An Overview of UM-Flint’s new GIS Certificate Program
Who Am I?

- Over 10 years of GIS experience
- Urban GIS Certificate
- B.S. in Biological Aspects of Conservation
- M.S. in Geography
- Ph.D. in Geography
  - UW-Milwaukee
What is a GIS Certificate Program?

A program that prepares students to apply GIS with a solid theoretical foundation. A diverse range of GIS skills are covered including data capture, spatial & statistical analysis, modeling and cartography.

Narrower in focus and less time to complete!

(Wikle, 1999)
**GIS Demand**

- 80% of data is spatial

- More than 100 different academic disciplines use GIS

- 500,000 professionals using GIS as a part of their job in the United States

(ArcUser, 2000)
GIS Demand

Figure 2: “Pyramid” of roles played by GIS&T professionals. Fewer, but more highly skilled, personnel are needed at the upper levels of the pyramid. (Marble, 1998).
Meeting GIS Demand

- Nearly 800 universities are doing research using GIS
- Approximately 2,000 GIS certificate programs in the United States
- 10,000 students world-wide are pursuing GIS Certificates

Meeting GIS Demand

Successful certificate programs require “critical events”

- Meeting professional needs
  - Service learning projects
- Job performance measures
  - Inputs from professionals
- Formal educational guidelines
  - Based on legacy programs

Greg Rybarczyk, Ph.D.

(Nadler and Nadler, 1998)
UM-Flint GIS Certificate

UM-Flint’s GIS Certificate Mission:
Provide UM-Flint students and non-degree seeking professionals with the foundational and advanced skills needed to succeed in the geospatial industry

Greg Rybarczyk, Ph.D.
UM-Flint GIS Certificate

**Requirements:**
- Minimum of 22 credits
- Minimum GPA of 3.0 in certificate courses

Tier 1 and 2 course can be applied to the Professional GIS certification (GISP)
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**Tier 1** core courses in GIS, spatial analysis, and remote sensing (14 credits)

- Required courses:
  - Intro to Spatial Analysis
  - Intro to GIS I
  - Intro to GIS II
  - Remote Sensing of the Environment
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**Tier 2 courses (5-8 credits)**

At least *one*:
- Spatial Analysis Seminar
- GIS Practicum
- GIS Internship

At least *one*:
- Database management
- Visual Basic
- Problem Solving with Programming
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**Tier 3** courses (3 credits)

At least *one* course from a focus area:

- Planning or Transportation
- Engineering
- Public Health
- Public Administration
- Sociology
- Business
- Anthropology
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- **Candidates will leave the program with:**
  - Proficiency in the use and theory of GIS
  - The analytical skills necessary to apply GIS to common planning, social, and environmental problems
  - Skills and expertise necessary to implement and manage a geospatial project
  - The ability to create and present professional-quality graphic representations of social, environmental and economic conditions
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Future Directions

- Online courses
- Night-time courses

New courses:
- GeoDesign
- Python programming
For more information:

http://www.umflint.edu/ers/gis-certificate
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