VCU College of Engineering

MULT 25-610 Smart Buildings-Sustainability and Efficiency

Team Contract

Prepared for

Kenneth Cossaboon

Siemens

By

Esha Sharma, Grant Forest-Collins, Daniel Gubay, Jaime Gerardo Juarez

09/06/2024

Contents

Step 1: Get to Know One Another. Gather Basic Information.

Task: This initial time together is important to form a strong team dynamic and get to know each other more as people outside of class time. Consider ways to develop positive working relationships with others, while remaining open and personal. Learn each other's strengths and discuss good/bad team experiences. This is also a good opportunity to start to better understand each other's communication and working styles.

Team Member Name	***Strengths each member bring to the group***	***Other Info***	***Contact Info***
Grant Forest-Collins	Analytical thinking, problem-solving, strong leadership skills, and project management experience	Experienced in mechanical engineering and project management, skilled in using software tools like AutoCAD and MATLAB, familiar with Lean Construction and OSHA safety standards. Involved in various extracurricular activities, including leadership roles in Omega Psi Phi Fraternity and The National Society of Black Engineers	forestcollgc@vcu.edu
Esha Sharma	Logical reasoning/problem-solving skills, research skills, strong skills/knowledge of software architecture and tools, effective at communication	Experienced in fundamental computer science, especially machine learning (pytorch, tensorflow), data science and NLP (sentiment analysis), fluent in Java, C, Python, SQL	esharma@vcu.edu
Daniel Gubay	Analytical thinking, problem-solving, Strong knowledge of high level software concepts, ability to learn new coding languages	Strong in automation using tools like Ansible and Terraform. Experienced in fundamental computer science concepts.	gubaydd@vcu.edu

Jaime Gerardo Juarez	Analytical Thinking, Problem Solving, willing to learn,	Experienced with AutoCad and construction management. Involved in SHPE (Student org)	gerardojuajs@vcu.edu

Other Stakeholders	***Notes***	***Contact Info***
Daniel Cranston	CS Faculty Advisor	dcranston@vcu.edu
Joao Soares	MNE Faculty Advisor	jsoares@vcu.edu
Siemens, Kenneth Cossaboon		kenneth.cossaboon@siemens.com

Step 2: Team Culture. Clarify the Group's Purpose and Culture Goals.

Task: Discuss how each team member wants to be treated to encourage them to make valuable contributions to the group and how each team member would like to feel recognized for their efforts. Discuss how the team will foster an environment where each team member feels they are accountable for their actions and the way they contribute to the project. These are your Culture Goals (left column). How do the students demonstrate these culture goals? These are your Actions (middle column). Finally, how do students deviate from the team's culture goals? What are ways that other team members can notice when that culture goal is no longer being honored in team dynamics? These are your Warning Signs (right column).

Resources: More information and an example Team Culture can be found in the Biodesign Student Guide "Intentional Teamwork" page (webpage | PDF)

Culture Goals	***Actions***	***Warning Signs***
Foster open communication and respect	Encourage team members to share their ideas and feedback freely in meetings and discussions. Use Discord/texting and in-person meetings to communicate	Team members becoming quiet or hesitant to share their thoughts Lack of responses to emails, messages Lack of attendance of meetings
Promote accountability and reliability	Set clear expectations and deadlines for tasks; follow up regularly on progress.	Missed deadlines and lack of updates on assigned tasks.
Encourage collaboration and teamwork Recognize and appreciate contributions	Plan regular check-ins and collaborative sessions to work together on tasks and projects Acknowledge individual efforts and successes in	Team members working in isolation without seeking input from others. Feelings of being undervalued or unnoticed within the team.

	group meetings and via group communication.	

Step 3: Time Commitments, Meeting Structure, and Communication

Task: Discuss the anticipated time commitments for the group project. Consider the following questions (don't answer these questions in the box below):

- What are reasonable time commitments for everyone to invest in this project?
- What other activities and commitments do group members have in their lives?
- How will we communicate with each other?
- When will we meet as a team? Where will we meet? How Often?
- Who will run the meetings? Will there be an assigned team leader or scribe? Does that position rotate or will same person take on that role for the duration of the project?

Required: How often you will meet with your faculty advisor advisor, where you will meet, and how the meetings will be conducted. Who arranges these meetings?
See examples below.

Meeting Participants	***Frequency*** ***Dates and Times / Locations***	***Meeting Goals*** ***Responsible Party***
Students Only - Esha Sharma, Grant Forest-Collins, Daniel Gubay, Jaime Gerardo Juarez	As Needed, On Discord Voice Channel	Update group on day-to-day challenges and accomplishments (Esha will record these for the weekly progress reports and meetings with advisor)
Students Only	Every Tuesday at 5 pm in Engineering West Hall/ERB	Actively work on project (Esha will document these meetings by committing to Github with detailed commit messages, etc, then post on Discord and update Capstone Report)
Students + Faculty advisor - Esha Sharma, Grant Forest-Collins, Daniel Gubay, Jaime Gerardo Juarez, Daniel Cranston, Joao Soares	Every Thursday at 10 am-11am in conference room ERB4310	Update faculty advisor and get answers to our questions (Esha will scribe)
Kenneth Cossaboon, Byron Burns, Students, Faculty Advisor	Monthly meetings on Thursday at 10 am in conference room ERB4310	Update project sponsor and make sure we are on the right track (Esha will scribe; Daniel will present prototype so far)

Step 4: Determine Individual Roles and Responsibilities

Task: As part of the Capstone Team experience, each member will take on a leadership role, ***in addition to*** contributing to the overall weekly action items for the project. Some common leadership roles for Capstone projects are listed below. Other roles may be assigned with approval of your faculty advisor as deemed fit for the project. For the entirety of the project, you should communicate progress to your advisor specifically with regard to your role.

- **Before meeting with your team**, take some time to ask yourself: what is my "natural" role in this group (strengths)? How can I use this experience to help me grow and develop more?
- **As a group,** discuss the various tasks needed for the project and role preferences. Then assign roles in the table on the next page. Try to create a team dynamic that is fair and equitable, while promoting the strengths of each member.

Communication Leaders

Suggested: Assign a team member to be the primary contact for the client/sponsor. This person will schedule meetings, send updates, and ensure deliverables are met.

Suggested: Assign a team member to be the primary contact for faculty advisor. This person will schedule meetings, send updates, and ensure deliverables are met.

Common Leadership Roles for Capstone

1. **Project Manager:** Manages all tasks; develops overall schedule for project; writes agendas and runs meetings; reviews and monitors individual action items; creates an environment where team members are respected, take risks and feel safe expressing their ideas.
   Required: On Edusourced, under the Team tab, make sure that this student is assigned the Project Manager role. This is required so that Capstone program staff can easily identify a single contact person, especially for items like Purchasing and Receiving project supplies.
2. **Logistics Manager:** coordinates all internal and external interactions; lead in establishing contact within and outside of organization, following up on communication of commitments, obtaining information for the team; documents meeting minutes; manages facility and resource usage.
3. **Financial Manager:** researches/benchmarks technical purchases and acquisitions; conducts pricing analysis and budget justifications on proposed purchases; carries out team purchase requests; monitors team budget.
4. **Systems Engineer:** analyzes Client initial design specification and leads establishment of product specifications; monitors, coordinates and manages integration of sub-systems in the prototype; develops and recommends system architecture and manages product interfaces.
5. **Test Engineer:** oversees experimental design, test plan, procedures and data analysis; acquires data acquisition equipment and any necessary software; establishes test protocols and schedules; oversees statistical analysis of results; leads presentation of experimental finding and resulting recommendations.
6. **Manufacturing Engineer:** coordinates all fabrication required to meet final prototype requirements; oversees that all engineering drawings meet the requirements of machine shop or

vendor; reviews designs to ensure design for manufacturing; determines realistic timing for fabrication and quality; develops schedule for all manufacturing.

Team Member	***Role(s)***	***Responsibilities***
Esha Sharma	Group communication /Scribe	✔ Keep a detailed record of meeting notes and share with group ✔ Record notes for weekly progress reports and meetings with advisor ✔ Write detailed commit messages for Github, etc, then post on Discord and update Capstone Report
Daniel Gubay	Test Engineer	✔ oversees experimental design test plans, procedures, and data analysis ✔ establishes test protocols and schedules ✔ leads presentation of experimental findings and resulting recommendations.
Grant Forest-Collins	PM	Manages all tasks; develops overall schedule for project; writes agendas and runs meetings; reviews and monitors individual action items; creates an environment where team members are respected, take risks and feel safe expressing their ideas. Required: On Edusourced, under the Team tab, make sure that this student is assigned the Project Manager role. This is required so that Capstone program staff can easily identify a single contact person, especially for items like Purchasing and Receiving project supplies.
Jaime Gerardo Juarez	Financial Manager	✔ Will submit all purchase requests needed for the project ✔ Will Setup and maintain a excel to keep track of the project budget ✔ Will Follow up with correspondence regarding purchasing

Step 5: Agree to the above team contract

Team Member: Esha Sharma	*Signature: Esha Sharma*
Team Member: Daniel Gubay	*Signature: Daniel Gubay*
Team Member: Grant Forest-Collins	*Signature: Grant Forest-Collins*
Team Member: Jaime Gerardo Juarez	*Signature: Jaime S Gerardo Juarez*