (CAREER)

Program website (<https://www.frederick.edu/programs/public-safety/gis.aspx>)

## Program Description

Designed to offer a series of courses which will serve as the foundation for preparing students to use Geographic Information Systems (GIS) and related technologies consistent with entry-level employment in public safety. Students will learn foundational GIS principles, how they are used in a variety of public safety careers, and the core skills for utilizing those principles themselves.

Students earning this letter of recognition will automatically receive a printed LOR diploma.

## Program Learning Outcomes

- Recognize career opportunities in the geospatial industry and the licenses and certifications available to professionals in the industry.
- Explain the role that GIS plays in supporting public safety through each mission area.
- Describe the types of products that GIS can produce.
- Explain how complimentary technologies contribute to GIS including, but limited to, GPS, Remote Sensing, and data collection products.
- Demonstrate knowledge of basic GIS concepts, terminology, and applications as they apply to the public safety sector.
- Apply GIS software utilizing ArcGIS and/or open source applications to manage GIS data including, but not limited to, vector, raster, and attributed data.
- Analyze common formats of spatial data, as well as parameters such as scale, projection, coordinate systems and metadata.
- Examine volunteered geographic information (VGI) and crowd-sourced data and discuss how these collection techniques apply within the field of public safety.
- Model geographic objects such as bounded areas (e.g., census tracts or service districts), specific locations (buildings or incidents such as a mass casualty), and networks (e.g., streets).
- Interpret and review finished maps created using GIS software.
- Evaluate best practices for establishing and maintaining data flow, products, and timelines during an incident.
- Consider unique characteristics of spatial data and compare vector and raster data.

## Program Requirements

Code	Title	Credits
<b>Departmental Requirements</b>		
GISA 101	Introduction to Geographic Information Systems with ArcGIS	3
EMGT 201	Public Safety GIS and Technology	3
FEMA 191	Emergency Management & Technical Tools Application	1
FEMA 192	Geospatial Information Systems Specialists	1
FEMA 200		1
Total Credits		9

## Guided Pathway to Success (GPS)

Suggested schedules map your path to degree completion.

Students should meet with an advisor each semester to carefully select and sequence courses based on their specific academic goals and interests. Visit Jefferson Hall or call 301.846.2471 for advising.

Recommended First Semester		Credits
<b>Part I: Residency (take these courses through FCC)</b>		
GISA 101	Introduction to Geographic Information Systems with ArcGIS	3
EMGT 201	Public Safety GIS and Technology	3
	Credits	6
<b>Recommended Second Semester</b>		
<b>Part II: FEMA Independent Study <sup>1</sup></b>		
FEMA 191	Emergency Management & Technical Tools Application <sup>2</sup>	1
FEMA 192	Geospatial Information Systems Specialists <sup>3</sup>	1
FEMA 200	<sup>4</sup>	1
	Credits	3
	Total Credits	9

1

complete online & convert via <https://macem.org/Independent-Study-Credit-Conversion-Programs.aspx>

2

IS-247.b, IS-251.a, IS-922.a

3

IS-103

4

IS-60.b, IS-61.b, IS-62.b, IS-63.b, IS-64.a

**To complete "FEMA XXX" course requirements:** Students should successfully complete and pass the exam for the FEMA Independent Study (IS) courses specified in italics. Upon doing so, they should then visit <https://macem.org/Independent-Study-Credit-Conversion-Programs.aspx> to verify and convert that progress into the appropriate FEMA credit.

**Note: The FEMA Independent Study requirements are online, self-paced coursework, and may be completed at any time in a student's pathway – they are listed in the order shown above simply for clarity and organization.**

## Part-time Students

Part-time students should complete courses in the order listed on the pathway. Please contact program manager for questions about part-time status.

Students who take fewer than 15 credits each semester or who require developmental English or Math coursework will need additional semesters to complete their degrees. Summer term and January session classes may help students to make faster progress.

## Pathway Legend

Milestone - courses with the Milestone notation should be taken within the recommend credit range to stay on track for program completion.

Fall, Spring, Summer - courses with a Fall, Spring, or Summer notation indicate the course is offered in the specified semester only.