**Fundamentals of Programming**

Julius R. Capul

Bachelor of Science in Electronics Engineering

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Prof. Kimber Eco

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**Relation of Programming to ECE Students**

Programming a skill that involves writing specific instructions a device or computer will follow. It is necessary to learn proper syntax and usage of each functions and expressions such as conditional and loops in order to have a fully running program. Programming also involves skills like debugging which is also a way of problem solving when errors pop up when testing the program.

In electronics, various different components and mechanics are familiarized by the students. One of which is, designing and testing a circuit. Circuit design also involves a lot of knowledge about electronics and its components. In designing a circuit, you need to know how each part works and how they interact with each other. There are also a lot of equipment that can be learned in order to assemble and test the circuits designed.

Both of these skills have a lot of similarities. Both of it involves learning different concepts. In programming we learn how to set variables, make conditional statements, and use loops to have a fully functioning program. Similar to that, we learn in electronics how to choose a certain component with specific value for a certain function and how to connect these components so that it interacts with each other according to what we need. Both skills involves problem solving and critical thinking, both of which are universal skills. We need to know how to test our programs or circuits and figure out solutions for the occurring problems and bugs.

Programming in the ECE curriculum is necessary addition since a demand for this skill is continuously growing. Various skills can also be learned in programming that may be used for other fields.