EEET2248 – Electrical Engineering Analysis
Individual Lectorial Project Guidelines

The major assessment task for the first half of the semester is the individual lectorial tasks; these are worth **25% of the total assessment for this course**.

This task will consist of the incremental development of a unit-conversion program in MATLAB and is broken into two main components:

- **Three milestones** (due weeks 3, 5 & 7 and worth 5% each): The purpose of these milestones is for you to receive <u>formative feedback</u> on your progress towards the final product you are developing (The unit-conversion program). These milestone submissions will consist of your MATLAB script file(s) and a very short progress report outlining the behaviour of your MATLAB script(s) thus far and how this is progressing towards the final program.

- **One final submission** (due week 9 and worth 10%): This submission will also consist of your MATLAB script file(s) and a more detailed report on the design process and testing of your program.

Below are the guidelines for what to submit for these assessment components:

- All **written documentation** for this project must be submitted in softcopy to <u>Canvas</u> and is due on the Fridays of the weeks outlined above **(before 11:59 pm)** the penalty otherwise will be 10 marks deducted per day late (inclusive of weekends).

- Documentation **MUST** be submitted in either Word format (.doc or .docx) or portable document format (.pdf). Due to compatibility issues reports in all other formats, including but not limited to, Open Office format (.odt) and Mac OS format (.pages) <u>WILL NOT BE ACCEPTED</u>!

- MATLAB .m files <u>must</u> be included in all submissions for both the three milestones and the final submission. **MATLAB code that has been screen captured and/or copied and pasted into the report will not be accepted.**

- **Copying the work of other students and/or other sources without referencing is called plagiarism and will result in the School being notified of misconduct.**

<u>Milestone Submissions:</u>

Details on where you should be as far as progress goes will be outlined at the bottom of the lectorial handout sheets, but in general your milestone submissions should consist of the following files:

- **<u>.m files</u>** showing the required progress. This includes your **main script** and any **user-defined functions** you've created to perform the task. All user-defined functions must be submitted as .m files, protected function files will not be accepted.

- A very short **progress report** outlining the following:

<u>Page 1:</u> Cover Page (example):

<div align="center">
RMIT University
School of Engineering
EEET2248 – Electrical Engineering Analysis
Lectorial Progress Report
Lecturer: Dr. Katrina Neville
Student Name: ……..   Student Number: ………
Lectorial Session: ……..   Submission Due Date: …….
</div>

<u>Page 2 - 3:</u>

1. **Abstract (50 marks)** should be around half a page in length:
   a. Concisely **summarise the requirements** for this part of the project (see lectorial sheets for details on this).
   b. Describe what **<u>new</u> MATLAB tools and techniques** you've included at this point in the project (e.g. Since my last progress report I've included two user-defined functions and a for-loop in my project to perform the following functions….).
   c. **Summarise the results** you've obtained from your program thus far. What functions can your project perform now and how well?

2. **Software solution and testing (50 marks)** around 1 – 1.5 pages:
   a. Include a *selection* of screenshots (or other output) to show the behaviour of the program, how the output is displayed and evidence that you have tested it with some input data.
   b. Testing should consist of showing the **accuracy** of your conversion program, how it **handles erroneous inputs** as well as **usability**.
   c. Explain what your screenshots are showing and how your solution has fulfilled the requirements to this point.

Final Submission:

Your final submission should contain the final product for the project and include the following:

- **MATLAB files** showing the final product. Again this will include your **main GUI file (.mlapp file)** and your **user-defined functions (.m files)**. All user-defined functions must be submitted as .m files, protected function files will not be accepted.

- A more detailed **report** outlining the following:

Page 1: Cover Page (example):

RMIT University
School of Engineering
EEET2248 – Electrical Engineering Analysis
Lectorial Report
Lecturer: Dr. Katrina Neville
Student Names: ……..   Student Numbers: ………
Lectorial Session: ……..   Submission Due Date: …….

Page 2 onwards:

1. **Introduction/background (10 marks):** Describe the requirements of the program and its purpose.

2. **Design and methodology (30 marks):** How did you design your user-interface? What algorithms were needed (conversion formulae)? Structure of the program (flow-charts, block diagrams, etc). Which MATLAB tools and techniques did you need to use and why?

3. **Output and testing (50 marks):**
   a. Test your solution with a range of reasonable input data values making sure the output is realistic. Demonstrate that your software solution has produced an output consistent with what you expected.
   b. Testing should consist of showing the **accuracy** of your conversion program, how it **handles erroneous inputs** as well as **usability**.
   c. Include a *selection* of screenshots (or other output) you've generated from MATLAB to show the output of your software solution. Explain how these outputs fit with the requirements of the task and the problem you are solving.

4. **Conclusion (10 marks):** Describe how your program has fulfilled the requirements of the task, any weaknesses in the way the program works and what could be done in future to make the program better (i.e. Extra features that may be beyond the scope of this project/course/development environment).

Assessment Guide for Electrical Engineering Analysis Lectorial Milestones

	Needs Improvement <50	Satisfactory 50 - <75	Outstanding 75 - 100
Abstract/Background (50%)	Abstract is missing, or the student appears to lack an understanding of the project and its requirements.	Abstract satisfactorily summarises the aim of the project, its requirements and the progress made. Level of detail presented may be superficial in places.	Abstract concisely summarises the aim of the project, its requirements and progress made in a clear and professional manner. Level of detail presented is appropriate for the task.
Technical Progress (50%)	Student has not successfully completed the technical requirements and/or has not adhered to the specifications for the task. No testing presented, or the testing was inappropriate for the task.	Student has completed the technical requirements for this milestone to a satisfactory level. Progress report may lack some detail and/or evidence of appropriate testing.	Student has completed the technical requirements for this milestone to an outstanding level. Progress report demonstrates a strong understanding of the project and presents evidence of appropriate and thorough testing.

Assessment Guide for Electrical Engineering Analysis Final Milestone

	0-49 Fail NN	50-59 Pass PA	60-69 Credit CR	70-79 Distinction DI	80-100 High Distinction HD
Introduction/ Background (10%)	No introduction presented, or student appears to lack an understanding of the project and its requirements.	An introduction has been presented on the project, but it lacks essential details or contains some ambiguity on the requirements for the project.	A satisfactory introduction has been presented which may lack some detail in parts. Student has an adequate understanding of the requirements for the project.	A good introduction has been presented showing a clear understanding of the project and its requirements. Only minor details missing.	An exceptional introduction presented that addresses all relevant requirements for the project. Student has presented an appropriate level of detail in all aspects of this section.
Design Methodology (30%)	Student has presented no evidence of the structure and design of the program or the design contains serious fundamental flaws.	Design and structure of the program has only been addressed in a superficial way. Overall the program design is not clear.	Design and structure of the program has been presented but may be lacking detail or clarity in parts. Program design is satisfactory.	A good program design has been presented with a clear structure and flow. Only minor errors present in design.	An excellent program design has been presented with clear structure and flow. All aspects of this section are correct and contain an appropriate level of detail.
Output and Testing (50%)	No solution presented, or solution has serious, fundamental flaws. Solution does not fulfil the specific requirements outlined in the specifications for the task.	A software solution has been presented but there is little to no evidence of testing. Software solution may contain some errors.	An adequate software solution has been presented with superficial links made to requirements. Some testing has been performed with a very limited set of inputs.	A good software solution has been presented with evidence of testing with a variety of inputs. Links are shown between the results/solution and the program requirements.	An excellent software solution has been presented with evidence of a wide range of testing with relevant input data. A clear link has been shown between the solution and the requirements.
Conclusion (10%)	No conclusion presented, or aim is simply restated in past tense.	Conclusion consists of superficial comments about the program. Future scope not addressed or addressed poorly.	Conclusion is satisfactory but may lack in-depth discussion on outcomes. Future scope addressed in a superficial way.	Conclusion explains the outcomes of the project and gives some indication of future scope. May be missing minor details.	Conclusion is appropriate and explains the outcomes and future scope for the project in a clear manner.