

Course Name	Research Methodology		طرق البحث			
Course Information	Course Code	Course No.	Credit Hour	Prerequisite(s)		
	0912615	IS 615	3 (3-0-6)	None		
Course Track	<input checked="" type="checkbox"/> Program Core <input type="checkbox"/> Electives					
Course Description						
Research Methodology is a graduate-level course that provides students with basic knowledge and insights into the theory of science, qualitative and quantitative research methodology and research ethics. The course will enable students to read and critically assess technical papers, identify and use criteria for good scientific practice, conduct literature review and use existing knowledge from literature to generalize and identify open areas. Students will be introduced to tools and techniques for selecting research topics, devising research questions, identifying hypotheses, planning and conducting research. Different types of research including case studies, survey, experimental, action and qualitative research are discussed. Statistical methods for data collection, sampling, measurement, data analysis and inference will be covered. Different forms of result analysis including quantitative, qualitative and mixed data analysis will also be covered in detail. The course also introduces students to ethical issues in research and appropriate documentation of research processes and outcomes. After completion of this course, students will have an overall understanding of quality in research and utilize this ability to reason in a critical manner, ensure quality control and further development of the knowledge present in the scientific literature.						
Course Outcomes						
After the completion of this course, the student will be able to:						
1. Describe approaches and methods used in the research process. [A]						
2. Conduct literature search and acquire knowledge from scientific articles. [B]						
3. Formulate research goals and hypotheses. [B]						
4. Analyze data using sampling and measurement techniques to infer reliability and validity. [B]						
5. Apply appropriate data analysis techniques using various statistical methods. [C]						
6. Document and present research results and outcomes. [D]						
Assessment Policy	Assignments	20%	Quiz	-	Project	30%
	Midterm	20%	Final	30%	Others	-
Textbook	John W. Creswell, “ <i>Research Design: Qualitative, Quantitative, and Mixed Methods Approaches</i> ”. 5 th Edition, SAGE Publications, 2018. ISBN-13: 978-1506386706.					
References	1. Wayne Booth, Gregory Colomb and Joseph Williams, “ <i>The Craft of Research</i> ”, 3 rd Edition, University of Chicago Press, 2008. ISBN-13: 978-0226065663. 2. William Navidi, “ <i>Statistics for Engineers and Scientists</i> ”, 2 nd Edition, McGraw-Hill, 2010. ISBN: 978-0073376332.					