Team Charter

Team Name: The Beach Boys

Adviser: David Wallace, david@ece.msstate.edu

Weekly Meeting Time with Faculty Advisor: Monday 1:00-2:00

[Optional] External adviser: None

Team membership:

Role	Name	NetID	Major (EE or CPE)
Leader	Garrett Mclaurin	gbm99	EE
Member	Nick Gray	nlg145	EE
Member	Ryli Cruz	rc1950	EE
Member	Saurav Josan	sj1522	EE
Member	Christian Watson	cw2612	EE

Mode & Frequency of Communication: How do your team members plan to communicate with one another for the rest of the semester, and how frequently? What does your team consider a reasonable response time to be? What does your team consider a reasonable notice of a scheduling conflict to be? How does your team plan to communicate with your advisor and, if applicable, customer? Be specific – what apps/video conferencing will you use? Will you meet face-to-face and, if so, where? Produce a communication plan that is a good fit for everyone on the team and that follows the University's social-distancing guidelines. Also, be sure you have a plan in case one or more of your team must quarantine.

The Beach Boys will meet once a week unless otherwise specified. Our team has agreed to meet from 1 to 2 every Monday. Our primary forms of communication will be text messages and emails. A response is required within 24 hours of receiving a communication. If a member cannot attend a meeting, they must give notice 24 hours in advance or when the conflict arises (if the conflict occurs within 24 hours of meeting time). We will communicate with Dr. Wallace by email and face-to-face meetings. Meetings will be held inside the library multimedia center. In the event a member cannot attend in person, they will be asked to attend via Zoom call. In the event a member must be quarantined, they will attend meetings over Zoom (assuming they are healthy enough to do so).

Submission Schedule: External deadlines for the class are set by Dr. Beck and Ms. Nordin. Your team is responsible for setting your own INTERNAL deadlines. When will you submit material for internal team review? When will you expect material to be submitted for external review (e.g., final graded deliverables)? Produce a schedule that everyone can live with—including those who work well up against deadlines and those who do not.

We will have our internal deadlines and review every Sunday. We expect to have material finalized for external review two days before it is due.

Team Roles: Segment your design into subsystems; for each subsystem, select one team member as the lead and at least one other teammate as a support. How will you make sure your subsystem integrates with the other components of the design?

Our team is divided up into two sections. One section will address the hardware subsystems, and the others will work on the software subsystems. Garrett McLaurin, the team lead, will oversee the power and power distribution of the project with the aid of Nick Gray. Garrett will also work with the other team members to understand their subsystems. Nick Gray is over the assisted wheels subsystem with the aid of Garrett Mclaurin. Nick's role is to work on the motors for the assisted wheels and discern the type of wheel that would be best fitted for the project. Saurav Josan will oversee the cart controls system with the aid of Christian Watson. This system will be focused on the main controls of the beach cart. By pulling a throttle it will activate the assisted wheels and will turn the motors based on how far the throttle is engaged. Ryli Cruz will be working on the tracking controls with the aid of Christian Watson. Ryli will make sure that the controls work well for the autopilot system. Lastly, Christian Watson will be working on the tracking software subsystem of the beach cart. The beach cart will be using a system to track the user via a transmitter or computer vision. This system will be software intensive, requiring the aid of Ryli and Saurav as the autopilot system must work with the motors as well as have its own control settings. Each member will be responsible for the software of their assigned subsystem.

Potential Obstacles: What do you see as the biggest technical and/or logistical challenges of completing your prototype subsystems by the end of the semester? How will you address those challenges? Consider challenges that may arise if some or all your team must quarantine.

One of the logistical challenges that we could face would be finding the right components for our project in a timely manner. Based on previous experiences, products tend to have extensive lead times, so to tackle this problem, we will need to be on schedule. However, a technical challenge we could face would be transitioning roles when a team member becomes unavailable due to extenuating circumstances. We will address this by communicating the plan of action ahead of time for the different sections each member is assigned, so the project can continue where the previous member left off.

Conflict Resolution: What is your plan for dealing with team problems (e.g., one team member is not participating as he or she should, misses class meetings virtually/F2F/etc. other than for reasons of extreme illness, misses team meetings or internal deadlines, submits subpar work, and so forth)? What if your team does not agree on certain aspects of the design—what will you do?

We can use simple frameworks, such as acknowledging the conflict, clarifying the issues and the positions of the parties involved, and generating and evaluating viable solutions.

Additional Comments or Concerns:

N/A

[Signatures on the Next Page.]

Signatures

[Type your names and netIDs here to indicate that you have all reviewed and agreed upon the above terms and submit your completed charter at the assignment link in Canvas. If you do not agree, contact Dr. Beck and Ms. Nordin.]

Team – Name and NetID

Garrett Mclaurin gbm99
Nick Gray nlg145
Ryli Cruz rc1950
Saurav Josan sj1522
Christian Watson cw2612

ECE 4512 Instructor (required)

GE 3512 Instructor (required)

David Wallace
Digitally signed by David Wallace
DN: cn=David Wallace, o=Mississippi State University, ou, email=David@ece.msstate.edu, c=US
Date: 2023.09.11 07:39:07 -05'00'

Faculty Advisor (required)

External Advisor (if applicable)

External Party (if applicable)