

Creating Geospatial Professionals

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Guidance: No Single Source, Differing Purposes

- GEOTECH Center
- US DOLETA GTCM
- USGIF EBK
- UCGIS BOK
- NCGIA Core Curriculum
- National Society of Professional Surveyors accreditation program
- NGA GPC Handbook
- US DOL O*NET job descriptions

Pedagogy (How do we teach?)

- Most agree that education moves from generalist to specialist
- Progression of learning outcome objectives (early lessons enable later/more advanced lessons)
- Subjects are defined and delimited by discipline early on, interdisciplinary later

What is geospatial?

- Geographic Information Systems
- Remote Sensing
- Data Management and Distribution
- Positioning
- Visualization
- Analysis
- Reporting

Curriculum

- 10 Liberal Arts Core Courses
- 14 Geospatial Courses
- 3 Geography Courses
- 4 Specialization Courses

Required Geospatial Courses

- Micro Computer Applications
- Introduction to GIS
- Advanced GIS
- Introduction to Remote Sensing
- Digital Image Processing
- Case Studies in GEOINT
- Topographic Mapping
- Hyperspectral, Microwave, and LIDAR
- Trends in Geospatial Technologies
- Analytic Techniques
- Geospatial Math and Algorithms
- Programming GIS
- Spatial Databases and Internet Technologies (Server side)
- Internship

Geography

- Human Geography
- Physical Geography
- World Regional Geography

Specialization

- Computerized Mapping and Cartography
- Introduction to Surveying
- Advanced Surveying
- Surveying and the Law
- Photogrammetry I
- Photogrammetry II
- Advanced Remote Sensing
- ??? To be developed as program grows

Challenges

- Sequencing
- Curriculum documentation (must support licensure, certification...)
- Re-structure grad program to offer industry specializations (Oil and Gas applications, GEOINT, Homeland Security, etc...)
- Promulgating model
 - Employers
 - Fellow academics
 - Prospective students