

**FLORIDA INTERNATIONAL UNIVERSITY**  
**DEPARTMENT OF ELECTRICAL AND COMPUTER ENGINEERING**  
**EEL- 4241 Power Electronics Fall 2017**

**INFORMATION SHEET AND COURSE TOPICS**

---

**CLASS TIMES:**      Fridays 2:00- 4:30 PM, EC-1113

**OFFICE HOURS:**    Fridays 1:00-2:00 pm or by special arrangements with Professor Mohammed or the class assistant.

**OFFICE:**

Professor Mohammed EC-3983, (305-348-3040)  
Teaching and Lab Instructor:  
Dr. Tarek Youssef, EC-3960, Tel: (305-348-1065)  
Office hours: Fridays 12-2:00 PM

**COURSE INSTRUCTOR:**

Professor Osama A. Mohammed, Ph.D.  
Department of Electrical & Computer Engineering  
Room EC-3983  
Florida International University  
Miami, Florida 33174 USA  
Tel: +1 (305) 348-3040 (Office)  
Fax: +1 (305) 348-3707 (Office)  
Tel: +1 (305) 348-6194 (Lab)  
E-mail: mohammed@fiu.edu  
<http://www.aln.fiu.edu/>

**Textbook:**      D. W. Hart, Introduction to Power Electronics, Prentice Hall 2011.

**Catalogue Data:** **EEL 4241 Power Electronics (3).** Power semiconductor devices operation, Power supplies, DC Choppers, AC Voltage controller, Power inverters, AC and DC drives design, and industrial applications.

**Course Outlines:**

1.      Introduction to power electronics
2.      Power Semiconductor Devices.
3.      Rectifiers.
4.      Converters.
5.      Power Supplies.
6.      Inverters
7.      DC Choppers.
8.      AC and DC Drives Design.
9.      Industrial Applications of Power Electronics

There will be laboratory demonstrations and circuit development assignments throughout the semester as quizzes and tests.

**IMPORTANT RULE:** Students are encouraged to discuss the course topics with the professor and with each other. Any work submitted (Homework, Tests, projects, etc.) should be pledged and signed as the students' own work, and that there is no any unauthorized help was obtained. Violators will be subject to academic misconduct which might lead to dismissal from the university.

**GRADING POLICY:**

All tests and final exam are closed book closed notes. Homework will be assigned regularly, collected and graded. Efforts in homework indicate that you are studying and caring about the course and therefore can have an impact on your final grad. Time for each of the two tests will be announced one week in advance. **Any work submitted must be neat and detailed for partial marks.** Your Grade will be calculated as Follows:

<b>Homework &amp; quizzes</b>	<b>20%</b>
<b>Mid-term</b>	<b>25%</b>
<b>Hardware Projects</b>	<b>15%</b>
<b>Final Exam</b>	<b>40%</b>
	<hr/>
<b>Total</b>	<b>100%</b>