GVSU Computer Engineering Program
Review, Critique, and Proposal

Written By:	Joe Gibson	gibsjose@mail.gvsu.edu
Comments and Review By:	Jesse Millwood	millwooj@mail.gvsu.edu
	Kurt VonEhr	vonehrk@mail.gvsu.edu

Date: July 2015

Executive Summary

This document attempts a review and critique of the Computer Engineering program at Grand Valley State University in the form of a proposal. Both the strengths and weaknesses of the program will be discussed, and additional topics will be proposed.

The goal of this document is to provide feedback from a former student who believes that the program is in a position to greatly enhance an already favorable curriculum. By reviewing this document and taking its contents to heart, the university will be demonstrating its commitment to student feedback and its ability to adapt to changing educational and industrial landscapes.

The following items are the main points of the proposal:

1. C++ should be taught to CE students following their introduction to C, rather than teaching them Java, which is never actually used after CIS 163.
2. Students should design their own ATmega-based development board instead of relying only on the Arduino. They should incorporate circuit protection aspects of the *Ruggeduino*, which they learn about in EGR 326.
3. Students should be taught version control systems (such as `git`) to manage code, group projects, and project submissions.
4. EGR 424 (Design of Microcontroller Applications) and CIS 457 (Data Communications) are both fundamental to Computer Engineering, and should be required courses, rather than electives.

Grand Valley State University