**Course Outcomes Assessment Summary**

**EGR 304—Embedded Microcontroller Systems**

**Course Outcomes (CO) organized by program Student Learning Outcomes (SLO):**

***SLO 1 - Educational Breadth and Worldview Development***

CO: N/A

* Performance Indicator(s): N/A
* Assessment: N/A

***SLO 2 - Faithfulness and Responsibility***

CO: N/A

* Performance Indicator(s): N/A
* Assessment: N/A

***SLO 3 - Societal and Historical Context***

CO: N/A

* Performance Indicator(s): N/A
* Assessment: N/A

***SLO 4 – Life-long Learning***

CO: N/A

* Performance Indicator(s): N/A
* Assessment: N/A

***SLO 5 – Critical Thinking and Problem Solving***

* Students will design a system that uses an embedded processor. The design will incorporate input/output and a sensor to measure a physical quantity such as temperature, pressure, a radio signal, etc. This is a primary goal of this course.
* Performance Indicator(s): Lab Project
* Assessment: Lab Report grades

***SLO 6 - Engineering, Math, and Science Fundamentals***

* To enable the project student study digital I/O strategies, serial and parallel interfacing including network interfaces such as USB and Ethernet, interrupts, etc.
* Performance Indicator(s): Tests
* Assessment: Test performance. The class average on all tests should be B or better. (Homework is graded for the benefit of the students. Homework grades are not used for course assessment.)

***SLO 7 - Experimental Design and Analysis***

* Students will design a system that uses an embedded processor. The design will incorporate input/output and a sensor to measure a physical quantity such as temperature, pressure, a radio signal, etc. This is a primary goal of this course.
* Performance Indicator(s): Lab Project
* Assessment: Lab Report grades

***SLO 8 - Engineering Design***

* Students will design a system that uses an embedded processor. The design will incorporate input/output and a sensor to measure a physical quantity such as temperature, pressure, a radio signal, etc. This is a primary goal of this course.
* Performance Indicator(s): Lab Project
* Assessment: Lab Report grades

***SLO 9 - Engineering Skills and Tools***

There is no specific course outcome for this on the syllabus. However students must learn about and effectively use a software version control system (typically Git), an integrated development system or editors, compilers, and various hardware parts and platforms in order to do the assigned lab work.

* Performance Indicator(s): Grades for the lab exercises.
* Assessment: The class average should be B or better for each exercise.

***SLO 10 - Teamwork***

CO: N/A

* Performance Indicator(s): N/A
* Assessment: N/A

***SLO 11 - Communication***

CO: N/A

* Performance Indicator(s): N/A
* Assessment: N/A

**Relationship of Course Objectives to Institutional Objectives (Four Coordinates)**

*Coordinate Course Objectives*

Religious Orientation 1

Creational Structure 6, 9

Creational Development 5, 6, 7, 9

Contemporary Response 2, 3, 4, 5, 8