GradTracker Redesign

Problem and Solution Overview

The target users are graduate students that need to track their own graduation progress. Graduate advisors and track directors also use this system to guide and verify students' graduation progress. In our contextual inquiries we came to the understanding that graduate advisors and track directors were satisfied with the current system and instead chose to focus on improving the system from the point of view of graduate students.

For advisors and track directors, their goal is to make sure students are making adequate and timely progress towards graduation. The advisors and track directors rely on external communications to let the student know what must be corrected, but are generally comfortable with GradTracker as they use it.

The goal of students reporting degree progress is to fulfill requirements for graduation in a timely manner. Current practices are unsatisfactory for students because they don't always know how to submit information or why the process is necessary. Students have a difficult time finding what requirements they need to fulfill by what deadline. They also have difficulty navigating the current system which presents a barrier to submitting information and forms.

One issue that makes this problem complicated is that students each have varying required tasks dependent on their track as well as their advisors. Not only are there many different tracks a student can take to earn their degree, but the specifics of their degree are largely influenced by the discretion of their academic advisors. Furthermore, students also have different methods to accomplish their required tasks. Finding a solution that allows students to keep track of a variety of tasks in a way that works for all students makes for a complex solution to the problem. Additionally, while it is important for students to submit information on their progress, they don't know why it is required or who is reading the information they submit. This makes it difficult for students to know who their audience is and what information they should include.

One solution we considered was to incorporate the ability for advisors to set deadlines for students within the system. This could then notify students of upcoming deadlines for tasks they need to complete. Instead, we focused more on implementing a tooltip system that would give clarifying information on what each form is asking for and who the information is for would help students to more effectively and efficiently submit forms. We also opted to directly pull information from elsewhere so that students are not required to enter it all themselves, similar to how the degree audit system currently pulls data for undergraduates.

Storyboards

Storyboard 1

Storyboard Explanation:
The user is a first year CS graduate student at the University of Utah who would like to plan what they need to complete next semester to stay on track for graduation. In order to do this, the user needs to know what their graduate requirements are, what they have and have yet to complete, and (in terms of course requirements) what courses are even available next semester. To find this information with the current system, the user has to search multiple locations and cross reference all of them which can be an annoying, inconvenient and inefficient use of time.

Storyboard 2

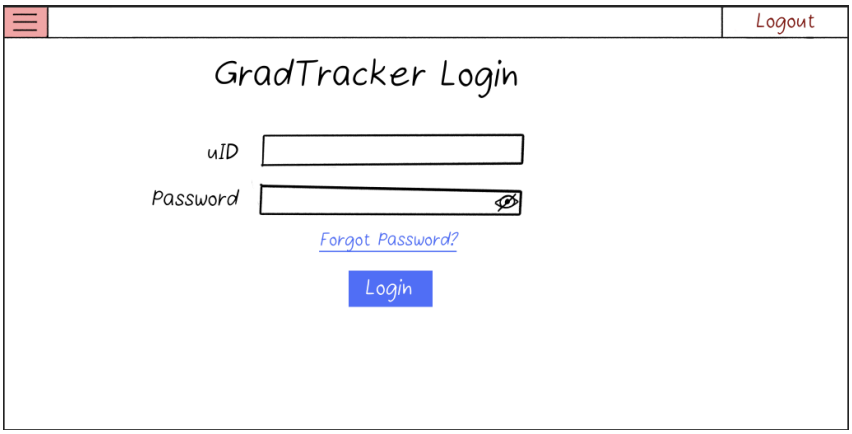
Storyboard Explanation:

The user is a first year CS graduate student at the University of Utah who would like to submit their progress form. In order to do this, the user needs to know what program milestones and courses they have previously completed, as well as what program milestones and courses they will complete this semester. To find this information with the current system, the user has to search multiple locations and cross reference all of them which can be an annoying, inconvenient and inefficient use of time.

Initial Paper Prototype

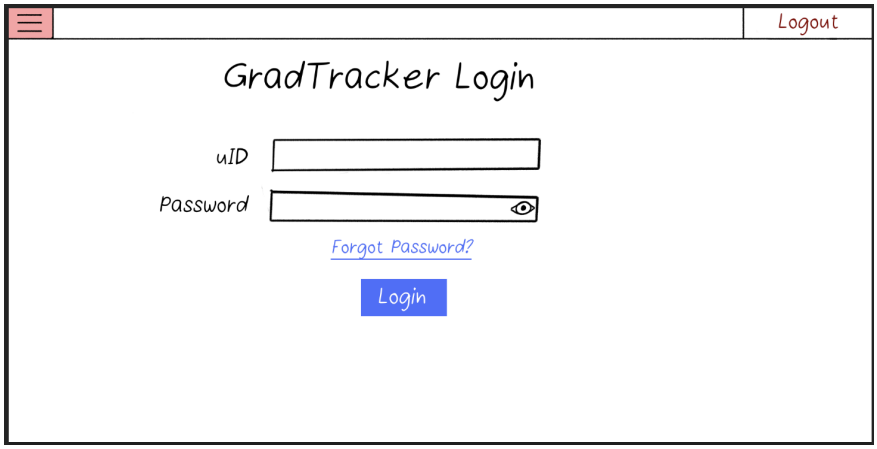
Overview

Image 1.



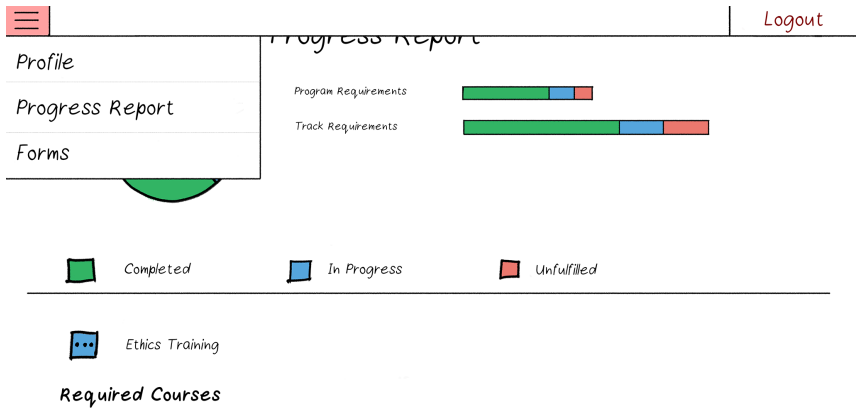
[*Task 1 and 2*]. This is the login page with the default show-password view unactivated.

Image 2.



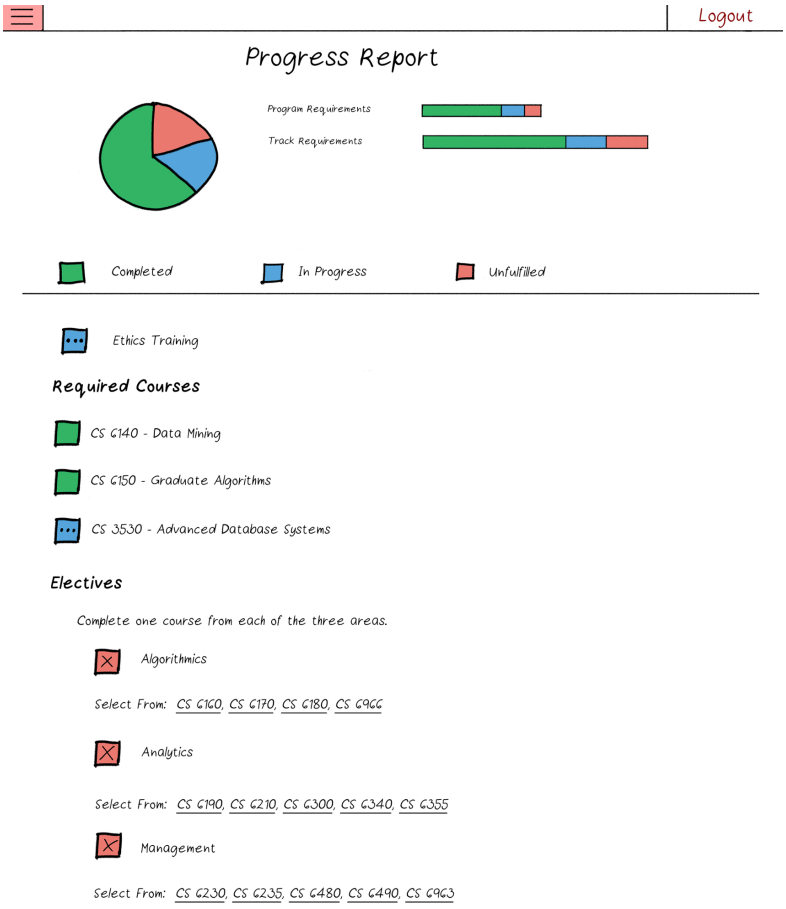
[*Task 1 and 2*]. This is the login page with the show-password view revealed. This happens when the user clicks on the eye icon.

Image 3.



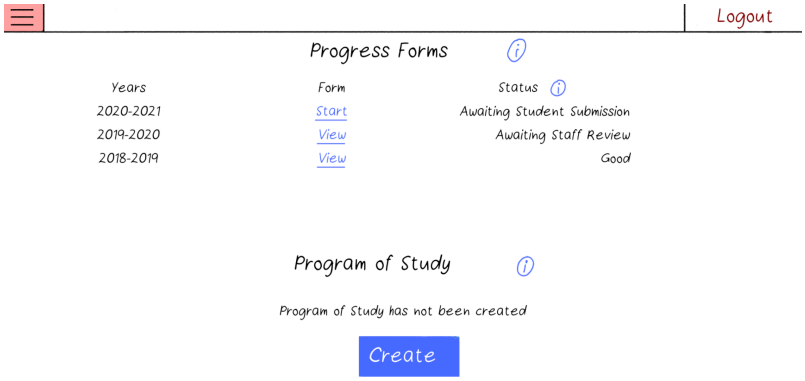
[*Task 1 and 2*]. This view displays the hamburger menu when expanded. The Hamburger menu exists as part of the navigation bar for every page and can be expanded to reveal the drop down of all possible pages (e.g. profile, progress report, and forms) to navigate to when a user clicks on the three-bars icon, also known as the hamburger.

Image 4.



[*Task 1*]. Upon a successful login, the user will land on the Progress Report page. This displays the progress the student has already made as well as what they have yet to do categorized in either track or program requirements. Required items are further categorized by statuses of either completed, in progress, or unfulfilled. There are also suggested time frames listed for quick reference by the user.

Image 5.



[*Task 2*]. This is the Progress Forms which a user can navigate to using the hamburger menu. On this page a user can ‘start’ a new progress form, ‘view’ a past progress form, ‘create’ a program of study (which is the current view displayed), or ‘view’ their program of study once it has been completed. A user also has the ability to hover over multiple information icons to gain further clarity on how to interact with and understand the information on the page.

Image 6

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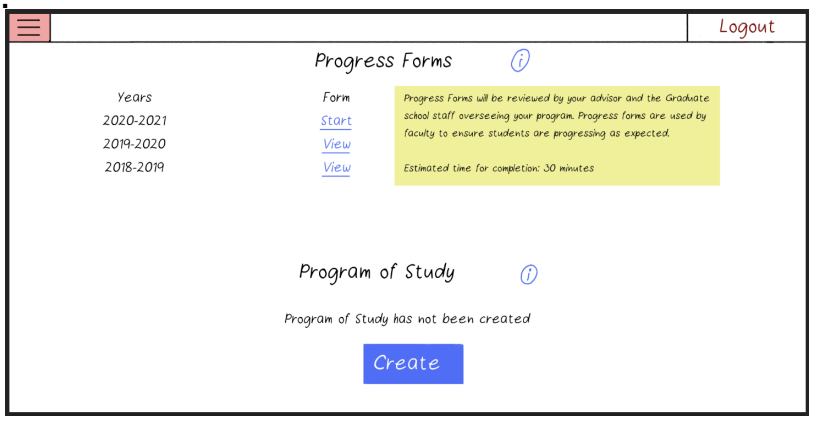
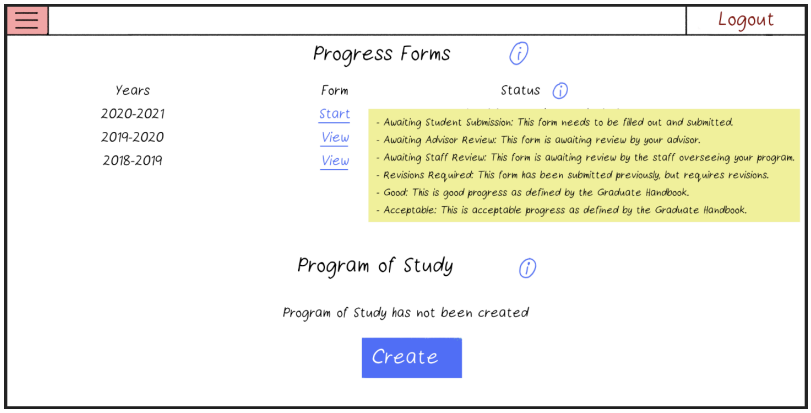


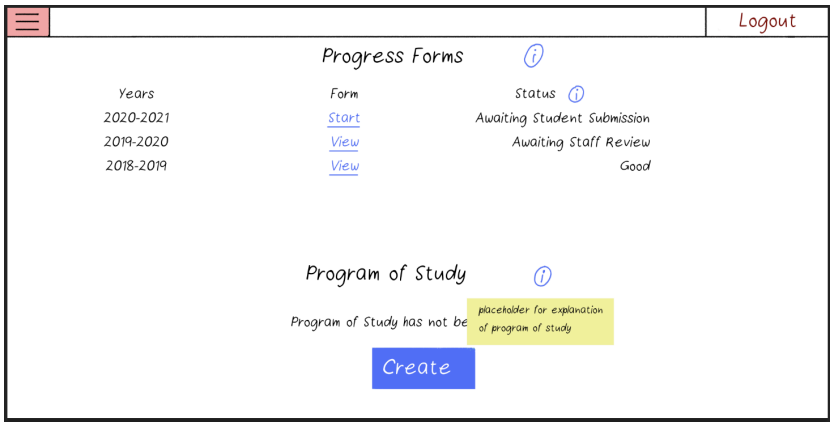
[*Task 2*]. This is the Progress Forms with the information icon bubble for Progress Forms hovered over. This tooltip contains a general description of what the user needs to do and why. There is also a time estimate of how long completing the form will take.

Image 7.



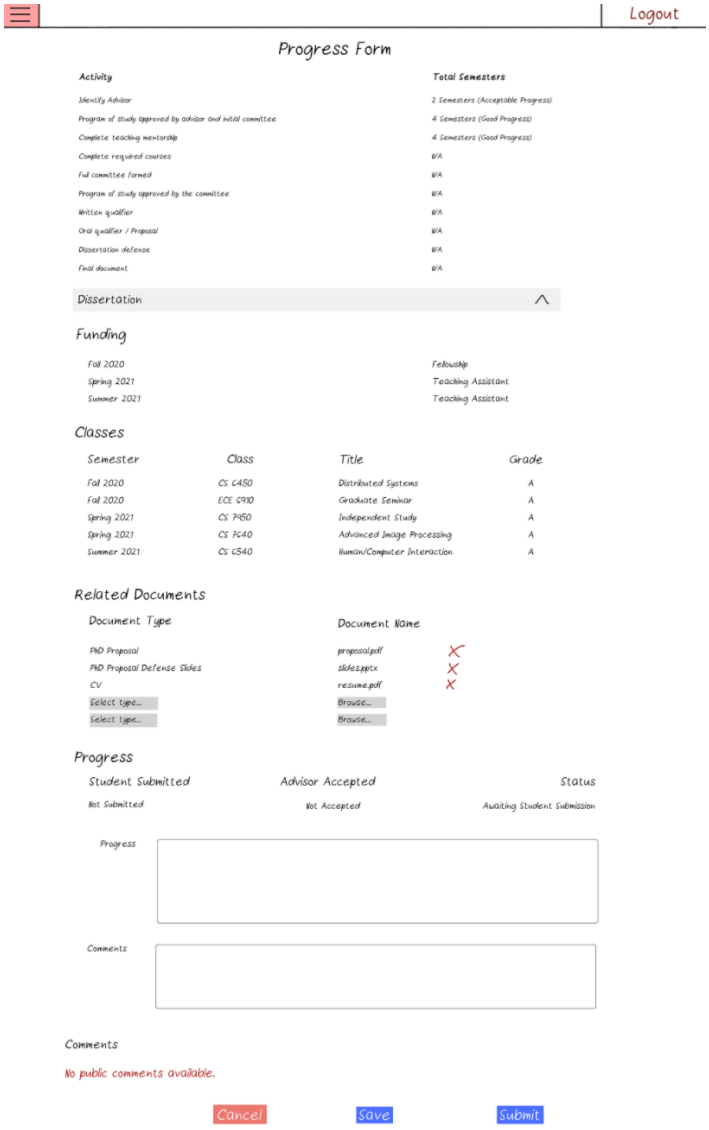
[*Task 2*]. This is the Progress Forms with the information icon bubble for Status hovered over. This tool tip provides a description of what the various status possibilities are along with some additional information.

Image 8.



[*Task 2*]. This is the Progress Forms with the information icon bubble for Program of Study hovered over which currently contains placeholder text.

Image 9.



[*Task 2*]. This is the Progress Form page when a user selects ‘start’ a new form. After making any or no edits, the user can ‘cancel’, ‘save’, or ‘submit’ the form. Clicking on cancel or submit will prompt the user with a message asking them if they are sure they want to cancel/submit the form and ask the user to click ‘yes’ or ‘no’ (for example, the clicking on cancel may result in the prompt: “Are you sure? Canceling the form will result in all edits being lost. <yes> <no>).

Miscellaneous

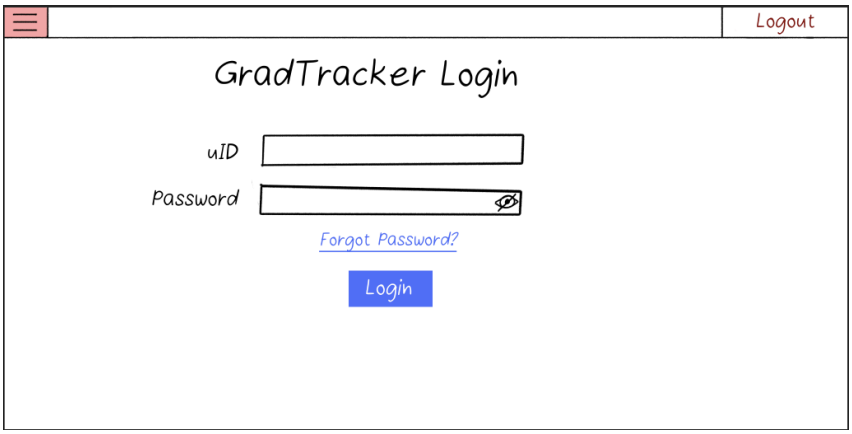
Image 1.

This is the profile page. The user can view and edit their profile or committee information.

Task 1

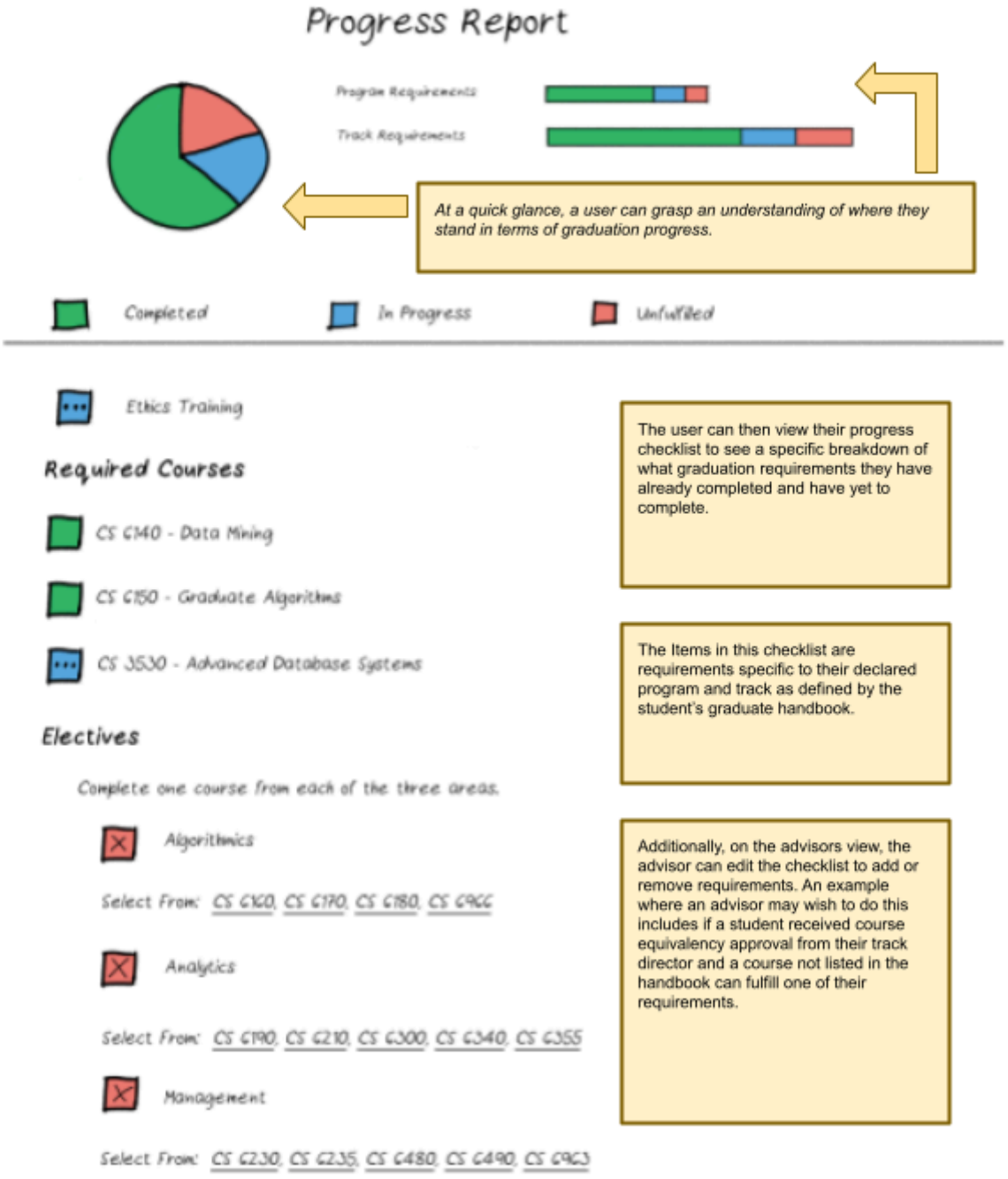
Task 1: The user should use the prototype to see what progress they have made toward earning their degree using the Progress Report page.

Image 1.



The student user will enter their uID and Password and select ‘Login’.

Image 2.

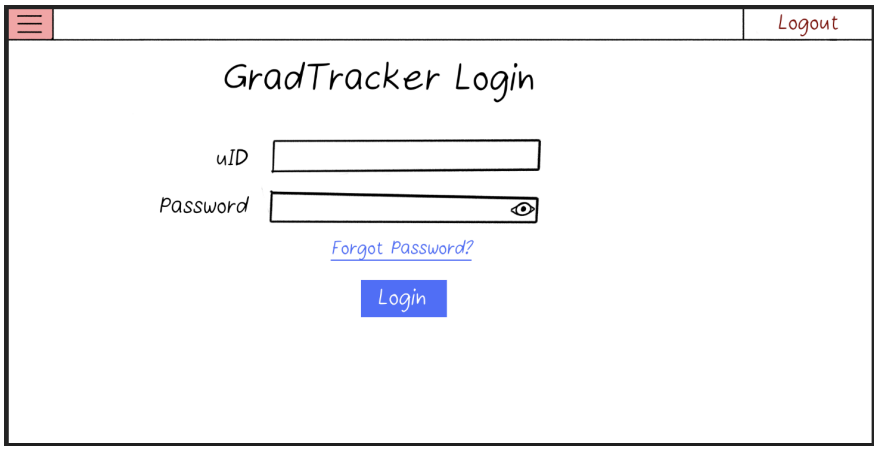


Upon successfully logging in, the user will land on the Progress Report page. Using the pie chart and bar graph visuals, they can get a clear picture of how close they are to reaching graduation with a quick glance. Scrolling down, they can now view all their graduate program and track requirements. Furthermore, they can see what requirements they have completed and which they haven't completed and use this information to know what they should be working on for next semester.

Task 2

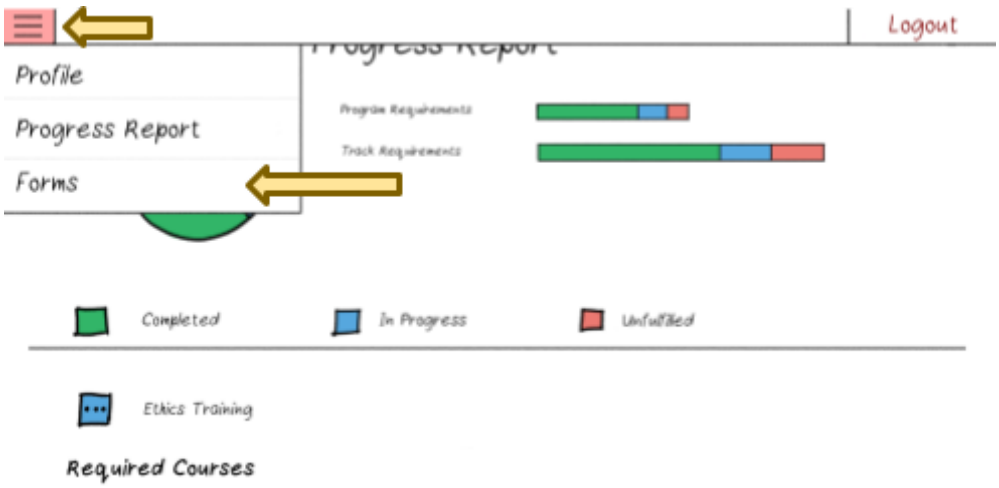
Task 2: The user should use the prototype to fill out and submit a progress form for their last academic year.

Image 1.



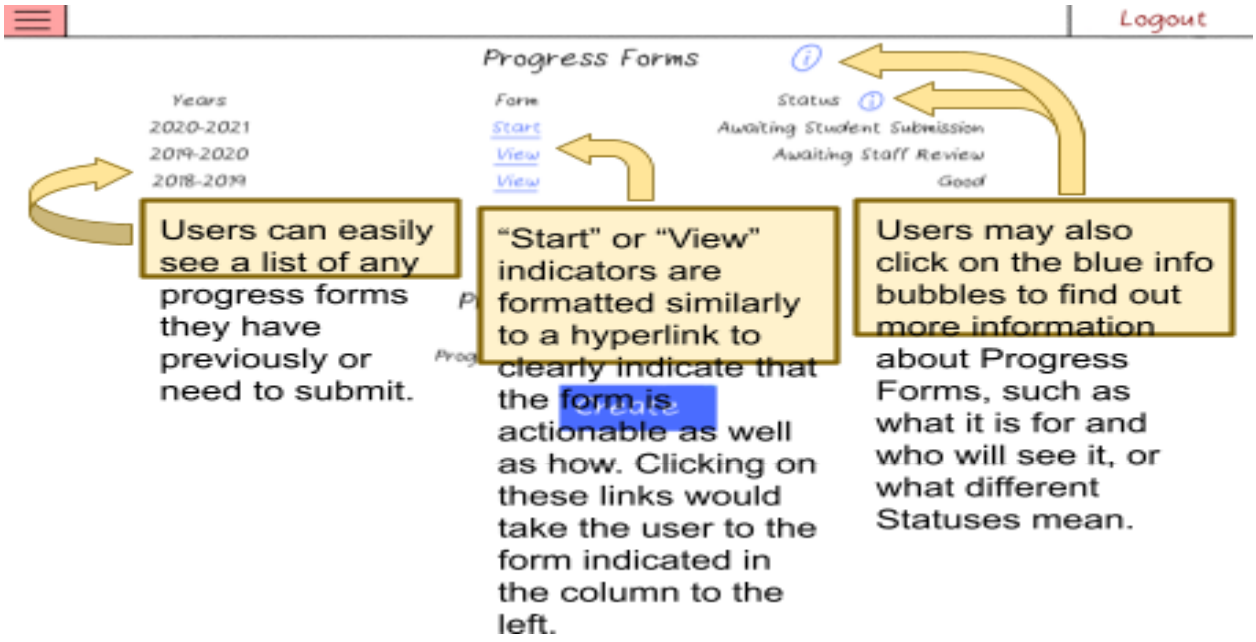
The student user will enter their uID and Password and select ‘Login’.

Image 2.



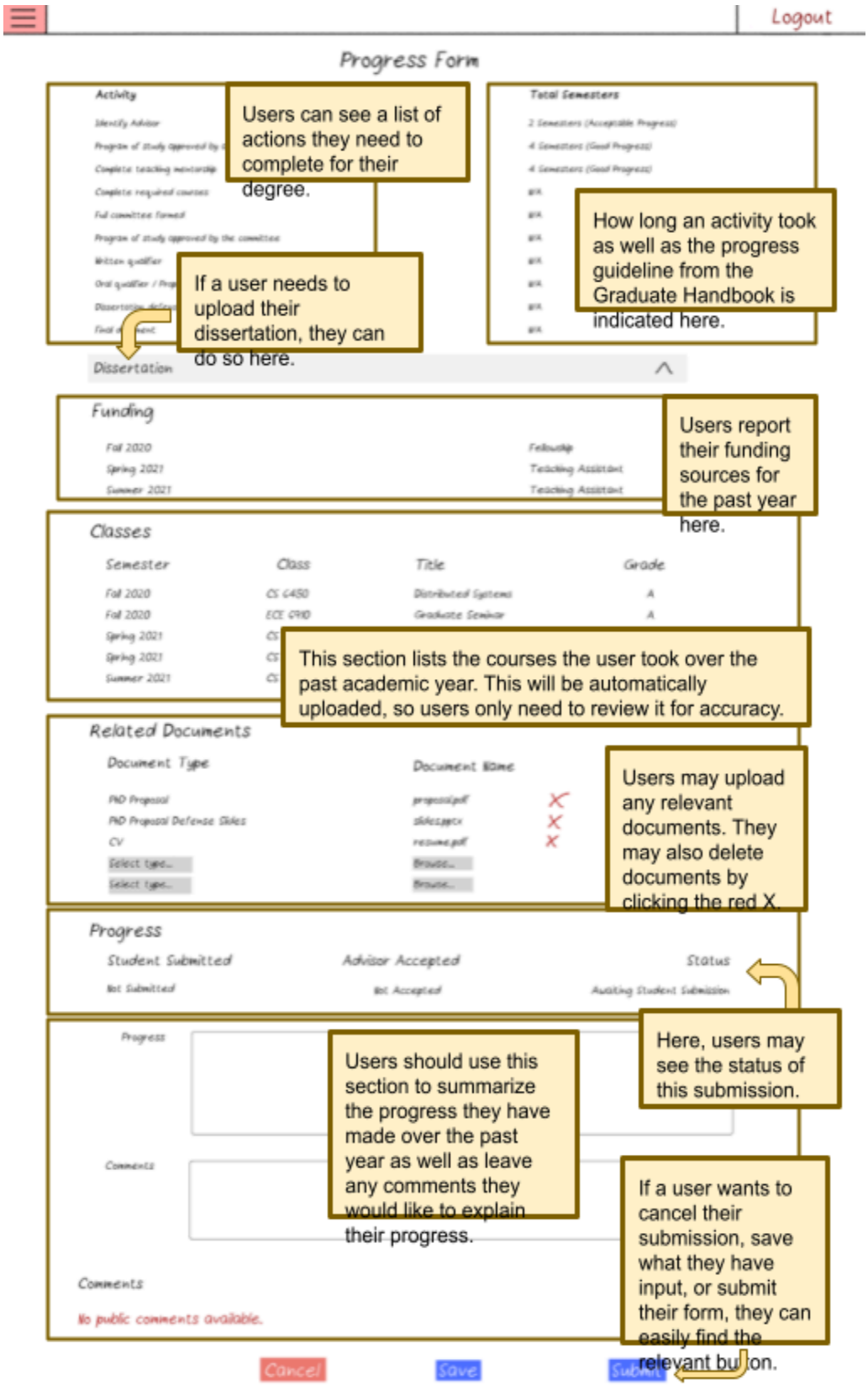
Upon successfully logging in, the user will land on the Progress Report page. From here the user will select the hamburger menu to expand it and select on ‘Forms’ from the drop down.

Image 3.



After selecting the 'Forms page' the user will be able to scan the page to see the many ways they can interact. They can click on the info bubble next to "Progress Forms" to get more information about what Progress Forms are, who sees them, and get a time estimate of how long it will take for them to complete the form. Knowing that they need to start and complete a new progress form, the user will select 'Start'.

Image 7.


Logout
Progress Form
Activity
Total Semesters
Users can see a list of actions they need to complete for their degree.
How long an activity took as well as the progress guideline from the Graduate Handbook is indicated here.
If a user needs to upload their dissertation, they can do so here.
Dissertation
Funding
Fall 2020
Spring 2021
Summer 2021
Fellowship
Teaching Assistant
Teaching Assistant
Users report their funding sources for the past year here.
Classes
Semester
Class
Title
Grade
Fall 2020
CS 6450
Distributed Systems
A
Fall 2020
ECE 6910
Graduate Seminar
A
This section lists the courses the user took over the past academic year. This will be automatically uploaded, so users only need to review it for accuracy.
Related Documents
Document Type
Document Name
PhD Proposal
PhD Proposal Defense Slides
CV
Users may upload any relevant documents. They may also delete documents by clicking the red X.
Progress
Student Submitted
Advisor Accepted
Status
Not Submitted
Not Accepted
Awaiting Student Submission
Here, users may see the status of this submission.
Progress
Users should use this section to summarize the progress they have made over the past year as well as leave any comments they would like to explain their progress.
Comments
Comments
No public comments available.
If a user wants to cancel their submission, save what they have input, or submit their form, they can easily find the relevant button.
Cancel
Save
Submit

Upon starting a new progress form, the user can clearly see what is expected of them and fill out all necessary information. They will need to manually input most of this information, but their course list will be automatically loaded into the submission and they will only need to review this information for accuracy. Uploading and removing documents is simple and easy to do with actionable parts of the page being highlighted in gray. There are buttons at the bottom of the page which are designed to stand out against the background for easy recognition. When finished with the form, the user may submit their form with the ‘Submit’ button at the bottom of the page.

Testing Process

Usability Testing

We tested our design with graduate computer science students who would need to use GradTracker as part of earning their degree, also known as usability testing. For usability testing we created a digital prototype of our design which the testers would interact with through the use of a “computer”. In this instance, the computer was a member of our team who would display the changes to the prototype as directed by the tester, such as when they say they would click on a link, changing the display so that the page connected to that link would be displayed like an actual web page.

During usability testing we utilized techniques including sanity checking, think-aloud prompts, and not providing help unless the user was stuck. For sanity checking, we asked the tester if the task we were asking them to do made sense to them. As they used the prototype, if they were struggling with something we would ask them if the way we designed our prototype made sense to them, or if they desired any specific changes. We used think-aloud prompts to ask testers to say what they were thinking as they worked their way through each task so that we understood their motivations and could more clearly understand what their experience was as they used our prototype. If a user was stuck at any point, we would prompt them to say what they were thinking and only help them if not doing so would prevent them from progressing further into the task so that we would fully understand when and why they struggled using our design.

We also looked at ways that our prototype could be improved and pitfalls we should avoid by comparing the prototype with principles of design, known as usability heuristics. In particular, we analyzed our design with regard to Jakob Nielsen’s usability heuristics as outlined here: https://www.nngroup.com/articles/ten-usability-heuristics/.

Requirements Check

	John Bovard	Aspen Evans	Jesse Toftum
Conductor	#2 - SU-02	#3 - SU-03	#1 - SU-01
Other Roles	#1 - Observer #3 - Computer	#1 - Computer #2 - Observer	#2 - Computer #3 - Observer

Usability Test 1

Team Members:

- Jesse Toftum: Conductor

- John Bovard: Observer
- Aspen Evans: Computer

Goal: To discover if our tasks are reasonable actions the user will want to complete inorder to track their graduation progress and to evaluate if the information provided by our system is what the user expects as well as evaluate if it helps them accomplish the two tasks defined.

Methodology:
- Participant: A graduate student at the University of Utah studying computer science
- Format: Virtual meeting over Zoom
- Reasoning for task framing: Graduate students would normally do this task on their computer at a location of their choice.
- Help provided during the test: None
- Changes to the prototype during the test: None
- Other important information about your methodology (if any): None
- Justification: The user understood the task and was able to perform it without any help or guidance. They still provided feedback for improving the clarity of information provided by our system that may help users complete the tasks with greater ease.

Task 1:
- Task Phrasing: Using this system, would you mind trying to find out what graduation requirements you still have to complete?
- Task Phrasing Justification: We wanted the phrasing to be both simple and neutral while indicating they should try to use our system to accomplish the task. We attempted to stray away from using the word “progress” so we do not unintentionally let the user know which page to navigate to.
- Sanity Check: Does this make sense as something you would use GradTracker for? Does the method we provide for reviewing your progress make sense? Does the information we provided in this section seem realistic or similar to what you would expect?

Task 2:
- Task Phrasing: As you know, graduate students are required to submit progress information. Could you submit a progress form?
- Task Phrasing Justification: We wanted the phrasing to be both simple and neutral. Additionally, we used the exact phrasing “submit a progress form” since that is the phrasing advisors use when they notify students to submit their forms.
- Sanity Check: Does this make sense as something you would use GradTracker for? Does the method we provide for submitting your progress make sense?

Revisions:
1. We reworked the phrasing we use when asking participants to do tasks to be more ambiguous so we aren’t unintentionally giving them hints on how to complete the task.

2. We also reviewed the order we have them do things to see if they clearly understand how to navigate the website.
3. We reviewed our script and practiced using it in mock usability tests before we conducted the next test. We each practiced our role before going into the usability test.

Usability Test 2

Team Members:

- John Bovard: Conductor
- Aspen Evans: Observer
- Jesse Toftum: Computer

Goal: To discover if our tasks are reasonable actions the user will want to complete inorder to track their graduation progress and to evaluate if the information provided by our system is what the user expects as well as evaluate if it helps them accomplish the two tasks defined.

Methodology:

- Participant: A graduate student at the University of Utah studying computer science
- Format: Virtual meeting over Zoom
- Reasoning for task framing: Graduate students would normally do this task on their computer at a location of their choice.
- Help provided during the test: None
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- Other important information about your methodology (if any): None
- Justification: The user understood the task and was able to perform it without any help or guidance. They still provided feedback for improving the clarity of information provided by our system that may help users complete the tasks with greater ease.

Task 1:

- Task Phrasing: Using this system, would you mind trying to find out what graduation requirements you still have to complete?
- Sanity Check: Does this make sense as something you would use GradTracker for? Does the method we provide for reviewing your progress make sense? Does the information we provided in this section seem realistic or similar to what you would expect?

Task 2:

- Task Phrasing: As you know, graduate students are required to submit progress information. Could you submit a progress form?
- Sanity Check: Does this make sense as something you would use GradTracker for? Does the method we provide for submitting your progress make sense?

Revisions:

1. While completing task 2, users have stated that they effectively understand the process and would fill it out accordingly using the system. They said everything is very intuitive and didn't feel the need to interact with it on a field by field basis. This means we are not getting enough detailed information on how users would specifically interact with the form. To rectify this, we had our participants explain how they would submit the progress form if they had already accomplished what they are working on this semester. This would lead to them interacting with the form more and allowed us to get more valuable feedback. We also asked them what makes them feel like they need to or do not need to interact with certain parts of the Progress Form.

Usability Test 3

Team Members:

- Aspen Evans: Conductor
- Jesse Toftum: Observer
- John Bovard: Computer

Goal: To discover any points of confusion or struggle a user may have while interacting with our system. To determine how to improve, remove, or add features on our system to best provide users with an easy to use and positive experience with our system that helps them achieve the tasks we defined.

Methodology:

- Participant: A graduate student at the University of Utah studying computer science
- Format: Virtual meeting over Zoom
- Reasoning for task framing: Graduate students would normally do this task on their computer at a location of their choice.
- Help provided during the test: None
- Changes to the prototype during the test: None
- Other important information about your methodology (if any): None
- Justification: The User understood the task and was able to perform it without any help or guidance. They still provided feedback for improving clarity of the task

Task 1:

- Task Phrasing: Using this system, would you mind trying to find out what graduation requirements you still have to complete?
- Sanity Check: Does this make sense as something you would use GradTracker for? Does the method we provide for reviewing your progress make sense? Does the information we provided in this section seem realistic or similar to what you would expect?

Task 2:

- Task Phrasing: As you know, graduate students are required to submit progress information. Could you submit a progress form?
- Sanity Check: Does this make sense as something you would use GradTracker for? Does the method we provide for submitting your progress make sense?

Test Results

Usability Tests

Usability Test 1

Most Important Finding:

1. We need to more clearly indicate to users that certain fields are editable and certain fields are prefilled.
    a. Evidence for finding: When filling out the progress form, the user was uncertain about what information was editable and what was not.
    b. Justification: Users should be able to immediately understand what they need to do on the Progress Form page. If users are uncertain about what they can and cannot edit, this indicates an important flaw in our design. We provided shading and an arrow to make it clear that information that was not imported from previous Progress Forms are editable via a drop down menu. This in addition to the placeholder default text being N/A when an item has not yet been edited helps make it clear to the user which items are static and which items need action.

Less Important Finding:

2. Having easy access to grades would be useful for students in GradTracker.
    a. Evidence for finding: The participant said that it would be useful to see the grade they had earned for courses they had previously taken.
    b. Justification: The participant said it would be useful, so we implemented the change. A goal of the redesign is to streamline the user experience such that they would not need to use multiple resources for tracking and submitting progress. This is less important than the first finding because the first issue is about basic use of the prototype, whereas the second finding indicates a small part of information was missing. In order to meet this goal we added more information about courses that students had already taken on the Progress Report page, including the grade that was earned.

Usability Test 2

Most Important Finding:

3. The user didn't know exactly where to go to complete the task of submitting a progress form.
    a. Evidence for finding: When asked to demonstrate how they would submit a progress form the user clicked on the hamburger menu and selected the "Progress Report" page. They then realized that this was the incorrect page and clicked on the hamburger menu once again and selected the "Forms" page. The user explained that the reason they selected "Progress Report" first was because the name "Progress Form" made them think they would want to be searching for a tab that contained similar wording. Especially a tab that contained the word "progress".
    b. Justification: Easily submitting a progress form is a fundamental part of our design. If this is not obvious to the user, this indicates an important flaw in our design. To revise this, the forms page was split into two separate pages, namely, "Progress Forms" and "Program of Study". This was done so the user could immediately identify the correct tab when searching by the expected and specific form names and we no longer have the slightly more ambiguous tab name "Forms".

Less Important Finding:

4. It was not obvious to the user that the Progress Report page includes a checklist for various requirements.
    a. Evidence for finding: The user mentioned that it would be useful if the system would provide a checklist for their program requirements in addition to their course requirements. This revealed that it was not clear that the Progress Report page includes a checklist for program requirements and track requirements (course requirements).
    b. Justification: How the Progress Report page is intended to be used should be obvious to the user. Our test indicated that it was not, indicating an important problem with our design. This is less important than finding 3 as finding 3 indicates that the user had difficulty completing the task, whereas this finding indicates that the user wanted more functionality from the design (which was there, but needed to be made more obvious). To make this more obvious we categorized the checklist by Program Requirement items and Track requirement Items so students don't think the checklist only refers to course work.

Usability Test 3

Most Important Finding:

5. It was not obvious to the user that fields in the progress form that are marked as “not yet fulfilled” should be checked for validity before submitting their form.
    a. Evidence for finding: In the progress form the participant didn’t know to leave the default “not yet fulfilled” as-is for activities that they have not yet completed.
    b. Justification: If how our design is intended to be used is not obvious to a user, it indicates an important flaw in our design which should be redesigned. To revise this, we included the “Instructions” button at the top of the progress form page. Students who are confused on how to fill out the form will be able to click on ‘instructions’ to see what fields, if any, are required to fill out as well as overall guidelines on how to interact with the form (e.g. If an activity has not been completed yet, then leave the field on the default “Not Yet Fulfilled” drop down option).

Less Important Finding:

6. It was not obvious to the user that classes were prefilled from data pulled from their records. This caused confusion for the user as they wanted to be able to edit their course list.
    a. Evidence for finding: The participant was confused that there was no button for editing the list of classes. She was unsure whether the classes are a reminder of what was taken or if it is something she needs to fill out/confirm.
    b. Justification: It should be obvious to users that certain fields are prefilled and their only for verification purposes. If this aspect of our design is not obvious to the user it indicates an important flaw in our design. This is less important than finding 5 since finding 5 may lead users to not fill out a progress form correctly, thus failing to complete the task correctly, whereas this finding indicates a small communication problem. Additionally, this finding may not be true in a real life use since the prototype had fake information for the user’s course list and a real life use of the design would have a course list that matches the users experience, potentially making the prefilled nature of the section more obvious. To remove this issue we removed the classes section entirely. The list of classes students took will be sent to advisors as part of the progress form, but since the students don’t need to edit the list we removed it from their view to avoid confusion.

Heuristic Evaluation

Most Important Finding:

1. There was inconsistency between the page titles and the option in the hamburger menu that linked to them.
    a. Evidence for finding: The peer critique said: “There is an inconsistency between the menu item’s name and the page title. While “Forms” makes sense, but the only type of form that the application supports is “Progress Forms” (*sic*).”
    b. Justification: The name of the page and the name of the link that is clicked on to go to that page should be consistent. This indicates an important flaw in our design. To revise this we put the title “Forms” at the top of the page so that the link in the hamburger menu and the page title match.

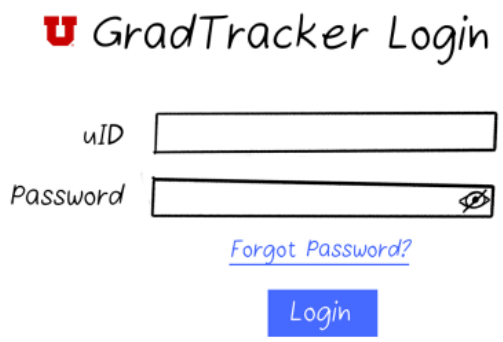
Less Important Finding:

2. It is difficult to quickly read through the information on the profile page due to there being too much space.
    a. Evidence for finding: The peer critique said: “In the profile section, there are labels such as Name, email, ID, etc in a column, but their respective information is very far away in the same row. Meanwhile, in progress forms, labels are at the top of columns, with their respective information in close proximity in the same column instead of the same row.”
    b. Justification: Users should be able to quickly read through the profile page and understand what information belongs to what field. If this is not obvious, this indicates an important problem with the readability of our design. This is less important than the other finding as the first finding indicates an issue that would cause navigation problems for a user which may potentially lead them to struggle to complete the task while this finding indicates a minor readability issue that only slows down task completion. The profile and the progress forms pages have very different purposes which make using different orientations more sensible. Though, we did adjust the spacing of the profile page to make it more readable.

Final Paper Prototype

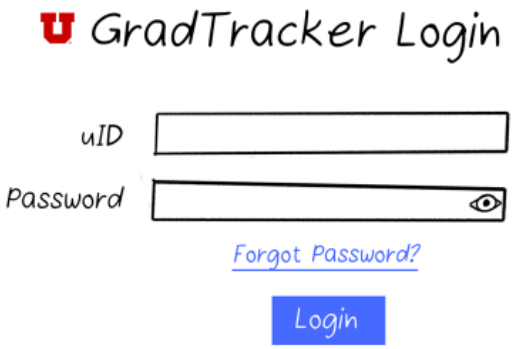
Overview

Image 1.



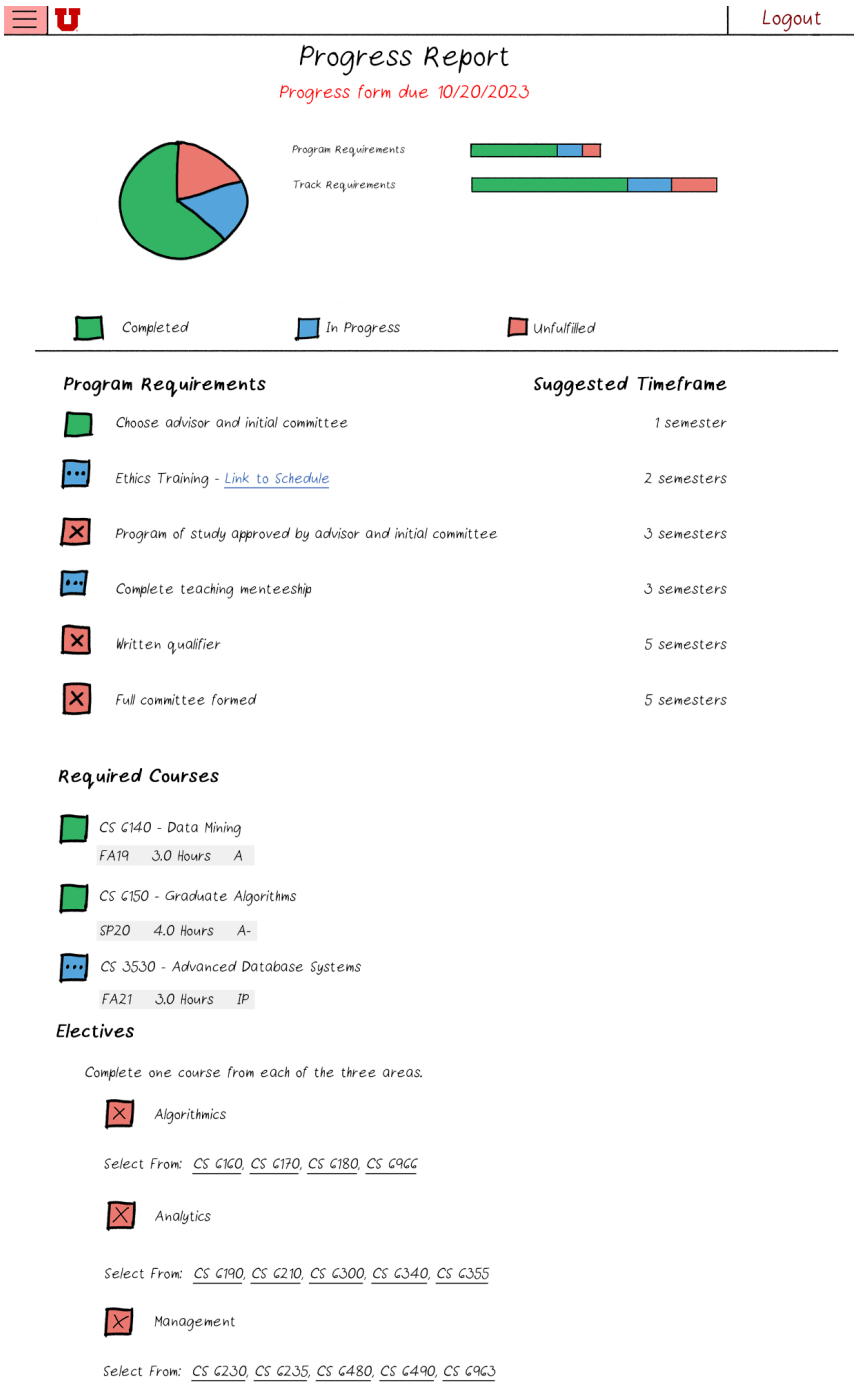
[*Task 1 & 2*] This is the login page with the default show-password view unactivated.

Image 2.



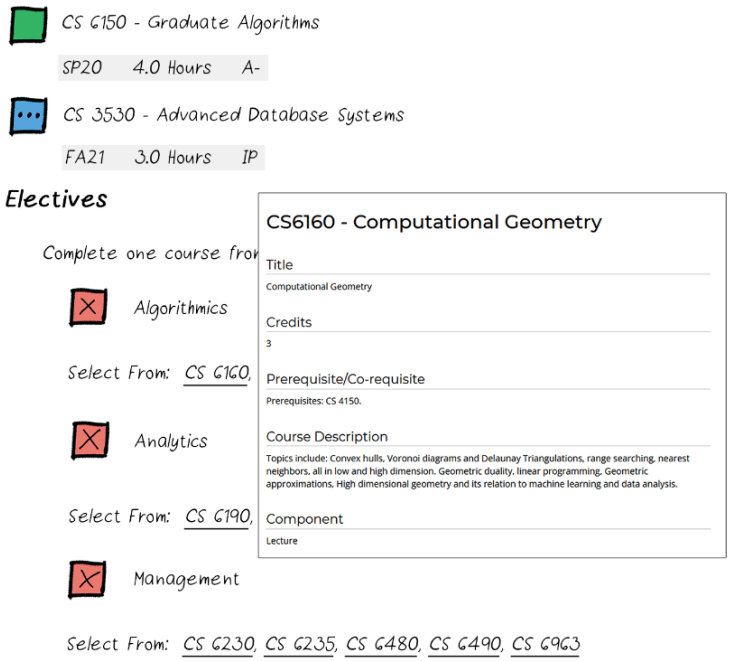
[*Task 1 & 2*] This is the login page with the show-password view revealed. This happens when the user clicks on the eye icon.

Image 3.



[*Task 1*] Upon a successful login, the user will land on the Progress Report page. This displays the progress the student has already made as well as what they have yet to do categorized in either track or program requirements. There are also suggested time frames listed for quick reference by the user.

Image 4.

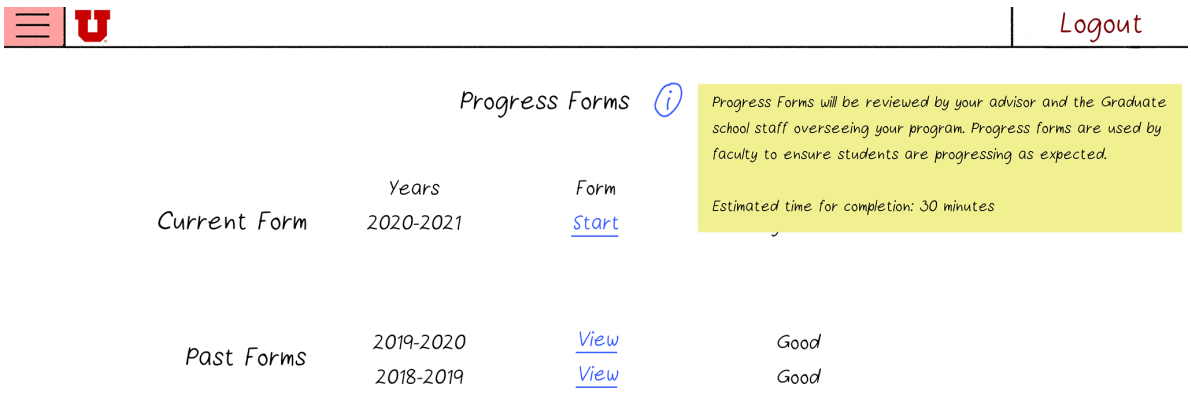


[*Task 1*] This is an alternative view of the Progress Report page seen when a user hovers over a course. If the user hovers over an underlined class, a course description will appear in a tooltip.

Image 5.

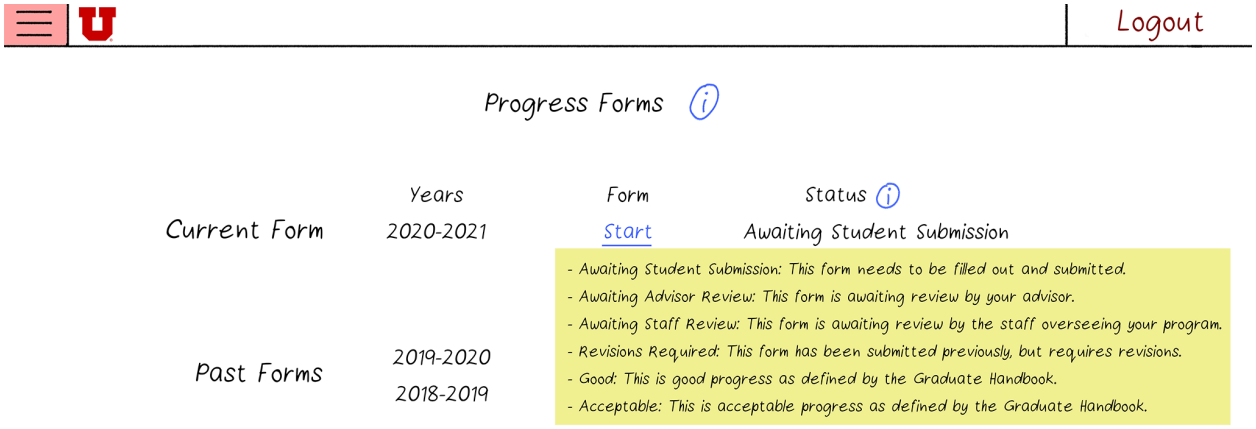
[*Task 1 & 2*] This view displays the hamburger menu when expanded. The Hamburger menu exists as part of the navigation bar for every page and can be expanded to reveal the drop down of all possible pages (e.g. profile, progress report, Progress Forms, Program of Study, and Graduate Resources) to navigate to when a user clicks on the three-bars icon, also known as the hamburger.

Image 6.



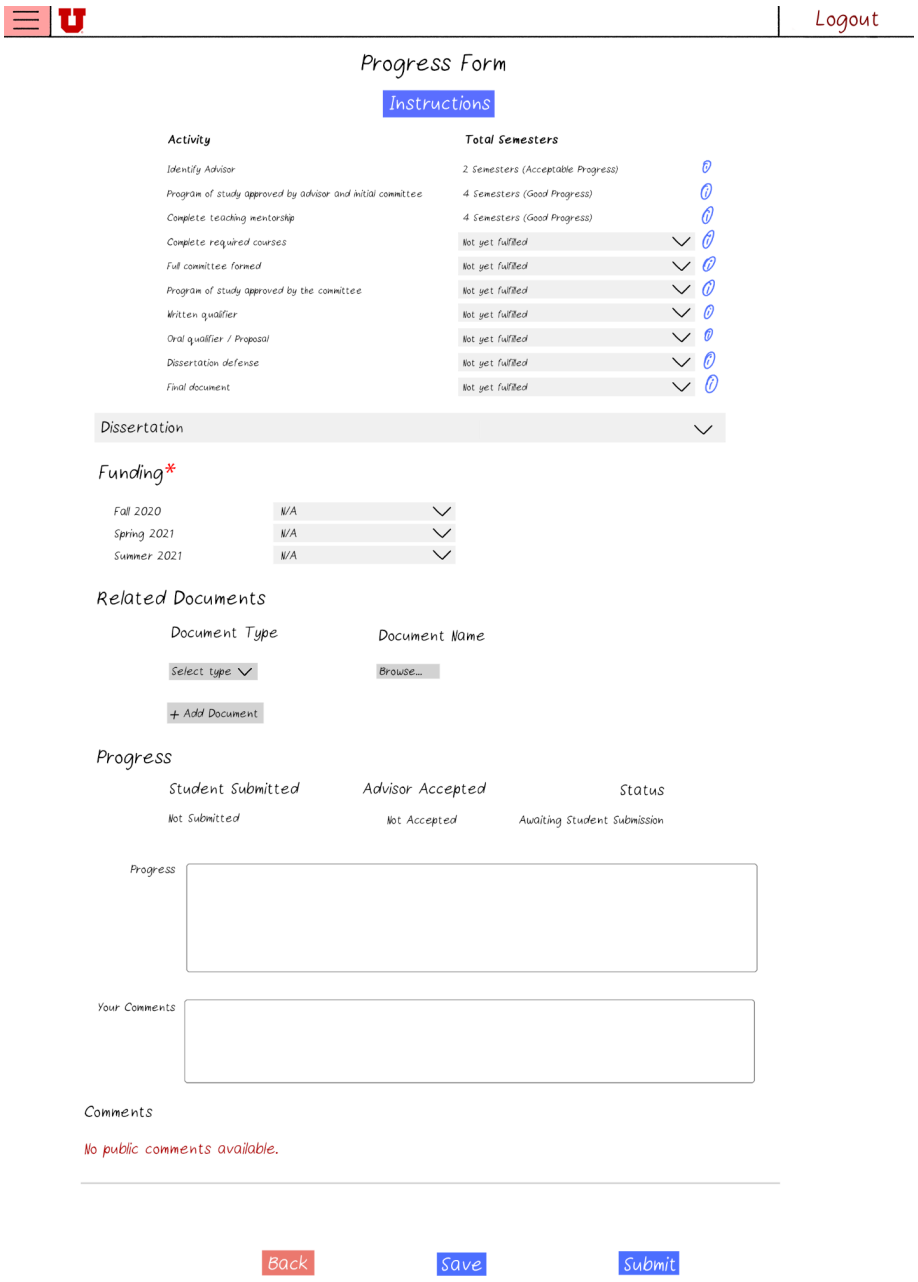
[*Task 2*] This is the Progress Forms with the information icon bubble for Progress Forms hovered over. This tooltip contains a general description of what the user needs to do and why. There is also a time estimate of how long completing the form will take.

Image 7.



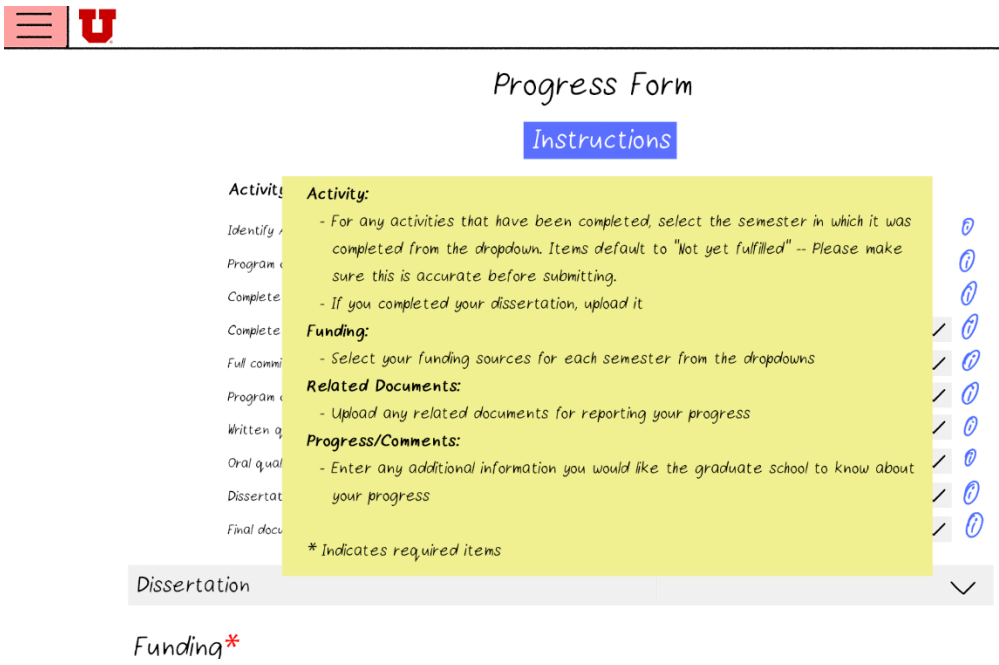
[*Task 2*] If a student clicks on the info bubble next to Status, this is the tool tip that is displayed. It provides a description of what the various status possibilities are with some additional information.

Image 8.



[*Task 2*] This is the participant's view of the Progress Form page when they click on 'Start' from the previous Progress Form page view.

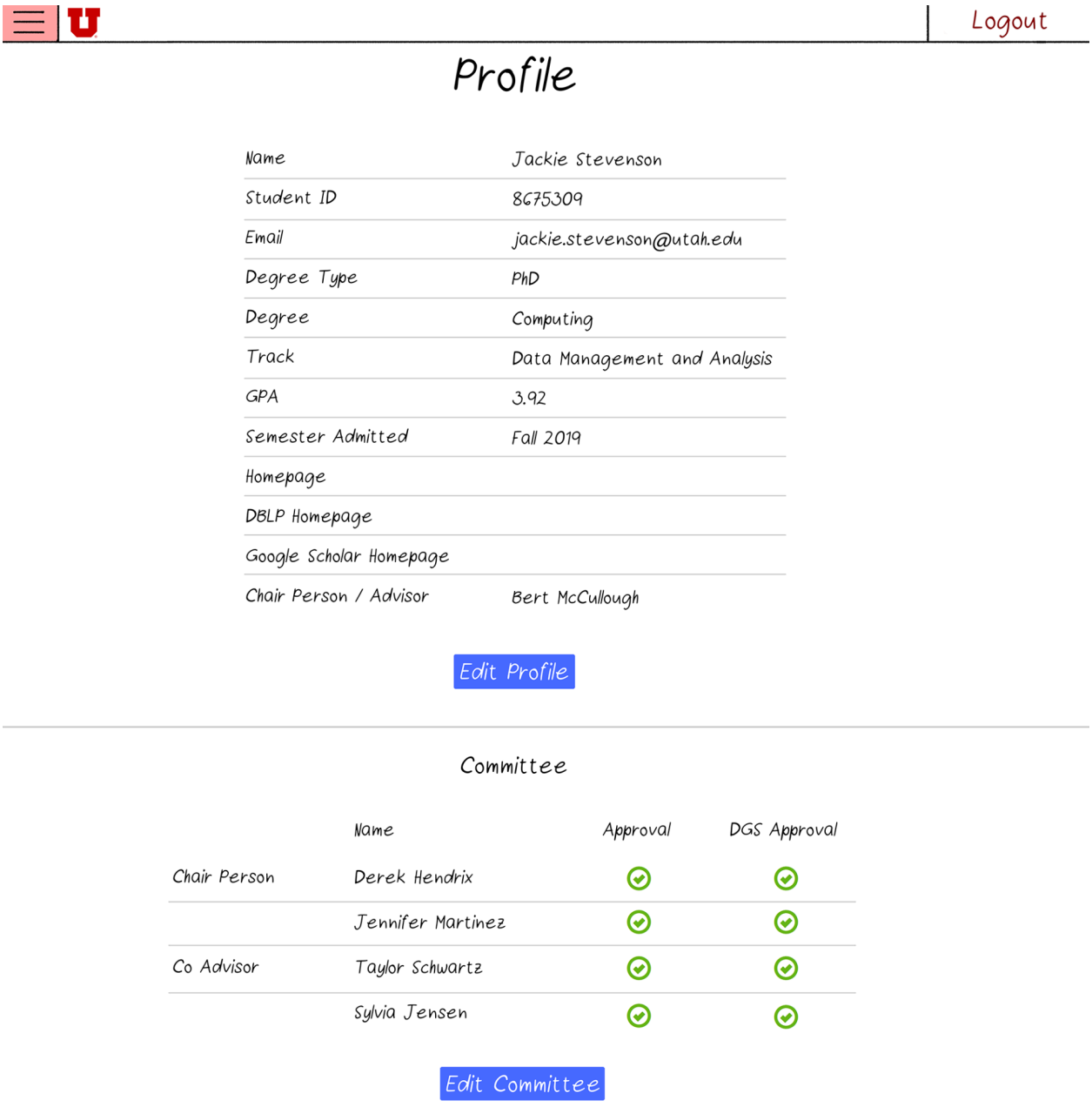
Image 9.



[*Task 2*] If the participant clicks on “Instructions”, a tooltip (with the yellow background) appears, providing instructions on what they are supposed to fill out.

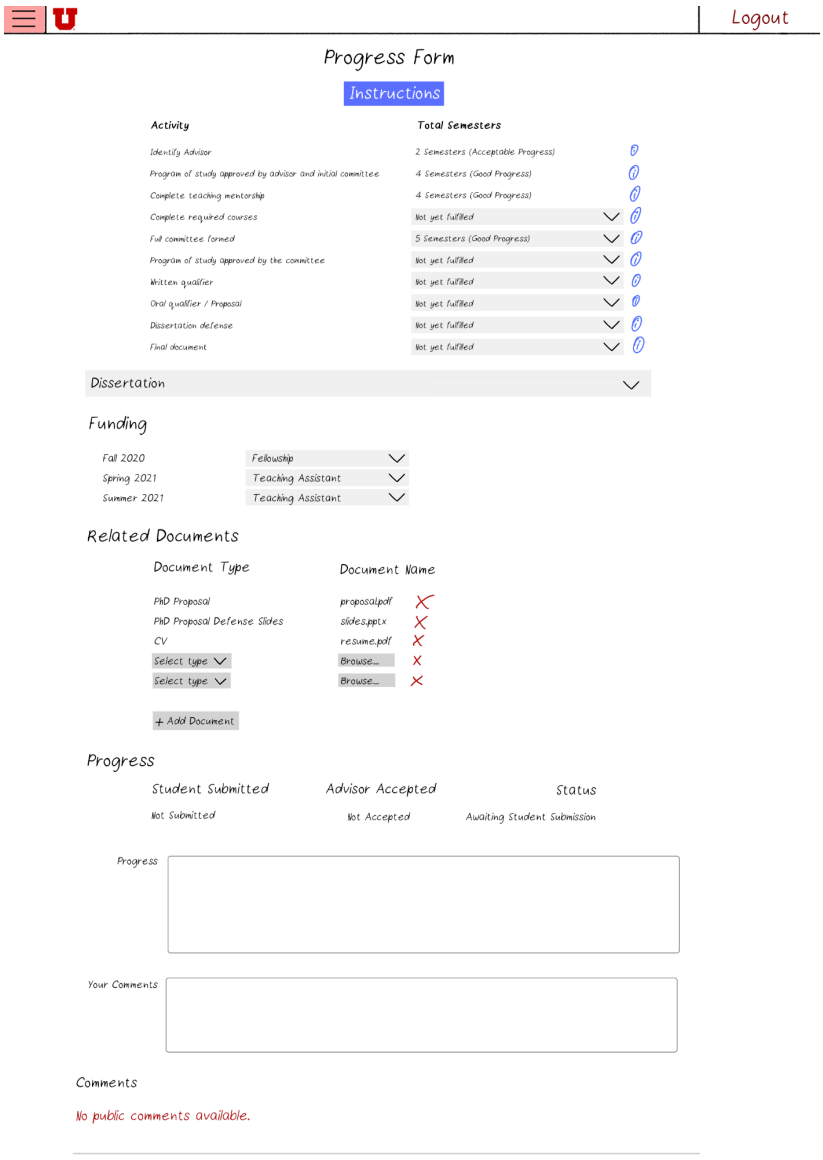
Miscellaneous

Image 1.



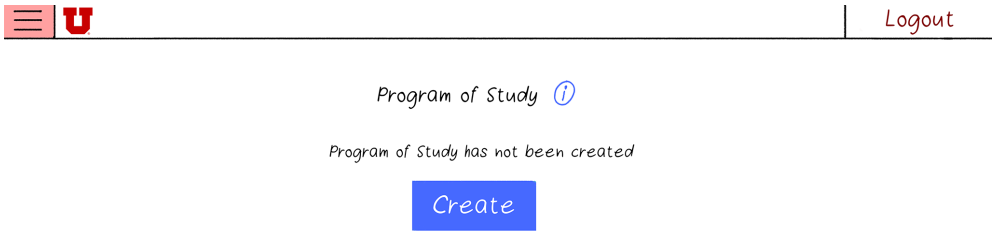
The student's view of their profile page. They can edit their profile or their committee if they need to. Because of the tasks we chose to focus on, this page may or may not be used by participants in usability testing.

Image 2.



An example of what the Progress Form may look like after a student fills it out.

Image 3.

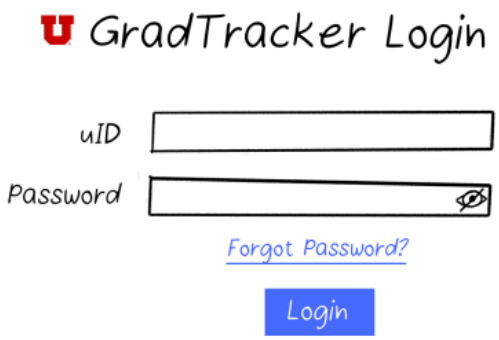


The Program of Study page after it is selected from the hamburger menu. From here students could click “Create” and submit their Program of Study. This is not part of one of our tasks, so we did not create a form for submitting this.

Task 1

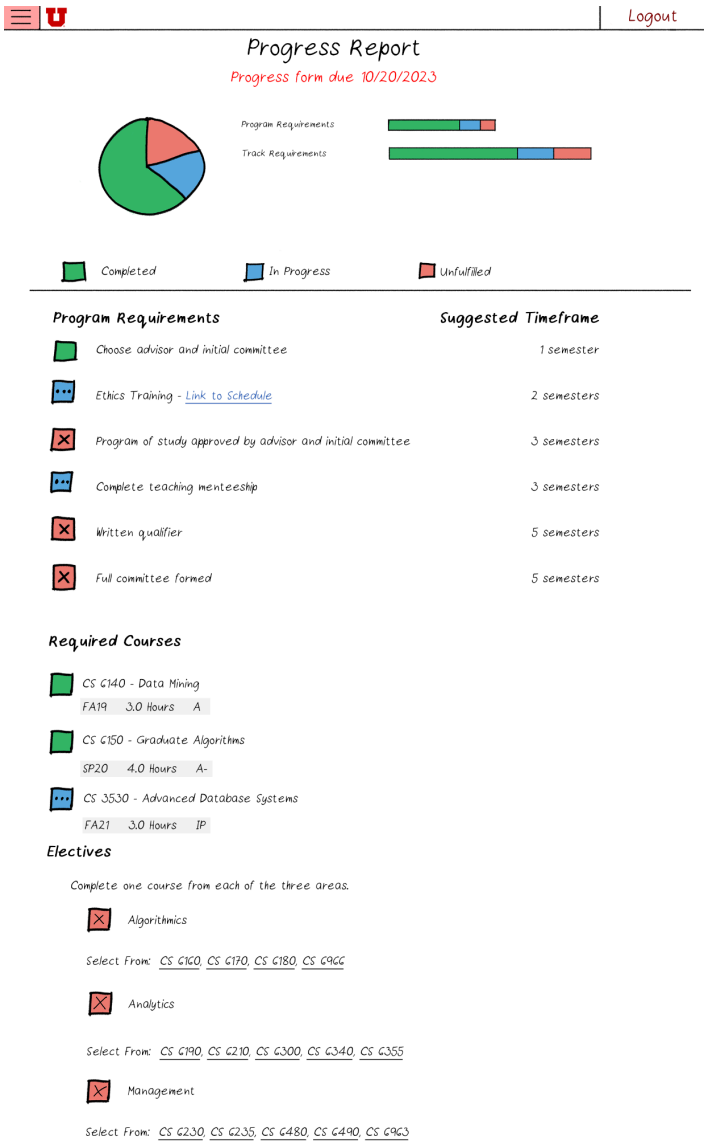
Task 1: The user should use the prototype to see what progress they have made toward earning their degree using the Progress Report page.

Image 1.



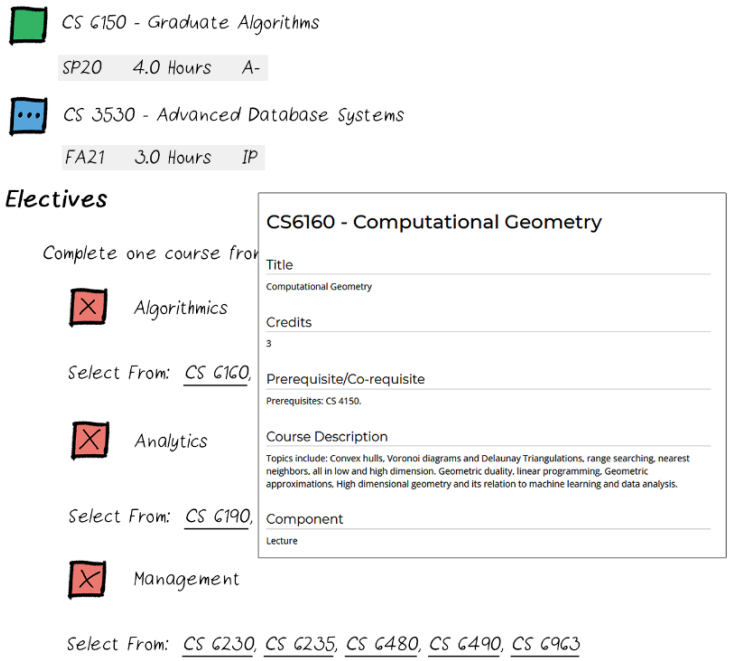
The student user will enter their uID and Password and select ‘Login’.

Image 2.



Upon successfully logging in, the user will land on the Progress Report page. Using the pie chart and bar graph visuals, they can get a clear picture of how close they are to reaching graduation with a quick glance. In red text they are immediately reminded when their next progress report is due if they have not submitted it yet. Scrolling down, they can now view all their graduate program and track requirements. They can also see what requirements they have completed and which they haven't completed and use this information to know what they should be working on for next semester. If a student wants to know what they should be working on they can refer to the Suggested Time Frame component on the right-hand side of the page to see when they need to complete a program requirement to maintain good progress.

Image 3.

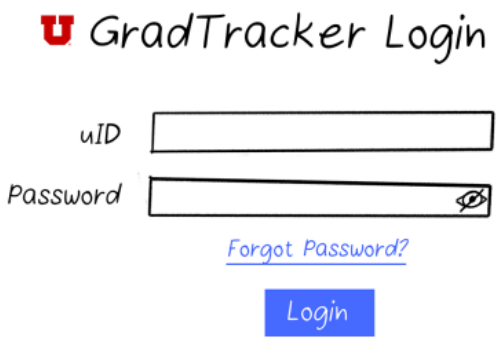


As the student wants to plan their course schedule for their next semester they are able to hover over an underlined class and a course description will appear in a tooltip.

Task 2

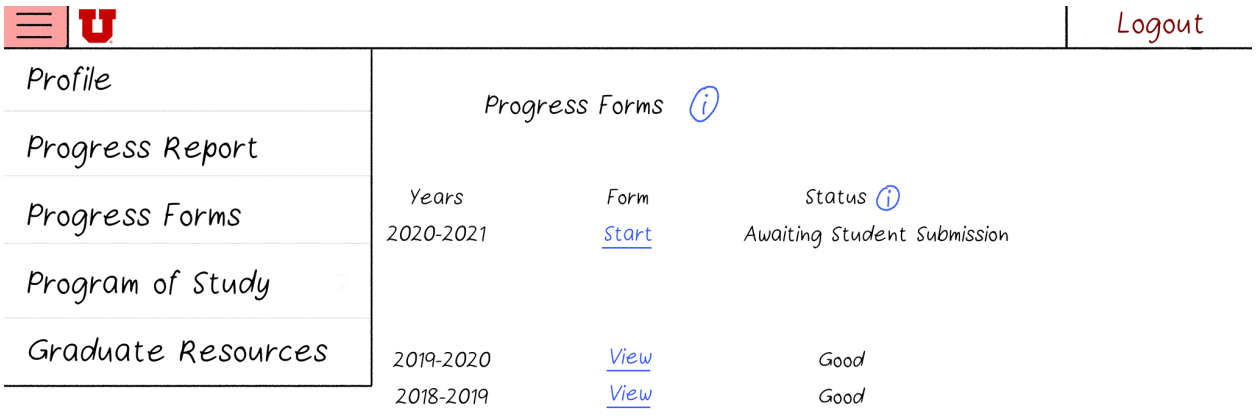
Task 2: The user should use the prototype to fill out and submit a progress form for their last academic year.

Image 1.



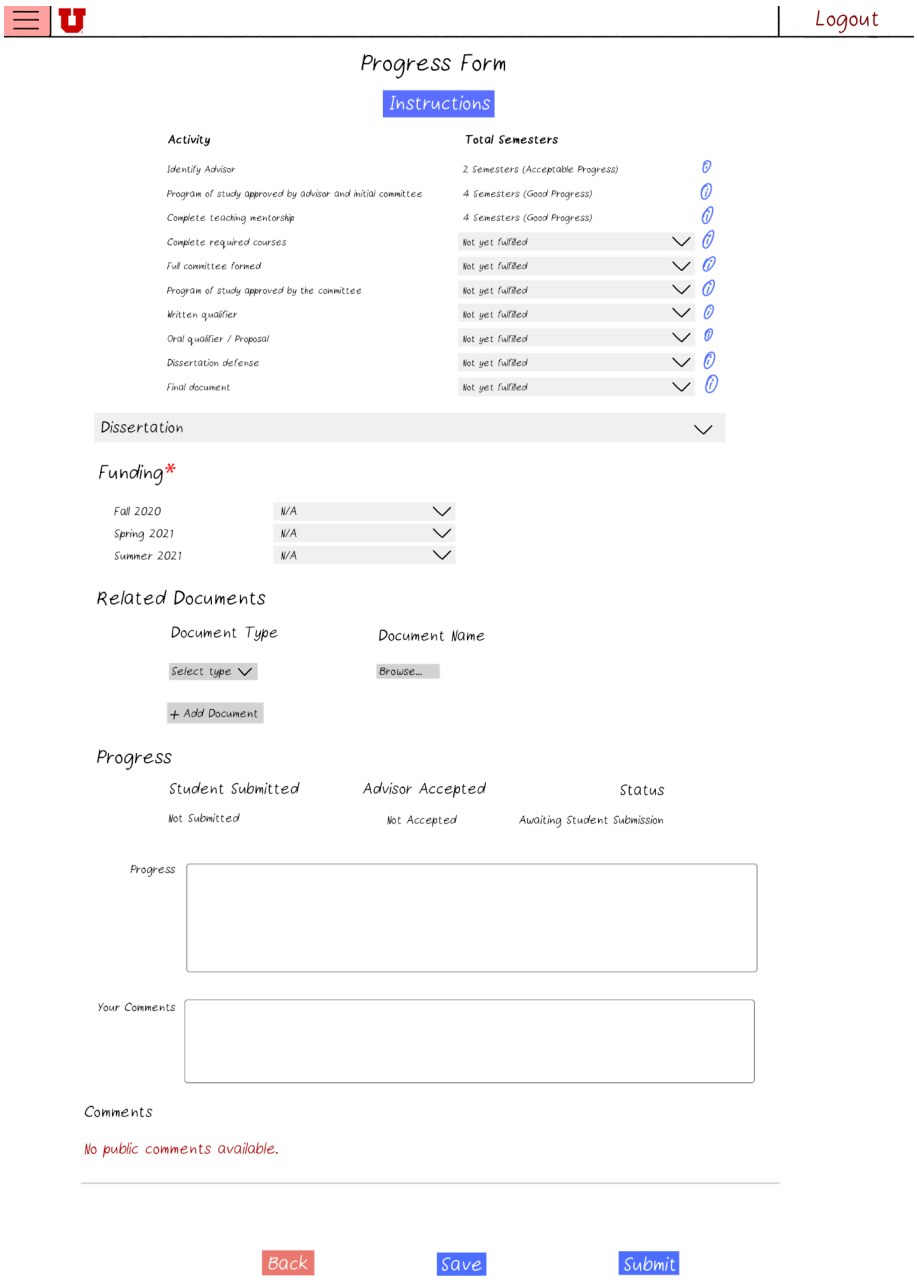
The student user will enter their uID and Password and select ‘Login’.

Image 2.



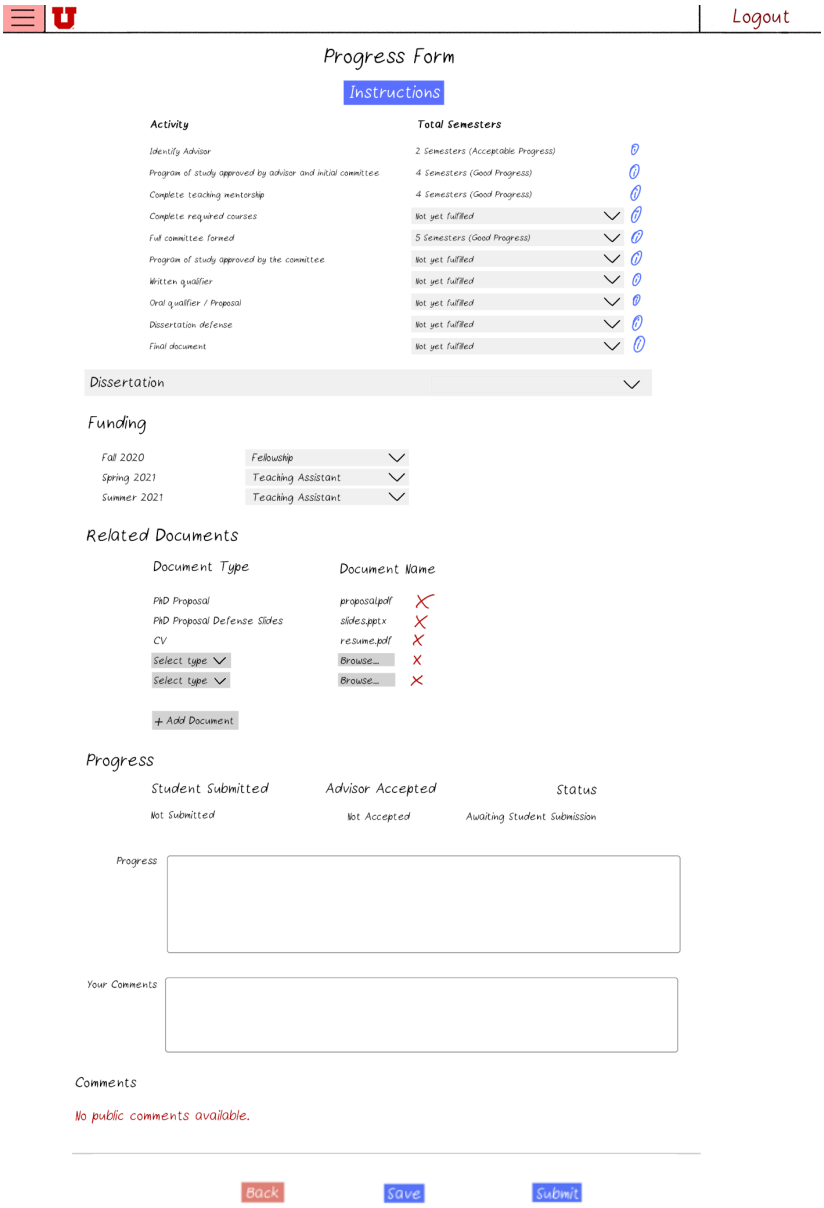
Upon successfully logging in, the user will land on the Progress Report page. From here the user will select the hamburger menu to expand it and select ‘Progress Forms’ from the drop down. After selecting the Progress Forms page the user will be able to scan the page to see the many ways they can interact. They can click on the info bubble next to “Progress Forms” to get more information about what Progress Forms are, who sees them, and get a time estimate of how long it will take for them to complete the form. Knowing that they need to start and complete a new progress form, the user will select ‘Start’.

Image 3.



Upon starting a new progress form, the user can clearly see what is expected of them and fill out all necessary information. Uploading and removing documents is simple and easy to do with actionable parts of the page being highlighted in gray. There are buttons at the bottom of the page which are designed to stand out against the background for easy recognition. When finished with the form, the user may submit their form with the ‘Submit’ button at the bottom of the page. If at any point the user is not certain on what they need to do or how something works they can click on the Instructions button or an information icon to receive some guidance.

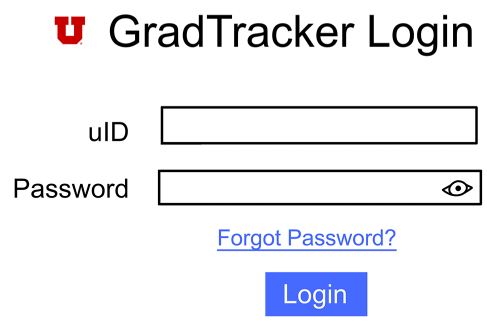
Image 4.



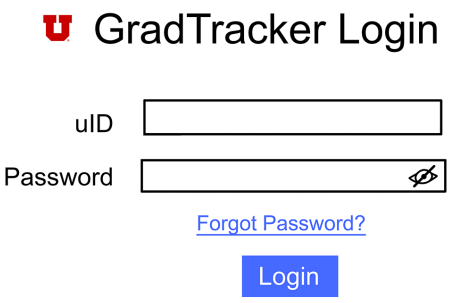
Once the user has filled out their progress for the year they can click on submit. They have now successfully completed their form and simply have to wait for it to be reviewed.

Digital Mockup

Overview Image

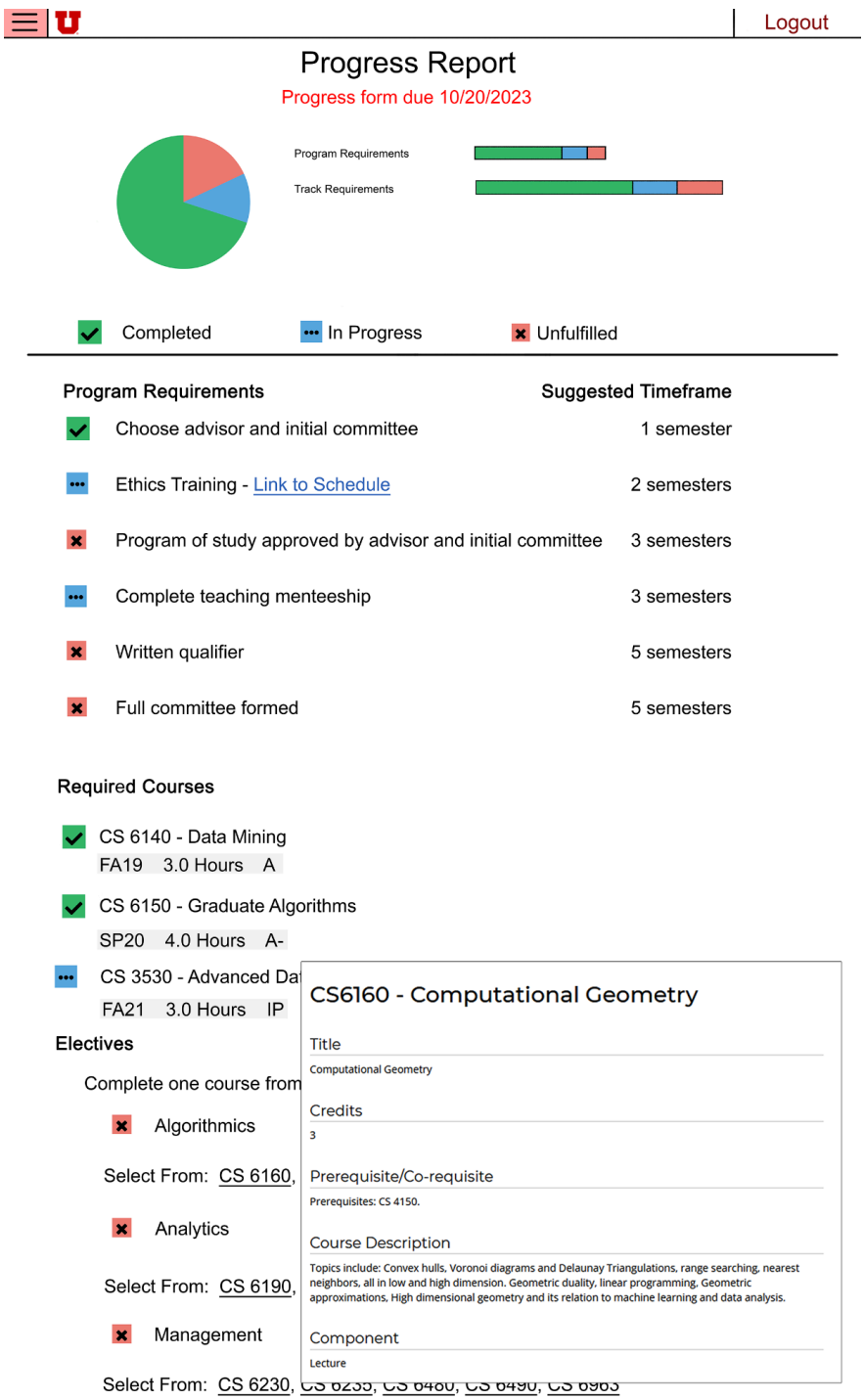


[*Task 1 & 2*] This is the login page with the default show-password view unactivated.

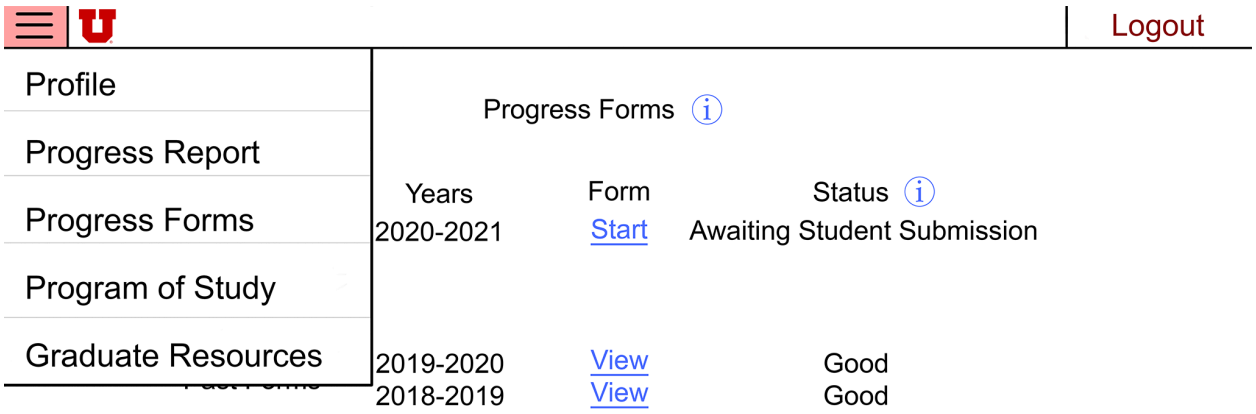


[*Task 1 & 2*] This is the login page with the show-password view revealed. This happens when the user clicks on the eye icon.

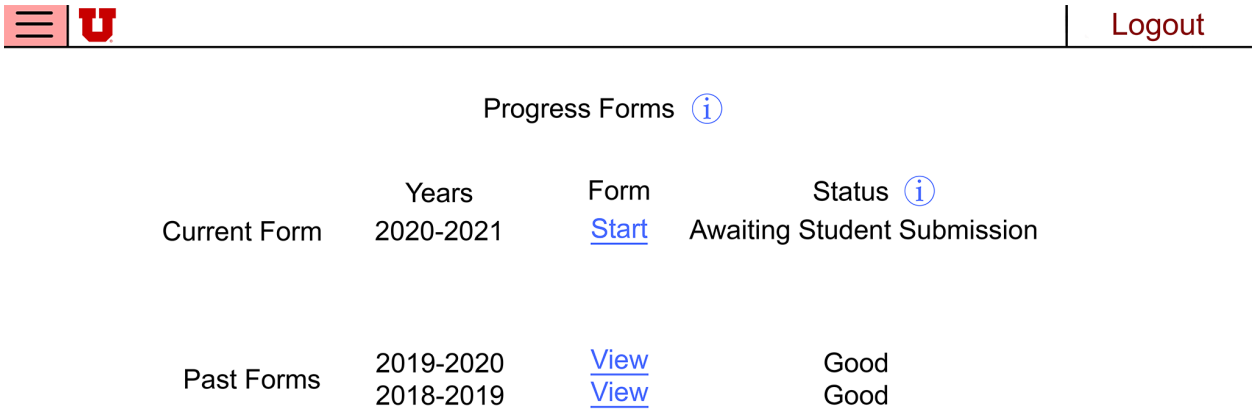
[*Task 1*] Upon a successful login, the user will land on the Progress Report page. This displays the progress the student has already made as well as what they have yet to do categorized in either track or program requirements. There are also suggested time frames listed for quick reference by the user.



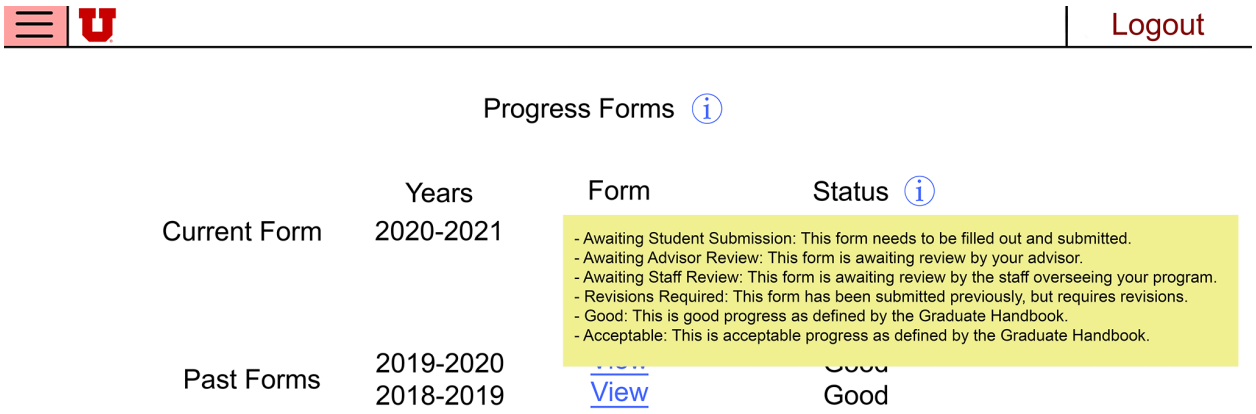
[*Task 1*] This is an alternative view of the Progress Report page seen when a user hovers over a course. If the user hovers over an underlined class, a course description will appear in a tooltip.



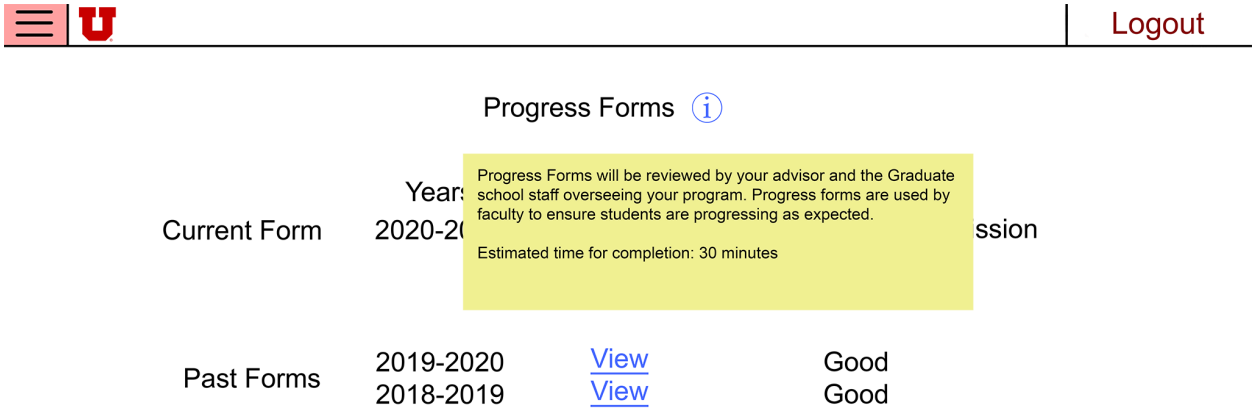
[*Task 1 & 2*] This view displays the hamburger menu when expanded. The Hamburger menu exists as part of the navigation bar for every page and can be expanded to reveal the drop down of all possible pages (e.g. profile, progress report, Progress Forms, Program of Study, and Graduate Resources) to navigate to when a user clicks on the three-bars icon, also known as the hamburger.



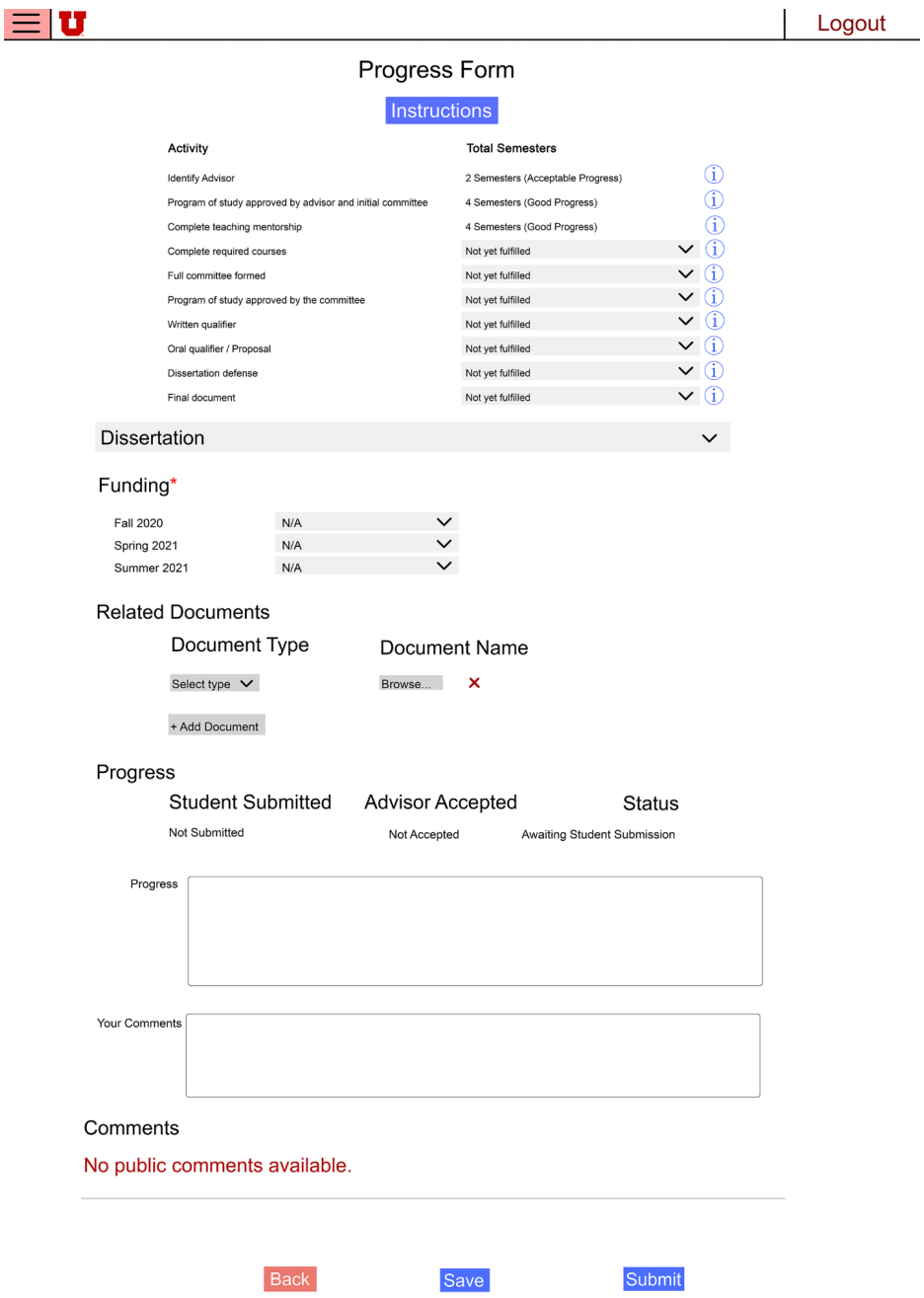
[*Task 2*] This is the Progress Forms page when first opened. To start a new form a user must select ‘Start’.



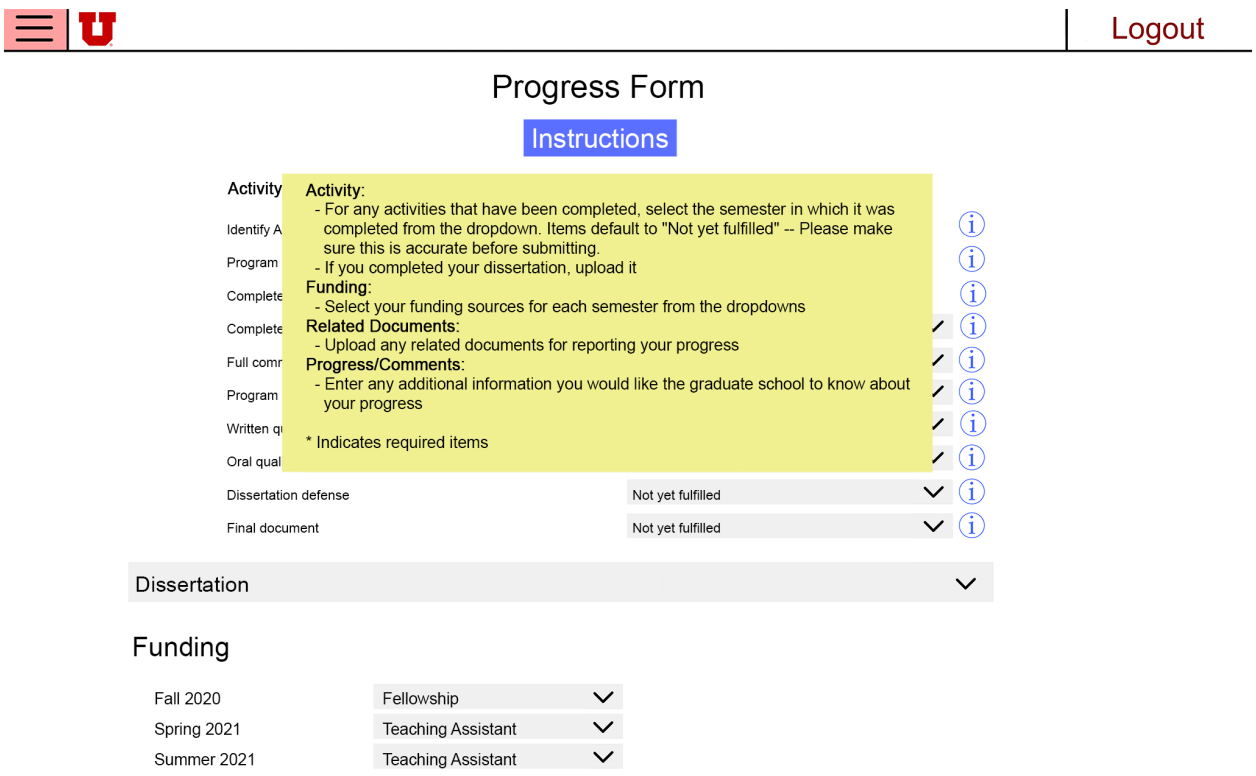
[*Task 2*] If a student clicks on the info bubble next to Status, this is the tool tip that is displayed. It provides a description of what the various status possibilities are with some additional information.



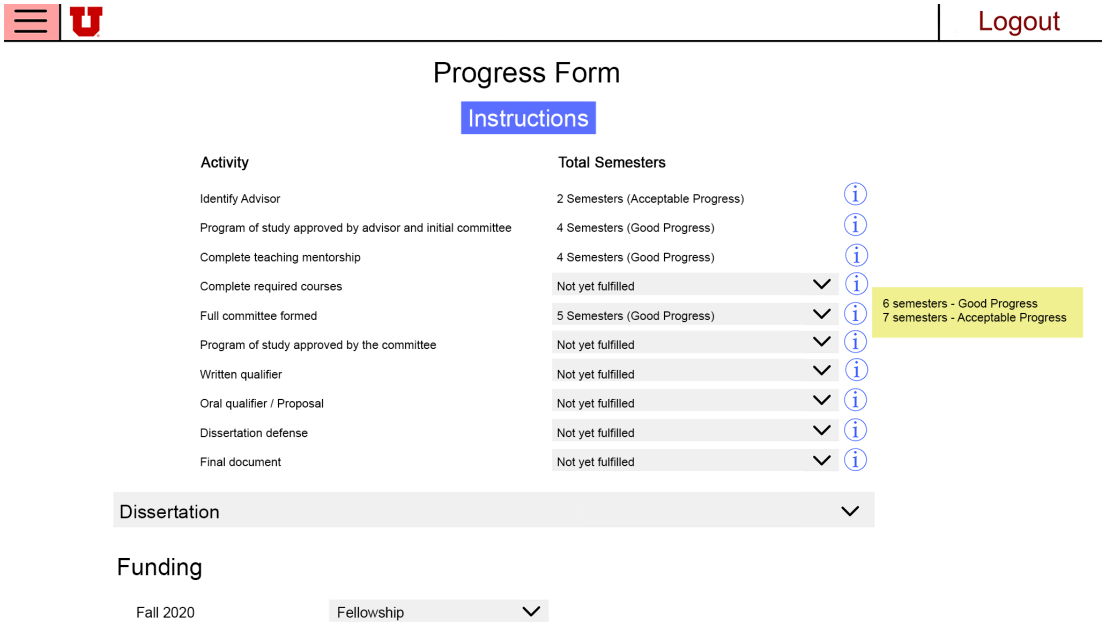
[*Task 2*] This is the Progress Forms with the information icon bubble for Progress Forms hovered over. This tooltip contains a general description of what the user needs to do and why. There is also a time estimate of how long completing the form will take.



[*Task 2*] This is the participant's view of the Progress Form page when they click on 'Start' from the previous Progress Form page view.



[*Task 2*] If the participant clicks on “Instructions”, a tooltip (with the yellow background) appears, providing instructions on what they are supposed to fill out.



[*Task 2*] If the participant clicks on an information icon they will see when that item needs to be completed by to maintain good and or acceptable progress as defined by the handbook.

Miscellaneous

Logout

Profile

Name	Jackie Stevenson
Student ID	8675309
Email	jackie.stevenson@utah.edu
Degree Type	PhD
Degree	Computing
Track	Data Management and Analysis
GPA	3.92
Semester Admitted	Fall 2019
Homepage	
DBLP Homepage	
Google Scholar Homepage	
Chair Person / Advisor	Bert McCullough

Edit Profile

Committee

	Name	Approval	DGS Approval
Chair Person	Derek Hendrix	✓	✓
	Jennifer Martinez	✓	✓
Co Advisor	Taylor Schwartz	✓	✓
	Sylvia Jensen	✓	✓

Edit Committee

Logout

Progress Form

Instructions

Activity	Total Semesters
Identify Advisor	2 Semesters (Acceptable Progress)
Program of study approved by advisor and initial committee	4 Semesters (Good Progress)
Complete teaching mentorship	4 Semesters (Good Progress)
Complete required courses	Not yet fulfilled
Full committee formed	5 Semesters (Good Progress)
Program of study approved by the committee	Not yet fulfilled
Written qualifier	Not yet fulfilled
Oral qualifier / Proposal	Not yet fulfilled
Dissertation defense	Not yet fulfilled
Final document	Not yet fulfilled

Dissertation

Funding

Fall 2020	Fellowship
Spring 2021	Teaching Assistant
Summer 2021	Teaching Assistant

Related Documents

Document Type	Document Name
PhD Proposal	proposal.pdf
PhD Proposal Defense Slides	slides.pptx
CV	resume.pdf
Select type	Browse...
Select type	Browse...

+ Add Document

Progress

Student Submitted	Advisor Accepted	Status
Not Submitted	Not Accepted	Awaiting Student Submission

Progress

Your Comments

Comments

No public comments available.

Back Save Submit

Program of Study ⓘ

Program of Study has not been created

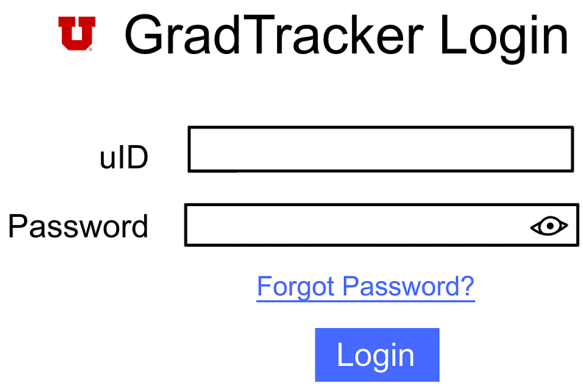
Create

Task 1 Images

Task 1: Students need to access information about their graduate track and program requirements. They need to access this information to be able to compare their completed and remaining milestones to be able to efficiently prioritize and plan what they need to work on next.

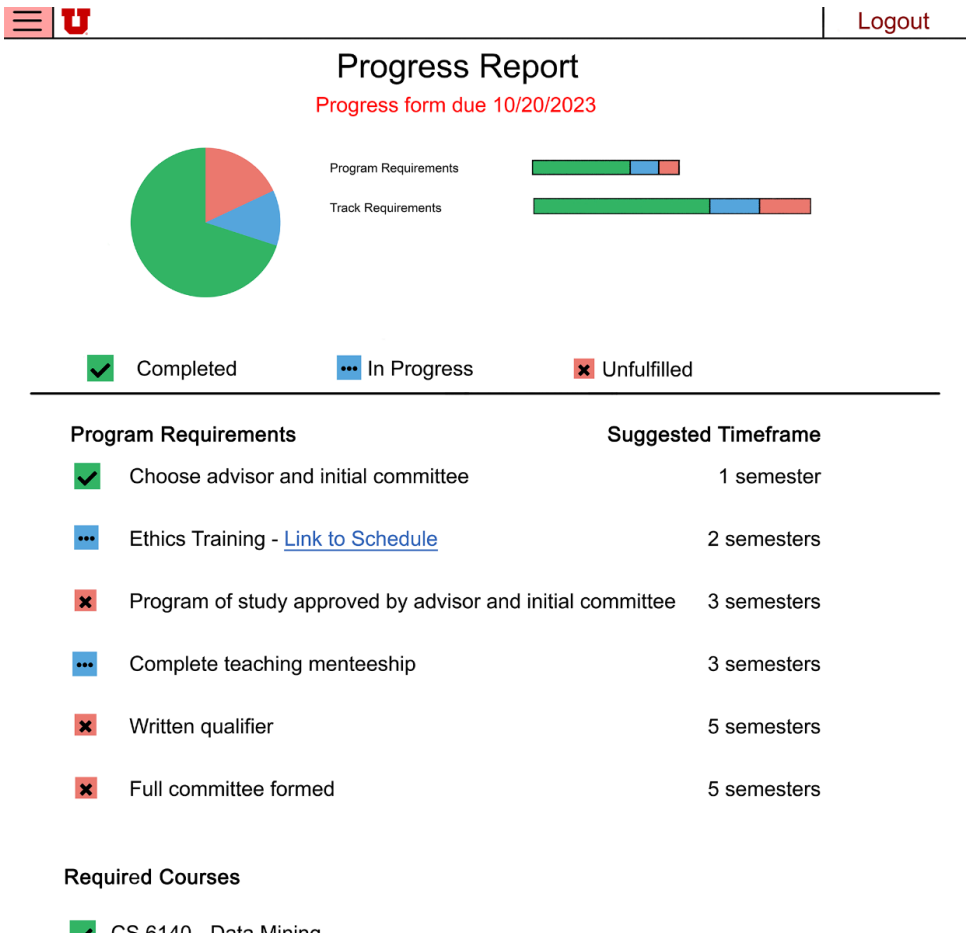
“Using this system, would you mind trying to find out what graduation requirements you still have to complete?”

Image 1.



The image above displays the login page. Here the user can enter their Unid and corresponding password to access their account and reveal the rest of the website. Alternatively, if a user forgot their password they are also able to follow prompts to reset their password by selecting the “Forgot Password?” link.

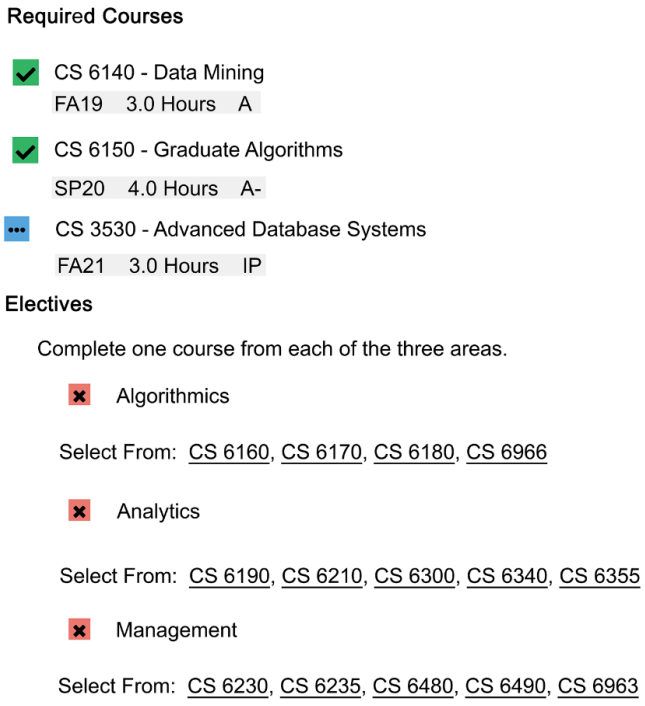
Image 2.



The image above is a partial display (1/2) of the landing page also known as the “Progress Report” page. Here the user can quickly glance over the top section of the page to easily understand how much progress they have made towards graduation (in terms of items completed, in progress, and unfulfilled categorized by program and track requirements) as well as be notified of their progress report due date for the current year.

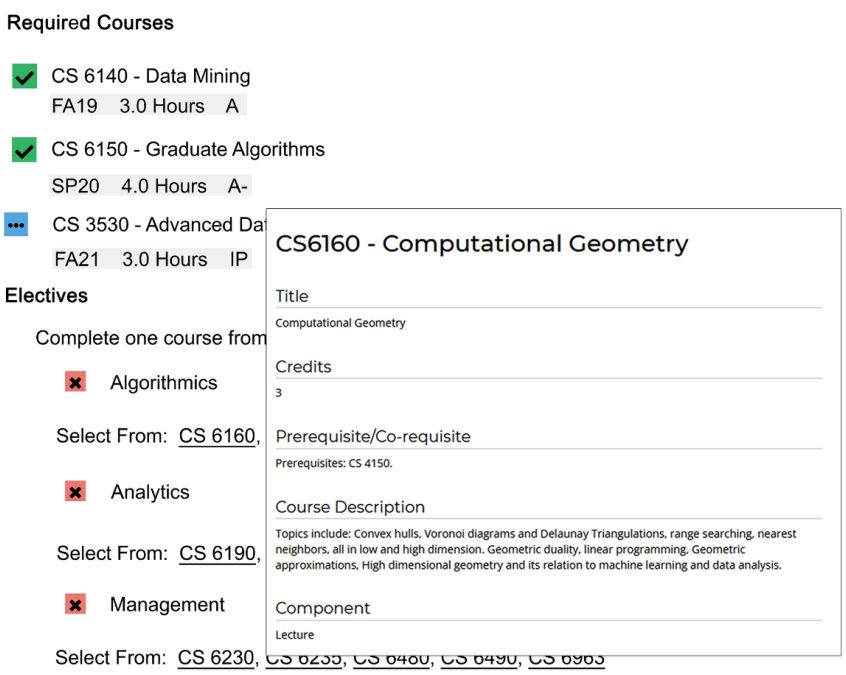
On the lower section the user can see a check list of graduate requirements along with their status (completed, ini progress, unfulfilled) and the suggested time frame to complete the task to make ‘good progress’ as defined by the handbook.

Image 3.



The image above is a partial display (2/2) of the landing page also known as the “Progress Report” page. Here the user can understand what courses they have completed (along with the credit hours and grade received), what courses they are currently enrolled in (in progress), and what courses they have yet to complete to fulfill their track requirements.

Image 4.



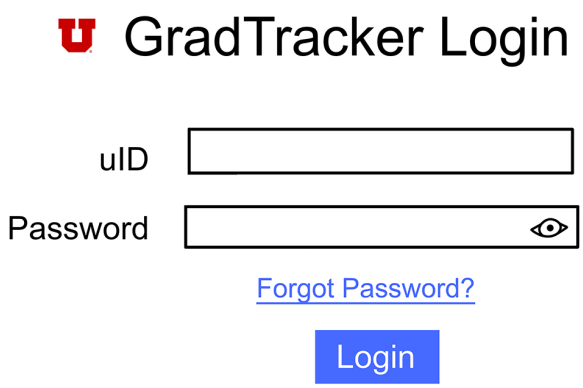
The image above is the same partial display (2/2) of the landing page (a.k.a “Progress Report” page) as image 3. With the additional view of a user hovering over a course link. As a user is planning what courses they should enroll in to remain on track for next semester, they are able to hover over courses to see a brief description of the course as described by the University Course Catalog.

Task 2 Images

Task 2: Students need to submit progress information. To do this, students need to be able to easily understand what information they need to submit and where to submit it. They may not know what information they need to provide in the progress forms or how much detail they need to go into

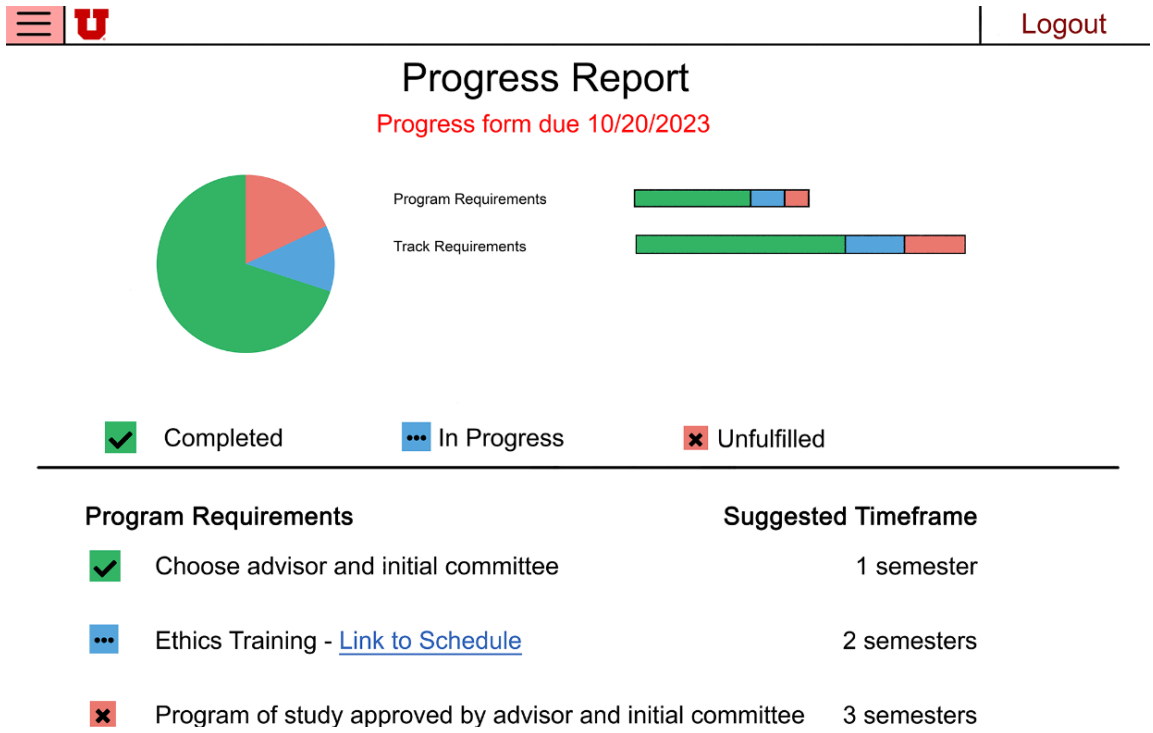
.

Image 1.



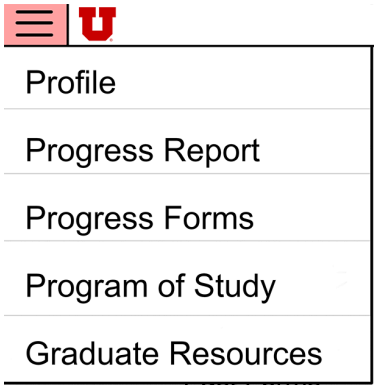
The image above displays the login page. Here the user can enter their Unid and corresponding password to access their account and reveal the rest of the website. Alternatively, if a user forgot their password they are also able to follow prompts to reset their password by selecting the “Forgot Password?” link.

Image 2.



When users log in they land on the Progress Report page. From here users will need to navigate through the website to accomplish Task 2.

Image 3.



Users will see the hamburger menu in the top right corner of the website which is available for website navigation from any page. This follows Jakob Nielsen's principle of consistency and standards and is easily recognizable by users as a navigation menu. Once the hamburger menu is open, users will recognize that they should click on "Progress Forms."

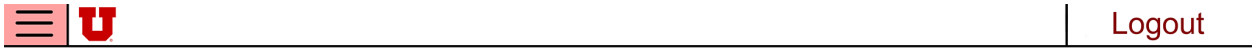
Image 4.

Progress Forms ⓘ

	Years	Form	Status ⓘ
Current Form	2020-2021	Start	Awaiting Student Submission
Past Forms	2019-2020	View	Good
	2018-2019	View	Good

Once users click “Progress Forms” in the hamburger menu they will land on the “Progress Forms” page, as they would expect. They can view the status of all forms they have submitted in the past as well as see what forms they need to submit. There are info bubbles which provide more information for the user if they need it.

Image 5.



Progress Forms ⓘ

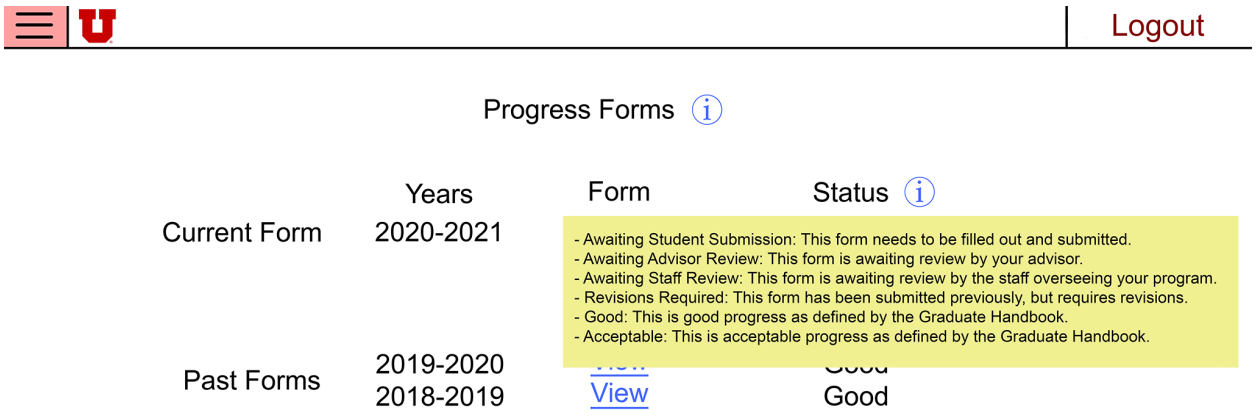
Progress Forms will be reviewed by your advisor and the Graduate school staff overseeing your program. Progress forms are used by faculty to ensure students are progressing as expected.

Estimated time for completion: 30 minutes

	Years		
Current Form	2020-2(		ssion
Past Forms	2019-2020	View	Good
	2018-2019	View	Good

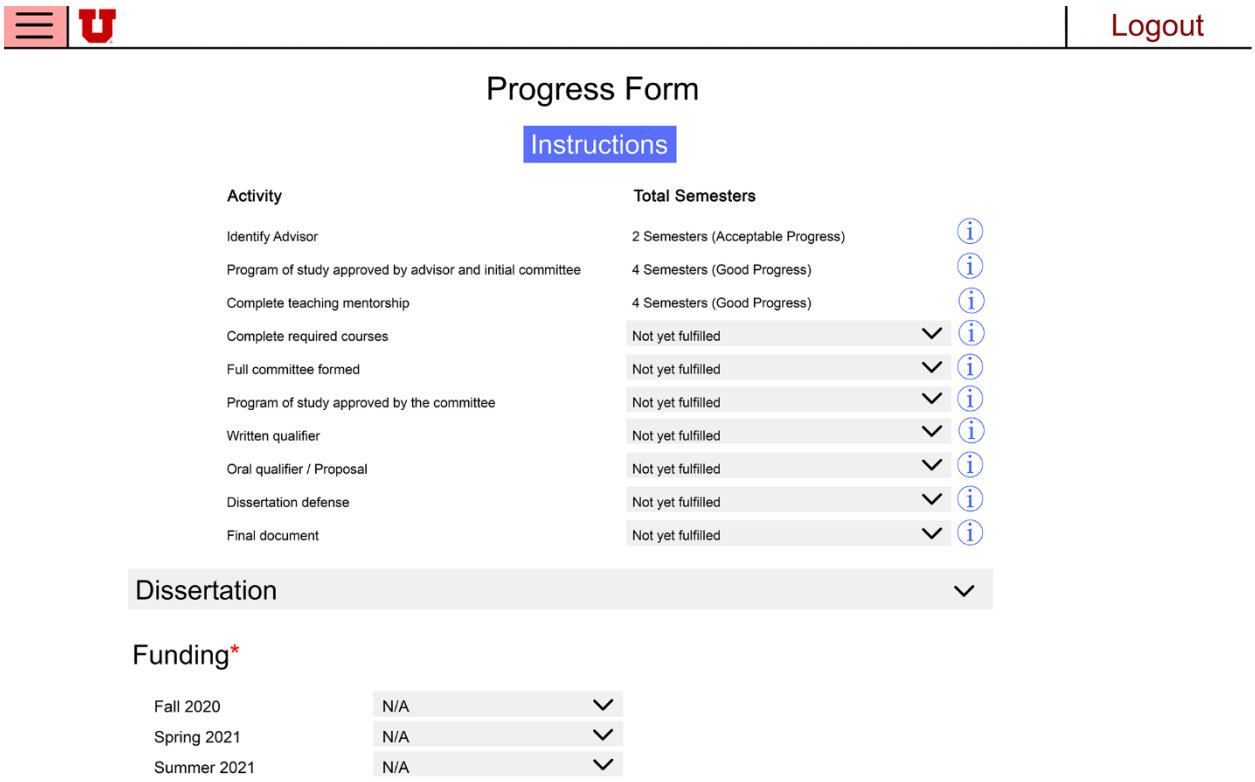
If a user clicks on the info bubble next to “Progress Forms” they are provided with a description of what progress forms are and what they are used for. Additionally, there is an estimate of how long a progress form takes to complete.

Image 6.



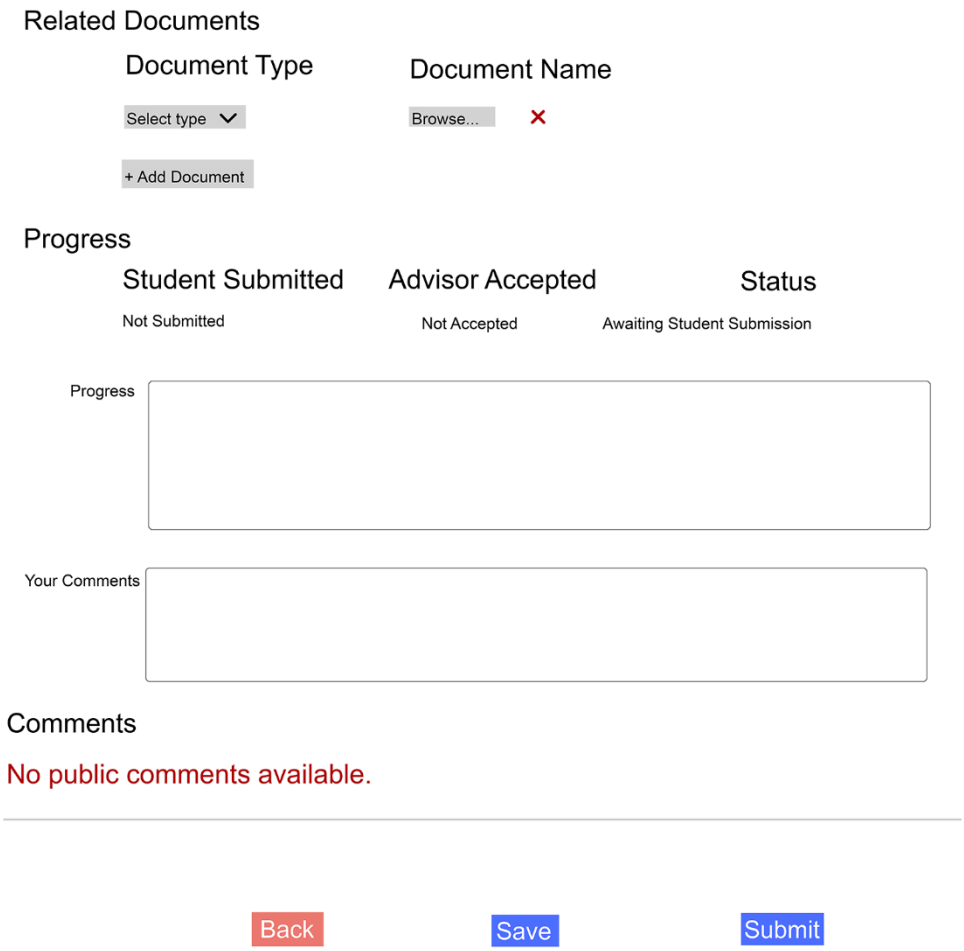
If a user clicks on the info bubble next to “Status” they are provided with a list of the different statuses that a form can have and what that status indicates.

Image 7.



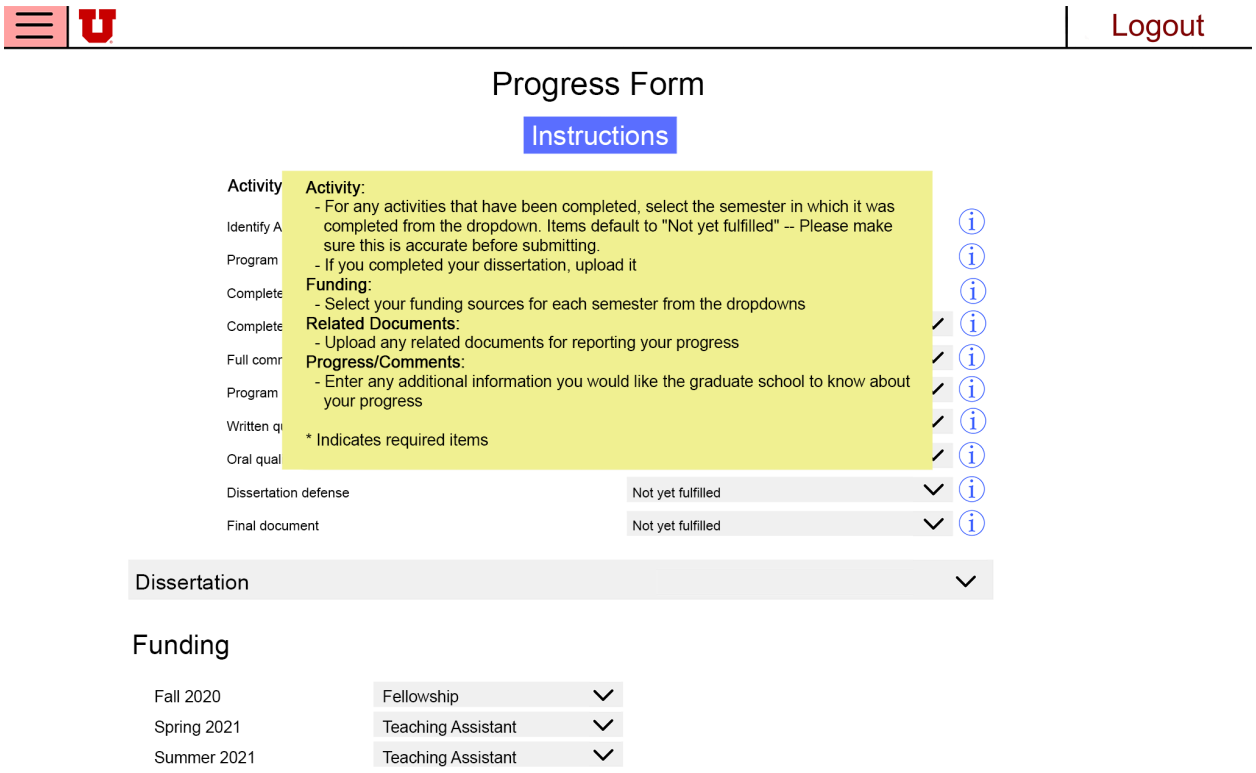
(Image 1/2) This is the top portion of an unfilled out progress form. This is what users see after users click on “Start” for the 2020-21 progress form on the “Progress Forms” page. In this portion of the page, users need to fill out how long each activity they have completed took them to complete. If they have a dissertation to upload, they can upload that as well. Lastly, they must provide information on their funding sources for each semester.
Additionally, if they need instructions for the progress form they can click on the “Instructions button.” They may also click on info bubbles to the right of each activity to view more details about what progress is expected.

Image 8.



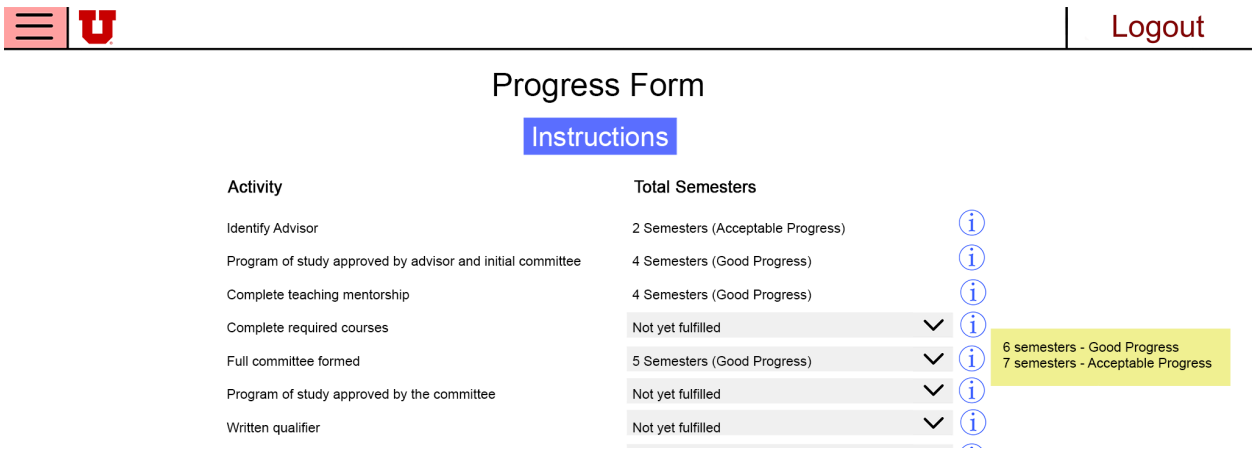
(Image 2/2) This is the lower portion of an unfilled out progress form. Users may upload documents, submit a summary of their progress over the past year, and leave any additional comments if they desire. They may then use the buttons at the bottom of the page to go back to the “Progress Forms” page, save their work, or submit the form. When the user has completed their progress form they will click submit to complete the task.

Image 9.



If a user clicks on “Instructions” they see a tool tip providing a summary of what they need to do to complete a progress form.

Image 10.



If a user clicks on an info bubble next to an activity, they see what progress is expected.

Reflection and Learning

Usability Test Techniques

A. **Something done well - Using Think-Aloud Prompts**

a. Detailed Description: As the user was reviewing the forms page they scrolled through the entire page in silence as they were reading and trying to gain an understanding of how to interact with the page. We allowed the user a moment to think through their thoughts and then prompted them to speak their thoughts out loud. The user then began voicing what they assume certain dropdown and info buttons contain and how they would approach filling out this form.

b. What makes this a good example of using Think-Aloud Prompts: Sometimes users need a moment to gather their thoughts and think things through so they can give us useful feedback. It's okay to allow them to think for a moment but we should be prompting them to speak their thoughts so we are able to gather this information.

c. Useful Data: After asking them to voice their thoughts we learned that they found the info bubbles helpful in the sense that they don't have to navigate to the handbook to see what good/acceptable progress is, but what was still confusing was what activities actually need to be filled out before submitting.

B. **Something to improve - Sanity Checking**

a. Detailed Description: The user had a question on whether or not they should be able to edit courses, and if so, how they would edit the courses. Rather than answer the question directly, we asked the user based on the system that they are seeing how they would go about figuring out if courses is an editable section.

b. What could be improved about Sanity Checking: While sometimes it's okay not to answer a user's question immediately, it would be okay to answer this question later on or even politely inform the user that for the sake of the usability interview this question will be answered at the end of the interview.

c. Potential Data Loss: If we answered the user's question directly, perhaps at the end of the interview, we could have received feedback from the user on how to make it more immediately clear that courses is not an editable section.

Further Reflection - Prompt 1

If we could do another contextual inquiry, we would want to get more information from an advisor. We feel like we don't understand what information they need as part of their interactions with GradTracker which lead to us not having enough information to be able to design around their tasks and goals. In designing our prototype, we had to make some assumptions about what would and would not be useful for a student from the perspective of their advisors' goals. For example, we did not completely understand the purpose of the "Progress" and "Comment" text boxes, which made it difficult to incorporate their intention into our design. We instead had to assume that they were important parts of progress forms, and therefore incorporated them as they had previously been designed.