1 The Teaching, Learning Process

1.1 What is Learning?
There are several different types of learning. **Cognitive learning** refers to the process of learning new knowledge and intellectual skills. **Psychomotor Learning** is learning new manual and physical skills. **Affective Learning** is the learning of new emotional responses, values, and attitudes.

1.2 Level of Intellectual Skills
There is a process known as Bloom’s Taxonomy that refers to the steps of learning:

- 1. Remembering
- 2. Understanding
- 3. Applying
- 4. Analyzing
- 5. Evaluating
- 6. Creating

1.3 How Do We Learn?
There are different ways to learn. You can learn two ways, as a **Sensing Learner**, and as an **Intuitive Learner**. You can receive information in a **Visual** or **Verbal** way.

1.4 Processing New Info
We can receive info in two ways: **Actively** or **Reflectively**. The way that we progress towards understanding is broken down. **Sequential Learning** is learning a subject in sequence, and in the end putting all the information into an overview. **Global Learning** is learning all about the subject, and then applying this info to determine how to solve a problem.

1.5 Index of Learning Styles
An index of learning styles is available at [engr.ncsu.edu/learningstyles/ilsweb.html](http://engr.ncsu.edu/learningstyles/ilsweb.html)
1.6 Metacognition

Metacognition is the process of improving your learning. Observing your learning and getting feedback about your learning is an important part. Expert Learners control their learning process instead of being a victim of it, they are active, not passive in their approach to learning, they are motivated and disciplined, and they know not just what to learn, but how to learn.

Learning is a reinforcement process. Prepare before the lecture by reading the material. During the lecture concentrate on the material at hand. Afterwords, annotate your notes. Before the test, review notes, rework problems, and meet with study partners. A good resource for students is the Freshman Mentor Lounge located in KEC 1119.

1.7 5 Aspects

1. Concrete vs. Abstract
2. Visual vs. Verbal
3. Deductive vs. Inductive
4. Active vs. Passive
5. Sequential vs. Global

2 Midterm Study Guide

2.1 Lab

- Finding the Resistivity of a Volume
- Finding the Frequency of a Waveform
- Converting Analog to Digital for an 8-bit ADC

2.2 Lecture

- The Resistor Color Codes
- The 60 Hour Rule
- An ADC (Keep in mind, AVCC might change)
- Definition of a Syllable in relation to Bioacoustics and birdsong
- What data logger is
- Putting the 6 steps of the Engineering Process in Order
- Comparing Energy usage by type from Oregon to the rest of the Nation
- Teaching Learning
- What is Learning?
- Different Types of Learning
- How many miles the Solar Vehicle went, and what place they got