# Industrial Drives - Power Electronics - Video course

1. Introduction
   a. Classification of Electric Drives
   b. Requirements of Electric Drives
   c. Some Applications

2. Converters and control
   a. Phase controlled converters
   b. Four quadrant operation
   c. Choppers
   d. AC to DC converters

3. DC motor drives
   a. Speed-torque characteristics DC shunt, PMDC and series motors
   b. Dynamic model
   c. Speed and position control methods

4. Inverters and PWM techniques
   a. Voltage source inverters (1h)
   b. Current source inverters (1h)
   c. PWM techniques
      i. sine-triangle comparison (1h)
      ii. harmonic elimination (1h)
      iii. hysteretic current controllers (1h)
      iv. space vector pwm (3h)

5. AC motor drives
   a. d-q model of induction motor (2 h)
   b. Constant flux speed control structure (2h)
   c. Vector control model (3h)
   d. Vector control structure (3h)