

Robotics Research Technology and Methods (RRTM)

Assignment 2 – Research Proposal

You should write a proposal for your dissertation project including the following **mandatory sections**:

- **Aims and Objectives**: define the *scope* of your project
- **Motivation**: establish the *need* for your project
- **Literature Review**: evaluate the *relevant state-of-the-art*
- **Impact Assessment**: consider potential *social, environmental, economic, political, legal or ethical* implications
- **Risk Register**: identify and manage *programmatic risks*
- **Timeline**: a chart dividing your project into a set of *subtasks* with time allocations
- **Appendix: Sustainability Assessment**: use the template provided in the appendix

Further details on each section will be provided in Research Methods lectures.

Your proposal ***must be written in LaTeX*** and should occupy ***no more than 13 sides of A4*** with ***at least 2cm margins all round*** and using fonts ***no smaller than 11pt*** in size. References may extend beyond the page limit.

You will be assessed on each section ***and on the overall consistency of your proposal***. For example, if your timeline is inconsistent with your aims and objectives, you will not achieve good marks on both, even if they are individually strong.

You should consult with your dissertation supervisor on the preparation of this proposal. It should serve as a plan for the project you later undertake.

Deadline: 1pm Thursday 14th March 2024

Submit your **PDF report** via UoB Blackboard.

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Marking scheme

	To pass, you must	For merit, you must also	For distinction, you must also:
Aims and Objectives	Write some sensible aims and/or objectives	Write a good number of clear aims and/or objectives	Neatly define project with concise aims and/or objectives
Motivation	Sensibly justify your project	Provide an evidence base for your project	Make a clear, concise case for your project
Literature Review	Show that you have read appropriate papers	Provide a good summary of relevant literature	Clearly relate your project to the state of the art
Impact Assessment	Identify some potential impacts of robotics	Highlight significant impacts of the proposed project	Clearly relate project to wider context
Risk Register	Identify sensible project risks	Identify and rank all significant risks	Effectively manage all significant risks
Timeline	Divide project into feasible sequence of activities and milestones	Define clear, efficient sequence of activities and milestones	Propose a usable, robust plan in appropriate level of detail
Appendix: sustainability assessment	Include a sensible sustainability assessment using the template provided	<i>Must pass, but not assessed for merit or distinction.</i>	

Appendix: Sustainability Assessment Template

Potentially unsustainable element	Likelihood of unsustainable effect (5=very likely, 1=very unlikely)	Severity of this effect (5=very severe, 1=very low severity)	Proposed mitigation strategy
Design and construction: How sustainable are the <i>materials</i> you plan to use and/or <i>components</i> you plan to buy? How will you ensure that the consumables you use are sustainable and minimize the amount of waste? Consider the source of the components, for example can you reuse existing components rather than importing new components from overseas suppliers?			
Life cycle: How sustainable is the process of running the <i>project/experiment</i> itself? Consider: resources consumed during the experiment (energy, water, disposable items etc); what might fail or expire and replacement materials; components that might be needed (e.g. batteries, 3D printed plastic parts).			
End of life: Assess what will happen at the end of the use of the hardware or when the experiment is finished – consider: where parts will be disposed; what parts can be reused; what can be recycled. You must consult with your supervisor to recycle as much of your project hardware as possible and return any additional reusable parts to the technicians for future student projects.			