

# Global Learning Semesters

## Course Syllabus

Course: EENG-350 Electronics III

Department: Engineering

Host Institution: Intercollege, Nicosia, Cyprus



Course Summary		
Course Code	Course Title	Recommended Credit Hours
EENG-350	Electronics III	3
Semester Offered	Contact Hours	Prerequisites
Fall	42	EENG-250 Electronics II, CENG-200 Digital Systems I. Fundamental concepts of electronic devices and circuits from an ac viewpoint; Introduction to basic analysis and design of digital and computer systems.
Department	Level of Course	Language of Instruction
Engineering	Upper Division	English

### Course Description

A survey and description of important digital Integrated Circuits (IC's) that are found in certain semiconductor technologies such as RTL, DTL, TTL, STTL, ECL, NMOS and CMOS. Important electrical characteristics, such as voltage transfer characteristics (VTC), fan-out, power dissipation and speed (propagation delay), are obtained and compared for each of the IC families. Emphasis is also paid on the description of the operation of various logic gates from each of the above technologies.

### Instructor

Dr Anastasis Polycarpou

### Course Aims and Objectives

The course introduces the student to the various semiconductor technologies used in the fabrication of digital integrated circuits.

### Teaching Methods

The course is delivered through a mixture of lectures and practical exercises and assignments.

### Course Teaching Hours

The course is 42 hours long and is delivered in 14 weeks (3 hours/week).

### Evaluation and Grading

Homework: 10%  
Test 1: 25%

Test 2: 25%  
Final Exam: 40%

## Readings and Resources

### Required Textbook

Thomas A. DeMassa and Zack Ciccone, Digital Integrated Circuits, John Wiley and Sons, 1996

### Recommended Reading

D. Schilling and H. Taub, Digital Integrated Electronics, New York: McGraw-Hill Book Company, 1977