

Module (Course Syllabus) Catalogue

2023-2024

College	Erbil Technical Engineering College	
Department	Mechanical and Energy Engineering	
Module Name	Advanced Research Methodology	
Module Code	ARM101	
Degree	Technical Diploma <input type="checkbox"/> Bachler <input type="checkbox"/> High Diploma <input type="checkbox"/> Master <input checked="" type="checkbox"/> PhD <input type="checkbox"/>	
Semester	1	
Qualification	Ph.D. in Mechanical Engineering	
Scientific Title	Professor	
ECTS (Credits)	5	
Module type	Prerequisite <input type="checkbox"/> Core Assist. <input checked="" type="checkbox"/>	
Weekly hours		
Weekly hours (Theory)	(3)hr Class	(36)Total hrs Workload
Weekly hours (Practical)	()hr Class	()Total hrs Workload
Number of Weeks	15	
Lecturer (Theory)	Prof. Dr. Ahmed Mohammed Adham	
E-Mail & Mobile NO.	ahmed.adham@epu.edu.iq ; 07500271523	
Websites	https://academicstaff.epu.edu.iq/faculty/ahmed.adham	

Course Book

<p>Course Description</p>	<p>Several research studies are undertaken and accomplished year after year. But in most cases very little attention is paid to an important dimension relating to research, namely, that of research methodology. The result is that much of research contains endless word-spinning and too many quotations. Thus a great deal of research tends to be futile. It may be noted, in the context of planning and development, that the significance of research lies in its quality and not in quantity. The need, therefore, is for those concerned with research to pay due attention to designing and adhering to the appropriate methodology throughout for improving the quality of research. The methodology may differ from problem to problem, yet the basic approach towards research remains the same.</p>					
<p>Course objectives</p>	<p>This course has two clear objectives, viz., (i) to enable researchers, irrespective of their discipline, in developing the most appropriate methodology for their research studies; and (ii) to make them familiar with the art of using different research methods and techniques. It is hoped that the humble effort made in the form of this course will assist in the accomplishment of exploratory as well as result-oriented research studies.</p>					
<p>Student's obligation</p>	<p>The students are obliged to attend and pass this course as a requirement to start their Master thesis. He / She has to take the assignment referred to in the evaluation plan also they should pass the final examination.</p>					
<p>Required Learning Materials</p>						
<p>Evaluation</p>	<p>Task</p>		<p>Weight (Marks)</p>	<p>Due Week</p>	<p>Relevant Learning Outcome</p>	
	<p>Paper Review</p>		<p>0 %</p>			
	<p>Assignments</p>	<p>Homework</p>		<p>0 %</p>		
		<p>Class Activity</p>		<p>0 %</p>		
		<p>Report</p>		<p>5 %</p>	<p>10</p>	
		<p>Seminar</p>		<p>10 %</p>	<p>7 & 9</p>	
		<p>Attendance</p>		<p>5 %</p>		
		<p>Project</p>		<p>0 %</p>		
	<p>Quiz</p>		<p>10 %</p>	<p>5 & 10</p>		
	<p>Lab.</p>		<p>0 %</p>			
	<p>Midterm Exam</p>		<p>20 %</p>	<p>8</p>		
	<p>Final Exam</p>		<p>50 %</p>	<p>15</p>		
	<p>Total</p>		<p>100 %</p>			

Specific learning outcome:	1- To provide an overview of the research methodology. 2- To explain the techniques of problem defining. 3- To be able to write a review article. 4- To deal with the process of writing his thesis/dissertation	
Course References:	<ol style="list-style-type: none"> 1. “Research Methodology: methods and Techniques”, C.R.Kothari, New age International 2. “Research Methodology: Step by Step guide for beginners”, Ranjut Kumar, SAGE 3. “Research Methodology: A Practical and Scientific Approach”, Vinayak Bairagi and Mousami V. Munot, CRC Press 4. “Engineering Research Methodology”, Dipankar Deb .Rajeeb Dey Valentina E. Balas, Springer 	
Course topics (Theory)	Week	Learning Outcome
Research Methodology: An Introduction	1-2	
Defining the Research Problem	3	
Writing a Review article	4	
Research Design	5-6	
Literature Review and Technical Reading	7-8	
Attributions and Citations: Giving Credit Wherever Due	9-10	
Ethics in Engineering Research.	11	
Technical Writing and Publishing	12-13	
Research Management, Planning and Collaboration	14	
Final Examination	15	
Questions Example Design		

Extra notes:

External Evaluator

I confirm that the contents of this syllabus (course catalogue) are sufficient and cover all the requirements of Research Methodology subject.



Dr. Banipal N. Yaqob
21/10/2023