The original design called for developing a system which was lightweight and would sense a users heart rate and then send that data wirelessly to a separate display. We achieved this through the use of the MAX30102 system purchased from MAXIM integrated and the wireless aspect was done through the use of bluetooth. Finally the separate display was decided on to be an android mobile phone display.

Fall Term:

First phase of development was researching what we needed to have and know to be able to develop this project as well as based on that research assigning roles to each member. After this it was down to designing those different blocks to be able to achieve the specifications needed for our system. This phase was mostly done by December 2020.
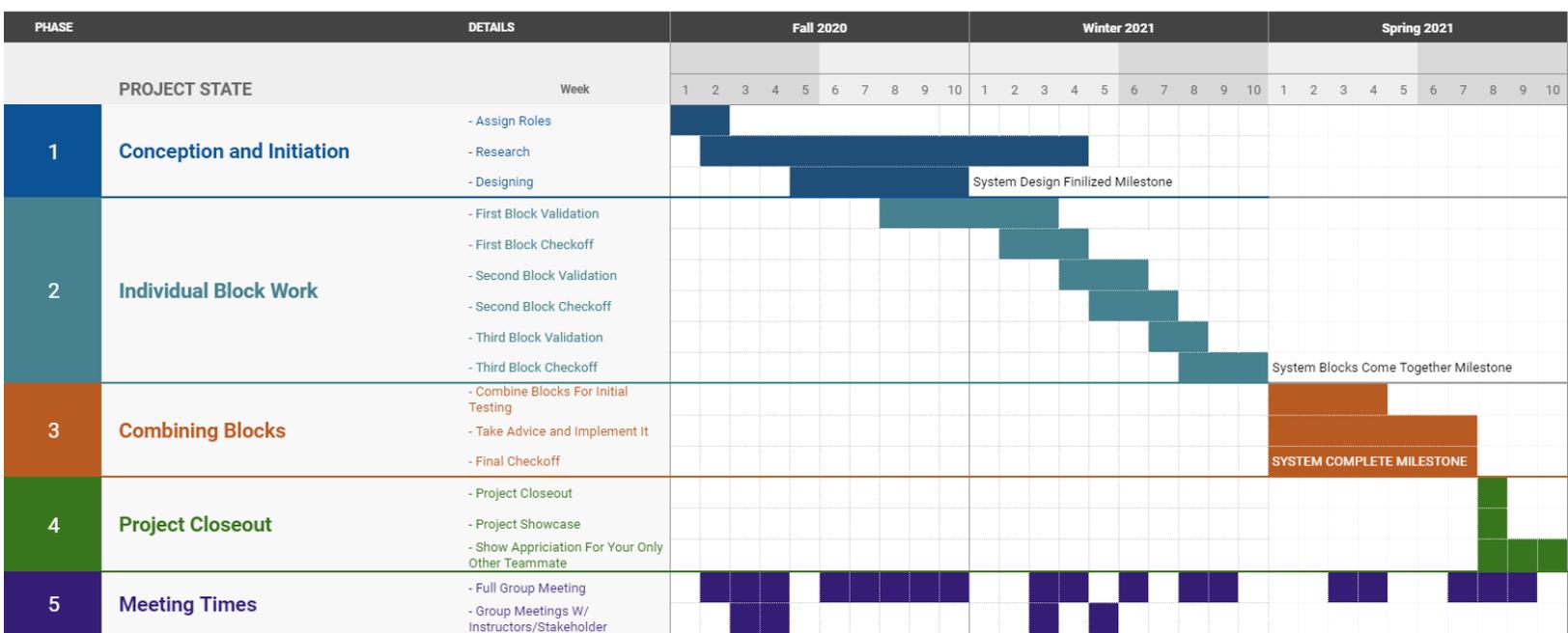
Winter Term:

Second phase featured individual members working and researching more about how to accomplish the specifications needed for their block. This was all leading up to conducting verification and then check-off on those blocks.

Spring Term:

Third phase is what covers system integration where we take all the blocks each person worked on and start to combine them and see if they work together correctly and figuring out any bugs that arise from some blocks not meshing exactly correctly. This was all leading up to a final system check-off and also project closeout.

PROJECT TIMELINE

PROJECT TITLE	Lightweight Wireless Heart Rate Monitor
TEAM MEMBERS	Ivan Vargas, Mohammad Alshahrani
PROJECT STAKEHOLDER	Joshua Thelen

Group	19
Start Term	Fall 2020

PHASE	PROJECT STATE	DETAILS	Term / Week
1	Conception and Initiation	- Assign Roles	Fall 2020, Weeks 1–2
		- Research	Fall 2020, Weeks 2–10
		- Designing	Fall 2020, Weeks 4–10 — *System Design Finilized Milestone*
2	Individual Block Work	- First Block Validation	
		- First Block Checkoff	
		- Second Block Validation	
		- Second Block Checkoff	
		- Third Block Validation	
		- Third Block Checkoff	*System Blocks Come Together Milestone*
3	Combining Blocks	- Combine Blocks For Initial Testing	Spring 2021
		- Take Advice and Implement It	
		- Final Checkoff	**SYSTEM COMPLETE MILESTONE**
4	Project Closeout	- Project Closeout	Spring 2021
		- Project Showcase	
		- Show Appriciation For Your Only Other Teammate	
5	Meeting Times	- Full Group Meeting	
		- Group Meetings W/ Instructors/Stakeholder	

Timeline terms: Fall 2020 (Weeks 1–10), Winter 2021 (Weeks 1–10), Spring 2021 (Weeks 1–10)

Key Lessons

Some key lessons learned from this project is to never underestimate the difficulty of some parts of a project. Just because something seems easy to think about and conceptualize doesn't always mean that it will be easy to implement. Another one would be to always keep the artifacts of whatever block you're working on clean and understandable just so if you need to step away from the project the rest of your team or who ever takes your spot on the project can have an easier time catching up with what is done and needs to be done with the project.