



### Sample Brief Course Description

<b>Course title</b>	Electrical Power Distribution Systems for REE
<b>Course code</b>	ECE 434
<b>College</b>	Engineering
<b>Department / Program</b>	Engineering / Renewable Energy Engineering
<b>Year/ Level</b>	5/9
<b>Course Type</b>	<p><b>A.</b></p> <p><input type="checkbox"/> University</p> <p><input type="checkbox"/> College</p> <p><input type="checkbox"/> Department</p> <p><input checked="" type="checkbox"/> Program</p> <p><input type="checkbox"/> Others</p> <p><b>b.</b></p> <p><input type="checkbox"/> Required</p> <p><input checked="" type="checkbox"/> Elective</p>
<b>Credited Hours</b>	3 credit hours
<b>Contact Hours</b>	(LT:3, LB:0 ,TR:0)
<b>Pre-requisites (if any)</b>	ECE 230/ ECE 331
<b>Co-requisites (if any)</b>	None
<b>Course description</b>	Electric power distribution system course including planning, design and operations, load characterisation and distribution transformers, design of local transmission lines, design considerations of the primary and secondary feeders, voltage regulation for distribution system, protection, reliability and smart grid performance.



<b>Course Main Objectives</b>	<ul style="list-style-type: none"><li>- Introduce the basics principles of the electric power distribution systems including primary and secondary distribution networks.</li><li>- Describe the configurations and characteristics of transformers in electric distribution systems.</li><li>- Analyse voltage drop and power losses within distribution systems.</li><li>- Covering the design of sub-transmission lines and distribution substations. This includes substation costs and bus schemes.</li><li>- Learn advance system voltage regulation and quality of service.</li><li>- Identify the applications of capacitors in distribution systems.</li><li>- Provide strategies for distribution system protection. This includes the overcurrent protection devices and fault current calculations</li></ul>
<b>Learning Outcomes</b>	<b>Knowledge and Understanding</b>
	<b>Skills:</b>
	<b>Values:</b>

References:

- Electric Power Distribution System Engineering, Turan Gonen, McGraw-Hill
- 2- Electric Power Systems, Vincent de el Toro, Prentice-Hall
- 3- Power Systems Analysis, Arthur R. Bergen, Prentice-Hall