

Task Name	Group Member	Finish by Date/Due	Sep-15			Oct-15			Nov-15			Dec-15			Jan-16			Feb-16			Mar-16			Apr-16										
			1	8	15	22	29	6	13	20	27	3	10	17	24	1	8	15	22	29	5	12	19	26	2	9	16	23	1	8	15	22	29	5
Individual Behavior																																		
Research Kilobot Sensors	Jared	September 28, 2015	[Blue bar from Sep 15 to Sep 22]																															
Research Kilobot Communication Protocol	Jared	October 12, 2015	[Blue bar from Sep 22 to Oct 5]																															
Research Q-bot Image Processing	Ryan/Greg	October 5, 2015	[Blue bar from Sep 22 to Oct 5]																															
Research Q-bot Sensors	Ryan/Greg	September 28, 2015	[Blue bar from Sep 15 to Sep 22]																															
Research Q-bot Communication Protocol	Ryan/Greg	October 19, 2015	[Blue bar from Sep 22 to Oct 19]																															
Research E-puck Sensors	Brittany	October 26, 2015	[Blue bar from Sep 22 to Oct 26]																															
Research E-puck Communication Protocol	Brittany		[Blue bar from Sep 22 to Oct 26]																															
Individual Communication																																		
Research/Test Kilobot - Kilobot	Jared	October 19, 2015	[Blue bar from Sep 22 to Oct 19]																															
Research/Test E-puck - E-puck	Brittany	December 14, 2015	[Blue bar from Nov 24 to Dec 14]																															
Research/Test Qbot - Qbot	Ryan/Greg	November 2, 2015	[Blue bar from Sep 22 to Nov 2]																															
Integrated Communication																																		
Test Kilobot - E-puck	Jared/Brittany	December 14, 2015	[Blue bar from Nov 24 to Dec 14]																															
Test Kilobot - Qbot	Jared/Ryan/Greg	November 16, 2015	[Red bar from Oct 13 to Nov 16]																															
Test E-puck - Qbot	Brittany/Ryan/Greg	December 14, 2015	[Red bar from Nov 24 to Dec 14]																															
Algorithm Design																																		
Design Linear Based Model	All	December 14, 2015	[Red bar from Nov 24 to Dec 14]																															
Integrated Behavior																																		
<i>Formation Control Behavior</i>																																		
Localization	All	January 25, 2016	[Blue bar from Nov 24 to Jan 25]																															
Point Convergence	All	January 25, 2016	[Blue bar from Nov 24 to Jan 25]																															
Leader Follower	All	January 25, 2016	[Blue bar from Nov 24 to Jan 25]																															
<i>Flocking Behavior</i>																																		
Neighbor Repulsion	All	February 1, 2016	[Red bar from Nov 24 to Feb 1]																															
Endpoint Attraction	All	February 1, 2016	[Red bar from Nov 24 to Feb 1]																															
Heading	All	February 1, 2016	[Red bar from Nov 24 to Feb 1]																															
Testing																																		
Software Implementation	All	March 7, 2016	[Blue bar from Sep 22 to Mar 7]																															
Hardware Implementation	All	March 7, 2016	[Blue bar from Sep 22 to Mar 7]																															
Deliverables																																		
Project Proposal - Oral Presentation	All	October 1, 2015	[Blue bar from Sep 22 to Oct 1]																															
Project Proposal - Document	All	October 15, 2015	[Blue bar from Sep 22 to Oct 15]																															
Webpage Release	All	October 28, 2015	[Blue bar from Sep 22 to Oct 28]																															
Fall Progress Presentation	All	November 19, 2015	[Blue bar from Sep 22 to Nov 19]																															
Fall Performance Evaluation	All	November 19, 2015	[Blue bar from Sep 22 to Nov 19]																															
Fall Performance Review	All	December 3, 2015	[Blue bar from Dec 3 to Dec 3]																															
Spring Progress Presentation	All	February 18, 2016	[Blue bar from Jan 11 to Feb 18]																															
Student Expo Abstract	All	March 18, 2016	[Red bar from Mar 18 to Mar 18]																															
Project Demonstration	All	March 24, 2016	[Red bar from Mar 24 to Mar 24]																															
Final Presentation	All	April 7, 2016	[Red bar from Apr 7 to Apr 7]																															
Student Expo Poster Printing Deadline	All	April 11, 2016	[Red bar from Apr 11 to Apr 11]																															
Student Expo Poster Setup	All	April 12, 2016	[Red bar from Apr 12 to Apr 12]																															
Student Expo	All	April 14, 2016	[Red bar from Apr 14 to Apr 14]																															
Final Report (Draft)	All	April 14, 2016	[Blue bar from Feb 9 to Apr 14]																															
Final Report	All	April 28, 2016	[Red bar from Apr 28 to Apr 28]																															
Final Web Page	All	April 28, 2016	[Red bar from Apr 28 to Apr 28]																															
Advisory Board Poster Printing Deadline	All	April 28, 2016	[Red bar from Apr 28 to Apr 28]																															
Advisory Board Poster Presentation	All	April 29, 2016	[Red bar from Apr 29 to Apr 29]																															

Complete In progress

2/11/16 – 3/24/16

Over the past few weeks, Greg and Ryan were able to make a few significant accomplishments. They implemented object avoidance using fuzzy logic. The QBots avoid objects in front of them based on the position and distance in relation to the QBots. The logic is “fuzzy” because of the smooth transitions between the different states. The QBots can now flock in formation. They move in a sinusoidal motion while maintaining the same triangle formation. Finally, the QBots can change from one formation to another, such as a triangle into a straight line. They will be able to navigate a narrow passage by lining up instead of staying in a triangle.

Jared and Brittany have been working on the E-pucks together. They have had a significant accomplishment, where they are able to un-brick all the E-pucks and have three E-pucks continuously working. They have worked on creating a square algorithm, as well as IR communication, and turning to a certain angle while communicating with the other E-pucks. They have also worked on creating a better way to have the batteries produce power. The E-pucks now have an add-on to the top to have a better battery connection. Jared and Brittany have noticed that this has increased the battery life significantly.