

<b>COURSE TITLE</b>	<b>TE142325: Transducers</b> Credits: 3 Semester: I
<b>LEARNING OBJECTIVES</b>	Students are able to understand and analyze the basic principles of various sensors and transducer.
<b>COMPETENCY</b>	Students are able to analyze and design the use of transducer devices in various fields of application.
<b>SUBJECTS</b>	<ul style="list-style-type: none"> <li>• Analysis and synthesis of Op-Amp circuits,</li> <li>• Synthesis on Field Programmable Analog Array (FPAA)</li> <li>• Synthesis on Field Programmable Gate Array (FPGA)</li> <li>• Structure and characteristic of transducer devices of temperature</li> <li>• Pressure</li> <li>• Optical</li> <li>• Acoustic</li> <li>• Position and chemicals, analysis of the signal conditioning circuit, and application transducers in various fields of application.</li> </ul>
<b>MAIN REFERENCES</b>	<ul style="list-style-type: none"> <li>• Jacob Fraden, Handbook of Modern Sensors: Physics Designs and Applications, Springer, 2004</li> <li>• John G Webster, Measurement Instrumentation and Sensors Handbook, CRC Press LLC, 1999</li> <li>• Joseph J Carr, Sensors and Circuits, Prentice Hall, 1993.</li> <li>• Julian W Gardner, Microsensors: Principles &amp; Applications, John Wiley &amp; Sons, 1994.</li> </ul>
<b>OPTIONAL REFERENCES</b>	<ul style="list-style-type: none"> <li>• Walt Kester, <u>Practical Design Techniques for Sensor Signal Conditioning, Analog Devices</u>, 1999</li> </ul>
<b>PREREQUISITE</b>	-