



ECE 245: Microcontroller Applications with IoT – Fall 2022: Theoretical Assignment 1

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Note – Cheating and Plagiarism: Cheating and plagiarism are not permitted in any form and cause certain penalties. The instructor reserves the right to fail culprits.

Deliverable: All your responses to the assignment questions should be included in a single compressed file to be uploaded in the Gannon University (GU) – Blackboard Learn environment.

Question 1. Consider the following items:

- Provide comprehensive explanations for definitions, employed emerging technologies, and real-world applications for each of processors, microprocessors, microcontrollers, system-on-chips through research.
- Determine the important peripherals and features for these computing elements.
- Specify the limitations of the current generation of them to be resolved.

Question 2. Determine the microcontroller used by each of the following development/test boards:

- The latest version of Raspberry Pi.
- The latest Beagle Bone (black, blue, or green).
- Nordic nRF52840-DK.