

EE P 520: SOFTWARE ENGINEERING FOR EMBEDDED APPLICATIONS

- Modern embedded systems programming starts with the hardware, and extends all the way to the cloud
- The resulting myriad of programming languages, libraries, tools, data structures, and algorithms may seem difficult for any one programmer to master
- In this course, we introduce the fundamentals of programming languages and software engineering common to all levels of embedded systems programming, giving students conceptual tools they need to tackle various projects.

More specifically, this course:

- Takes a detailed look at two programming languages, C and C++ ;
- Teaches students how to use build tools, version control, and advanced editors;
- Describes how to use and create software libraries; and ties everything together with a more substantial software engineering project

At the end of this course, you should be able to:

- Design an embedded application to small and moderately sized problems
- Implement a given design in the C/C++ programming language
- Generate appropriate documentation for developed solutions
- Design and implement tests for a given component
- Explore existing documentation to describe and use existing libraries and frameworks