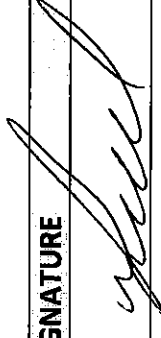


ASSIGNMENT INTERNAL VERIFICATION FORM (2016-2017)

ASSIGNMENT TITLE:		Interim Report and Presentation	LEVEL:	5
MODULE:	PSDE5007 – Individual Project		ASSIGNMENT NO (x of y):	2 of 2
PROGRAMME:	HNC Electrical and Electronic Engineering		ASSIGNMENT AUTHOR:	R. Jenkins

VERSION:	DATE SUBMITTED FOR VERIFICATION:	INTERNAL VERIFIER COMMENTS (Approval or detail of amendments required):	DATE
1.	14/12/2016	Brief conforms to the assessment pattern without modification. Ready to be sent to EV.	15/12/2016
2.			

INTERNAL VERIFIER PLEASE TICK TO INDICATE THAT THE COURSEWORK:	
☒	Conforms to the assessment pattern described in the module syllabus
☒	Tests the module learning outcome(s) appropriately

SIGNATURES OF FINAL APPROVAL:		SIGNATURE	DATE
INTERNAL VERIFIER: I confirm that this version of the assignment specification is ready to be sent to the external examiner			15/12/16
ASSIGNMENT AUTHOR: I confirm that internal verifier and external examiner approval have been received and that this version of the assignment specification will be distributed to students			

LEVEL/ LEFEL 5

SEMESTER 2

MODULE CODE/ COD Y MODIWL: PSDE5007
INDIVIDUAL PROJECT

ASSESSMENT TYPE/ MATH O ASESU: ASSIGNMENT

ASSESSMENT/COMPONENT/ ASESAD/CYDRAN: 2

COMPONENT WEIGHTING/ PWYSAU'R CYDRAN: 85%

WORD COUNT (or WORD COUNT EQUIVALENT)/ NIFER Y GEIRIAU:
2500 and 3000 WORDS/O EIRIAU

MODULE TUTOR / TIWTOR Y MODIWL: ROBERT JENKINS

SUBMISSION DETAILS/ MANYLION CYFLWYNO:

- **Make sure that Your Name , Your Student P Number, Your Module Title, Assignment Title and Your Module Lecturer's Name are clearly shown on the front page of your assignment**
- **All assignments must be submitted electronically to Turnitin unless indicated by the module lecturer here:**
- **If lecturer additionally requires you to upload coding separately to Moodle it will be indicated here: NO**
- **If a paper submission is required, then it will be indicated here: YES
you will then be required to submit the assignment parts in a suitable report folder–
not in poly-pockets - to the module tutor.**

For paper submissions only this form (ALL PAGES) MUST be printed out, signed, attached to the front of your assignment and submitted to the module tutor separately from your electronic assignment submission. Paper submission assignments will not be accepted without this form as it is a requirement that you sign the disclosure regarding the referencing convention.

- **DO NOT put this form into Turnitin or it will match many similarities with other students' submissions.**

ASSIGNMENT SPECIFICATION

Student name:		Student P number:	
Programme:	HNC Electrical and Electronic Engineering		
Lecturer:	Robert Jenkins	Internal Verifier:	Mike Hall
Assignment Title:	Final Report, Log Book and Presentation		
Hand Out Date:		Submission deadline:	

Referencing:	In the main body of your submission you must give credit to authors on whose research your work is based. Append to your submission a reference list that indicates the books, articles, etc. that you have read or quoted in order to complete this assignment (e.g. for books: surname of author and initials, year of publication, <u>title of book</u> , edition, publisher: place of publication).		
Disclosure:	I declare that this assignment is all my own work and that I have acknowledged all materials used from the published or unpublished works of other people. All references have been duly cited.		
Student's Signature:	<i>Hardcopy assignments will not be accepted without a signature here</i>	Date:	

Late submission will result in a late penalty mark, as follows:

Up to one week late, maximum mark of 40% for first attempts. No late submission for resit work.

(Academic Quality Handbook 2016/17 7.5 (5))

Only the Extenuating Circumstances Committee may grant an extension.

Learning Outcomes tested (from module syllabus)
1. Plan and organise a relatively long-term investigation within time and budgetary constraints, appreciating the significance of keeping a detailed log of all work, correspondence associated with investigations of this nature.
2. Work independently with limited supervision, within health and safety guidelines, developing and implementing a solution to a technical problem to meet customer or user needs ensuring fitness for purpose including operation, maintenance and reliability and with consideration of environmental protection and sustainability and ensuring a high level of professional and ethical conduct.
3. Write and present a technical report on the outcomes of a significant project.

TASK DESCRIPTION

Aims and Objectives

Select a project; produce a project proposal; consider costs and resources; produce a project specification; plan for testing; produce a project plan; provide evidence of background reading into the underlying theory associated with the project; keep a log-book showing the complete development of the project from start to finish.

Implement a project plan; work safely within legislation; risk assessment; consideration of environmental protection and sustainability; provide technical solutions to the project; select and implement the best solution; test the solution; consider fit for purpose, operation, maintenance and reliability; high levels of professional and ethical conduct.

Write a formal project report and give a project presentation

Task 1 – Full Report

A report must be written based on sections 1 to 11 below. The actual structure of the report is provided on the next page. Write each section in an impersonal style avoiding references to yourself or your feelings. Keep an overall word count and limit it between 4000 and 4500 words. A log-book must be compiled in section 11 and a summary in section 10.

1 - Introduction and Background Research

Write an introduction to the project (in the future tense) for the reader to understand its context. Explain the reason for the project and describe the problem to be solved. Provide clear evidence of background reading and research into all aspects of the project. Use Harvard referencing for all sources cited. Any material directly taken must be included in double quotation marks and referenced. All material written in your own words but based on other sources must also be referenced. Keep a list of all your sources ready for task 8.

2 - Specification

Write a clear description of the project specification giving a detailed list of all the project outcomes i.e. what it must achieve. Write this in the future tense. Include time and budgetary constraints. Explain the customer or user needs, expected operation, maintenance and reliability requirements with due consideration of health and safety risks, environmental protection and sustainability issues.

3 - Planning

Provide a detailed Gantt chart showing the timing of the project from beginning to end, that includes expected and actual times running in parallel so that comparisons can be made of the effectiveness of the plan. A testing plan must also be provided that lists all the requirements of the specification, expected outcomes and space for actual outcomes (though left blank at this stage). Explain your plans and refer to the Gantt chart and testing table by figure number. Write this section in the future tense.

4 - Solutions Considered

Provide an outline of each of the solutions considered (there should be at least two, preferably three) while seeking to solve the problem set out in the specification. Note that each solution should be able to meet the specification requirements. Analyse and evaluate each method in terms of cost, efficiency, reliability etc., and justify the choice of your final solutions.

5 - Final Solution and Implementation

Provide a full explanation of the final project solution including detailed designs and costs. Note that the developmental stages and prototypes will be found in the log book. Photographic evidence must also be provided of the final constructed system or product and installation if appropriate. Explain the operation and maintenance requirements and the steps taken to ensure environmental protection and sustainability. Write this section in the past tense.

6 - Testing and Results

The testing plan from task 3 must be revisited with the inclusion of test results and must be supported by photos, data tables, graphs or any other appropriate evidence. This task will form the basis of the next task and must be detailed enough to allow the project outcomes to be assessed. Write this section in the past tense.

7 – Discussion, Conclusions and Recommendations

Discuss the project test results in relation to all parts of the specification laid out in task 3. Make relevant conclusions as to whether the project outcomes have been met and comment on the overall success level of the project. Include your considerations of whether the project's overall outcome makes it 'fit for purpose' (operation, maintenance and reliability). Consider whether the project has met the time and budgetary constraints and if it has been successful with regards to environmental protection and requirements of sustainability. Explain how you have demonstrated high levels of professional and ethical conduct throughout the project. Write this section in the past tense.

8 – Reference list and Bibliography

Use the Harvard method to list all sources cited in the report. For each entry there must be one or more references in the main body of the report. Failure to do this is considered to be plagiarism. Provide a list of sources read but not quoted or reference and place in the bibliography list using the Harvard method.

9 - Appendix

Include in this section of the report material such as schematic drawings, program printouts, photographs of construction and testing evidence and any relevant datasheet pages.

11 – Summary

When each of the above sections have been written, write a short 200-word summary of every aspect of the project from beginning to end, stating clearly the intended outcomes and the overall success. Write this section in the past tense. Although this is your last task for the report, it must be placed first when the report is submitted. See the correct order for each section on the next page.

12 – Log Book

The log book used and developed throughout the project must show around 120 hours of work. Each log entry must be numbered, dated, signed by your tutor and industrial supervisor (if appropriate) and bound as a separate document using comb binding with a front title page and a contents page. The contents page must contain a summary table of each log entry showing date, time spent, accumulated time and a one line summary of activity.

Task 2 – Final Presentation

Produce a professional presentation that includes all aspects of the project to be delivered in around 10 minutes to your tutor with another tutor present to verify the grade awarded. Keep the number of words per slide to a minimum. Use bullet points with a minimum font size of 24. Keep a high contrast between text and background. Ensure diagrams are clear to read with good contrast and be ready to answer questions on any information placed on a slide at the end of the presentation. You must be clear about the project outcomes and make a definite statement on the project's success.

10 - Communication

Deliver a presentation to selected technical and non-technical panel members. The presentation should include an outline of the contents in the final report.

GUIDANCE FOR STUDENTS IN THE COMPLETION OF TASKS

Requirements

You are required to present a printed formal report and submit an electronic version (through Turnitin). This report must be between 2500 and 3000 words and should be well structured and laid out in sections preceded by a title page and comb-bound with clear acetate covers front and back. Ensure all your pages and figures are numbered. Here is the required structure of the report. The first entry in the contents page will be the list of figures.

- Summary
- Acknowledgements
- Contents page
- List of figures
- 1. Introduction and background research
- 2. Specification
- 3. Planning
- 4. Solutions considered
- 5. Final solution and implementation
- 6. Testing and results
- 7. Discussion, Conclusions and Recommendations
- 8. Reference list and Bibliography
- 9. Appendix
- 10. Communication

You are expected to present a detailed analysis of all your observations and designs. Your design and analysis skills need to be evident in both the practical work and the written work. You will be assessed against the five common assessment criteria as follows:

1 Research Informed Literature (20%)

Marks will be awarded for the extent of research and/or own reading, selection of credible sources, application of appropriate referencing conventions.

2 Knowledge and Understanding of Subject (20%)

Marks will be awarded for the extent of knowledge and understanding of concepts and underlying principles associated with the discipline.

3 Analysis (20%)

Marks will be awarded for your analysis, evaluation and synthesis; logic, argument and judgement; analytical reflection; organisation of ideas and evidence.

4 Practical Application and Deployment (20%)

Marks will be awarded for the effective deployment of appropriate methods, materials, tools and techniques; extent of skill demonstrated in the application of concepts to a variety of processes and/or contexts; formulation of innovative and creative solutions to solve problems.

5 Skills for Professional Practice (20%)

Half of these marks will be awarded for the quality of the report. A good mark will be obtained for well written material including appropriate punctuation, grammar and spelling. The report must be written in an impersonal and objective way (without references to yourself or your feelings). Ensure your conclusions compare your results with the system specification. It is essential that you try to keep within the word count and avoid unnecessary descriptions of what went wrong. The other half of this mark will be awarded for the quality of the presentation. See separate sheet for marking scheme on page 8.

GRADING CRITERIA AND STUDENT FEEDBACK

This section details the assessment criteria. The *extent* to which these are demonstrated by you determines your grade. The weightings available for each criterion are shown. Lecturers will use the space provided to comment on the achievement of the task(s), including those areas in which you have performed well and areas that would benefit from development/improvement.

Common Assessment Criteria Applied	Percentage weighting	Grade awarded
1. Research-informed Literature Extent of research and/or own reading, selection of credible sources, application of appropriate referencing conventions.	20	
Section 1: Introduction and background research -	10	
Section 8: References –	10	
2. Knowledge and Understanding of Subject Extent of knowledge and understanding of concepts and underlying principles associated with the discipline.	20	
Section 2: Specification –	10	
Section 4: Solutions considered -	10	
3. Analysis Analysis, evaluation and synthesis; logic, argument and judgement; analytical reflection; organisation of ideas and evidence	20	
Section 6 : Testing and results –	10	
Section 7: Conclusions –	10	

4. Practical Application and Deployment Deployment of methods, materials, tools and techniques; application of concepts; formulation of innovative and creative solutions to solve problems.		20	
Section 3: Solutions considered – Section 5: Final solution and implementation - Section 9: Quality of work -		5 10 5	
5. Skills for Professional Practice Attributes in professional practice: individual and collaborative working; deployment of appropriate media; presentation and organisation.		20	
Report All sections -		10	
Presentation Section 10: Communication -		10	

*Assignment Result (Assessment grades are subject to ratification at the Exam Board. These comments and grades are to give feedback on module work and are for guidance only until they are confirmed.)	Late Submission Penalties (tick if appropriate)		%
	Up to 1 week late		
	1 st , 2 nd , 3 rd attempt?	1 st	

COMMON ASSESSMENT AND GRADING CRITERIA

Assessment Criteria	OUTRIGHT FAIL	UNSATISFACTORY	SATISFACTORY	GOOD	VERY GOOD	EXCELLENT	EXCEPTIONAL
	REFER (equivalent to 0-29%)	REFER (equivalent to 30-39%*	PASS (equivalent to 40-49%)	PASS (equivalent to 50-59%)	MERIT (equivalent to 60-69%)	DISTINCTION (equivalent to 70-79%)	DISTINCTION (equivalent to 80-100%)
1. Research-informed Literature Extent of research and/or own reading, selection of credible sources, application of appropriate referencing conventions	Little or no evidence of reading. Views and findings unsupported and non-authoritative. Referencing conventions largely ignored.	Poor evidence of reading and/or of reliance on inappropriate sources, and/or indiscriminate use of sources. Referencing conventions used inconsistently.	References to a limited range of mostly relevant sources. Some omissions and minor errors. Referencing conventions evident though not always applied consistently.	Inclusion of a range of research-informed literature, including sources retrieved independently. Referencing conventions mostly consistently applied.	Inclusion of a wide range of research-informed literature, including sources retrieved independently. Selection of relevant and credible sources. Very good use of referencing conventions, consistently applied.	A comprehensive range of research-informed literature embedded in the work. Excellent selection of relevant and credible sources. High-level referencing skills, consistently applied.	Outstanding knowledge of research-informed literature embedded in the work. Outstanding selection of relevant and credible sources. High-level referencing skills consistently and professionally applied.
2. Knowledge and Understanding of Subject Extent of knowledge and understanding of concepts and underlying principles associated with the discipline.	Major gaps in knowledge and understanding of material at this level. Substantial inaccuracies.	Gaps in knowledge, with only superficial understanding. Some significant inaccuracies.	Evidence of basic knowledge and understanding of the relevant concepts and underlying principles.	Knowledge is accurate with a good understanding of the field of study.	Knowledge is extensive. Exhibits understanding of the breadth and depth of established views.	Excellent knowledge and understanding of the main concepts and key theories. Clear awareness of challenges to established views and the limitations of the knowledge base.	Highly detailed knowledge and understanding of the main theories/concepts, and a critical awareness of the ambiguities and limitations of knowledge.
3. Analysis Analysis, evaluation and synthesis; logic, argument and judgement; analytical reflection; organisation of ideas and evidence	Unsubstantiated generalisations, made without use of any credible evidence. Lack of logic, leading to unsupportable/missing conclusions. Lack of any attempt to analyse, synthesise or evaluate.	Some evidence of analytical intellectual skills, but for the most part descriptive. Ideas/findings sometimes illogical and contradictory. Generalised statements made with scant evidence. Conclusions lack relevance.	Evidence of some logical, analytical thinking and some attempts to synthesise, albeit with some weaknesses. Some evidence to support findings/ views, but evidence not consistently interpreted. Some relevant conclusions and recommendations, where relevant	Evidence of some logical, analytical thinking and synthesis. Can analyse new and/or abstract data and situations without guidance. An emerging awareness of different stances and ability to use evidence to support the argument. Valid conclusions and recommendations, where relevant	Sound, logical, analytical thinking; synthesis and evaluation. Ability to devise and sustain persuasive arguments, and to review the reliability, validity & significance of evidence. Ability to communicate ideas and evidence accurately and convincingly. Sound, convincing conclusions / recommendations.	Thoroughly logical work, supported by evaluated evidence. High quality analysis, developed independently or through effective collaboration. Ability to investigate contradictory information and identify reasons for contradictions. Strong, persuasive, conclusions, justifiable recommendations.	Exceptional work; judiciously selected and evaluated evidence. Very high quality analysis, developed independently or through effective collaboration. Ability to investigate contradictory information and identify reasons for contradictions. Highly persuasive conclusions
4. Practical Application and Deployment Effective deployment of appropriate methods, materials, tools and techniques; extent of skill demonstrated in the application of concepts to a variety of processes and/or contexts; formulation of innovative and creative solutions to solve problems.	Limited or no use of methods, materials, tools and/or techniques. Little or no appreciation of the context of the application.	Rudimentary application of methods, materials, tools and/or techniques but without consideration and competence. Flawed appreciation of the context of the application.	An adequate awareness and mostly appropriate application of well established methods, materials, tools and/or techniques. Basic appreciation of the context of the application.	A good and appropriate application of standard methods, materials, tools and/or techniques. Good appreciation of the context of the application, with some use of examples, where relevant.	A very good application of a range of methods, materials, tools and/or techniques. Very good consideration of the context of the application, with perceptive use of examples, where relevant. Evidence of some innovation and creativity.	An advanced application of a range of methods, materials, tools and/or techniques. The context of the application is well considered, with extensive use of relevant examples. Application and deployment extend beyond established conventions. Innovation and creativity evident throughout.	Outstanding levels of application and deployment skills. Assimilation and development of cutting edge processes and techniques.
5. Skills for Professional Practice Demonstrates attributes expected in professional practice including: individual initiative and collaborative working; deployment of appropriate media to communicate (including written and oral); clarity and effectiveness in presentation and organisation.	Communication media is inappropriate or misapplied. Little or no evidence of autonomy in the completion of tasks. Work is poorly structured and/or largely incoherent.	Media is poorly designed and/or not suitable for the audience. Poor independent or collaborative initiative. Work lacks structure, organisation, and/or coherence	Can communicate in a suitable format but with some room for improvement. Can work as part of a team, but with limited involvement in group activities. Work lacks coherence in places and could be better structured.	Can communicate effectively in a suitable format, but may have minor errors. Can work effectively as part of a team, with clear contribution to group activities. Mostly coherent work and is in a suitable structure.	Can communicate well, confidently and consistently in a suitable format. Can work very well as part of a team, with very good contribution to group activities. Work is coherent and fluent and is well structured and organised.	Can communicate professionally and, confidently in a suitable format. Can work professionally within a team, showing leadership skills as appropriate, managing conflict and meeting obligations. Work is coherent, very fluent and is presented professionally.	Can communicate with an exceptionally high level of professionalism. Can work exceptionally well and professionally within a team, showing advanced leadership skills. Work is exceptionally coherent, very fluent and is presented professionally.

Attainment Description	Complete one box only	
	Range	Mark
A skilfully delivered and charismatic presentation. Professional quality visual aids detailed all aspects of the project. Questions were enthusiastically answered and demonstrated an understanding that far exceeded the bounds of the project.	80–100%	
A confidently delivered, well-structured presentation was complemented with excellent visual aids and covered all aspects of the project. Questions were tackled enthusiastically and competently, and demonstrated a wide understanding.	70-79%	
A punchy, well-structured presentation, complete with good visual aids, covered most aspects of the project preparation, achievements to date and future objectives. Questions revealed a very good understanding of underlying theory.	60-69%	
The good presentation covered most aspects of the project within the allocated time and gave an honest account of what had been achieved and what was planned. Visual aids were used to good effect. Questions indicated a good understanding of the project and project background.	50-59%	
The basic presentation covered most aspects of the project within the allocated time and gave a reasonable account of what had been achieved and what was planned. Visual aids were not used to their best effect. Questions indicated a limited understanding of the project.	40-49%	
The presentation lacked structure and clarity, time management was a problem. Visual aids were poor. Questions were not really answered and/or little knowledge demonstrated.	30-39%	
A rambling, disjointed performance with few, if any, visual aids. Both from the presentation itself and the resulting questions it was quite difficult to determine exactly what had been done or needed to be done.	0-29%	

Tutor's Signatures 1st Signature..... 2nd Signature..... Date.....	
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SPECIFIC LEARNING OUTCOMES FOR IENG

This section lists the IEng learning outcomes for full accreditation that are relevant to the assignment. The marks allocated are extracted from the Marking Criteria and Student Feedback form. The grade awarded for the particular LO is also shown. These grades are then transferred onto a 'global' sheet related to each student ensuring all IEng LO's are assessed at least twice across all modules

Code	Learning Outcome	Relevant Tasks in Assignment	Marks available	Marks awarded	Grade awarded
Science & Mathematics					
Engineering Analysis					
EA3i	Ability to use the results of engineering analysis to solve engineering problems and to recommend appropriate action.	Section 6 Section 7	20		
Design					
D4i	Apply problem-solving skills, technical knowledge and understanding to create or adapt design solutions that are fit for purpose including operation, maintenance, reliability etc.	Section 4 Section 2	20		
D3i	Work with information that may be incomplete or uncertain and be aware that this may affect the design.	Section 4 Section 2	20		
Economic, Legal, Social, Ethical and Environmental context					
ET4i	Understanding of the requirement for engineering activities to promote sustainable development.	Section 4	10		
Engineering Practice					
EP2i	Understanding of and ability to use relevant materials, equipment, tools, processes, or products.	Section 5	10		
EP3i	Knowledge and understanding of workshop and laboratory practice.	Section 5	10		