

Assessment scheme for Engineering unit BADI Year 3

The unit assessment will be based on a design activity in which the students will work in their groups to design systems selected from a list as follows:

- Line following robot
- Rescue robot
- Heat pumps for refrigeration / air conditioning and heating applications
- Patient monitoring - respiration monitor
- Electric hedge trimmer
- Machine for sorting refuse for recycling

REPORT: Students are required to submit design drawings / sketches, plans, calculations if any, and relevant theory. Each member of the group is required to submit at least three pages of relevant documentation bearing their signature. Where two students have worked closely together they may choose to append both of their signatures to the pages they submit.

Marking: A basic pass: simple design documentation for **at least two** of the above systems, including design issues, details of components and materials to be used.

Excellent: thorough documentation for **three** of the above, (possibly with suggestions or ideas for others) including design issues & choices; types of sensors and actuators to be used, with more detailed specifications (e.g. power ratings for motors) where possible; taking into account physical dimensions, heat dissipation, power sources etc.; supported by references from books, catalogues, web.

Deadline for submission agreed with students as Wednesday 10 Dec.