

# Digital Electronics and Computer Interfacing

## PH 434/534

### Syllabus

### Spring 2008

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The course *Digital Electronics and Computer Interfacing* (PH 434/534) is a laboratory course and will cover the basics of digital electronics and computer interfacing. Some specific topics include analog to digital conversion and digital to analog conversion as well as interfacing to laboratory equipment using GPIB-commands (**General Purpose Instrumentation Bus**) for control and data acquisition purposes.

The course will also give an introduction to the graphical development software LabVIEW. Throughout the course LabVIEW will be used by the students to develop their own VIs (virtual instruments) to simulate electronic circuits, perform calculations, control laboratory equipment and to acquire experimental data.

Part of the weekly class meeting time will be lecture; while the remaining time will be devoted to LabVIEW programming, digital electronics and interfacing exercises.

Students are expected to work in teams of two on these projects, and turn in written reports. The course grade is based on the lab exercises (80%) and a final project (20%).

Course material and additional information will be posted on the following web page:  
<http://www.bama.ua.edu/~tmewes/DigitalElectronics/DigitalElectronics.shtml>

The access to some of the material will require a password, the user name is **student** and the password is **RollTide**.

**TEXTBOOK:** Labview 8.0 Express Student Edition, Robert H. Bishop, Prentice Hall.  
(not required)

#### **ATTENDANCE AND MAKEUP POLICY:**

Students are expected to be present during class/lab. No makeup of in-class/lab work or exams will be given. If you have a legitimate reason for missing a class/lab, then you must inform me as soon as possible. If the reason is acceptable, then the final project will count proportionately more.

#### **ACADEMIC MISCONDUCT POLICY:**

All acts of dishonesty in any work constitute academic misconduct. The Academic Misconduct Disciplinary Policy will be followed in the event of academic misconduct.

#### **DISABILITY ACCOMODATIONS:**

To request disability accommodations, please contact Disabilities Services (348-4285). After initial arrangements are made with that office, contact Dr. Mewes.