
School of Applied Engineering and Technology
Division of the Built Environment

SET490 - SENIOR PROJECT IN SURVEYING

Instructor: Dr. Laramie V. Potts

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Class time & Place: Wednesday 6:00 pm - 7:55 pm, FMH -110

Office Hours: Mon. 4:00 – 5:30 pm

Office: 2510 GITC BLDG

Course Description

The student works on an individual surveying project guided by the department staff. The project should concentrate on a specific aspect of surveying not necessarily on field measurements. It must include library research, a written report, and oral presentation of findings.

Objectives:

- To experience an in-depth study of a specific surveying topic
- To familiarize the student with report writing
- Build communication skills needed for preparing and delivering an oral presentation

**COURSE LEARNING
OUTCOMES**

By the end of the course students should be able to:

1. Prepare a written research proposal
2. Perform independent research (and literature review) and deliver project results according to a prepared time table.
3. Demonstrate adaptability in survey measurement systems and design to meet required positional accuracy of the project.
4. Demonstrate the ability to perform independent analysis and to design a survey according to prescribed accuracy standards.
5. Demonstrate the ability to identify unforeseen obstacles in the measurement system and to demonstrate a workable solution to overcome the problem to meet the requirement positional accuracy of the project.
6. Demonstrate knowledge of the significance of correct geospatial information in terms of social-political decision making and utility of geospatial data products.
7. Demonstrate abilities in public speaking by giving an oral presentation of their senior project in a public forum where members of IAB may be present. Students will complete an effective senior report according to acceptable criteria.
8. Demonstrate utility of modern equipment or remote sensing imagery and the ability to utilize survey procedures to develop a useful surveying measurement approach to solve the problem(s) identified in the project.
9. Demonstrate knowledge of and utilize industry-standard software to solve surveying related problems of the project.
10. Demonstrate sensitivity of surveying and mapping applications on contemporary issues in landuse and development projects.

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Week	Topic	Tasks/Submittals	Activity
<u>1</u> 01/17	<u>Introduction</u> 1. Review Topics for Senior Project 2. Procedures and Protocol 3. Formats and Schedule	Objectives of the course Select Your Topic Identify Objectives Discuss Project Requirements Discuss Project Benefits	Virtual Class meeting
<u>2</u> 1/31	<u>Project Proposal Presentations</u> 1. Student presentations 2. Discuss Proposal Report - Literature Search - Citations (bibliography)	<u>2-Minute Presentation</u> - Define Project Title - Refine Project Scope - Refine Project Requirements	Virtual Class meeting
<u>4</u> 2/09	<u>Proposal Submittals</u> Word document (or pdf)	Project Title List Project Objectives Bibliography/Citations	Online Submission
<u>7</u> 3/02	<u>Preliminary Result</u> 1. Data and Field Procedure 2. Computations 3. (Corrections and Reductions)	Written Paragraphs on: - Data Collection and Field Procedure - Data Processing: Corrections and Reductions - Initial Results	Online Submission
<u>15</u> 05/03	<u>Project Summary</u> 1. Data and Field Procedure 2. Computations 3. Presentation – Figures & Tables	Executive Summary: (>1500 words) Single space, Times New Roman 12pt Headings include <i>Introduction,</i> <i>Method,</i> <i>Results,</i> <i>Conclusion</i>	Online Submission
<u>16</u> 05/11	<u>Final Report & Presentation</u>	1. Final Report (submitted via canvas) <u>8-minute Presentations (w/ PPT)</u> - Project Purpose - Project Data & Methods - Project Significance 2. Initial Results	Virtual meeting

Grading

- Proposal.....15%
- Preliminary Results.....15%
- Intermediate Report 10%
- Final Report 35%
- Executive Summary10%
- Final Presentation.....15%

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Written Reports
Content and Format

Proposal:

A proposal is a detailed plan regarding your chosen topic of investigation. This report should cover the following points and provide answers to questions such as:

1. Define your project clearly and specifically.
 - a. What exactly is the objective of your project?
 - b. What exactly will your project produce?
2. **Why** is it important or what is its significance (to Surveying, Engineering, and Science etc.)
3. **What** knowledge and resources will you need to do it?
4. **How** will it be done?
5. Prepare a timetable chart with proposed project tasks and completion dates for each task of your project. Create the following chart;

(Task 1)*								
(Task 2)*								
(Task 3)*								
"								
"								
"								
(Task n)*								
Week #	1	3	4	6	11	13	14	15

*Specify and actual task

[Basics of Project Management: <https://www.youtube.com/watch?v=qkuUBcmmBpk>]

Intermediate (Progress) Report:

Provide a progress report on what has been accomplished. The report should

- Clearly outline the task(s) that have been completed and the status of those that are not
- Summarize current findings and possible deviation from the original proposal
- Correlate your progress against your proposed timetable
- Explain any deviation from the original proposal

Final Report:

Prepare a well written and detailed report on your project. It should have some variations of the following main heading (or chapters):

1. Introduction (state the problem and provide overview on topic and the project)
2. Project development (describe project details)
3. Experiments (describe and discuss field observations, procedures etc.,)
4. Results (explain the results, graphs, and tables)
5. Conclusion. (Summarize the important finds and discuss conclusions you draw from this work. Include potential improvements as a follow-up phase of this topic)
6. References (SaLIS style format of your list of references)

Some references to books and/or articles dealing with your topic must be part of the report.

Reference to material downloaded from the internet must be acknowledge as well.