Task	Week 1 Sept 2, 2019	Week 2 Sept 9, 2019	Week 3 Sept 16, 2019	Week 4 Sept 23, 2019	Week 5 Sept 30, 2019	Week 6 Oct 7, 2019	Week 7 Oct 14, 2019	Week 8 Oct 21, 2019	Week 9 Oct 28, 2019	Week 10 Nov 4, 2019	Week 11 Nov 11, 2019	Week 12 Nov 12, 2019
Project Definition	▉	▉										
Literature Review	▉	▉										
Re-cast problem		▉										
Research for the proposal report			▉									
Familiarize with FDM Machine			▉									
Research Precision of sensors			▉									
Research defect sizes			▉									
Write the proposal report		▉	▉									
Find previous work		▉										
Specify material of interest		▉	▉									
Specify defects of interest		▉										
Determine top three solutions				▉								
Prepare Midterm Report and Presentation				▉	▉	▉						
Compare functionality				▉	▉							
Compare economics				▉	▉							
LCA of chosen solutions				▉	▉							
Present						▉						
Try making objects with defects - analyze							▉	▉				
Select one Solution							▉	▉	▉	▉		
Clearly define the defects we are solving for							▉	▉				
Determine the best solution for these defects								▉				
Estimate reliability of the sensor									▉			
Determine placement of the sensor										▉		
Prepare Final report and presentation											▉	
Present												▉

midterm

Task	Week	Completed by	Comments
Initial literature review complete	1	All	Milestone
Problem definition	1	Isabela & Clement	
Defining relevant terms	1	All	Done individually and combined
Research already existing solutions	1	Jenna & Alisha	
List of all possible solutions	2	All	Milestone
Research all possible defects	2	Sofia & Catherine	
Begin writing proposal report	2	All	Was divided
Preliminary proposal report written	3	All	Milestone
Complete writing preliminary proposal report	3	All	Was divided
Finalized proposal report finished and research continued	4	All	Milestone
Finish final copy of proposal report	4	All	Was divided
Familiarize with physical FDM printer (if available)	4	All	Group activity
Research defect size ranges	4	Catherine, Sofia & Isabela	
Research sensors (prices/precision/existence)	4	Clement, Aleisha & Jenna	
Top three solutions chosen with week 4's research	5	All	Milestone
Combine week 4 research into tables for solution comparison	5	All	Used to determine top three
In depth comparison of functionality of top solutions	5	Sofia, Catherine & Isabela	
In depth comparison of economics of top solutions	5	Clement, Aleisha & Jenna	
Preliminary presentation and midterm repport completed	6	All	Milestone
Prepare presentation	6	All	To be divided
Write report	6	All	To be divided
Practice presentation	6	Half the group	Half the group will present
Completed presentation and midterm report	7	All	Milestone
Practice presentation more	7	Half the group	Half the group will present
Present	7	Half the group	Half the group will present
Complete final midterm report	7	All	To be divided
One solution chosen	8	All	Milestone
Use in depth comparison to choose optimal solution	8	All	Collaborative effort
Clearly define which defects this solution can detect	8	Clement, Aleisha & Sofia	With help from others
Top solution finalized with in depth research ongoing	9	All	Milestone
Estimate reliability of the sensor	9	Catherine, Sofia & Isabela	With help from others
Top solution assesment	10	All	Milestone
Determine placement of sensor	10	Jenna, Catherine & Sofia	
Perform LCA of solution	10	Aleisha	
Research social impacts of solution	10	Clement & Isabela	
Preliminary Final report and presentation Complete	11	All	Milestone
Prepare presentation slides	11	All	To be divided
Write preliminary final report	11	All	To be divided
Complete Sensing Failure project successfully	12	All	Milestone
Present final presentation	12	Other half	Other half the group will present
Turn in final report	12	All	

Week	Main Task
7	Complete midterm report and research how the system will be used
8	Finalize method of using our system (precision, algorithm, language, which defects)
9	Where the system will be places and assiciated math
10	Complete prood of concept (with semi-working example)
11	Complete Final presentation and report
12	Present Final presentation and turn in report

Task	Week	Completed by	Comments
Complete midterm report and research how the system will be used	7	All	Milestone
Complete midterm report	7	All	Each member had a different section
Reaseach line laser systems on the market	7	Catherine & Jenna	
Make sample objects; some with defects	7	Clement & Sofia	
Test line laser plus a phone camera on the printed objects; what do images look like?	7	Aleisha & Isabela	
Finalize method of using our system	8	All	Milestone
Print objects and try to catch defects on camera	8	Clement & Sofia	
Precision needed	8	Clement & Catheirne	Done by analyzing objects we printed
Determine where line laser should be shining on the object being printed	8	Sofia & Isabela	Done by analyzing objects we printed
Determine the language for our code and how to interface with the CAD model	8	Jenna & Aleisha	This is to prove we can write the needed code
Complete a flow chart for the algortithm	8	Catherine & Isabela	
Determine where the system will be placed	9	All	Milestone
Mathmatically determine how the angle of incident effects the system	9	Catherine & Clement	
Compare theoretical values to exmaple images from last week	9	Jenna & Sofia	
Determine how change in height of the object effects the measurements	9	Aleisha & Isabela	
Combine information to determine where the system will be placed	9	All	
Complete proof of concept	10	All	Milestone
Update the algorithm flow chart	10	Catherine & Isabela	May chnage due to sytem placement
Film the relfection of the line laser during a print with a defect	10	Cement & Sofia	This should be done in a dark room
Use the video to validate that algoritm will work	10	Jenna & Aleisha	
Prepare final presentation and report	11	All	Milestone
Write report	11	All	Work will be split later
Prepare presentation	11	All	Each member will work on thier section
Present and turn in final project	12		Milestone

	Task	Week	Completed by	Comments
	Edit report	12	Catherine & Jenna	Members that are not presenting
	Practice presentation	12	Aleisha, Clement, SOfia & Is	Presenters

First Half

Task	Week	Completed by	Comments
Initial literature review complete	1	All	Milestone
Problem definition	1	Isabela, Clement & Catherine	
Research already existing solutions	1	Jenna, Aleisha & Sofia	
List of all possible solutions	2	All	Milestone
Research all possible defects	2	Sofia & Catherine	
Research all possible sensing methods	2	Clement, Aleisha & Jenna	
Begin writing proposal report	2	All	Divided among members
Preliminary proposal report written	3	All	Milestone
Finalized proposal report finished and research continued	4	All	Milestone
Finish final copy of proposal report	4	All	Divided among members
Familiarize with physical FDM printer (if available)	4	All	Group activity
Research defect size ranges	4	Catherine, Sofia & Isabela	
Research sensors (prices/precision/existence)	4	Clement, Aleisha & Jenna	
Top three solutions chosen with week 4's research	5	All	Milestone
Combine week 4 research into tables for solution comparison	5	All	Used to determine top three
In depth comparison of functionality of top solutions	5	Sofia, Catherine & Isabela	
In depth comparison of economics of top solutions	5	Clement, Aleisha & Jenna	
Most promising solution chosen	5	All	
Preliminary presentation and midterm report completed	6	All	Milestone
Prepare presentation	6	All	Divided among members
Write report	6	All	Divided among members
Practice presentation	6	Catherine & Jenna	Two presenters
Complete midterm report and research how the system will be used	7	All	Milestone
Complete midterm report	7	All	Each member had a different section
Reaseach line laser systems on the market	7	Catherine & Jenna	
Make sample objects; some with defects	7	Clement & Sofia	
Test line laser plus a phone camera on the printed objects; what do images look like?	7	Aleisha & Isabela	
Finalize method of using our system	8	All	Milestone
Print objects and try to catch defects on camera	8	Clement & Sofia	
Precision needed	8	Clement & Catheirne	Done by analyzing objects we printed
Determine where line laser should be shining on the object being printed	8	Sofia & Isabela	Done by analyzing objects we printed
Determine the language for our code and how to interface with the CAD model	8	Jenna & Aleisha	This is to prove we can write the needed code
Complete a flow chart for the algortithm	8	Catherine & Isabela	
Determine where the system will be placed	9	All	Milestone
Mathmatically determine how the angle of incident effects the system	9	Catherine & Clement	
Compare theoretical values to exmaple images from last week	9	Jenna & Sofia	
Determine how change in height of the object effects the measurements	9	Aleisha & Isabela	
Combine information to determine where the system will be placed	9	All	
Complete proof of concept	10	All	Milestone
Update the algorithm flow chart	10	Catherine & Isabela	May chnage due to sytem placement
Film the relfection of the line laser during a print with a defect	10	Cement & Sofia	This should be done in a dark room
Use the video to validate that algoritm will work	10	Jenna & Aleisha	
Prepare final presentation and report	11	All	Milestone
Write report	11	All	Work will be split later
Prepare presentation	11	All	Each member will work on thier section
Present and turn in final project	12		Milestone
Edit report	12	Catherine & Jenna	Members that are not presenting
Practice presentation	12	Aleisha, Clement, SOfia & Is	Presenters