



Team 505: Pop-Up Classroom

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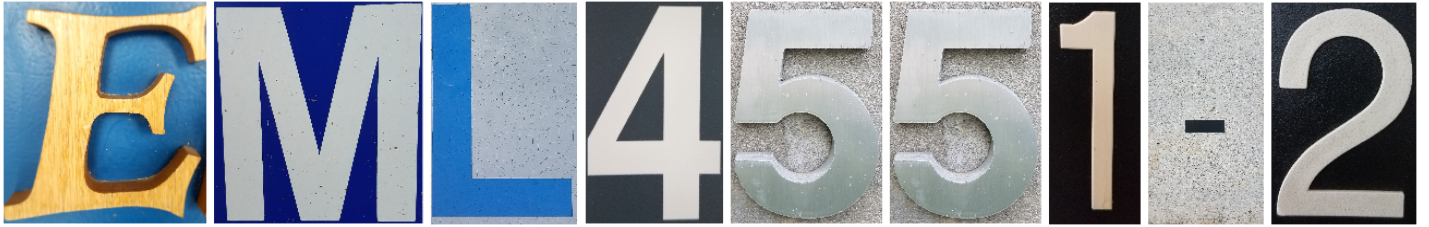




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Chapter One: EML 4551C

1.1 Project Scope

Campus Reimagined (CRI) seeks to create a new campus experience through a pop-up classroom. The popup classroom should provide a collaborative environment that is nomadic and has the capability of being ordered online. This device will enable a comfortable interaction between professors and students, faculty, and classmates. It will include all the necessary things so that lectures, meetings, and conversations are pleasant.

Project Description

The purpose of this project is to design a nomadic classroom that is able to accommodate the key components of a learning environment. It should allow for educational instruction outside of the standard classroom setting.

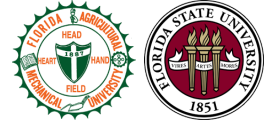
Stakeholders

The Pop-Up Classroom project has implications for the future of educational and collaborative setting. Stakeholders have been identified for this project in relation to its potential applications. These stakeholders fall into four main groups: sponsors, advisors, agencies, and impacted customers. Note that this list is not all inclusive.

The sponsors category includes members that have a monetary interest in the project currently. This category includes Campus Re-Imagined and the FAMU - FSU College of Engineering.

The advisor category includes educational and engineering mentors for the project and includes Dr. Shayne McConomy and Dr. Jerris Hooker. Dr. McConomy serves as the faculty advisor for the project while Dr. Hooker serves as the instructor of half of the team's senior design class.

Agencies that may have an interest in the project include the State University System of Florida, disaster relief agencies, and the military. The State University System of Florida provides university regulations and the approval of the popup classroom design may implement new legislation to increase the range of educational opportunities. Disaster relief agencies can utilize the product when serving communities that have been devastated by natural disasters, particularly around education institutions. All military branches may benefit from the success of this product to increase the comfort of meeting points and the portability of important facilities during deployment.



Impacted customers include people who may be affected by the product's release and implementation. The main two sectors would be university students and parents and public figures. University students and parents will be affected as the product would have an impact on the educational experience and the students' capabilities to obtain knowledge. Public figures may wish to utilize the device for impromptu meetings and provide a comfortable area for questioning after major events.

This product has many stakeholders, with the sponsors and advisors being currently affected and invested in the project. The educational and presentational implications of the project description allows for this list to adjusted and added to as it progresses.

Market

The markets for this device have been identified based upon its current purpose. The primary market are educational institutions. This is due to design's purpose currently being focused on creating a learning environment. Secondary markets have been identified based upon the collaboration aspect of the project. The secondary market includes student organizations and clubs, the government for military use, and disaster relief organizations. These markets will be taken into consideration during the design process, with educational institution attendees being the target customer in regard to customer needs.

Key Goals

This project's focus is on mobility, user experience, and energy optimization. The following key goals were found to satisfy the project description.

- The device is transportable
- The device's moving parts require average strength to maneuver.
- The infrastructure for the classroom is centered on promoting a collaborative group experience
- The device is user friendly with minimal trouble-shooting time
- The device provides a power source
- The device is integrated with an online platform
- The device provides shelter for users from environmental factors
- The device accommodates 10 - 15 participants

Additional key goals may be added as customer needs are identified.

Assumptions

The following assumptions will be utilized to assist in governing the project direction.

1. The product will be based on a small multi-terrain vehicle.
2. A nomadic prototype is expected by the completion of the project
3. The product will be built for outside usage
4. The product will not include autonomous capabilities in the first iteration

These assumptions will assist in determining the project timeline and design selection.



Appendix A: Code of Conduct

Mission Statement

The team seeks to push the boundaries of the current educational environment by creating a device that provides for simultaneous collaboration and instruction outside of the typical classroom setting.

Team Roles & Description

This section defines the member roles and descriptions, with the organization consisting of the member's major, career aspirations, and roles within the team.

Daziyah Sullivan



A senior mechanical engineering major from Jacksonville, FL. Her dream job is to be a design engineer, with a particular love for the engineering design process. She is also interested in adjacent jobs such as product development and research and development engineering. Her primary role within the group will be serving as the Project Manager. This involves keeping track of the progress of the project by tracking activities against dates, determining timelines and assigning roles for specific tasks, and ensuring the project charter guidelines are being followed.

Jean P Roquebert

A senior computer engineering major from Panama City, Panama. His dream job is to work as a Programmer / Software Engineer. His primary role within the group will be serving as the Software Engineer. This involves determining applicability of software to the project, designing and implementing code to carry out specific tasks, and debug codes when applicable.

Kyle Jackey

A senior computer engineering major from Panama City, FL. His dream job is to be a drone pilot in the Air Force. His primary role within the group will be serving as the User Experience Engineer. This involves creating and maintaining customer surveys, maintaining the customer mindset throughout the design process, and providing possible adjustments to accommodate different customer sectors.

Michael Johnson

Team 505

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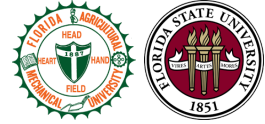
A senior mechanical engineering major from Pensacola, FL. His dream job is to be a senior engineer and board member for research and development within a company, supervising and facilitating ideas for concept development. His primary role within the group will be serving as the Prototype Developer. This involves tracking ideas of members during brainstorming sessions, furthering development of applicable ideas and determining their feasibility, and finding/utilizing prototyping resources from the universities.

Valeria Bernal

A senior electrical engineering major from Panama City, Panama. Her dream job is to assist in ethical engineering practices to assist communities that have been affected by political and economic disruptions. Her primary role within the group will be serving as the Communications Specialist. This involves keeping the team members and stakeholders informed, sending email communications, and ensuring that information presented or submitted is acceptable.

Yahdid James

A senior mechanical engineering major from Jacksonville, FL. His dream job is to be in the automotive industry, with specific goals being to work with Ford Motor Company to gain industry experience then starting an independent automotive company. His primary role within the group will be serving as the Vehicle Engineer. This involves determining methods for



incorporating motion into the product, accounting for the possible terrains, and finding techniques that could be utilized in later iterations for autonomous capabilities.

It is important to note that the primary roles mentioned within each member description is not indicative of their full roles. Each member is expected to contribute in every capacity that they are willing and able to. As the timeline progresses, primary roles are subject to change to ensure that members are contributing to tasks that are in line with their strengths. Tasks not covered within the role descriptions will be delegated by the Project Manager to team members that are able to complete them.

Attendance & Communication

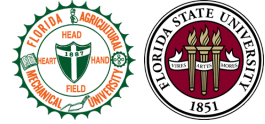
Article I: Attendance

The project work schedule is divided into two periods:

1. September to December (Fall)
2. January to May (Spring)

During each period, each team member is allowed four (4) excused absences and two (2) unexcused absences. An excused absence is an absence from a team, advisor, or sponsor meeting, for which fellow members were notified of at least twenty-four hours in advance. Excused absences may include, but are not limited to: illness, traveling, and/or studying reasons. After four (4) excused absences, all other absences are unexcused. Failure to notify the team of an absence twenty-four hours ahead of time will result in an unexcused absence.

The possible types of meetings are:



- Whole Team Meeting (WTM): all six members must attend the team, advisor, or sponsor meeting.
- Partial Team Meeting (PTM): assigned members must attend the team, advisor, or sponsor meeting. Examples include, but are not limited to: ECE department meeting, ME department meeting, design meeting, programming meeting, etc.

The team meeting type will be determined when planning the meeting.

Article II: Meeting Requirements

Meetings are due to be scheduled at least twenty-four (24) hours in advance. They will occur with the following frequency:

- WTMs will occur at least once a month.
- PTMs will occur as frequently as needed.
- Advisor meetings will occur on a monthly basis and sponsor meetings will occur biweekly.

Article III: Communication Channels and Contact Person

The primary communication channels for the team and their intended purpose are as follows, with appropriate response delays noted in parentheses:

- Basecamp (24 hours): notify absences, schedule meetings, ask project-related questions.
- GroupMe (48 hours): notify absences, discuss trivial matters.
- Google Calendar (24 hours): schedule meetings.
- Google Drive (2 business days): meeting minutes, project documents.



Project updates will be communicated to the team through meeting minutes (MMs). These will be shared on Google Drive, so that team members can access the information remotely. MMs are expected to be complete, insightful, and informative. Meeting minutes will be primary source for attendance tracking, with a separate living document being maintained to document absence categorization.

The team's contact person is Valeria Bernal. She will communicate with outside resources--such as our advisor, sponsor, or counsel--regarding budget, inquiries, and/or clarifications concerning the senior design project. Emails with outside resources will be responded to within 2 business days.

Ethics

This project is a redesign of the current classroom and therefore will lean on previous research and concepts throughout the design process. Each source of ideas and inputs will be given proper credit within reports and presentations. Creativity will be promoted through the acknowledgement of specific team member inputs. The device intentions are for educational and collaborative purposes, and members are expected to keep this in mind throughout the design process. We are not building a weapon.

Dress Code

The following information outlines the expected apparel for team members in different settings.

- ***Presentations*** : Business Professional, note that similar colors should be worn during presentations to promote the appearance of cohesiveness
- ***Advisor meetings*** : Casual
- ***Team meetings*** : Casual



- **Customers** : Business casual
- **Sponsor meetings** : Business casual

These dress code terms follow typical conventions associated with the phrases.

Conflict Resolution

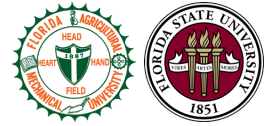
There are multiple issues that may arise throughout the course of the project, the following information provides steps for conflict resolution in a few of the potential issues.

Design Direction Conflicts

- Should conflicting views of design direction arise, a meeting between the two conflicting parties will meet to solve the issue. If an agreement cannot be reached between the two conflicting parties after three days, the issue will be discussed among the entire group. If the group cannot reach a compromise after five days of the initial disagreement, the Project Manager will make a decision or ask for support from the Faculty Advisor.

Attendance Conflicts

- Absences will be recorded within a living document on the Google Drive. When nearing the number of accepted absences, the member will be notified that their contributions will be monitored closely. Once the member has reached the absence limit, the team will evaluate their contribution and decide on whether to escalate the issue.



Vacation Day Use

- The team reserves the right to deny a request for the use of a vacation day for a team assignment. If someone requires an extension, the team will work to distribute their tasks for that assignment amongst the remaining members. That member will then be expected to carry more tasks in the next assignment. If the member does not give advance notice of their inability to complete their tasks so that the rest of the team may accommodate, the team may vote on whether to inform the senior design instructor with three members voting yes warranting this response.



Statement of Understanding

By signing this document, I acknowledge that the contents within will govern the actions of the group and agree with all terms set forth.

Daziyah Sullivan

09/20/2019

Daziyah Sullivan
[Signature]

Date

09/20/2019

Jean P Roquebert
Kyle Jackey

Date

09/20/2019

Kyle Jackey
Michael Johnson

Date

09/20/2019

Michael Johnson
[Signature]

Date

09/20/2019

Valeria Bernal
[Signature]

Date

09/20/2019

Yahdid James

Date