

SEMESTER <i>Fifth</i>	DEPARTMENT <i>Power Engineering</i>	COURSE TITLE <i>Power Transformers Lab</i>
COURSE CODE <i>EP510</i>	HOURS: 3 UNITS: 1	COURSE SPECIFICATIONS <i>Practical Content</i>
1. Describe the Components and Construction of Transformers. Introduction: <ul style="list-style-type: none"> ➤ Describe the single phase, three phase transformers. ➤ To name each part of transformer. ➤ Assemble a transformer. 		
2. Define the Different Types of Transformer Windings, Connections and Their Importance. Transformer's Oil Characteristics. Transformer Cooling Types. <ul style="list-style-type: none"> ➤ Define the different types of transformer winding and understand the advantages and disadvantages of each. ➤ Get familiar with transformer's oil characteristics and cooling principles. 		
3. Define the Types of Cores' Laminations and Their Different Types of Assembling. <ul style="list-style-type: none"> ➤ Collect and assemble core laminations. ➤ Understand the advantage and disadvantage of each principle of collecting laminations. 		
4. Carry Out the Open Circuit and Short Circuit Tests. <ul style="list-style-type: none"> ➤ Carry out the open circuit and short circuit test on a transformer. ➤ Compare results with the transformer name plate. 		
5. Get Familiar with Different Types of Tap-Changers Used in Transformers.		
6. Study the effect of different types of faults in transformers and transformer protection. <ul style="list-style-type: none"> ➤ Learn the effect of different types of faults in transformers, and various protection principles 		
References: 1- Electric Power Systems. B.M. Weedy 2- Library of Schneider Company. 3- Library of Siemens Company		