

**FLORIDA INTERNATIONAL UNIVERSITY  
UNIVERSITY CURRICULUM COMMITTEE**  
*Course Change/Deletion Request*

<b>DO NOT TYPE IN THIS BOX</b>
Bulletin #: _____
Academic Year: _____

**INSTRUCTIONS:** Fill out Part I completely. In Part II, fill out the items which have changed and explain reason for change.

I. 1a. SCHOOL/COLLEGE Engineering and Computing DIV./DEPT. IN WHICH TAUGHT Electrical and Computer Engineering

b. DIV./DEPT. NO. EGEL DEPT. ACCOUNT NO. 2124001  
(9 digits)

2a. Present Course Title Introduction to Digital Electronics

b. 

<u>EEE</u>	<u>4</u>	<u>343</u>	<u>3</u>		
Alpha Prefix	1st Digit	last 3 Digits	"C"-lec-lab "L"-Lab	Cr. Hrs.	HEGIS No. (6 digits)

CIP Code  
(Leave this blank)

3. Deletion Request? Yes  Effective Date      /      / 20     

a. Reason for Deletion: \_\_\_\_\_

b. Skip Change Information Section (Part II)  
No  Fill out Part II.

**II. CHANGE INFORMATION ONLY**

4a. New Title: \_\_\_\_\_ Change Effective      /      / 20     

b. Abbreviated course Title (for computer class schedules, transcripts)  
 25 Characters (including spaces)

5a. 


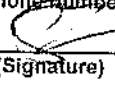
<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>		
New Alpha Prefix	1st Digit	last 3 Digits	"C"-lec-lab "L"-Lab	Credit Hours: From	To

6. Catalog Description (not to exceed 200 characters including spaces)  
 \_\_\_\_\_  
 \_\_\_\_\_

7. New Prerequisite(s): EEL 3712 and EEL 3712L New Corequisite(s): \_\_\_\_\_

8. Explain Reclassification Request: \_\_\_\_\_  
 \_\_\_\_\_

**CHANGE REQUESTED BY:**

Faculty Contact	<u>Herman Watson</u> (Type name)	 (Signature)	<u>09/04/2012</u>
	<u>herman.watson@fiu.edu</u> (Email address)	<u>(305)348-3018</u> (Phone number)	
Chairperson (Dept./Div.)	<u>Shekhar Bhansali</u> (Type name)	 (Signature)	<u>9/14/2012</u>
Chairperson (Curr. Comm.)	<u>Nagarajan Prabhakaran</u> (Type name)	 (Signature)	<u>    </u> / <u>    </u> / 20 <u>    </u>
College/School Dean	<u>Amir Mirmiran</u> (Type name)	 (Signature)	<u>    </u> / <u>    </u> / 20 <u>    </u>

**APPROVED BY:**

University Curriculum Committee \_\_\_\_\_ / \_\_\_\_\_ / 20     

Faculty Senate Chairperson \_\_\_\_\_ / \_\_\_\_\_ / 20     

Academic Affairs V.P. \_\_\_\_\_ / \_\_\_\_\_ / 20     

Submit one original copy of this form. Attach one hard copy and one electronic copy of the course syllabus containing: Objectives, Learning Outcomes, Major Topics and Textbooks.

**FLORIDA INTERNATIONAL UNIVERSITY**  
**Department of Electrical and Computer Engineering**  
**EEE 4343 – Introduction to Digital Electronics**

**Semester:** Spring 2013  
**Instructor:** Dr. Jeffrey Fan  
**Title:** Assistant Professor, Electrical and Computer Engineering  
**Office:** EC – 3915  
**E-mail:** jeffrey.fan@fiu.edu  
**Phone:** 305-348-3017  
**Class:** TuTh 2:00 p.m. – 3:15 p.m., Room EC – 1113  
**Office hours:** TuTh 10:00 a.m. – 11:00 a.m.  
**Credits:** 3 units  
**Course website:** <http://web.eng.fiu.edu/fanj/eee4343.html>

**Catalog course description**

This course focuses on digital electronics. BJT as a switch, CMOS and other advanced logic-gate circuits, data converters, switched capacitor filters, semiconductor memories.

**Prerequisites**

EEL 3712 and EEL 3712L

**Learning outcomes**

(1) Link the theory of semiconductor devices to digital circuit parameters.

- (2) Design logic gates and memory cells at the transistor level.
- (3) Analyze the operation of digital and logic circuits.

### **Course outlines**

- (1) MOS Field-Effect Transistors (Chapter 5)
- (2) CMOS Digital Logic Circuits (Chapter 13)
- (3) Advanced MOS and Bipolar Logic Circuits (Chapter 14)
- (4) Memory Circuits (Chapter 15)

### **Textbook**

Microelectronic Circuits, Sedra & Smith, Oxford University Press, 6<sup>th</sup> edition, 2010 (ISBN-10: 0195323033, ISBN-13: 9780195323030)

### **Grading policy**

- (1) Class participation (20%), may include attendance and/or discussion. Homework questions and solutions will be posted online for exercise, but do NOT turn in. Homework will not be graded.
- (2) Midterm I (25%)
- (3) Midterm II (25%)
- (4) Final exam (30%) – comprehensive

### **Exam policy**

- (1) You should supply your own blank 8½-inch by 11-inch paper for all tests
- (2) Make up tests will be given only with official written confirmation of reasons
- (3) Use of unfair means in an exam will result in “F” in the course

### **Department regulations concerning incomplete grades:**

- (1) Must be unable to complete the course through documented circumstances beyond his/her control.
- (2) Must be passing the course prior to that part of the course that is not completed.
- (3) Must contact the instructor or the secretary immediately before or during the part missed, so the instructor will be aware of the circumstances causing the incomplete.
- (4) Must make up the incomplete work through the instructor of the course and should not be allowed to sit through another entire course to make up the incomplete.
- (5) Must make proper arrangements with the instructor to complete the course before the last two weeks of the second term.

### **Contribution of course to meeting the professional component**

Engineering Science

Engineering Design

### **Course outcomes**

- (a) an ability to apply knowledge of mathematics, science and engineering
- (c) an ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability
- (i) a recognition of the need for, and an ability to engage in life-long learning
- (j) a knowledge of contemporary issues
- (k) an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice
- (m) an ability to apply knowledge of advanced math (Differential Equation, Linear Algebra, Complex Variables, and Discrete Math)