Project Assessment Sheet

Student Number	Repo URL	Branch

When evaluating an assessment item, the following criteria apply:

Evaluation	**Mark (%)**	**Description**
Excellent	100	**All relevant material is presented in a logical manner showing clear understanding, and sound reasoning.** For software – correct coding style, correct software architecture including: modularity; functions; parameters; and types, very efficient implementation (code and time) and/or novel (and correct) code.
Good	75	**Nearly all relevant material is presented with good organisation and understanding.** For software – mostly correct coding style, mostly correct software architecture including: modularity; functions; parameters; and types, reasonably efficient implementation (code and time).
Acceptable	50	**Most relevant material is presented with acceptable organisation and understanding.** For software – inconsistent coding style, reasonable software architecture (but could show improvement in modularity, use of functions, parameters, or types), some code may be prone to errors under certain operating conditions (e.g. input parameters) or usage, occasional inefficient or incorrect code.
Poor	25	**Little relevant material is presented and/or poor organisation or understanding.** For software – Conceptual difficulty of the underlying concepts, numerous coding style errors, functionality missing, poor software architecture, inappropriate or incorrect use of functions, parameters or types. Very inefficient and / or incorrect code.
No attempt	0	**No attempt.** For software – missing modules and/or functionality.

Oral Defence

During the assessment of your work you will be asked questions based on material which you have learnt in the subject and then used to implement the assessment task. You are expected to know exactly how your implementation works and be able to justify the design choices which you have made. If you fail to answer the questions with appropriate substance then you will be awarded **zero** for that component.

DEM – Basic Functionality

Self-assessment: evaluate your work, and provide evidence with the filename and line number.

Evaluation	Mark	Item	Comments	Filename(s)	Line Number(s)
E G A P N	**/2**	Software style	File headers are correct. Function descriptions are appropriate and correct. Names and code structure conform to the *Software Style Guide*.		
E G A P N	**/2**	Version control	Appropriate and relevant comments for code changes. Commits adhere to the *Git Workflow*.		
E G A P N	**/2**	Voltage and current sampling.	Two channels have synchronous sampling. 16 samples per cycle at 50 Hz. Hard real-time constraint met.		
E G A P N	**/4**	Energy.	Time, average power and total energy measurements. Speed of calculation (fixed-point). Efficiency of algorithm.		
E G A P N	**/4**	Cost.	Tariffs and total cost implemented. ToU tariff demonstrated under “test mode”.		
E G A P N	**/4**	HMI.	Display cycling and updating, with timeout.		
E G A P N	**/2**	Settings / interrogation.	Tower protocol expanded to achieve Basic Functionality.		
SUBTOTAL	**/20**				

DEM – Intermediate Functionality

Self-assessment: evaluate your work, and provide evidence with the filename and line number.

Evaluation	Mark	Item	Comments	Filename(s)	Line Number(s)
E G A P N	**/6**	RTOS	Multiple threads are used with an RTOS – i.e. proper multi-threaded architecture, use of interrupt and thread priorities, semaphores, synchronisation, etc.		
E G A P N	**/4**	Sample rate.	16 samples per cycle (i.e. frequency measurement to 0.1 Hz and tracking).		
E G A P N	**/2**	Settings / interrogation.	Tower protocol expanded to achieve Intermediate Functionality.		
SUBTOTAL	**/12**				

DEM – Advanced Functionality

Self-assessment: evaluate your work, and provide evidence with the filename and line number.

Evaluation	Mark	Item	Comments	Filename(s)	Line Number(s)
E G A P N	**/8**	Measurements.	Measurement of true RMS for voltage and current. Calculation of power factor. Speed of calculation. Efficiency of algorithm.		
SUBTOTAL	**/8**				

Additional Information

Indicate any other project work that you think should be taken into consideration in assessing the project.

Include details such as filenames and line numbers.