

# Course Syllabus

Last update: 5/13/2019

**\*\* All Course Videos Posted in Modules \*\***

## [Summer 2019 Lab Schedule](#)

### Instructor:

Dr. David Cheney, NEB 229/NPB 2232, 392-7545, [djcheney@ufl.edu](mailto:djcheney@ufl.edu)

Michael Stapleton, NEB 239, 392-2727, [mstap@ece.ufl.edu](mailto:mstap@ece.ufl.edu)

Tech /Lab Support: Eric Liebner, NEB 23, 392-4923, [ericl@ece.ufl.edu](mailto:ericl@ece.ufl.edu)

### Office Hours:

By appt.

TBD later in the semester

### Lab Experts:

The lab experts will be available to assist students in the Design I lab during their office hours. They will also assist with grading, evaluation of student modules and final projects, and with operating the labs.

Wes Piard, [wespiard@ufl.edu](mailto:wespiard@ufl.edu)

Brit Chesley, [bchesley97@ufl.edu](mailto:bchesley97@ufl.edu)

### Meeting Times & Location:

Design 1 Lab, NEB 246 -- 24 hour access

### Course Description:

Preparatory skills are developed for Design II. The main focus is in basic hardware design, software implementation, microprocessor and microcontroller development tool usage, and PCB design tools. Student design, produce and report on a hardware prototype, meeting defined specifications and using a structured design methodology. Project management, hardware prototyping, project reporting. Laboratory. 3 credits.

### Course Pre-Requisites:

EEL 3111C, EEL 3701C

(EEL 4744C, EEL 3308, EEL 3112 recommended as co-requisites)

### Course Objectives:

- Students will reinforce basic circuit techniques and digital systems to implement electrical and/or computer engineering projects.
- PCB design software will also be taught such that small PCBs can be fabricated and tested in the lab.

- Basic design modules are formed around tools sets where they are introduced and then tested via short projects in the lab.
- At the end of the semester, a design project is assigned that uses the modules taught earlier in the semester.
- ABET
  - An ability to design a system, component, or process to meet desired needs
  - An ability to identify, formulate and solve engineering problems

**Material & Supply Fees:** \$153

**Textbook & Hardware/Software(Required Item):**

No textbook

LTSPICE IV: Available for free at <http://www.linear.com/designtools/software/>

MSP430, Atmel & Pic microprocessor development tool software and Altium PCB design software will be made available to the students in lab.

**Assignment Due Dates:** Are posted on the schedule for each group.

**Attendance and Expectations**

- Format
 

The course is comprised of seven modules and a final project. The class is broken into 8 groups with each group following a different schedule. Over the course of the term all groups will complete the same modules, however, they will be required to complete the modules according to the schedule as shown in item 14 above. All module presentations for each group are due at 5PM on the last day listed for that module for that group. Module write-ups are due at 5PM two weekdays after the group presentation deadline for that module. The assignments and supporting material will be available on canvas.
- Students must submit individual work individually on each module/final project. You are encouraged to work together and share ideas on assignments. However you are not allowed to copy or duplicate anything, from anyone or any source. This work will be considered cheating and will be dealt with in a severe manner.
- Class and Laboratory etiquette
 

It is understood that attendees at lectures and labs will be focused on the particular lecture or lab and will take every possible measure to minimize distractions for everyone.

  - It is the student's responsibility to return all equipment and clean her/his work area before leaving the lab unless the equipment is specifically checked out. In the latter case the equipment must be checked in before the end of the semester

**Grading-methods of evaluation:** The overall grade for the course will be based on seven modules and the final project.

Seven Modules

- The modules are pass/fail.

- A module is not complete until you have successfully demonstrated that your design meets the specifications AND you complete and submit the report.
- Each student will be allowed to use up to two tardy passes during the term.
  - The use of a tardy extends the due date for that module by one week.
  - Students may use excess tardies beyond the two tardy passes.
    - Each excess tardy will result in a reduction in the final grade for the course to the next lower grade. i.e. two excess tardies would reduce an 'A' first to an 'A-' and then to a 'B+'.
- Students are encouraged to NOT USE THE TARDY PASSES so that they will be available if they need them later.
- There will be a full letter grade deduction for the final grade for each module that was not fully completed. Full completion requires a pass on the demonstration AND a pass on the associated write-up.

### Final project

The final project will be graded on a 100 point scale. To pass the course the final project must be implemented on a PCB designed by each student, AND, the PCB must have been designed, and intended, to fully implement the entire functionality of the system. A final project that works properly, but meets only the minimum requirements, will receive a score no higher than 90.

### Grading Scale:

A = 92 – 100  
 A- = 90 – 91.99  
 B+ = 88 – 89.99  
 B = 82 – 87.99  
 B- = 80 – 81.99  
 C+ = 78 – 79.99  
 C = 72 – 77.99  
 C- = 70 – 71.99  
 D = 60 – 69.99

Less than 59.99 will result in an E grade

A C- will not be a qualifying grade for critical tracking courses. In order to graduate, students must have an overall GPA and an upper-division GPA of 2.0 or better (C or better). Note: a C- average is equivalent to a GPA of 1.67, and therefore, it does not satisfy this graduation requirement. For more information on grades and grading policies, please

visit: <https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx> (Links to an external site.)Links to an external site.

More information on UF grading policy may be found

at: <https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx> (Links to an external site.)Links to an external site.

### UF Counseling Services:

Resources are available on-campus for students having personal problems or lacking clear career and academic goals. The resources include:

- UF Counseling & Wellness Center, 3190 Radio Rd, 392-1575, <http://www.counseling.ufl.edu/cwc/Default.aspx>(Links to an external site.)Links to an external site. (Links to an external site.)Links to an external site., counseling services and mental health services.
- Career Resource Center, Reitz Union, 392-1601, career and job search services.
- University Police Department 392-1111

### **Students Requiring Accommodations:**

Students with disabilities requesting accommodations should first register with the Disability Resource Center (352-392-8565, <https://www.dso.ufl.edu/drc>) by providing appropriate documentation. Once registered, students will receive an accommodation letter which must be presented to the instructor when requesting accommodation. Students with disabilities should follow this procedure as early as possible in the semester.

### **Commitment to a safe and inclusive learning environment:**

The Herbert Wertheim College of Engineering values broad diversity within our community and is committed to individual and group empowerment, inclusion, and the elimination of discrimination.

It is expected that every person in this class will treat one another with dignity and respect regardless of gender, sexuality, disability, age, socioeconomic status, ethnicity, race, and culture.

If you feel like your performance in class is being impacted by discrimination or harassment of any kind please contact your instructor or any of the following:

- Your academic advisor or Graduate Program Coordinator
- Robin Bielling, Director of Human Resources, 352-392-0903, [rbielling@eng.ufl.edu](mailto:rbielling@eng.ufl.edu)
- Curtis Taylor, Associate Dean of Student Affairs, 352-392-2177, [taylor@eng.ufl.edu](mailto:taylor@eng.ufl.edu)
- Toshikazu Nishida, Associate Dean of Academic Affairs, 352-392-0943, [nishida@ufl.edu](mailto:nishida@ufl.edu)
- *Sexual Discrimination, Harassment, Assault, or Violence*

If you or a friend has been subjected to sexual discrimination, sexual harassment, sexual assault, or violence contact the **Office of Title IX Compliance**, located at Yon Hall Room 427, 1908 Stadium Road, (352) 273-1094, [title-ix@ufl.edu](mailto:title-ix@ufl.edu)

### **Course Evaluation:**

Students are expected to provide feedback on the quality of instruction in this course by completing online evaluations at <https://evaluations.ufl.edu/evals> (Links to an external site.)Links to an external site.. Evaluations are typically open during the last two or three weeks of the semester, but students will be given specific times when they are

open. Summary results of these assessments are available to students at <https://evaluations.ufl.edu/results/> (Links to an external site.)Links to an external site..

### **University Honesty Policy:**

UF students are bound by The Honor Pledge which states, “We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the Honor Code. On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied: “On my honor, I have neither given nor received unauthorized aid in doing this assignment.” The Honor Code (<https://www.dso.ufl.edu/sccr/process/student-conduct-honor-code/>) specifies a number of behaviors that are in violation of this code and the possible sanctions. Furthermore, you are obligated to report any condition that facilitates academic misconduct to appropriate personnel. If you have any questions or concerns, please consult with the instructor or TAs in this class.

### **Software Use:**

All faculty, staff, and students of the University are required and expected to obey the laws and legal agreements governing software use. Failure to do so can lead to monetary damages and/or criminal penalties for the individual violator. Because such violations are also against University policies and rules, disciplinary action will be taken as appropriate. We, the members of the University of Florida community, pledge to uphold ourselves and our peers to the highest standards of honesty and integrity.

### **Student Privacy:**

There are federal laws protecting your privacy with regards to grades earned in courses and on individual assignments. For more information, please see: <http://registrar.ufl.edu/catalog0910/policies/regulationferpa.html> (Links to an external site.)Links to an external site..

### **Other Campus Resources:**

#### **Health and Wellness**

**U Matter, We Care:** Your well-being is important to the University of Florida. The U Matter, We Care initiative is committed to creating a culture of care on our campus by encouraging members of our community to look out for one another and to reach out for help if a member of our community is in need. If you or a friend is in distress, please contact [umatter@ufl.edu](mailto:umatter@ufl.edu) so that the U Matter, We Care Team can reach out to the student in distress. A nighttime and weekend crisis counselor is available by phone at 352-392-1575. The U Matter, We Care Team can help connect students to the many other helping resources available including, but not limited to, Victim Advocates, Housing staff, and the Counseling and Wellness Center. Please remember that asking for help is a sign of strength. In case of emergency, call 9-1-1.

**Counseling and Wellness Center:** <http://www.counseling.ufl.edu/cwc> (Links to an external site.)Links to an external site., and 392-1575; and the University Police Department: 392-1111 or 9-1-1 for emergencies.

**Sexual Assault Recovery Services (SARS)** : Student Health Care Center, 392-1161.

**University Police Department** at 392-1111 (or 9-1-1 for emergencies),  
or <http://www.police.ufl.edu/> (Links to an external site.)Links to an external site..

### **Academic Resources**

**E-learning technical support**, 352-392-4357 (select option 2) or e-mail to Learning-support@ufl.edu. <https://lss.at.ufl.edu/help.shtml> (Links to an external site.)Links to an external site..

**Career Resource Center**, Reitz Union, 392-1601. Career assistance and counseling. <https://www.crc.ufl.edu/> (Links to an external site.)Links to an external site..

**Library Support**, <http://cms.uflib.ufl.edu/ask> (Links to an external site.)Links to an external site.. Various ways to receive assistance with respect to using the libraries or finding resources.

**Teaching Center**, Broward Hall, 392-2010 or 392-6420. General study skills and tutoring. <https://teachingcenter.ufl.edu/> (Links to an external site.)Links to an external site..

**Writing Studio, 302 Tigert Hall**, 846-1138. Help brainstorming, formatting, and writing papers. <https://writing.ufl.edu/writing-studio/> (Links to an external site.)Links to an external site..

### **Student Complaints**

**Campus:** [https://www.dso.ufl.edu/documents/UF\\_Complaints\\_policy.pdf](https://www.dso.ufl.edu/documents/UF_Complaints_policy.pdf) (Links to an external site.)Links to an external site..

**On-Line Students Complaints:** <http://www.distance.ufl.edu/student-complaint-process> (Links to an external site.)Links to an external site..