

Course Syllabus

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General Information

Time: Tuesday 1:55-2:45, Thursday 1:55-3:15 Location: MAEA 327

Instructor: Ann Gordon-Ross

Email: Via Canvas email only

Office: 319 Benton Hall

Office Hours: By appointment only

Catalog Description

(3 credit hours) An embedded system is any computing system other than a traditional computer system. Examples include set-top boxes, digital cameras, alarm systems, automotive systems, aerospace systems, and cell phones. This course is structured as a seminar course and will review cutting-edge publications with student presentations.

Prerequisites

- Computer Architecture
- Digital logic design
- Basic UNIX/LINUX OS and compiler knowledge
- Programming experience with C and/or C++
- Assembly language

Course Objectives

This course will cover a wide variety of design issues for embedded system. The course will be taught as a seminar course, where students will read several state of the art conference/journal papers per week and lectures will consist of student presentations covering these papers. Semesters with large enrollment will require students to pre-record and submit some presentations and/or work in groups

Textbook and Materials

There is no required textbook. Readings will consist of conference/journal papers as selected by you for presentation. Papers will be uploaded throughout the semester.

Excellent programming references:

- C++ How to Program - Great beginner/intermediate C++ programming guide
- The C++ Programming Language - Written by the creator of the C++ programming language, Bjarne Stroustrup. This book is an excellent book and is highly advanced -- a must for any serious C++ programmer

Grading

The course is divided into three graded components, combined as a weighted sum to total 100%:

- 45% - Tests (not cumulative)
 - 15% - Midterm 1
 - 15% - Midterm 2
 - 15% - Midterm 3
- 15% - Class Participation
- 40% - Class Presentations
 - 30% - Two long presentations, 40 minutes each
 - 10% - One short presentation, 20 minutes

Letter grades will be assigned roughly according to the standard 90/80/70/60 scale out of 100 percentage points overall, with a 90 and above corresponding to an A, 80 and above to a B, 70 and above to a C, 60 and above to a D, and less than 60 to an F. +/- grades will also be given where appropriate and available, with approximate dividing lines at the upper and lower 3% of a grade area (e.g., 87% to 89.999% is a B+; 80% to 83% is a B-). Students are not competing against one another, but rather against this scale -- all students can get good grades if all do well. I may scale ("curve") an individual item ONLY if it HELPS the class and I feel that scaling is appropriate given the circumstances. In order to graduate, graduate students must have an overall GPA and an upper-division GPA of 3.0 or better (B or better). Note: a B- average is equivalent to a GPA of 2.67, and therefore, it does not satisfy this graduation requirement. For more information on grades and grading policies.

Absolutely **no** late work is accepted. Regrades must be submitted within one week of returned materials.

Academic Integrity and Collaboration Policy

All students admitted to the University of Florida have signed a statement of academic honesty committing themselves to be honest in all academic work and understanding that failure to comply with this commitment will result in disciplinary action. This statement is a reminder to uphold your obligation as a UF student and to be honest in all work submitted and exams taken in this course and all others. Please be aware that I am very strict about cheating and any infraction may result in failure in the course.

Attendance

Attendance is compulsory, and class participation is a portion of your grade. You are expected to attend class and provide constructive feedback on your peers' presentations, as they will be giving you constructive feedback. Another portion of your grade includes your presentation skills, knowledge transfer, and development, and these skills can only be refined by attending class and participating in the discussions.

Cell phones

Please remember to turn your phones off during lecture. Absolutely no phone conversations can take place during lecture. It is distracting to both the students and to me.

Communication with the instructor and/or TAs

All emails involving this course must be sent via Canvas. Any email sent to an instructor/TAs personal email account (campus or otherwise) will be ignored. Please try to be professional and use reasonable grammar and formatting.

Make-up Exam Policy

Missed exams cannot be made up except in the case of a documented medical emergency. Absolutely no late work is accepted. Regrades must be submitted within one week of returned materials.

Accommodation for Students with Disabilities

Students requesting classroom accommodation must first register with the Dean of Students Office. That office will provide the student with documentation that he/she must provide to the course instructor when requesting accommodation

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, psychological and psychiatric services.
- Career Resource Center, Reitz Union, 392-1601, career and job search services.












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 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








Course Summary:







Date	Details	
Thu Jan 5, 2017	 Introductory Lecture (https://ufl.instructure.com/calendar?event_id=630659&include_contexts=course_349980)	12am
Tue Jan 10, 2017	 Building a good presentation (https://ufl.instructure.com/calendar?event_id=630655&include_contexts=course_349980)	12am
Wed Jan 11, 2017	 Group Selection (https://ufl.instructure.com/courses/349980/assignments/3456421)	due by 11:59pm
Thu Jan 12, 2017	 Seminar Presentation (https://ufl.instructure.com/calendar?event_id=630657&include_contexts=course_349980)	12am
Fri Jan 13, 2017	 Topic Selection (https://ufl.instructure.com/courses/349980/assignments/3456438)	due by 11:59pm
Tue Jan 17, 2017	 Introduction to Embedded Systems (https://ufl.instructure.com/calendar?event_id=630656&include_contexts=course_349980)	12am
Thu Jan 19, 2017	 LP Topic 1 (WSNs): Embedded in the Swamp! (https://ufl.instructure.com/calendar?event_id=630658&include_contexts=course_349980)	12am
Sat Jan 21, 2017	 Class Participation for Thurs Jan 19 (https://ufl.instructure.com/courses/349980/assignments/3456407)	due by 11:59pm
Tue Jan 24, 2017	 LP Topic 1: Infinite (https://ufl.instructure.com/calendar?event_id=630650&include_contexts=course_349980)	12am
Thu Jan 26, 2017	 LP Topic 1 (IoT): Embedded in the Swamp! (https://ufl.instructure.com/calendar?event_id=630648&include_contexts=course_349980)	12am
	 SP Topic 1 (WSN): GatorRisers (https://ufl.instructure.com/calendar?event_id=630647&include_contexts=course_349980)	12am
	 SP Topic 1: TLDR (https://ufl.instructure.com/calendar?event_id=630643&include_contexts=course_349980)	12am
Sat Jan 28, 2017	 Class Participation for Tues Jan 24 (https://ufl.instructure.com/courses/349980/assignments/3456417)	due by 11:59pm
	 Class Participation for Thur Jan 26 (https://ufl.instructure.com/courses/349980/assignments/3456400)	due by 11:59pm

Date	Details	
Tue Jan 31, 2017	 LP Topic 1 (WSN): Synthegator (https://ufl.instructure.com/calendar?event_id=630649&include_contexts=course_349980)	12am
Thu Feb 2, 2017	 LP Topic 2 : DROP TABLES (https://ufl.instructure.com/calendar?event_id=630645&include_contexts=course_349980)	12am
Thu Feb 2, 2017	 LP Topic 2: Mongoose (https://ufl.instructure.com/calendar?event_id=630644&include_contexts=course_349980)	12am
Sat Feb 4, 2017	 Class Participation for Tues Jan 31 https://ufl.instructure.com/courses/349980/assignments/3456418	due by 11:59pm
Sat Feb 4, 2017	 Class Participation for Thurs Feb 2 https://ufl.instructure.com/courses/349980/assignments/3456404	due by 11:59pm
Tue Feb 7, 2017	 LP Topic 2: Gator Mbed (https://ufl.instructure.com/calendar?event_id=630642&include_contexts=course_349980)	12am
Thu Feb 9, 2017	 LP Topic 2: GatorRisers (https://ufl.instructure.com/calendar?event_id=630639&include_contexts=course_349980)	12am
Thu Feb 9, 2017	 LP Topic 2: Optimus Architects https://ufl.instructure.com/calendar?event_id=630651&include_contexts=course_349980	12am
Sat Feb 11, 2017	 Class Participation for Tues Feb 7 https://ufl.instructure.com/courses/349980/assignments/3456416	due by 11:59pm
Sat Feb 11, 2017	 Class Participation for Thurs Feb 9 https://ufl.instructure.com/courses/349980/assignments/3456406	due by 11:59pm
Tue Feb 14, 2017	 Midterm 1 (https://ufl.instructure.com/calendar?event_id=630654&include_contexts=course_349980)	12am
Thu Feb 16, 2017	 LP Topic 3: Infinite (https://ufl.instructure.com/calendar?event_id=630637&include_contexts=course_349980)	12am
Thu Feb 16, 2017	 SP Topic 1 (WSN): Optimus Architects https://ufl.instructure.com/calendar?event_id=630641&include_contexts=course_349980	12am
Sat Feb 18, 2017	 SP Topic 2: FoolPROOF (https://ufl.instructure.com/calendar?event_id=630638&include_contexts=course_349980)	12am
Sat Feb 18, 2017	 Class Participation for Thurs Feb 16 https://ufl.instructure.com/courses/349980/assignments/3456403	due by 11:59pm

Date	Details	
Tue Feb 21, 2017	 Special Guest Lecture (https://ufl.instructure.com/calendar?event_id=630646&include_contexts=course_349980)	12am
Thu Feb 23, 2017	 LP Topic 4: Optimus Architects (https://ufl.instructure.com/calendar?event_id=630640&include_contexts=course_349980)	12am
	 LP Topic 5: RK (https://ufl.instructure.com/calendar?event_id=630636&include_contexts=course_349980)  Class Participation for Tues Feb 21 (https://ufl.instructure.com/courses/349980/assignments/3456414)	due by 11:59pm
Sat Feb 25, 2017	 Class Participation for Thurs Feb 23 (https://ufl.instructure.com/courses/349980/assignments/3456405)	due by 11:59pm
Tue Feb 28, 2017	 SP Topic 4: Gator Mbed (https://ufl.instructure.com/calendar?event_id=630634&include_contexts=course_349980)	12am
	 SP Topic 4: Mongoose (https://ufl.instructure.com/calendar?event_id=630653&include_contexts=course_349980)	12am
Thu Mar 2, 2017	 LP Topic 5: DROP TABLES (https://ufl.instructure.com/calendar?event_id=630635&include_contexts=course_349980)	12am
	 SP Topic 5: Infinite (https://ufl.instructure.com/calendar?event_id=630633&include_contexts=course_349980)	12am
	 Class Participation for Tues Feb 28 (https://ufl.instructure.com/courses/349980/assignments/3456415)	due by 11:59pm
Sat Mar 4, 2017	 Class Participation for Thurs March 2 (https://ufl.instructure.com/courses/349980/assignments/3456409)	due by 11:59pm
Tue Mar 14, 2017	 LP Topic 5: Mavericks-2 (https://ufl.instructure.com/calendar?event_id=630630&include_contexts=course_349980)	12am
Wed Mar 15, 2017	 MS non-Thesis Exam (https://ufl.instructure.com/courses/349980/assignments/3456425)	due by 11:59pm
Thu Mar 16, 2017	 LP Topic 5: FoolPROOF (https://ufl.instructure.com/calendar?event_id=630631&include_contexts=course_349980)	12am
	 LP Topic 6: Synthegator (https://ufl.instructure.com/calendar?event_id=630661&include_contexts=course_349980)	12am
	 Class Participation for Tues March 14 (https://ufl.instructure.com/courses/349980/assignments/3456419)	due by 11:59pm

Date	Details	
Sat Mar 18, 2017	 Class Participation for Thurs March 16 https://ufl.instructure.com/courses/349980/assignments/3456408	due by 11:59pm
Tue Mar 21, 2017	 Midterm 2 (https://ufl.instructure.com/calendar?event_id=630652&include_contexts=course_349980)	12am
Thu Mar 23, 2017	 LP Topic 7: GatorRisers (https://ufl.instructure.com/calendar?event_id=630629&include_contexts=course_349980)	12am
	 SP Topic 6: DROP TABLES (https://ufl.instructure.com/calendar?event_id=630632&include_contexts=course_349980)	12am
Sat Mar 25, 2017	 Class Participation for Thurs March 23 https://ufl.instructure.com/courses/349980/assignments/3456410	due by 11:59pm
Tue Mar 28, 2017	 LP Topic 7: TLDR (https://ufl.instructure.com/calendar?event_id=630626&include_contexts=course_349980)	12am
Thu Mar 30, 2017	 LP Topic 7: Mavericks-2 (https://ufl.instructure.com/calendar?event_id=630628&include_contexts=course_349980)	12am
	 LP Topic 7: Mongoose (https://ufl.instructure.com/calendar?event_id=630627&include_contexts=course_349980)	12am
Sat Apr 1, 2017	 Class Participation for Tues March 28 https://ufl.instructure.com/courses/349980/assignments/3456420	due by 11:59pm
	 Class Participation for Thurs March 30 https://ufl.instructure.com/courses/349980/assignments/3456411	due by 11:59pm
Tue Apr 4, 2017	 LP Topic 8: FoolPROOF (https://ufl.instructure.com/calendar?event_id=630623&include_contexts=course_349980)	12am
Thu Apr 6, 2017	 LP Topic 8: Gator Mbed (https://ufl.instructure.com/calendar?event_id=630622&include_contexts=course_349980)	12am
	 SP Topic 8: Embedded in the Swamp! https://ufl.instructure.com/calendar?event_id=630625&include_contexts=course_349980	12am
	 SP Topic 8: RK (https://ufl.instructure.com/calendar?event_id=630624&include_contexts=course_349980)	12am
	 Class Participation for Tues April 4 https://ufl.instructure.com/courses/349980/assignments/3456413	due by 11:59pm
Sat Apr 8, 2017	 Class Participation for Thurs April 6 https://ufl.instructure.com/courses/349980/assignments/3456402	due by 11:59pm

Date	Details	
Tue Apr 11, 2017	 LP Topic 8: TLDR (https://ufl.instructure.com/calendar?event_id=630619&include_contexts=course_349980)	12am
	 LP Topic 9: RK (https://ufl.instructure.com/calendar?event_id=630620&include_contexts=course_349980)	12am
Thu Apr 13, 2017	 SP Topic 8: Synthegator (https://ufl.instructure.com/calendar?event_id=630621&include_contexts=course_349980)	12am
	 SP Topic 9: Mavericks-2 (https://ufl.instructure.com/calendar?event_id=630618&include_contexts=course_349980)	12am
	 Class Participation for Tues April 11 (https://ufl.instructure.com/courses/349980/assignments/3456412)	due by 11:59pm
Sat Apr 15, 2017	 Class Participation for Thurs April 13 (https://ufl.instructure.com/courses/349980/assignments/3456401)	due by 11:59pm
Tue Apr 18, 2017	 Midterm 3 (https://ufl.instructure.com/calendar?event_id=630660&include_contexts=course_349980)	12am

Date	Details	due by 11:59pm
	 Papers for your group's first LONG presentation (https://ufl.instructure.com/courses/349980/assignments/3456426)	
	 Papers for your group's FIRST SHORT presentation (https://ufl.instructure.com/courses/349980/assignments/3456427)	
	 Papers for your group's SECOND LONG presentation (https://ufl.instructure.com/courses/349980/assignments/3456428)	
	 PER STUDENT questions for your first LONG presentation (https://ufl.instructure.com/courses/349980/assignments/3456429)	
	 PER STUDENT questions for your FIRST SHORT presentation (https://ufl.instructure.com/courses/349980/assignments/3456430)	
	 PER STUDENT questions for your SECOND LONG presentation (https://ufl.instructure.com/courses/349980/assignments/3456431)	
Wed Apr 19, 2017	 Powerpoint presentation for your group's first LONG presentation (https://ufl.instructure.com/courses/349980/assignments/3456432)	
	 Powerpoint presentation for your group's FIRST SHORT presentation (https://ufl.instructure.com/courses/349980/assignments/3456433)	
	 Powerpoint presentation for your group's SECOND LONG presentation (https://ufl.instructure.com/courses/349980/assignments/3456434)	
	 Presentation (https://ufl.instructure.com/courses/349980/assignments/3456437)	
	 Presentation (https://ufl.instructure.com/courses/349980/assignments/3456435)	
	 Presentation (https://ufl.instructure.com/courses/349980/assignments/3456436)	
	 Midterm 1 (https://ufl.instructure.com/courses/349980/assignments/3456422)	
	 Midterm 2 (https://ufl.instructure.com/courses/349980/assignments/3456423)	
	 Midterm 3 (https://ufl.instructure.com/courses/349980/assignments/3456424)	