

## ***Geographic Information Systems (GIS) Track***

(4 modules, 3 weeks each)

In response to the growing need to offer online curriculum to expand skillsets in key areas, the Geographic Information Systems (GIS) Program has designed four modules that will provide students an understanding of the key theories, techniques and applications of GIS; effective data visualization techniques; GIS database management best practices; and applying what they have learned through a real-world application in common fields of study. Each module is designed to be part of a self-paced online program with both synchronous and asynchronous instruction provided by experienced faculty at Washington College. The modules include access to instructional material, data, software, and one-on-one mentoring. Access will be provided to Esri's full suite of software, extensions, and documentation.

Completing the GIS modules will position students to sit for the Esri ArcGIS Desktop Entry certification, which validates skills learned in a classroom environment to potential employers. Esri-certified students will be able to showcase their achievements through digital badging. To learn more about the certification, [click here](#). If you desire formal Esri certification, they will charge a fee. This is nice to have, but by completing our modules, you will have the same level of knowledge and competence required for formal certification.

### **Introduction to Geographic Information Science/Systems**

**Two sessions offered: August 10-28, meetings Tues/Thurs. 4:30 pm – 6:00 pm or  
September 7-25, meetings Tues/Thurs. 2:30 pm – 4:00 pm**

Cost: \$250/ discounted to \$100 for Class of 2020/ 20% for 5 or more modules

Lead Instructors: Erica McMaster, GIS Program Director; S. Lynn, L. Machado, and G. Sine, GIS Program

This module supplies foundational knowledge in the theory, research, techniques and applications of GIS (science & systems) and uses a tiered approach to learning GIS data collection, manipulation, analysis, output, and presentation techniques

### **GIS Data Visualization (prerequisite: Intro to GIS or equivalent)**

**September 7-25, meetings Tues/Thurs. 4:30 pm – 6:00 pm**

Cost: \$250 (discounted to \$100 for Class of 2020; for all others, 20% for 5 or more modules)

Lead Instructors: Erica McMaster, GIS Program Director; S. Lynn, L. Machado, and G. Sine, GIS Program

This module teaches foundational knowledge in the theory and applications cartographic design and map making. You will learn effective visualization methods based on available data, problems to be addressed, and the audience. You'll also explore infographics, web maps and applications, Story Maps, and dashboards

## **GIS Database Management (prerequisite: Intro to GIS or equivalent)**

Schedule: **October 5-23, meetings Tues/Thurs. 4:30 pm – 6:00 pm**

Cost: \$250/ discounted to \$100 for Class of 2020/ for all others, 20% for 5 or more modules

Lead Instructors: Erica McMaster, GIS Program Director; S. Lynn, L. Machado, and G. Sine, GIS Program

This module will work to build foundational knowledge about managing spatial data and information systems. Students will explore best practices, system design, and data modeling through practical applications of database theory and methods

## **Applying GIS to Real-World Problems (prerequisite: Intro to GIS or equivalent)**

**November 2-20, meetings Tues/Thurs. 4:30 pm – 6:00 pm**

Cost: \$250/ discounted to \$100 for Class of 2020/ for all others, 20% for 5 or more modules

Lead Instructors: Erica McMaster, GIS Program Director; S. Lynn, L. Machado, and G. Sine, GIS Program

Using the skills learned in Modules 1-3, students will choose from a list of problem areas (ex. crime, environment, business) and will complete a project from start to finish. You'll also have the opportunity to supply your own data to solve a real-world problem that you may be working on in other courses or in your professional career.