14:332:438 Software Engineering

Final Report

Final Design and Implementation

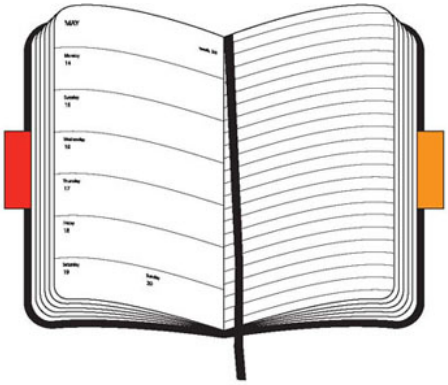
Website:

https://github.com/sjlu/RU-Planner/wiki

Team Members:
Steven Lu
Nicholas Guida

Project: RUplanner

May 3, 2013



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Scope of Report

For our final deliverable, our goal was to finalize/polish everything in preparation for presentation. We made some late modifications to use cases and original design in order to get this accomplished, but ultimately we feel it was the best and most feasible solution to our problems.

In the end, we were only able to complete the course planner for 2 of the engineering majors: Electrical and Computer. We originally believed we would be able to do it for all engineering majors due to the thought that Rutgers supplied some public API which could be used to interface with all their courses. We found out later that this was not doable, but tried to proceed anyway in manually entering in all the information to our databases. However, this proved too tedious and difficult giving the time constraints, and it simply wasn't pragmatic to put in all courses for every major while also designing custom logic to handle each specific majors' different requirements. That said, we were very happy and proud of the results for our two working majors, and since the framework is already set up, anyone can add courses / majors to the databases and expand upon our project.

Use Cases

For our final deliverable, we had to change a couple of the use cases. This also involved removing UC9 (share planner) but replacing that with Comment Course (our new UC9). Virtually everything else was already in place, so this report was light on "implementation" of use cases since it was mostly just polish and refining of the existing use cases.

Implemented Use Cases for Final Deliverable

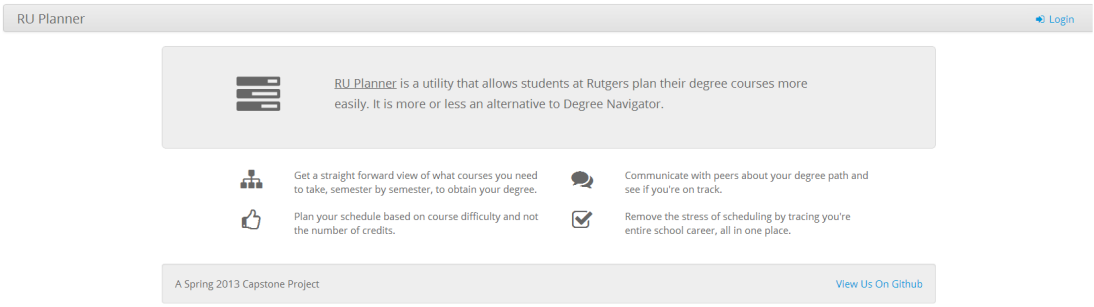
Name: Comment Course **Number**: (new) UC9
Description: Allows student to comment on courses **Purpose**: To allow the student to comment and view comments on specific courses in order to better understand the course itself and the pros/cons involved with it

Final Website UI

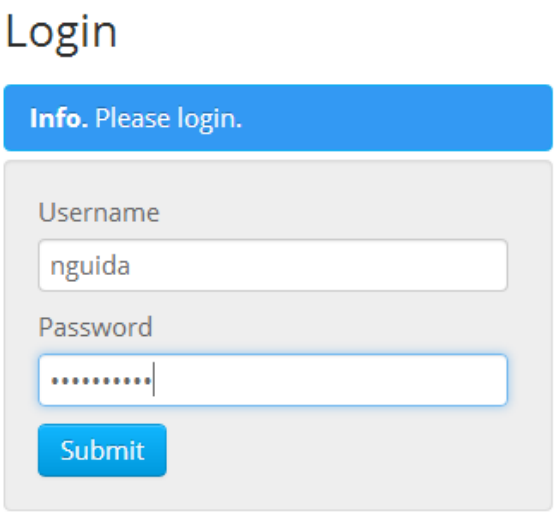
Our final website design came out exactly as we had planned, with all data clearly visible and fluid. Despite the fact we weren't able to implement all majors, we were very proud of handling of the front end UI and feel that that was the major goal of our capstone: to redesign degree navigator.

Some sample shots:

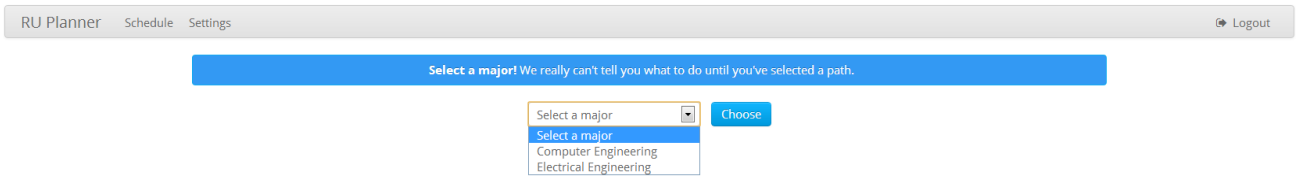
Homepage for our website:



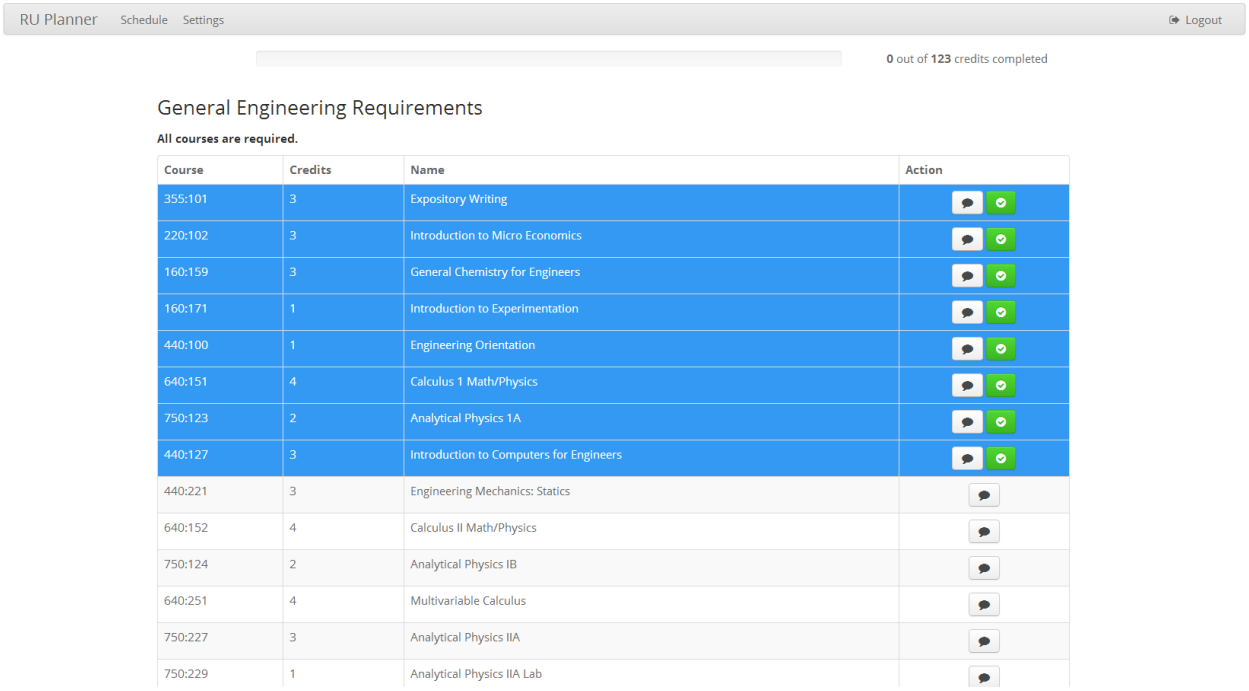
Login:



Select Major:



Course List:



Course Selected:

General Engineering Requirements

All courses are required.

Course	Credits	Name	Action
220:102	3	Introduction to Micro Economics	
160:159	3	General Chemistry for Engineers	
160:171	1	Introduction to Experimentation	
440:100	1	Engineering Orientation	
640:151	4	Calculus 1 Math/Physics	
750:123	2	Analytical Physics 1A	
440:127	3	Introduction to Computers for Engineers	
440:221	3	Engineering Mechanics: Statics	
640:152	4	Calculus II Math/Physics	
750:124	2	Analytical Physics IB	
640:251	4	Multivariable Calculus	
750:227	3	Analytical Physics IIA	
750:229	1	Analytical Physics IIA Lab	
640:244	4	Differential Equations for Engg/Phy	
355:101	3	Expository Writing	

Discussions:

640:152 Calculus II Math/Physics

Add Comment

May 1 2013	CALC 2 IS 4 CREDITS WORTH OF PAIN
May 1 2013	THE TEACHER IS SO HOT
May 1 2013	THIS CLASS IS HARD

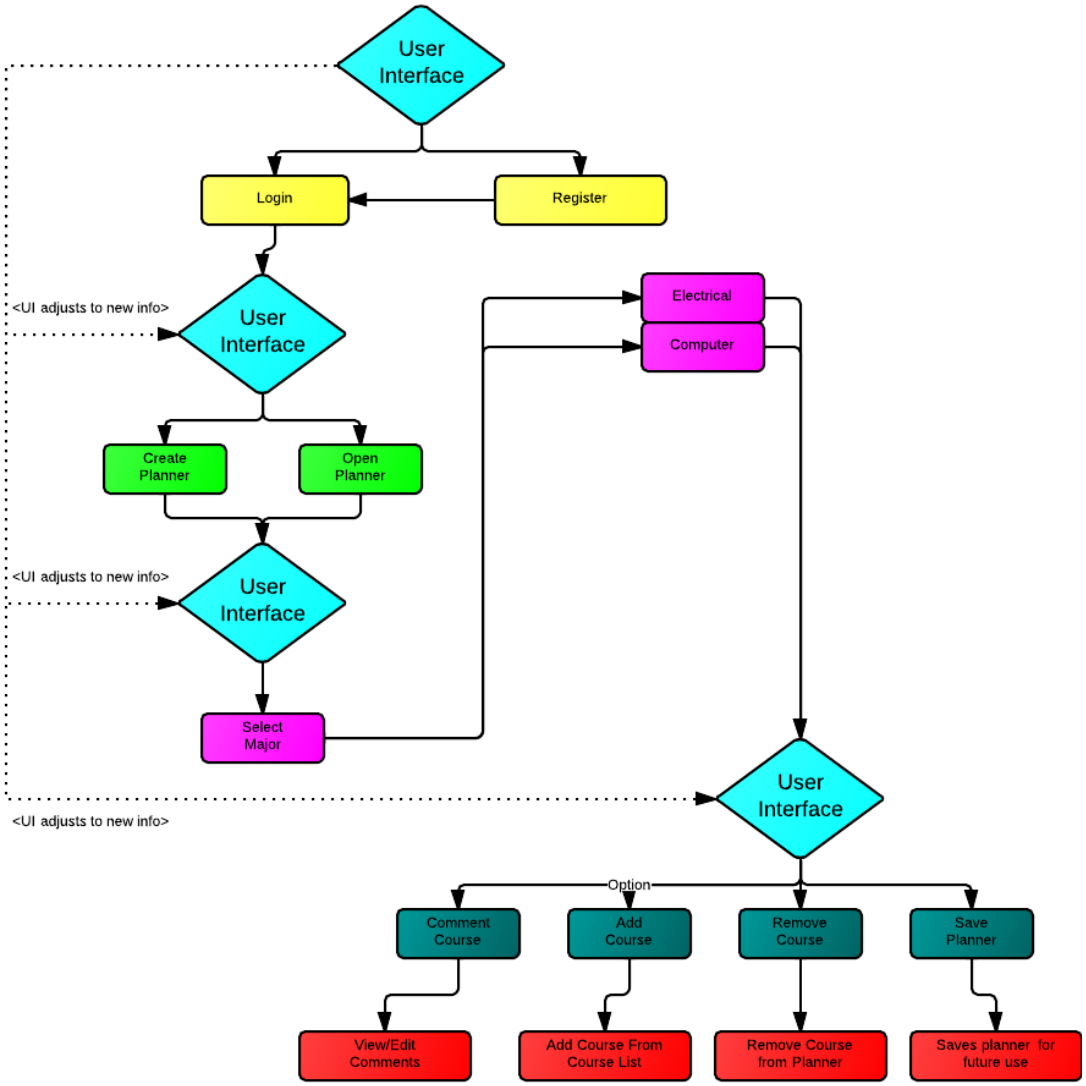
Clearing your account:

Use this function to reset your account.

Clear Account

Conceptual Model

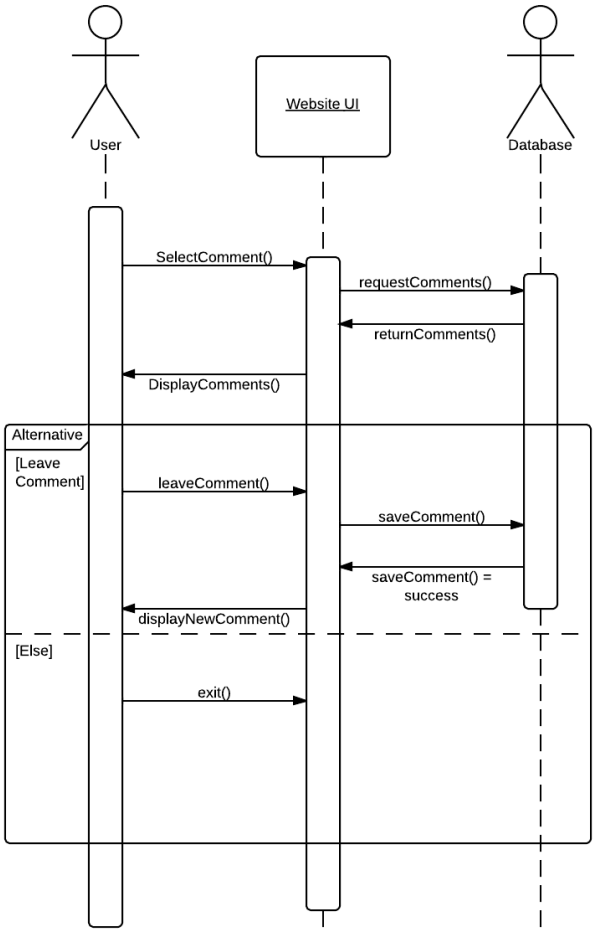
Because we had to eliminate the other majors, our conceptual changed to reflect that. In addition, we added in a portion to reflect the new change in use cases.



Sequence Diagrams

Since we only implemented one use case, we only have one sequence diagram.

Comment Course

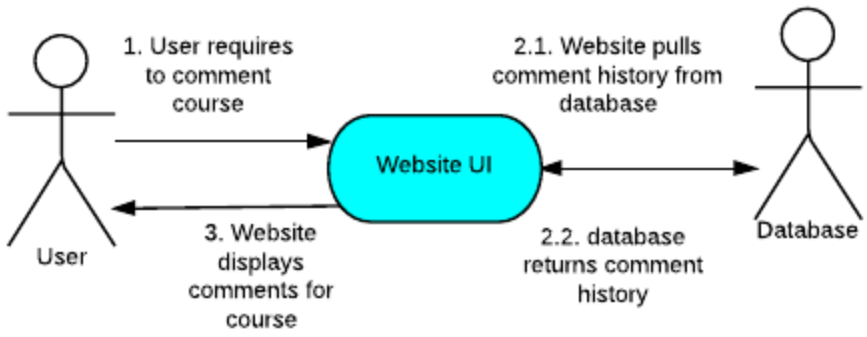


Document Contracts

Operation:	Comment Course
Cross References:	UC-9
PreCondition:	Student has an account Student has logged in Student sees available courses with chat icon
PostCondition:	Student has an account Student has logged in Student sees available courses with chat icon Student selects chat icon and comments section appears

Collaboration Diagrams

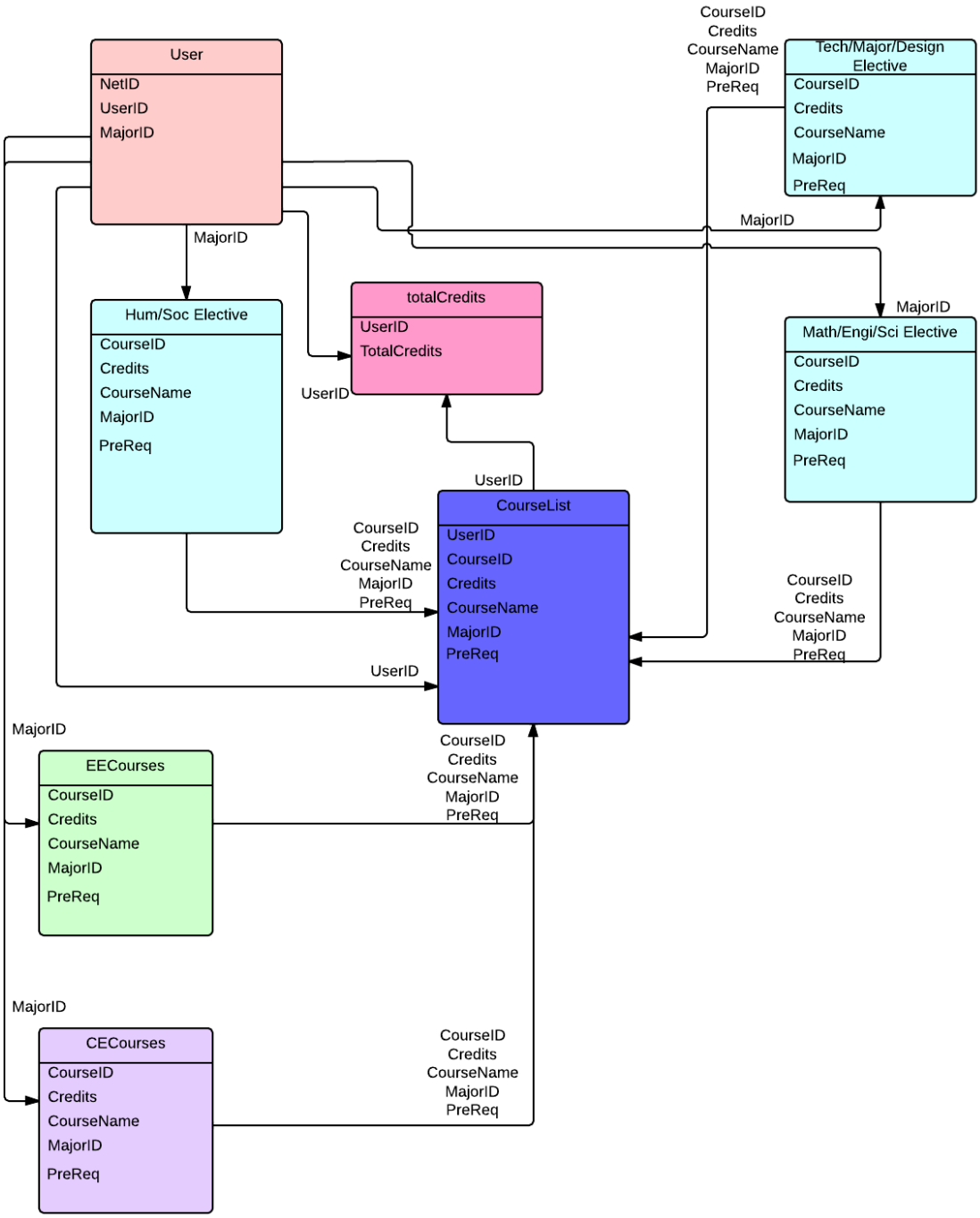
Comment Course



Class Diagram

For our final report, we have kept the same database structure and have only added further information to our databases. Our databases can be found at the same site as the rest of our code (next section), and we have our finalized database structure.

Database Relationship Diagram



Code (Header Files)

All of our code (which is html/css/php/mysql) can be found on our github repository:

https://github.com/sjlu/RU-Planner

Modifications

We have modified our original deliverable chart, since we have eliminated our original UC9 (sharing) and replaced with the new UC (comment course). Every other use case is in place and working, and we are proud that we were able to implement nearly every use case despite the fact we didn't have the time to implement all the different majors.

UC#	Deliverable I (3/27/2013)	Deliverable II (4/15/2013)	Deliverable III (5/12/2013)
UC1	-	-	-
UC2	✓	✓	✓
UC3	x	✓	✓
UC4	x	✓	✓
UC5	x	✓	✓
UC6	x	✓	✓
UC7	x	✓	✓
UC8	x	✓	✓
UC9 (old)	-	-	-
UC9(new)	x	x	✓
UC10	✓	✓	✓

Individual Contributions

Steven Lu:

- Web Page Design
- Web Page Development
- UI Development

Nicholas Guida:

- Created Report/Presentation
- Database Creator

Time Log

(Since deliverable II)

Name	Date	Time	Reason
Steven	4/15	4 hours	Website Polish
Steven/Nick	4/16	2 hours	Meetings
Nick	4/19	3 hours	Database Entry
Nick	4/21	3 hours	Database Entry
Steven	4/21	4 hours	Website Polish
Steven	4/23	4 hours	Use Cases Added
Nick/Steven	4/24	2 hours	Meeting
Nick	4/25	3 hours	Database Entry
Nick	4/28	2 hours	Database Updates
Nick	4/29	2 hours	Database entry
Steven	4/30	5 hours	Finishing Coding
Nick/Steven	4/30	2 hours	Meeting

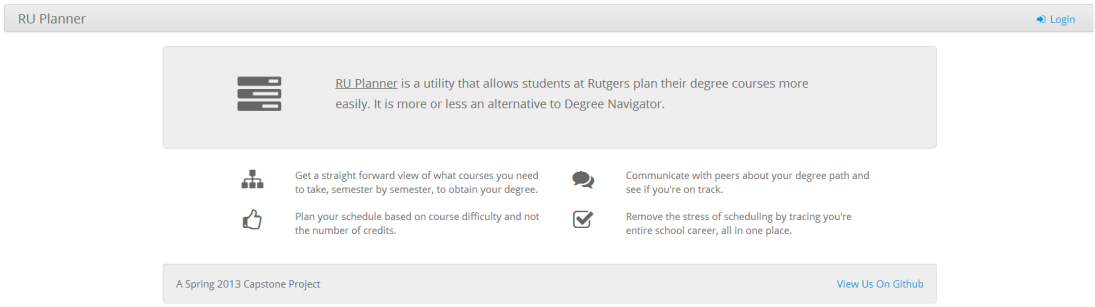
User Manual

Here is a user manual for any users who want to try their hand at using our planner.

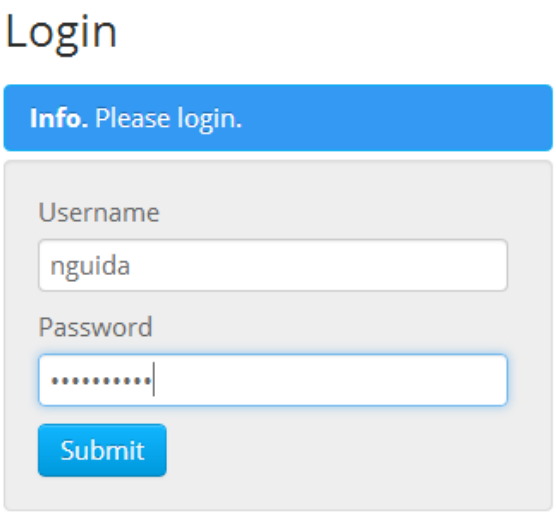
First, access to the website:

planner.stevenlu.com

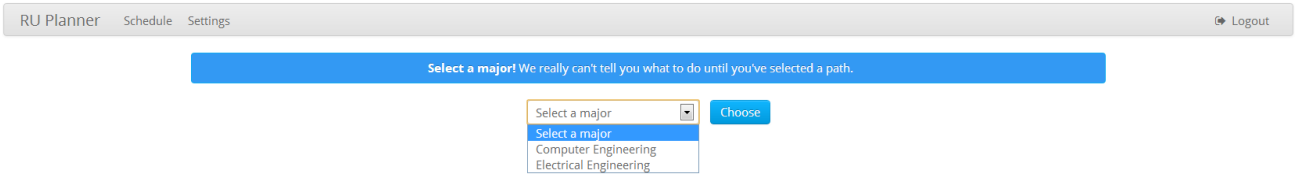
This leads to the homepage. where a user will need to log in using their rutgers net ID (therefore, user must be a current rutgers students)



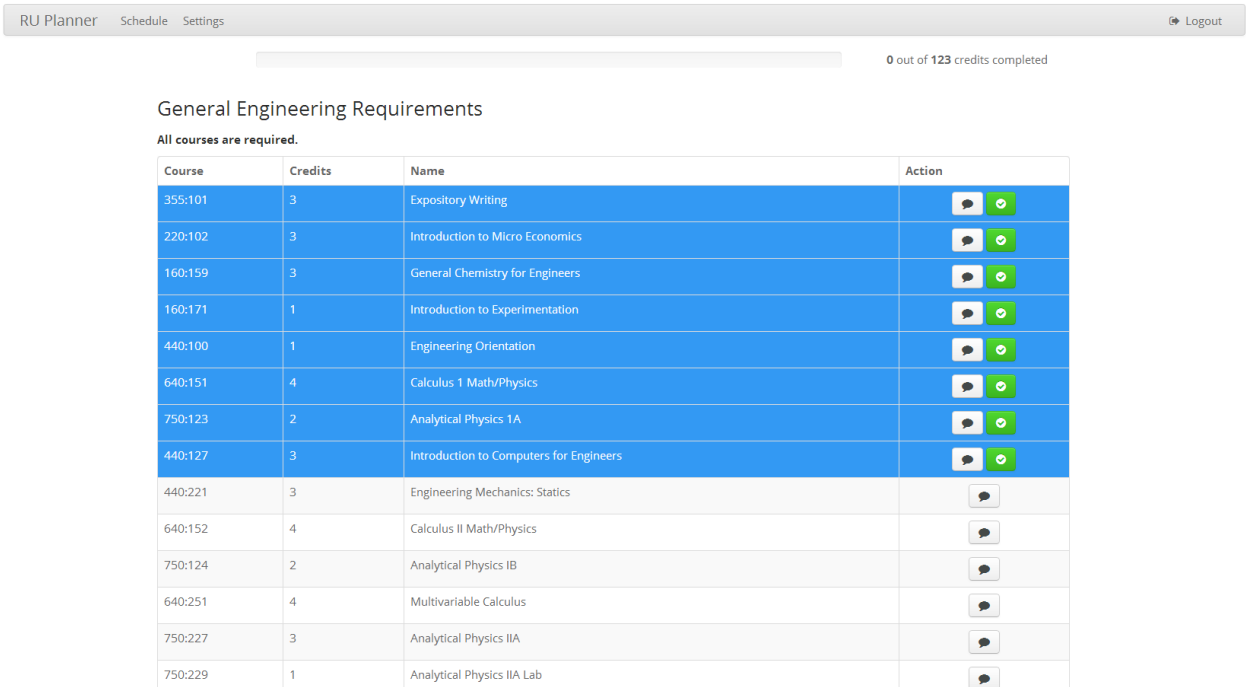
Selecting login in the top right hand corner will bring up the login page, where a user will need to log in using their rutgers net ID (therefore, user must be a current rutgers students)



Next, a menu pops up asking the user to select their current major

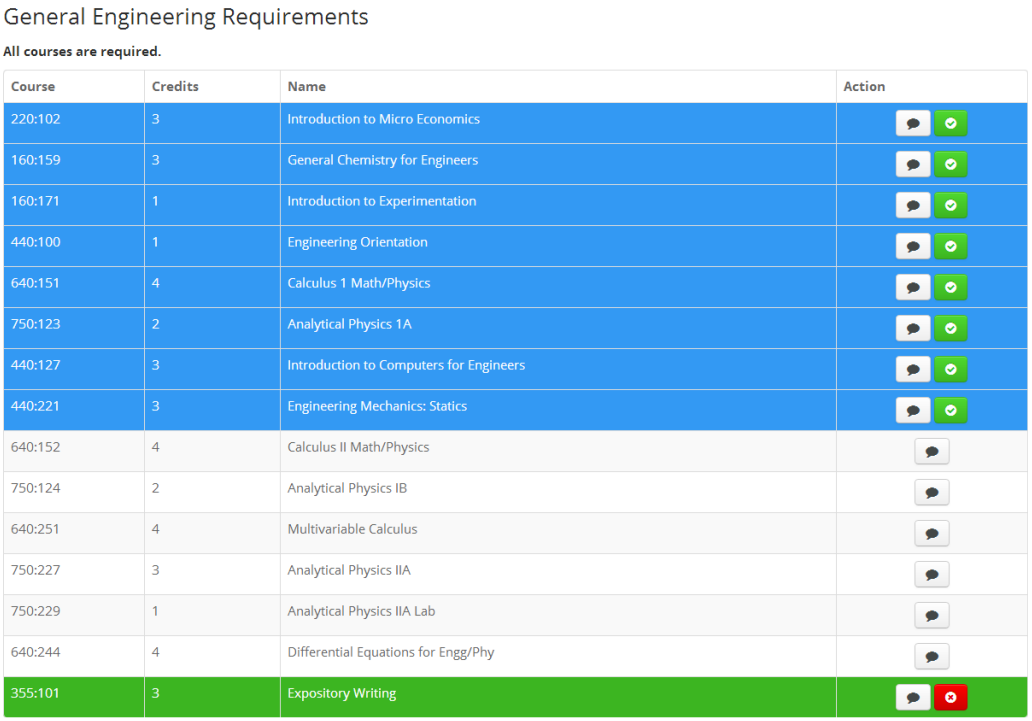


Once selected, a page comes about with all the courses listed for that student's major, in addition to humanities classes and other requirements.



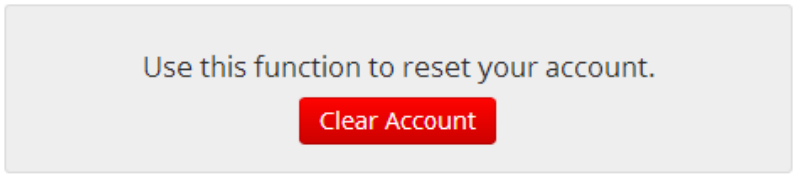
The blue indicates classes that can currently be taken, meaning that they either don't have prerequisites or you have already completed them. The courses in white mean that you currently don't meet the requirements to take that course.

Selecting the green check mark places the course on your list, adding the credits to your total credits completed bar and highlighting the course as green.



Selecting the red “x” mark will delete the course from your list, putting it back into the available list of courses to select from. In addition, there is a chat bubble for every course which can be selected, letting the user see comments made about the course from anyone who chose to comment on it. The user can get hindsight as to the difficulty of the course and what to expect.

If at any point you are displeased with your current schedule and wish to start over, select the “settings” button up at the top left and go to clear account. This will reset your planner, allowing you to start over fresh.



Once you have selected enough courses to meet the requirements, the blue bar will fill up and will reach the goal of 123 credits. After this, you are done! Again, the user manual is extremely straightforward, as it should be: Our goal was to make it as intuitive and easy to use as possible. With expansion of courses and majors, this tool could be used for many more instances outside of just ECE