



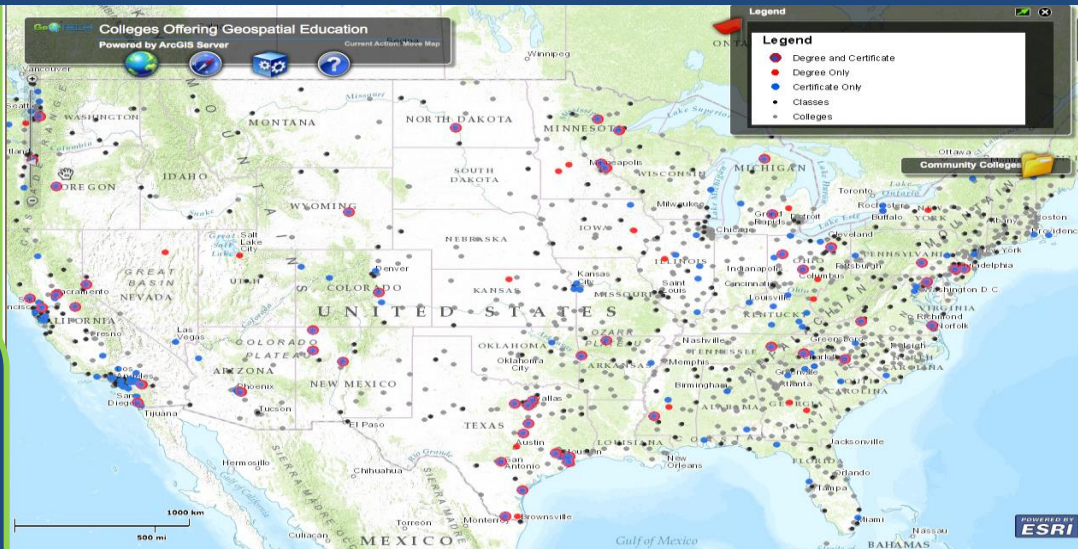
A Monthly Newsletter of the
National Geospatial Technology
Center of Excellence

Innovation in Geospatial Science and Technology Education

Empowering Colleges: Expanding the Geospatial Workforce

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Skills for the Digital Earth MOOC

Concept

Elmhurst College's Skills for the Digital Earth MOOC is a 4-week, online course designed to introduce how location technologies are used in society.

Ever stop to think about how important location is when using your smart phone? This educational MOOC begins with an elementary explanation of how society uses location in a myriad of disciplines. Geography, or rather, "where?" is important to all of us from various perspectives.

Within this MOOC, participants will learn what location technologies are used for and how the discipline developed. Online spatial learning modules will take users through exercises using real world examples. The MOOC is appropriate for those with no prior experience with geographic information systems (GIS) software all the way to advanced users.

Skills for the Digital Earth will incorporate video lectures, interaction opportunities, and discussion forums. Each module will feature a quiz and activities, and participants will receive a badge after each completed module to be used to demonstrate skills mastered. Instructions will be provided on the process of adding badges to your backpack in the course.

- March 30 to April 26, 2014 (4 weeks)
- Cost per student: Free

In this course, participants will...

- Demonstrate fundamental basic geographic concepts and be exposed to the geospatial workforce.
- Identify skills associated with the Geospatial Technology Competency Model (GTCM).
- Display creative thinking skills, problem-solving, and decision making in geospatial technologies.
- Use geospatial tools and technology and apply some business fundamentals using GIS.
- Recognize employment opportunities in the geospatial industry.
- Demonstrate the use of basic computer skills.
- Demonstrate the use of business application software.
- Demonstrate the use and interpretation of spatial data and data sources.
- Demonstrate the core geospatial abilities that are consistent with those of someone working in the geospatial industry.



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Elmhurst Digital Earth MOOC continued

Modules and Badges:

Module 1: Fundamental Geography

- Demonstrate and apply fundamental geographic knowledge and concepts.
- Use ArcGIS Online to navigate an online map and use skills learned to create a functional map.

Module 2: Fundamental Computing Skills Associated with Geography

- Successfully identify the skills of navigation online, including file management.
- Recognize geographic communication skills.
- Recognize skills associated with e-publishing, use of spreadsheets, presentation software, and use of databases.
- Identify skills associated with fundamental computing as a means of communication in the discipline of geography and geospatial technologies.

Module 3: Creative Thinking

- Recognize logic, deductive/inductive reasoning and problem management skills.
- Recognize geographic reasoning skills.

Module 4: Problem Solving and Decision-Making in Geography

- Identify problem-solving and decision-making principles.
- Identify the effective use of solution implementation and alternative solutions to a spatial problem.

Module 5: Geographic/Geospatial Tools and Technology

- Recognize skills with gathering, storing, transforming, and manipulating spatial data to produce a desired outcome.
- Evaluate other open source software and data sources.

Module 6: Business Fundamentals of Geography/Geospatial Environments

- Identify the application of business fundamentals in several disciplines using GIS.

Module 7: Abilities in the Geospatial Field - Advanced Digital Earth

- Describe the fundamental concepts and applications of GIS&T.
- Identify and describe the basic elements of cartography.
- Describe the fundamental concepts and applications of remote sensing and global positioning systems.
- Describe and discuss sources of data, the process of creating data, different data models, and the fundamental concepts of data quality and uncertainty.
- Identify Location Based Services applications.
- Describe the use of overlaying, buffering, and other analysis techniques.
- Discuss the need for ethics and professionalism in GIS&T.
- Explain datums, ellipsoids, and geoids.

Elmhurst Digital Earth MOOC continued

Completing the Course

- Upon successful completion of Modules 1-6, participants will be issued a certificate of completion. Upon successful completion of Module 7, participants will receive an additional certificate.
- Module 1-6's certificate of completion may be used as a waiver to *GIS 100 Introduction to Geospatial Technologies*, the first course in the Online Undergraduate Certificate in Geographic Information Systems at Elmhurst College.
- Module 1-7's certificate of completion may be used as a waiver to *AGS 500 Fundamentals of Geospatial Technologies*, the first course in the Online Master's Degree or Graduate Certificate in Applied Geospatial Sciences at Elmhurst College.

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Register Here:

<https://opencourses.desire2learn.com/d2l/custom/MOOC?ou=6926>

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