

Ernesto Salcedo PhD, FALL

CAPSTONE WORKSHOP



Fall Overview
Background and Rationale



THE GOAL OF THE CAPSTONE PROJECT

- Your chance to drive your own agenda
- Hone your ability to integrate and apply information:
 - Anatomical Knowledge, research capabilities, professional skills
- To give you the experience of
 - Brainstorming
 - Planning
 - Implementing
 - Presenting in a public forum

Project Management

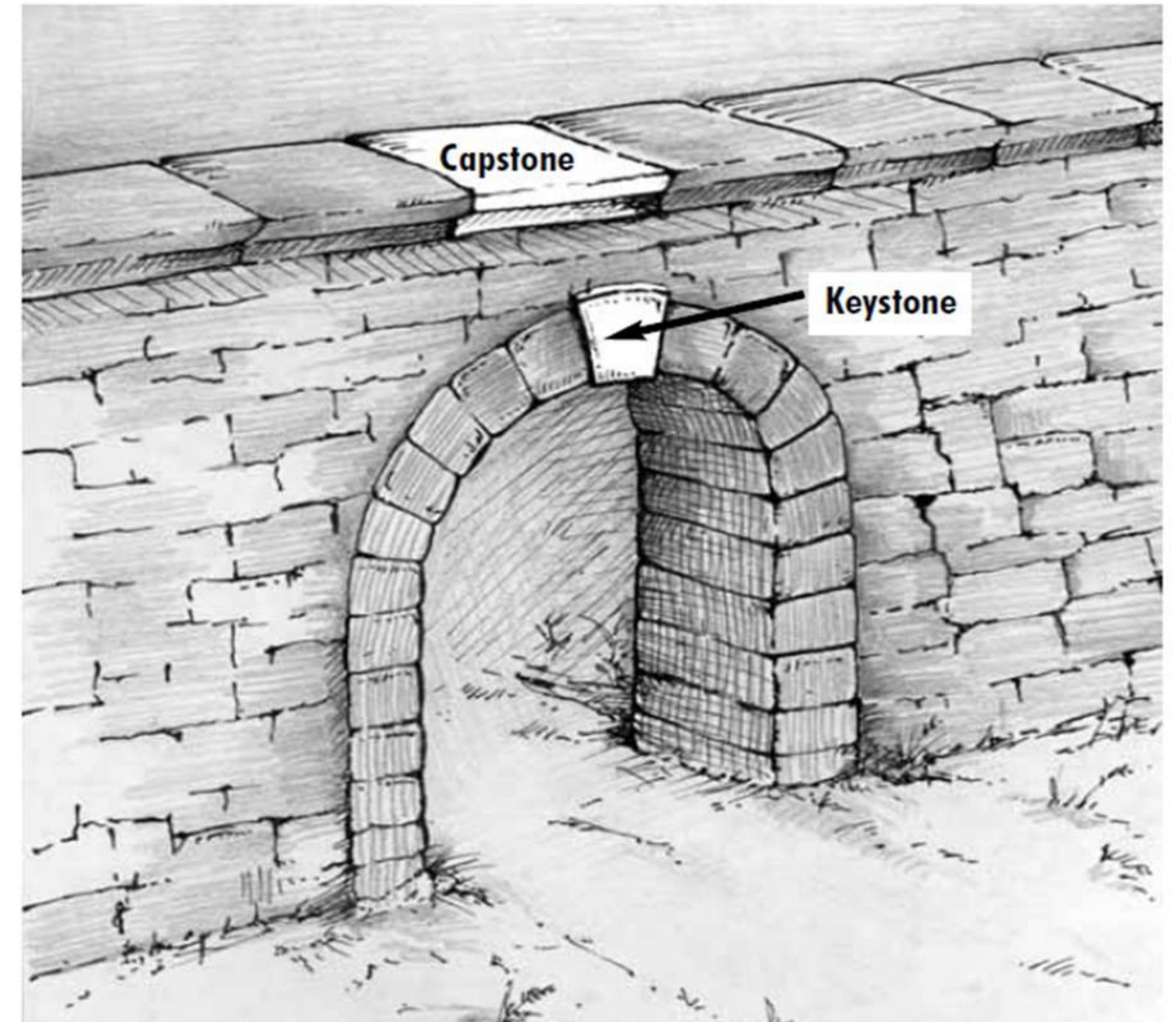


IMPLEMENTATION

**FINAL
PRODUCT**

CAPSTONE REQUIREMENTS

- A Capstone project should
 - result in a tangible product or deliverable
 - demonstrate scholarship and creativity
 - exhibit expertise
 - be anatomically related
 - examine some kind of structure
 - from molecular level to gross
 - be Visually enhanced
 - Images and/or 3D models



A capstone is a finishing stone atop an exterior wall or roof or other exterior architectural feature.

DELIVERABLES

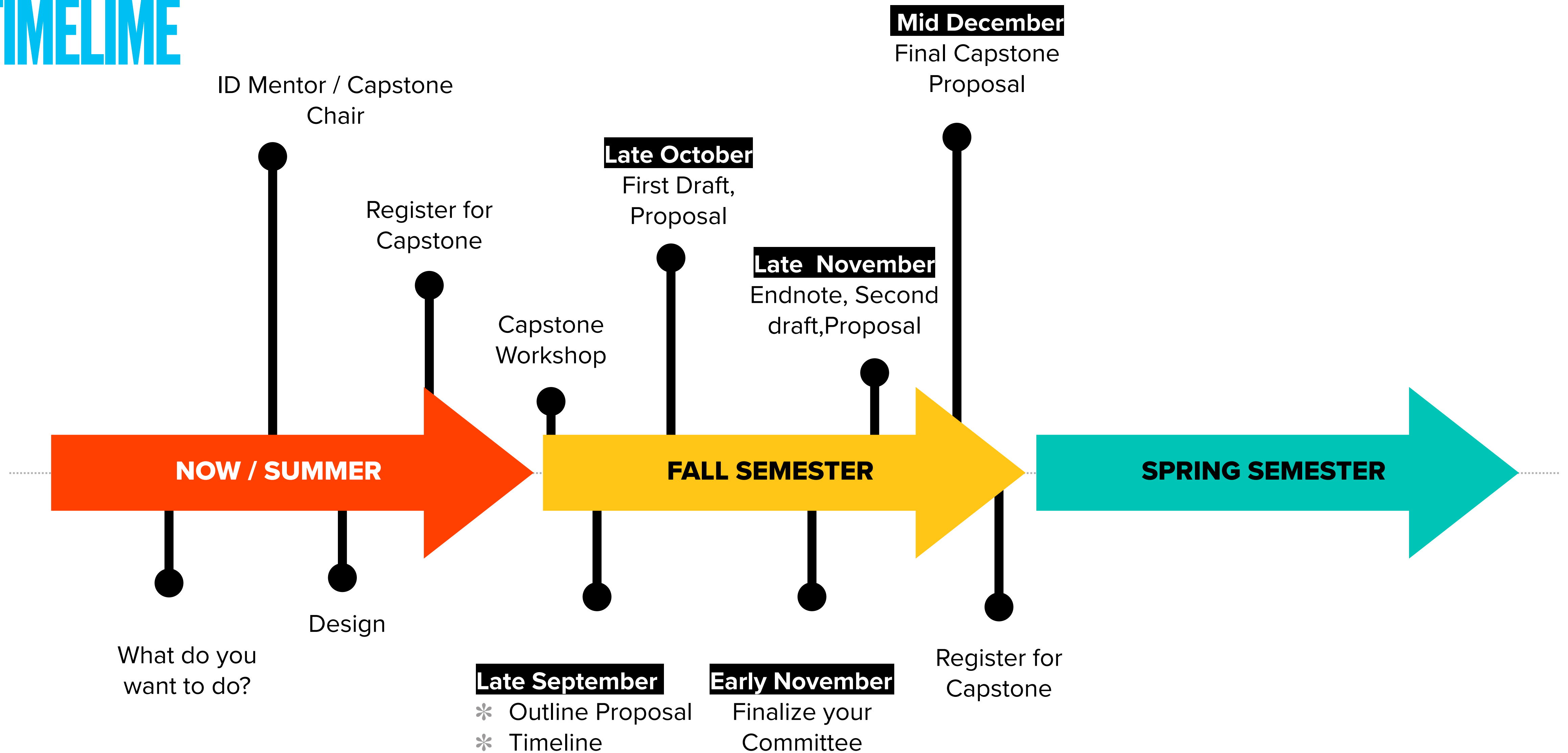
- **Fall Semester**
 - Capstone Proposal
- **Spring Semester**
 - Full Written Report
 - Poster Presentation



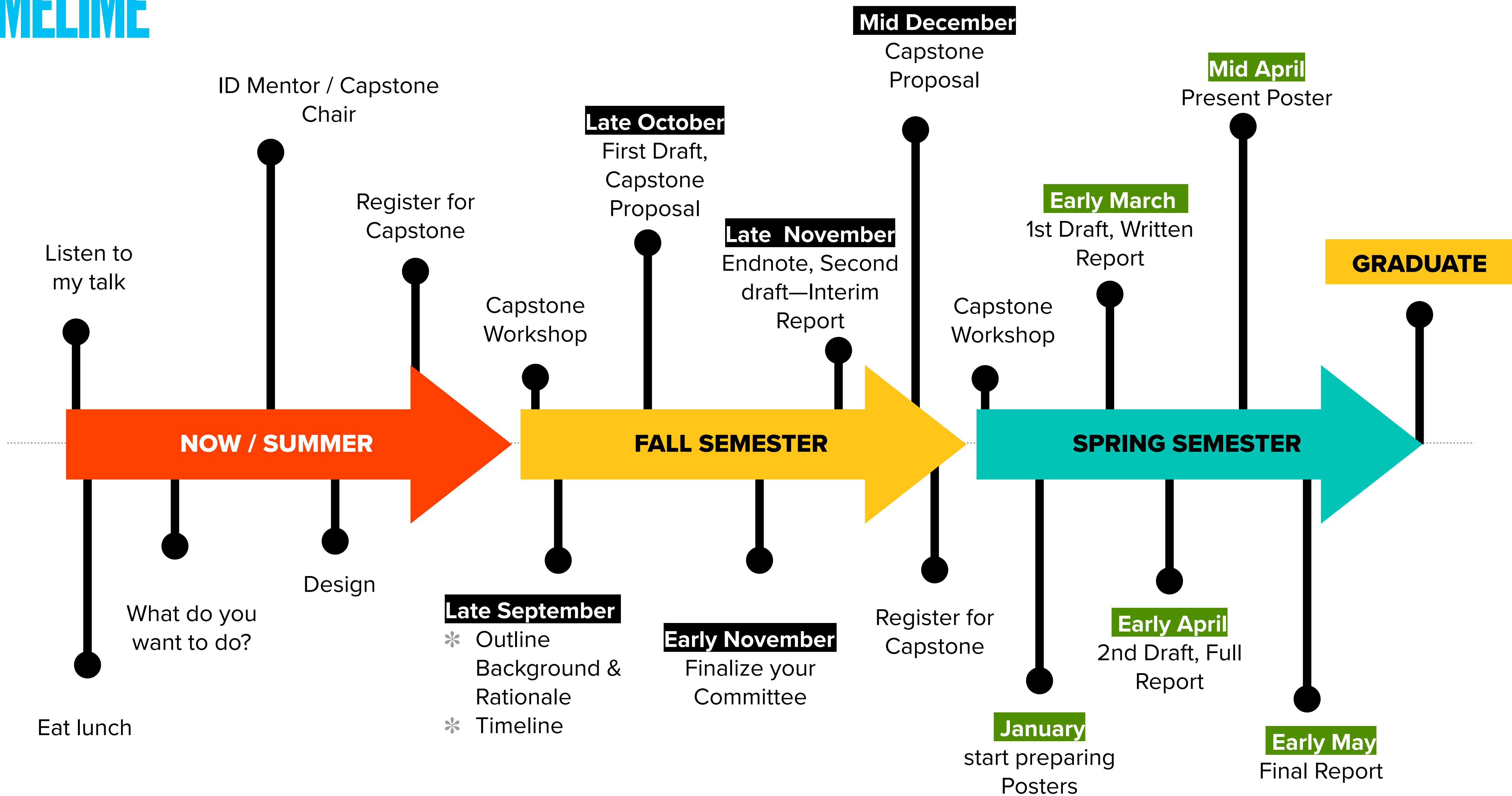


APRIL IS COMING

TIMELINE



TIMELINE



CAPSTONE PROPOSAL

Just what are
you proposing,
anyway?



CAPSTONE PROPOSAL

Modeled after an NIH Proposal

- **Title**
- **Significance**
- **Innovation**
- **Approach**
- **Budget**
- **Timeline**
- **Citations**

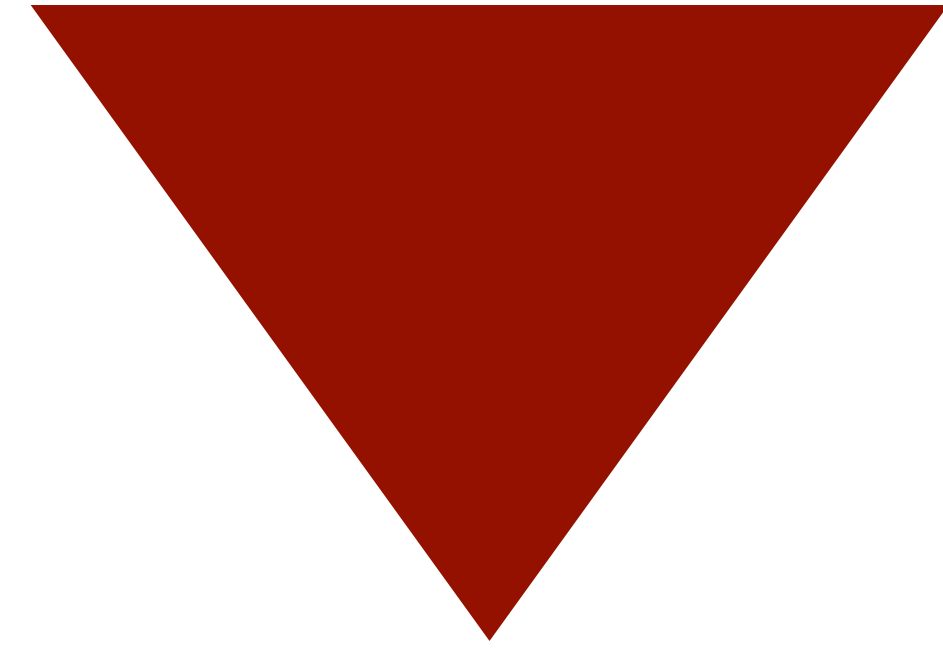
SIGNIFICANCE

Sets the stage — why are proposing what you are proposing

MAIN PARTS

- **Background information.** What is known.
- **Rationale.** What is not known (and something should be done about this)
- **Hypothesis.** A testable statement
- **Specific aims.** Stated objectives or goals
- **Outlook.** Why is this important?

SIGNIFICANCE



- **Background**

- A summary of the current state of affairs
- Think **AND** Statements: “We know this and that and this.”
- Only include the background necessary to understand the project
 - Watch out for DATA DUMPS. We do not want Wikipedia entries here. Just the info we need to understand the rationale and hypothesis
- Don’t forget to mention ANATOMY. We are an anatomy program here.

- **Rationale:**

- Hint at problems with the current state of affairs
- State what’s missing and how your project is going to swoop in and save the day.
- Think **BUT** statements. “We know this and that, but...”
- Your rationale sets up your specific aims and hypothesis

- **OUTLOOK:**

- Why should we care?

SIGNIFICANCE

- **Central Hypothesis:**

- Hypotheses are testable statements.
- “Our new 3D model will improve learning outcomes”
- Be specific:
 - **NOT:** social networking sites are harmful (Too general)
 - **HOT:** Twitter users experiences more privacy issues that users not on such social network
- Your hypothesis should clearly inform the type of experiment that you will be performing

- **Specific Aims:** Your Specific Aims are your objective statements

- Now that you have set up the problem (in the rationale), you state how you plan to solve this problem
- Specific Aims are single sentences that summarize what you plan to do

INNOVATION

- How does your project add new information?
- What is new and exciting about your project.
- How is this different from a wikipedia entry
- Reframe your rationale so you discuss what's new

APPROACH

- In the approach section, you will outline the things that you will actually do.
- Basically, you will expand on your Specific Aims
- Every proposed approach should have a rationale on why you are doing it.
 - Because of this, we plan to do this and that
 - Because of that, we will do this other thing



BUDGET

- Do you need money for your project?
- Well, then you are going to need to a budget
 - Create a Line-item budget for things that you may need to purchase
 - Creating a budget doesn't mean that you will actually request the funds — your mentor may be able to provide the supplies
 - To actually receive the funds, you will need to fill out a form and submit it to the finance committee
- If you don't know yet, simply write “No budget Anticipated”



TIME LINE

- Create deadlines for your Approach
 - By this Date, I will collect the data
 - Part 1
 - Part 2
 - Part 3
 - By this date, I will analyze the data
 - By this date, I will start writing the report
 - ...



ASSIGNMENT - ENDNOTE

- EndNote is a citation manager
- A citation manager:
 - organizes your references
 - simplifies the process of citing a reference in a manuscript
 - formats a bibliography
- EndNote has a plug-in for Microsoft Word
- The university now has a site license for EndNote
- For the assignment, install EndNote and learn how to use it.

WRITING CENTER

- Your writing needs to be precise and concise. And professional sounding.
- Don't forget to take advantage of the writing center
- Especially if your writing is wanting!
- There is a link on the canvas site
- They book up at the end of the semester, so plan on meeting them early, say after the first draft of your background draft is due (mid-october)



The Writing Center

UNIVERSITY OF COLORADO

DENVER | ANSCHUTZ MEDICAL CAMPUS