

Mapping of Worksheets onto Learning Outcomes

For your assignment, you need to produce a piece of work for all four learning outcomes. Here is a table of worksheets and the learning outcomes they address. This supersedes any previous communication. The final column “Advice” is for those of you who started late or have fallen behind, to give you a ‘plan for success’. More detailed guidance on how to approach the assignment will be published later.

Remember, you need to include **only four pieces of work**, one for each learning outcome.

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| <p>3. What will I be able to do when I have attended and actively participated in this module?</p> | <p>Attendance is essential to your successful module outcome and your degree classification. Active participation in all sessions whether online or face-to-face will help you to:</p> <ol style="list-style-type: none"> 1. Demonstrate an understanding of robot control architectures. 2. Apply the theory of robot kinematics. 3. Implement a range of sensor and motor-drive systems. 4. Design, build and test a robot application to solve a given problem. |
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| Worksheet Number | Worksheet Content | ILO | Advice |
|---|------------------------------------|-------|---------------------|
| 1 | Boe-bot | 1 | Should do |
| 2 | Sensors -1- | 3 | Should do either/or |
| 3 | Sensors -2- | 3 | |
| 4 | Braitenberg | 1 | Should do |
| 5 | Compass/GPS | 3 | |
| 6 | Motor Drive/Odometry | 2,3 | Should do |
| 7 | Object Detection | 1,2 | |
| 8 | Computer Vision – Object Detection | 3 | |
| 9 | Computer Vision – Navigation | | |
| 10 | Computer Vision – Line Following | 1,2,3 | Should do |
| 11 | Maze Solving | 1,2,3 | |
| 12 | Navigation using Potential Fields | 1,2,3 | |
| <p>Design, build, test mini-project will cover ILO4 and should comprise at least 25% of your assignment</p> | | | |