



Full Syllabus



Course Title Electric drives

Lecturer

Prof. Joseph Appelbaum

Semester

Fall

Course requirements

Energy conversion

Final grade components

Final Exam- 90%, Exercises-10%

Course schedule

| Class no. / Date | Subject and Requirements (assignments, reading materials, tasks, etc.) |
|------------------|--|
| 1-6 | Mechanics of drive systems |
| 7-11 | Rehearsal: DC machines |
| 12-16 | Drives of DC motors |
| 17-21 | Rehearsal: Induction machine |
| 22-25 | Drives of induction motor |
| 26-31 | Speed control of electrical motors |
| 32-38 | Synchronous machines |
| 39-46 | Determination of motor power |
| | Detailed syllabus: Characteristics of mechanical loads and electrical motors. Movement equations, forces and torques in drive systems, translation of static torques and inertia to motor shaft, starting and braking times. |
| | AC and DC motors: mechanical characteristics, starting and braking calculations, speed control. |
| | Determination of motor power: heating and cooling of motors, motors for continuous operation, cyclic and short loads. Determination of motor power by various methods, effect of ventilation and temperature on motor poiwerr. |
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Required course reading: Manuals by "Safrut Zola" 1. Electric drives. 2. Electric motors

obligatory

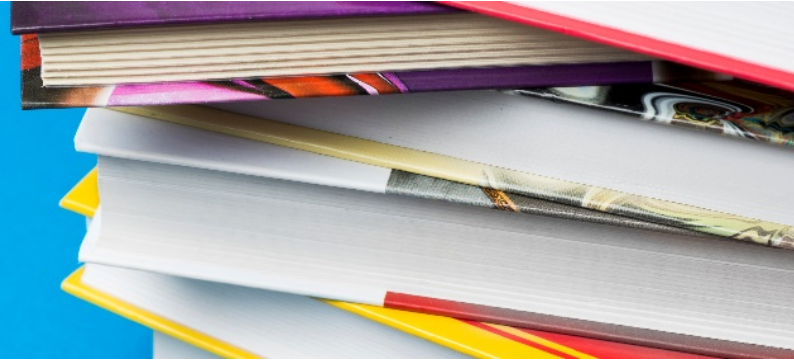
Optional course reading

See recommended list



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|---|----|
| Handbook of Electric motors, Richard H. Engelmann and William H. Middendorf, Marcel Dekker, Inc.1995. | .1 |
| of Electrical Drives, Werner Leonard, Springer | .2 |
| Power Electronics and Motor Drives, Bimal Bose, Academic Press, 2006. | .3 |
| Electric Machines, Charles A..Gross, CRC Press. | |

Comments

Material reading obligatory