**University of Wisconsin Stevens Point**

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| **Instructor Panel:** | Douglas Miskowiak, GISP.  GIS Instructional Administrator. |
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| | Dr. Ismaila Odogba.   Professor |
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| | Dr. Samantha Kaplan.  Professor |
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| **Office:** | Science B307 (Third Floor, Eastern Most Wing) |
| **Office Hours:** | Bi-weekly office hours (every other week) with students and instructors TBD **based on instructor and student schedules.** |
| **Class Schedule:** | Independent. |

**Course Description:**  You may, with consent of the instructor, arrange for directed study of a geographical topic.   Credits: 3.  Prerequisites: One geography course, and Department Consent.

**Course Overview:**  This directed course of study will guide students through an independent study and exploration of the art and science of cartography.  During the first phase of the course, students will independently complete an array of online courses through the Esri Academy.  These courses cover mapping, visualization, may layers, map design, labeling, symbolization, creating map layouts, creating map series, web mapping, story mapping, planning cartographic projects, and sharing animations, among other topics.

During the second phase of the course students will plan for, design, and craft a final cartographic project for evaluation.  Students are encouraged to collaborate with each other and share ideas for implementation.  Students will use ArcGIS Pro, Adobe Illustrator, Adobe Photoshop, and other mapping and cartographic tools to implement their cartographic designs.

**Learning Outcomes:**  After taking this course, students will be able to…
- Plan a cartographic project, that includes definition of seven design controls.
- Craft a map layout employing cartographic visual variables to communicate a geospatial idea.

**Course Format:** This course is designed for independent learning with bi-weekly (every other week) meetings to guide interaction and collaboration among students and instructors. Course materials are delivered asynchronously online, disseminated using Canvas and the Esri Academy.

The course consists of:

1. Bi-Weekly Meetings
2. Esri Academy Online Courses
3. Midterm Cartographic Ideas/Design Panel
4. Final Cartographic Presentation and Design Evaluation

1. **Bi-Weekly Meetings:** Bi-weekly (every other week) meetings will be scheduled at dates and times that are mutually favorable to students and the faculty panel. The meetings will be casual and are meant for students and instructors to engage with course content, share ideas, and refine final cartographic design projects.
   Two bi-weekly meetings are **mandatory**. They include:
   • Midterm Cartographic Ideas/Design Panel
   • Final Cartographic Presentation and Design Evaluation
   Meetings will tentatively be held in the GIS/Map Center. Other off campus locations will be sought.

2. **Esri Academy Online Courses:** Course training materials are designed and delivered by the Esri Academy to support independent learning. The following learning materials are offered by the Esri Academy. Courses that are accompanied by a certification are required and scored. After completing a course, please share your certificate to CANVAS for grading. Courses that have no certification are optional and are not graded. The Esri Academy is worth 600 course points and 60 percent of the total grade for the course. The courses include:

| Esri Academy Course | Training Type | Minutes | Esri Certification | Course Points |
|---|---|---|---|---|
| Getting Started with Mapping and Visualization | Web Course | 75 | Certification | 25 |
| ArcGIS Living Atlas of the World | Video | 55 | | 0 |
| Selecting the Right Data Visualization | Story Map | 30 | | 0 |
| Map Design Fundamentals | Web Course | 120 | Certification | 40 |
| Map Layer Basics | Web Course | 115 | Certification | 40 |
| How Maps Work and How to Make them Work | Video | 49 | | 0 |
| Symbolize Map Layers | Web Course | 105 | Certification | 35 |
| Labeling Map Features | Web Course | 85 | Certification | 30 |

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|---|---|---|---|---|
| ArcGIS Pro:  Advanced Map Labeling | Video | 44 | | 0 |
| Creating a Map Layout | Web Course | 85 | Certification | 30 |
| Creating a Map Series in ArcGIS Pro | Web Course | 120 | Certification | 40 |
| Discover the Possibilities with ArcGIS Story Maps | | 30 | | 0 |
| Creating a Web Map in ArcGIS Pro | Web Course | 185 | Certification | 65 |
| Spatial Data Science:  Data Visualization and Exploration | Video | 30 | | 0 |
| ArcGIS Online:  Tips and Tricks for Viral Maps | Video | 34 | | 0 |
| ArcGIS Online:  Using Smart Mapping | Video | 45 | | 0 |
| Planning a Cartography Project | Web Course | 120 | Certification | 40 |
| Creating and Sharing Animation in ArcGIS Pro | Web Course | 90 | Certification | 30 |
| Telling Stories with GIS Maps | Web Course | 85 | Certification | 30 |
| Creating Map Products | Web Course | 165 | Certification | 55 |
| Getting Started with Cartographic Representations | Web Course | 330 | Certification | 110 |
| Advanced Techniques for Cartographic Representations | Web Course | 85 | Certification | 30 |
| TOTAL | | 2082 | | 600 |

3. **Midterm Cartographic Ideas/Design Panel:** During the 5th week of the semester (October 2-6) the bi-weekly meeting will be used for each student to share their plans for crafting a final cartographic product (map, map series, or story map). The plan shall be a written description of the host of controls or external forces that influence the map's design. Design controls shall include the following categories, distinctly sub-headed and described: PURPOSE, AUDIENCE, REALITY, MAP SCALE, CONDITIONS OF USE, TECHNICAL LIMITS, AVAILABLE DATA. Descriptions are limited to 1-page, regular margins, 11-12 point font, 1.15 line spacing. Writing should concisely, suitably, and fully describe each cartographic design control and how each influenced the map's design. Grammar, spelling, and punctuation are considered. The midterm cartographic ideas/design document is worth 100 course points and 10 percent of the total grade for the course.

4. **Final Cartographic Presentation and Design Evaluation:** During the last week of the semester, or during the final exam period the students and faculty panel will hold their last bi-weekly meeting to present the final cartographic product to receive evaluation. Each student will describe and present their final product in comparison to their initial design controls. The product will be evaluated based upon a rubric for the following categories:
   - Focus, Order, Balance, and Distribution of Map Elements
   - Map Figure Placement, Orientation, Size, Scale.
   - Symbology – the Application of Visual Variables.
   - Titles/Subtitles
   - Legend
   - Scale
   - Cardinal Orientation
   - Data Use
   - Credits and Metadata
   - Map Grid (as necessary)
   - Labeling and Annotation (as necessary)
   - Inset Map (as necessary)

   The final cartographic presentation and design evaluation is worth 300 course points and 30 percent of the total grade for the course.

**Evaluation and Grading:** 1,000 total points are possible in this course. In summary, students are graded based upon the following categories:

- Esri Academy Online Courses                        600 Points
- Midterm Cartographic Ideas/Design Panel        100 Points
- Final Cartographic Presentation and Design Evaluation    300 Points
- Total                                =           1000 Points

Ranges of percentages, course points and their equivalent letter grades are shown below. By referring to this table you can determine your letter-grade standing at any point in the course.

| LETTER GRADE | PERCENT | 1000 POINTS | 100 POINTS |
|---|---|---|---|
| A | 100-93 | 1000-930 | 100-93 |
| A- | 90 | 900 | 90 |
| B+ | 87 | 870 | 87 |
| B | 83 | 830 | 83 |
| B- | 80 | 800 | 80 |
| C+ | 77 | 770 | 77 |
| C | 73 | 730 | 73 |
| C- | 70 | 700 | 70 |
| D+ | 67 | 670 | 67 |
| D | 63 | 630 | 63 |
| F | <63 | <630 | <63 |