

<b>COURSE</b>	Name	: Control of Electrical Machines
	Code	: EE185527
	Credit(s)	: 2
	Semester	: (Elective Course)

**Description of Course**

Control of electric drive course gives students working knowledge of electric motors. In this course, the concept of electric drives which includes the DC motor, AC motor and induction motor are discussed. In the first part, the modeling and dynamic behavior analysis methods of the motor are discussed. Furthermore, the controller design method studied and implemented in computer simulation and real motors.

**Learning Outcomes****Knowledge**

(P01) Mastering the concepts and principles of science in a comprehensive manner, and to develop procedures and strategies needed for the analysis and design of systems related to the field of power systems, control systems, multimedia telecommunications, electronics, intelligent multimedia network, or telematics as a preparation for further education or professional career.

**Specific Skill**

(KK01) Being able to formulate engineering problems with new ideas for the development of technology in power systems, control systems, multimedia telecommunications, electronics, intelligent multimedia network, or telematics.

**General Skill**

(KU11) Being able to implement information and communication technology in the context of execution of his/her work.

**Attitude**

(S09) Demonstrating attitude of responsibility on work in his/her field of expertise independently.

**Course Learning Outcomes****Knowledge**

Mastering the concept and application of electric drive.

**Specific Skill**

Capable of modeling and analysis of DC motors, induction motors, and synchronous motors, and able to design controllers on DC motors, induction motors, and synchronous motors.

**General Skill**

Able to use appropriate software to perform analysis and design of electric drive system settings.

**Attitude**

Demonstrating attitude of responsibility on work in his/her field of expertise independently.

---

**Main Subjects**

---

1. DC Motor Dynamic
2. DC Motor Control
3. Induction Motor Dynamics
4. Induction Motor Control
5. Synchronous Motor Control

---

**Reference(s)**

---

- [1] DUBEY, Gopal K: Power Semiconductor Controlled Drives, Prentice Hall, Inc., 1989  
[2] Subrahmanyam, Vedam : Electric Drives Concepts & Applications, McGraw-Hill, 1996.

---

**Prerequisite(s)**

---

--

---