ENGN1211 Discovering Engineering S1 2021

ANU College of Engineering and Computer Science, 2021

Milestone 4: Rover in Motion

Details

Due Date	Prior to the week 8 rover workshop
Submission	Demonstrate a rover prototype with functioning motors, marked by tutor during the week 8 rover workshop. Also submit a PDF document through the Turnitin submission portal. Reviewed by your tutor during the workshop
Format	Demonstration and Document - No specific format required, must be logical, readable, and fit for purpose
Value	1% of course total
Report Length	1-2 pages
Participation	Group
Workload	1 hour each (4 hours total)

Description

This milestone is set to ensure that teams are progressing with the rover design and using prototypes to develop and refine their design. This is also an opportunity to demonstrate to your tutor that all team members are contributing to the project.

Detail

An important milestone in the development of your rover is to have a physical prototype that can drive in multiple directions (basic chassis, wheels, and control of two motors). It is not required that you have achieved autonomous control (using the sonar sensor) at this stage.

To demonstrate that your rover can drive in multiple directions you should create a small program to repeatedly drive your rover in a rectangle. The rectangle should have sides a minimum of 200mm and maximum of 500mm.

The chassis and wheels used in this demonstration may be a prototype.

In your document, summarise any iterations to your design specification and design concept that have occurred so far. Outline any uncertainties that require further investigation.

Your submission will also outline work completed by each team member since the last meeting and planned work for each team member.

Marking Criteria

Grades will be awarded as follows:

Grade	Description
0	*Unacceptable:* Unable to demonstrate rover motion and /or no document submitted
50	*Acceptable with reservations:* Movement of rover can be demonstrated. Team has made some attempt to document progress but is lacking in some key areas. For example, no iteration of design criteria or design concept based on increased knowledge or effort from each team member not clear or evenly distributed.
100	*Acceptable:* Rover can be demonstrated to move in multiple directions. Good effort to document progress and fair distribution of work. Small errors and omissions are acceptable.

Assignment Submission

- you will need to submit one pdf file containing your rover progress using the assignment submission on the course Wattle site.
- name your file according to the following naming convention:

Naming Convention	Example
[University ID]_[given name]_[family name] _[Group]_rover_in_motion.pdf	u5608740_Jenny_Simmons_ A01_ rover_in_motion.pdf