

EAS Assignment Brief



Module Code &
Module Title:
EE4IOT - Internet
of Things

The design and analysis of an Internet of Things prototype product.

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https://wass.aston.ac.uk/pages/viewcalendar.page.php?makeapp=1&cal_id=2093

Assignment Brief/ Coursework Content:

Design, implement, verify and demonstrate an Arduino program (sketch) that can perform the functionality required for an Internet of Things product.

Descriptive details of Assignment:

- 1) A technical report submitted as a PDF document to Blackboard.
- 2) A zip file containing your Arduino sketch for the IoT hardware platform.

Recommended reading/ online sources:

- Blackboard's Learning resources -> Lectures, Laboratory sessions and support material.
- Books suggested on Readings page on blackboard.

Key Dates:

Deadline (week)	Details
25	1) A technical report submitted as a PDF document to Blackboard. 2) A zip file containing your Arduino sketch for the IoT hardware platform.
28	Coursework feedback

Submission Details:

- Coursework will be submitted electronically to blackboard.

[Optional: Checklist to help students complete multifaceted submissions]

The coursework consists of a technical report to be submitted through Blackboard and a code submission. Each report should include all diagrams in the main body of the report and not in an appendix. The font should be Arial size 12pt with single line spacing. All diagrams should have figure numbers and be referenced from within the text. Numeric (IEEE style) references should be used instead of Vancouver or Harvard style references.

Marking Rubric:

Element	Module weighting
Class-test	50%
Coursework	50%

Coursework weighting:

The project report marking scheme is on the next page for reference.

	<40% Fail	40-49%	50-59%	60-69%	70-79%	80% + (publishable work)
<p>1. Design and implementation (25%)</p> <p>Maps to learning outcome(s): 1,2</p>	<p>The design does not align to the specification given.</p> <p>The implementation has major errors or omissions inhibiting its function.</p>	<p>The design is functional. However, it does not align strongly with the specification.</p> <p>The implementation functionally works. However, the design has omissions, problems, insecurities or is inefficient in its implementation.</p>	<p>The design fulfils the specification and aligns well with the specification.</p> <p>The implementation functionally works. The design has potential for improvements</p>	<p>The design fulfils the specification and aligns strongly with the specification, demonstrating a coherent design process.</p> <p>The implementation functionally works and efficiently covers all aspects with room for minor improvements.</p>	<p>The design fulfils the specification and aligns strongly with the specification, demonstrating a coherent design process.</p> <p>The implementation fully works and efficiently covers all aspects.</p>	<p>The design fulfils the specification and aligns strongly with the specification, demonstrating a coherent design process.</p> <p>The implementation fully works and efficiently covers all aspects.</p> <p>The design and approach is novel and is worthy of publication.</p>
<p>2. Societal / privacy / commercial impact analysis (25%)</p> <p>Maps to learning outcome(s): 4</p>	<p>The various aspects are briefly mentioned. However, the environmental impact, entrepreneurial possibilities and ethical issues are not evaluated sufficiently.</p>	<p>The various analyses are performed to an adequate level.</p>	<p>The various analyses are performed to an adequate level and numerical estimates are based on typical scenarios.</p>	<p>The various analyses are performed to an adequate level and numerical estimates are based upon both typical scenarios and the product.</p>	<p>The various analyses are performed concisely and evaluate a broad range of issues with accurate numerical estimations.</p>	<p>The various analyses are performed concisely and evaluate a broad range of issues with accurate numerical estimations.</p> <p>The quality of the analysis is sufficient for publication.</p>
<p>3. Deployment considerations (25%)</p>	<p>Deployment considerations are</p>	<p>Deployment considerations are adequate, but</p>	<p>Deployment considerations are accurate and likely to</p>	<p>Deployment considerations are accurate and likely to</p>	<p>Deployment considerations are accurate and likely</p>	<p>Deployment considerations are accurate and likely</p>

	not covered or are overly superficial.	might have minor omissions or errors which impede their accuracy.	be of use in actually deploying an IoT product.	be of use in actually deploying an IoT product. Estimates are based on numerical estimates from typical use case scenarios.	to be of use in actually deploying an IoT product. Estimates are based on numerical estimates from typical use case scenarios and best and worst case figures are provided.	to be of use in actually deploying an IoT product. Estimates are based on numerical estimates from typical use case scenarios and best and worst case figures are provided. The analysis performed is to a professional quality.
4. Code (25%) Maps to learning outcome(s): 3	The code is incomplete, non-functional or is incomplete.	The code implements most of the functionality required. However, the code has numerous problems and formatting issues.	The code implements all functionality and works. However, there may be minor issues which could cause problems in rare circumstances.	The code functions and fully meets the specification. The formatting utilised follows recommended laboratory guidelines.	The code functions and fully meets the specification. Code is efficient with no apparent flaws. The formatting utilised follows the recommended laboratory guidelines.	The code functions and fully meets the specification. Code is efficient with no apparent flaws. The programming is of a professional quality (in terms of efficiency, layout and style). The formatting utilised follows the recommended laboratory guidelines.