

SEMESTER	DEPARTMENT	COURSE TITLE
<i>Fifth</i>	<i>Power Engineering</i>	<i>Protection Devices Lab</i>
COURSE CODE	HOURS: 3	COURSE SPECIFICATIONS
<i>EP506</i>	UNITS: 1	<i>Practical Content</i>
<p>1. To Get Familiar with the Different Types of Protective Devices in Low Voltage Networks and Their Functions.</p> <ul style="list-style-type: none"> ➤ Be familiar with safety measures in lab. ➤ Compare Time-Current characteristics standards of different types of protective devices. ➤ Describe different types of protection devices by their catalogues and printed data. 		
<p>2. To Know How to Read and Use the Characteristics of Different Protective Devices in Low- Voltage Networks and Their Constructions. Be Familiar with Testing Parameters of Protecting Devices.</p> <ul style="list-style-type: none"> ➤ Test the discriminating function for disconnection of two or more protective devices connected in series for protecting a load. ➤ Test the disconnection of circuit breaker using an earth leakage relays with different settings. 		
<p>3. Execute Discrimination between Protective Devices.</p> <ul style="list-style-type: none"> ➤ Test the over current relay with different settings ➤ Test the I-T relation of the over-current relay. ➤ Test the magnetic and thermal protecting function of the miniature circuit breaker. ➤ Test the protecting function of the residual current breakers. 		
<p>4. To Get Familiar with the Different Types of Protective Devices in Medium and High Voltage Networks and Their Functions, Collect Their Characteristics and Construction.</p> <ul style="list-style-type: none"> ➤ Be familiar with the parts and construction of the oil circuit breakers ➤ Be familiar with the parts and construction of air-blast breakers. ➤ Be familiar with the parts and construction of SF6 breakers. 		

5. *Studying the Different Types of Relays, Their Function and Construction of Each.*

- Test the function of differential relay for protecting transformer.
- Test the function of moving coil relay for protecting lines.
- Test the functioning of relays using relay testing- device.

6. *Use the Digital Computer as a Protection System.*

- Specify the main items of the computerized control system and the technique used in it.
- Do a site visit and explore the use of computers in protection systems.