

**UNC Charlotte, Department of Electrical and Computer Engineering
ECGR 4101/5101, Fall 2008, Homework #2
Due: 9/9/2009, at the beginning of class (20 points)**

Assignment should be typed, a hard copy turned in to instructor

1. How long did this homework take you? (1 point)
2. I have an wireless sensor node whose current drain is 100mA for 1 minute every two hours and 0.1 mA the rest of the time . I am using a single 5000 mAh cell as the power supply for this device. How long will my device run? (3 points)
3. For the SKP board, what is the total amount of memory that can be used by a user for storing programs? (2 points)
4. Can you, the user, store a program instruction at memory location 003FEh? Why or why not? (2 points)
5. Read the July 2008 EE Times article “Power trends point to a knowledge of integration.” In four lines of correct English, summarize what the authors suggest can be done to reduce power consumption in electronic devices. (5 points)
6. Jim Turley wrote the article “The Two Percent Solution” in 2002. Mr. Turley believed processors make up only a small percentage of semiconductor volume yet generate most of the revenue. That was six years ago. Has anything changed since then? In up to ten lines of correct English, state why you agree or disagree with him, **and cite one current article or website to justify your points.** (7 points)