Milestone 4

A. High-Fidelity Prototype

User Stories

1. As a student I want to access lecture videos so that I can review topics I may have missed.
2. As a student, I want to discuss lecture material with my peers so that I can better understand the class content.
3. As a student, I want to access lecture notes so that I can see what material was covered in class.
4. As a professor, I want to access and view my students' discussions and questions so that I can provide good feedback and assistance.
5. As a professor, I want to upload videos and other class content so that it is accessible to all students enrolled in the course.

NOTE: We combined them so that:

Prototype 1 - includes user stories 1 & 5

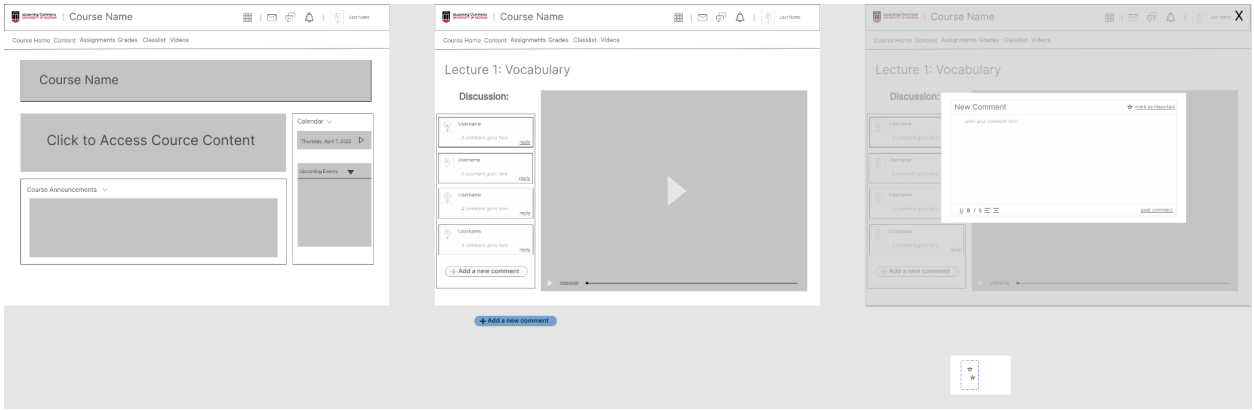
Prototype 2 - includes user stories 2, 3, & 4

Download link for the Figma file:

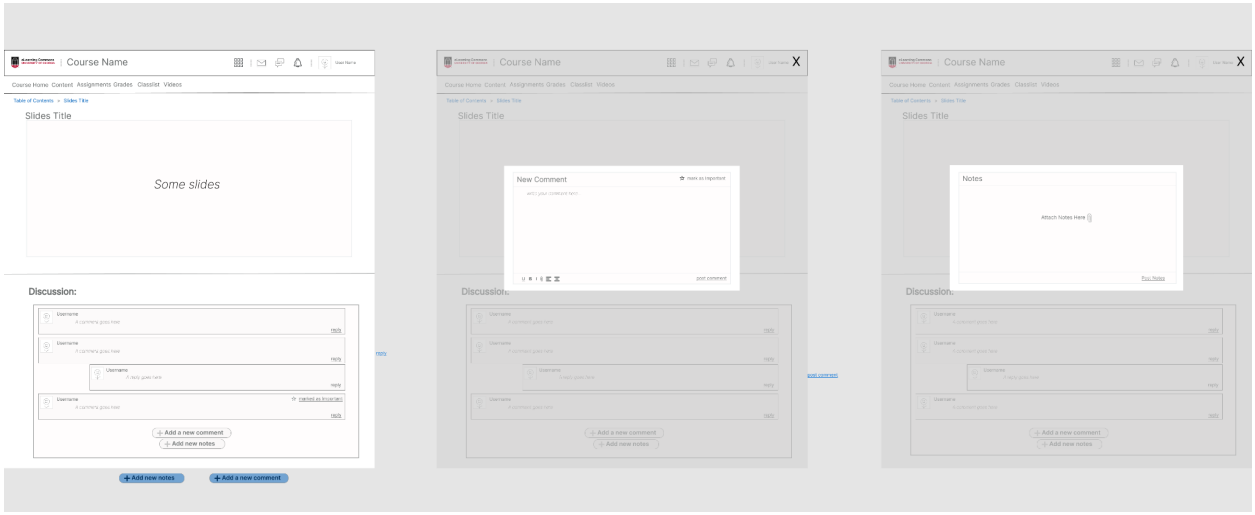
https://drive.google.com/uc?export=download&id=1mzP9NOG3nS6AGaPp5nt24UwVmUu3gotk

Artboards:

User stories 1 & 5



User stories 2, 3, & 4



How was this addressed? restate the user story along with an extended description that explains how the design elements of your prototype address your problem of study with respect to that specific user story

<u>Userstory/Prototype details:</u>

User Story 1: As a student I want to access lecture videos so that I can review topics I may have missed.

- User Story 1 was meant to give students a chance to access lecture videos so they can review content from class. We created a “Video” tab on the top ELC tool bar. The student can click on that tab, and a new page will appear with all of the videos the teacher has posted throughout the semester. The student then can watch as many videos as they wish as well as comment and post questions in the discussion section attached to each video. We thought this design of having all the videos grouped together would increase the findability and discoverability of course material.
- Demo videos:
    - Demo video 1: https://youtu.be/69AZmV2fAL4
    - Demo video 2: https://youtu.be/AFrL0bfYROE

User Story 2: As a student, I want to discuss lecture material with my peers so that I can better understand the class content.

- We addressed this user story in Prototype 2, which encompasses user stories 2, 3, and 4. Our prototype contains a discussion board embedded at the bottom of any content/slides page. This discussion board allows students to communicate with one another, as well as the professor, with regards to a specific section of

content. This addresses the part of our problem of study where we stated that students “lack the affordance of being able to have online discussions”. With this discussion board, students would have the ability to ask questions to the class, reply to one another, or post important comments for that content section.

- Demo videos:
    - Demo video 1: https://youtu.be/IVeXeIuOlgM
    - Demo video 2: https://youtu.be/14FBdnUbx0I
    - Demo video 3: https://youtu.be/1SycRD1uuao

User Story 3: As a student, I want to access lecture notes so that I can see what material was covered in class.

- User Story 3 was meant to give students a chance to easily access lecture notes so they can review content from class. Similarly to User Story 1, there is an ELC page dedicated specifically to class lecture notes. The teacher can upload these at their discretion and students can access them throughout the semester. We also included a discussion section for students to post their own notes and to ask questions to each other. Having a specific page with all the notes from the semester is designed to increase the discoverability and findability of the course material.
- Demo videos:
    - Demo video 1: https://youtu.be/L7K7V_vN5nE

User Story 4: As a professor, I want to access and view my students’ discussions and questions so that I can provide good feedback and assistance.

- To address this user story, we decided to create a discussion board that is visible to both the students and professor. This discussion board allows for everyone in the course to ask questions by leaving a comment and also answer them in a reply. Specifically, the professor is able to view these posts to see what the students need and provide direct feedback and assistance to students.
- Demo videos:
    - Demo video 1: https://youtu.be/fiJMWVbpn7k
    - Demo video 2: https://youtu.be/y2JDyh7gPU4

User Story 5: As a professor, I want to upload videos and other class content so that it is accessible to all students enrolled in the course.

- To address this user story, we created a separate tab in elc just for lecture videos. The course instructor is able to upload recorded lectures for students to view outside of class. This video window is presented alongside a discussion board where students and the professor can leave extra notes and discuss the topics presented in the video. As discussed in user story 1, we thought having

one place for instructors to upload videos and content would increase findability and discoverability for the instructors specific to this user story.

- Demo video:
    - https://youtu.be/xpblrWpaGEE

B. Testing Protocol

Research question:

How can we better facilitate communication between teachers and students when moving from online instruction to in person instruction?

Research Methodology:

We will use observations, focus groups, and surveys to test our research question. The observations will be a simulation of a student trying to perform a list of tasks using our prototype. The focus group will allow us to collect sentiment among our participants so that we can analyze those results alongside a survey that is sent to each participant in order for us to collect quantifiable data.

Testing Procedure:

We can start with an observation of 100 students using our prototypes. We can see what they click on and what they do not click on. We can have a simulation with a set of tasks emulating a real student trying to study to see what signifiers they choose to help them learn. After the simulation, they will be placed into 20 focus groups of 5 participants each. In the focus groups, they will talk about what they liked, what they did not like, and what they thought was missing. After the groups are dismissed, they will fill out a short survey using a likert scale so that we can quantify their opinions and feelings towards our design.

- What is your specific plan to deal with informed consent?
  We will write up a waiver, which highlights any risks, the ability to leave the study at any time, the duration of the experiment, the fact that their actions will be recorded, and the testing procedures that will be used.

- What specific data will you collect and how will it be organized?
  We will collect how many times each signifier is clicked on and rank them from most-clicked to least clicked and how much the discussion feature was used throughout the simulations. We will record the focus groups to be sure that each group stayed on topic with their discussion, and finally we will use the data from the survey to provide feedback for us to improve our design.

- What type of analysis do you intend to perform with the study data, and how will that analysis help answer your research question from (B.1)?

We would perform a sentiment analysis on the data from the observations, focus groups and surveys to see how easy participants felt it was to communicate with their simulated “peers” and “teachers”. If the majority of the sentiment from the participants was that our interface was easy to use, did not require much thinking, and facilitated easy communication then we would consider this a success. Because our main focus was on improving communication in person, our design should be successful by combining the features of the software tools used during the pandemic.

- How might you conduct your testing procedure safely during a pandemic?
  Participants can come in one at a time and meet with a researcher to do the simulation tests. After that, their focus group will be held on Zoom on the same day so that there is less memory loss of the task. Shortly after their focus group, a survey will be emailed to them. These steps would minimize risk of spreading covid-19 throughout researchers and participants.

C. Final Summary Video

Link: https://www.youtube.com/watch?v=s-8DJD6Zqpk