

## The GRACE Project

Enhancing STEM Education using GIS Technology

### Professional Development Course Offered by the GRACE Project:

#### Using Geographic Information Systems (GIS) in Your School and Community

*Today's students embrace technology outside the classroom. When used effectively, technology is an excellent tool to engage students inside the classroom as well.*

This Online Course is offered in **FOUR** progressive **MODULES** to acquire skills to incorporate GIS (Geographical Information System) instructional tools and educational experiences into classrooms. Teachers completing each module may receive SCECH credits for meeting module expectations. Module work must be completed to qualify for enrolling in the next module.

#### **Module 1: Introduction to Geographic Information Systems for Teachers**

*Strategies for integrating GIS to support instruction, discussion, and extended learning on any topic will be presented. You will learn how to create and use GIS maps as a framework for understanding the geographic context of current and historical events and phenomena and exploring issues of interest to your local community. Many practical ideas for GIS activities that enhance student learning and critical thinking skills are shared.*

#### **Module 2: Preparing to Use GIS as a Tool in the Classroom with Story Maps**

*Story Maps let you present a series of maps via tabs, numbered bullets, or an expandable 'side accordion' control. In addition to maps, you can also include images, video and web content in your series to tell your story and engage your audience. Skills incorporated in this course will allow teachers to create a Story Map showing different data for the same location.*

#### **Module 3: Designing your School AGOO and Using Spatial Analysis Tools**

*This module introduces teachers and students to ArcGIS Online as they establish and use their own School AGOO. The ArcGIS Online software helps organizations increase the value of their GIS content by making it more broadly available, enabling individuals and teams to do their work better and faster.*

#### **Module 4: Preparing High School Students for GIS Internships**

*During this module, teachers will examine the skills needed by students as they prepare for GIS Internships in community agencies. They will also recruit prepared students for such placements.*

#### **Additional Course Information Continued on Reverse**

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EASTERN MICHIGAN UNIVERSITY



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# Using Geographic Information Systems (GIS) in Your School and Community

## MODULE 1: *Introduction to Geographic Information Systems (GIS) for Teachers*

Three weeks in duration.

### **Module 1 Expectations:**

- Submit a Completion Certificate for *“Teaching with GIS: Introduction to Using GIS in the Classroom”*
- Create a learning artifact focused on *“Careers in GIS”*
- Interview a GIS Professional

**Potential SCECHs: 12**

## MODULE 2: *Preparing to Use GIS as a Tool in the Classroom with Story Maps*

Two weeks in duration

### **Module 2 Expectations:**

- Compare and contrast a GRACE Lesson and a GeoInquiry
- Create a Story Map

**Potential SCECHs: 8**

## MODULE 3: *Designing Your School AGOO and Using Spatial Analysis Tools*

Three weeks in duration

### **Module 3 Expectations:**

- Build and enhance a School AGOO
- Submit a Completion Certificate for *“Configuring and Managing an AGOO”*
- Design a GIS Investigation using the *“You Can Do It”* lesson planning template
- Submit a **GIS Lesson Implementation Plan** (includes two Explorer Lessons, one Story Map, and two Investigator Lessons using spatial analysis).

**Potential SCECHs: 13**

## MODULE 4: *Preparing High School Students for GIS Internships*

One week in duration

### **Module 4 Expectation:**

- Design and submit an **Intern Recruiting and Mentoring Plan**

**Potential SCECHs: 5**

**“Using Geographic Information Systems (GIS) in Your School and Community”**

**THERE IS CURRENTLY NO PLAN TO OFFER THESE MODULES UNLESS THERE IS A SUFFICIENT NUMBER OF TEACHERS INTERESTED IN ENROLLING IN MICHIGAN VIRTUAL’S PROFESSIONAL LEARNING PORTAL.**

**QUESTIONS???** Email Dr. Peggy Gaskill, GRACE PD, [pgaskill@michiganvirtual.org](mailto:pgaskill@michiganvirtual.org)