2013 Scanning Sheet.  Assignment Description:_____ Instructor:_____ Date:_____ Scanned File Name:_____

| ABET Outcomes | | | | | | | | | | | Rubric or student % | Example problem | Outcome # | A, B, C, D, F |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | B | C | D | E | F | G | H | I | J | K | | | | **EE 234 Microprocessors I (3) – Outcomes – Reviewed 2013** |
| 2 | 2 | | | | | | | | | | | B1 | 1 | Use the chosen microcontroller registers, addressing modes, and instructions properly. |
| 2 | 2 | | | | | | | | | | | B2 | 2 | Write instruction sequence to perform arithmetic and logical operations. |
| 2 | 2 | | | | | | | | | | | A2 | 3 | Use appropriate instruction sequence to write program loops. |
| | | 2 | | | | | | | | | | C1 | 4 | Use a microcontroller demo board to run and debug assembly programs. |
| 2 | | | 2 | | 2 | | | | | | | | 5 | Write and call subroutines to perfrom desired functions. |
| 2 | | | | | | | | | | | | A1 | 6 | Generate clock signals to be used by the CPU and peripheral modules. |
| 2 | | 2 | 2 | | | | | | | | | C2,D2 | 7 | Explain interrupts and write service routines to handle interrupts. |
| 2 | | 1 | 2 | | | | | | | | | D1 | 8 | Use parallel port to drive I/O devices such as LEDs, 7-seg. displays, key-pads, stepper motors, and LCD. |
| | | | 1 | | 2 | | | | | | | F1 | 9 | Use timer function to create delays, measure signal parameters such as period, frequency and duty cycle. |
| | | | 1 | | 2 | | | | | | | F2 | 10 | Use timer function to generate waveforms with certain frequency and duty cycle for use in control apps. |
| | | | 1 | | 2 | | | | | | | | 11 | Use serial peripheral interface (SPI) to interface with peripherals such as D/A converter. |
| 2 | | | | | | | | | | | | | 12 | Use microcontroller USART module to communicate with a PC. |

1=supporting contribution
2=significant contribution

| Rubric |
|---|
| 5: Excellent Mastery of Outcome By Vast Majority of Students |
| 4: Good Mastery of Outcome By Vast Majority of Students |
| 3: Adequate Mastery of Outcome By Majority of Students |
| 2: Marginal Mastery of Outcome By Most Students |
| 1: Lack of Mastery of Concept By Most Students |

Improvement Suggestions or Comments:

a. an ability to apply knowledge of mathematics, science, and engineering
b. an ability to design and conduct experiments, as well as to analyze and interpret data
c. an ability to design a system, component, or process to meet desired needs within realistic constraints such as economic,
d. an ability to function on multi-disciplinary teams
e. an ability to identify, formulate, and solve engineering problems
f. an understanding of professional and ethical responsibility
g. an ability to communicate effectively
h. the broad education necessary to understand the impact of engineering solution in a global, economic, environmental, and
i. a recognition of the need for, and an ability to engage in life-long learning
j. a knowledge of contemporary issues
k. an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice