

<b>Course Code</b>	ME 326
<b>Course Title</b>	Introduction to Research Methods
<b>No. of Credits</b>	1
<b>Pre-requisites</b>	None
<b>Compulsory/Optional</b>	Compulsory for Mechanical Engineering stream
<b>Aim(s):</b> To provide the participants with the opportunity to experience the basic fundamentals of research methods. At the end of the course all students are expected to adopt a systematic approach in a research based project.	
<b>Intended Learning Outcomes:</b> On successful completion of the course, the students should be able to;	
<ul style="list-style-type: none"> <li>• differentiate between an ad hoc and a research based approach to solving a problem and identify the basic aspects involved in a research based approach,</li> <li>• justify the necessity for systematic validation using suitable methods,</li> <li>• clearly and systematically communicate the research,</li> <li>• justify the importance of honesty and integrity.</li> </ul>	
<b>Time Allocation (Hours) :</b> Lectures 04, Assignment 22 <b>(Notional Hours: 50)</b>	
<b>Course content / Course description :</b>	
<ul style="list-style-type: none"> <li>• <b>Introduction to the notion of research:</b> The scientific method, Types of research.</li> <li>• Defining a research question</li> <li>• Literature review</li> <li>• Designing and undertaking ‘experiments’</li> <li>• <b>Validation:</b> Types of validation, Analyzing research data</li> <li>• <b>Research communications:</b> Written reports and Verbal presentations</li> <li>• Research ethics</li> </ul>	
<b>Recommended Texts (if any) :</b>	
<ul style="list-style-type: none"> <li>• Walliman, N. (2011). <i>Research Methods: The Basics</i>. Taylor &amp; Francis Group, UK.</li> <li>• O’Leary, Z. (2014). <i>The Essential Guide to Doing Research</i>. Sage Publications, California, USA.</li> </ul>	
<b>Assessment</b>	<b>Percentage Mark</b>
<b>In-course</b>	
Tutorials/Assignments/Quizzes/Practicals	
Written Assignments	55
Verbal presentation	45
Mid Semester Examination	-
<b>End-semester</b>	-