GEOG 607: GeoSTAC—Geospatial Teaching Across the Curriculum
Curriculum Development Workshop—NSF-ATE #0903330

This professional development class will focus on understanding how geospatial technology and geospatial thinking skills can be embedded across the K-12 Curriculum. During this class teachers will learn how to use web-based GIS technology to address state and national education standards. Teachers will develop, implement, and revise a lesson using web-based GIS that addresses geospatial thinking within their discipline.

Week 1: What is geospatial thinking? Why is this important to today’s students?
Readings:
  - Goodchild, M. The Fourth R? Rethinking GIS Education
  - Jenner, P. 2006. Engaging Students Through the use of G’IS at Pamlico State High School
  - Bednarz, S. and Greshmill, P. Thinking Spatially
Activities: GeoSpatial thinking Across the Curriculum

Week 2: The continuum of geospatial technology
Readings:
Activities: Web-GIS Tutorials

Week 3: Lesson Exploration
Activity: Teachers will evaluate three existing Geospatial lessons and teaching guides using the evaluation rubric.

Week 4: Careers in Geospatial Technology
Activities – Web search for geospatial careers
  Design student career focus activity

Week 5: Standards and Geospatial Technology Pedagogy
Readings:
  - Developing Expertise for Inquiry
    http://webspace.oise.utoronto.ca/~benczela/InquiryDesignEd.html

Week 6 through 8: Lesson Development
Activity: Using the template for the teaching guide and student lesson, teachers will design a web-based GIS lesson.

Weeks 9-11: Lesson implementation and revision
Activity: Teachers will implement the lesson within their classes. They will provide documentation about lesson effectiveness, time to teach, and needed revisions and recommendations. Teachers will revise the lesson and teaching guide.

UO—Graduate Credit Options.
For 1 graduate credit, you will need to finish all the listed activities and submit the revised teaching guide and student lesson.

For 2 graduate credits, you will need to do all the work for 1 credit and submit formal evaluation of two lessons with recommendation and extensions.

For 3 graduate credits, you will need to do all the work for 2 credits with the addition of a four-page research paper related to the application of geospatial technology in education.