ANAT 6950 OV1: Capstone Workshop

Course Director: Ernesto Salcedo, PhD

- email: ernesto.salcedo@mac.com
- Office: RC1S - 11th Floor - Rm 11124
- Office Phone: 303.724.3430

--- Prerequisites ---

To enroll in this workshop:

1. You must have already identified a capstone mentor and filled out the capstone mentor agreement form
2. Enrolled in the Capstone Course

--- Workshop Description ---

In this workshop, which will span both fall and spring semesters, you will begin to articulate your Capstone Project. Class by class, you will build both your Capstone Report and your Capstone Presentation poster. As such, this workshop should be considered less as a formal course and more as a forum for you to bring your questions and to begin practicing your capstone
Definition of a Capstone Project.

The capstone project is the **culminating experience** of your tenure in the MSMHA program. The goal of the Capstone project is to give you the experience of planning, implementing and presenting a research or education based project. This means that you will have to come up with a **question** and a **method** to answer this question.

All capstone projects should demonstrate the ability to take an idea from **conception to final presentation**, combining anatomical knowledge, research capabilities, and professional skills into a coherent project.

To ensure that you are free to pursue the many opportunities offered by the Anschutz Medical Center and surrounding scientific community, we have defined a capstone project less by what it is than by what it should include. As such, a capstone project should:

- Result in a **tangible product** or deliverable which enhances or adds to existing content being studied.
- Reflect a significant level of **scholarship and creativity**, and provide a scholarly contribution.
- Entail new learning for the student and demonstrate that the student has gained a new level of **expertise**.
- Involve the characterization of a **structure** (or structures) ranging in scale anywhere from molecular to organismal or gross levels of organization.
- Include at least one (and preferably more) of the following: 2D **images**, 3D images, animations or 3D models.

In contrast, a Capstone Project **should not simply be** a superficial project with low educational value, e.g. an annotated series of existing image files or a synthesis of what is already known in the literature. That is, you must move beyond simply reporting factual information to generating new factual information of your own in a manner that distills the anatomical, research, analytical, and presentation knowledge that you have acquired over the course of your capstone experience.

**Capstone Deliverables**

At the end of your capstone report, you will produce, at the very least, the following deliverables:
1. A well-written capstone report
2. A final presentation to a professional audience (poster or talk)

**Capstone Report**

The final written report needs to be approximately 8 - 10 pages.

You can find the guidelines for the written report [here](#), but briefly, the written report should include the following sections:

1. Abstract
2. Background / Rationale
3. Methods / Approach
4. Results (including data analysis, photos, videos, etc)
5. Conclusions / Discussion
6. Personal Statement
7. Citations
8. Appendices (optional)

**Presentation**

Most students will present their findings during the annual poster session that we hold in April for the second year students. If you are not on track to finish your capstone during this timeframe, then you can make arrangements with your Capstone committee to present a talk instead at a later date.

Templates for both the poster and the talk will be made available.
You are responsible for forming your three-member capstone committee that will review your progress and grade you on your final report and presentation. Your capstone committee is comprised of:

1. Your Capstone Mentor
2. Your MSMHA Academic Advisor
3. An outside expert that can offer expertise on your project

--- Deadlines ---

To remain on track for successful completion of the Capstone Project by the end of your second year, you must meet the following deadlines:

1. Capstone Committee must be fully formed (3 members) - due November 1st.
2. Interim Capstone Report – due mid December
3. Final Draft Capstone Report – due two weeks before the Poster Presentation
4. Poster Presentation – End of April/Early May
5. Final Capstone Report – due two weeks after the Poster Presentation

If you do not meet these deadlines, then you might not finish in your second year. An alternative timeline will then have to be established with you and your capstone committee.

--- Evaluation ---

Participation in this workshop will comprise 10% of your Final Capstone Project Grade.
Participation will be evaluated based on the following:

1. Class Attendance
2. Class Participation
3. Timely Assignment Completion (the Assignments themselves will not be individually evaluated)

--- Workshop Schedule ---

Fall Semester

- **Class 1: Overview**
  - **Discussion: Fun with Templates:** Introduction to the Capstone Report, Capstone Poster, and The Grading Rubric.
  - **Discussion:** Overview of the capstone deadlines
  - **Discussion:** What is an abstract?
  - **Discussion:** What is an objective?
  - **Assignment:** Write your Objective. Be prepared to give a brief overview of your capstone for next class

- **Class 2:** Background / Rationale
  - **Class Exercise:** Stand up and present your objective.
  - **Class Discussion:** What should you put in Background / Rationale? What makes a good hypothesis? Or Statement of Problem?
  - **Lecture:** How to use a citation manager.
  - **Assignment:** Write your Background / Rationale

- **Class 3:** Methods / Project Approach
  - **Class Discussion:** What should go in your Methods / Project Approach?
  - **Assignment:** Write up your Methods

- **Class 4:** The reviewers and the figures
• **Lecture:** Figures: how to generate publication quality figures. What should go in figure legends?

• **Class Discussion:** Review of Grading Rubric

• **Assignment:** Using the rubric, grade three of interim capstone reports (Objective, Background / Rationale / Methods). Add constructive comments where applicable

• **Assignment:** Add Figures and figure legends to your Report.

  • **Class 5:** Interim Capstone Report
    • **Discussion:** Final Review: What should your interim report include?
    • **Assignment:** Write up a Response to the Reviewers. Rewrite Your objective, Background, and Methods, incorporating revisions requested by the reviewers.

• **Assignment:** Turn your report into the Writing Center for evaluation

• **Assignment:** Write up your Interim Capstone Report and turn it in.

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**Spring Semester**

• **Class 6:** Posters
  • **Discussion:** Poster Templates. What makes a good poster? How is the Poster different from the Report?
  • **Class Discussion:** What should go in your results section? In your discussion section?
  • **Assignment:** Generate a poster
  • **Assignment:** Make appointment with the writing center.

• **Class 7:** Poster Presentations and Feedback
  • **Class Exercise:** Mock Poster Presentation and feedback
  • **Assignment:** Redo posters, taking feedback into consideration.

• **Class 8:** Poster Presentations and Feedback
  • **Assignment:** Redo posters, taking feedback into consideration.
  • **Assignment:** Capstone Report Rough Draft. Finalize your rough draft with the results and the figures

• **Class 9:** Putting it all together
  • **Class Discussion:** Capstone report rough draft overview
  • **Class Exercise:** Poster review and feedback
  • **Assignment:** Finish poster, prepare for presentation.
  • **Assignment:** Finish Capstone Report Rough Draft. Meet with Writing Evaluation center. Turn in Rough Draft