Course Specification

(Postgraduate Programs)

Course Title:	Research Methodology
Course Code:	IS-615 (0912615)
Program:	MS program Computer Information Systems
Department:	Information Systems
College:	College of Computer Sciences and Information Technology
Institution:	King Faisal University
Version:	2
Last Revision Date:	6 February 2018

Table of Contents

A. General information about the course:

1. Course Identification:

1. Credit hours: (……)				
2. Course type				
A.	☐University	☐College	☒ Department	☐Track
B.	☒ Required		☐Elective	
3. Level/year at which this course is offered: (3rd Level (2nd Year).)				
4. Course general Description:				
The philosophy of Science, basics of doing research including problem solving and research, defining the research problem, writing a literature review, hypothesis development and validation, conceptual modeling and research design, case study research, survey and observations, primary data collection, experiments, histories and simulations, interventions including benchmarking, action research and pilot studies, sampling and measurement, instrument and questionnaire design, analysis methods including qualitative, quantitative and mixed data analysis, grounded theory, usability evaluations, research ethics, peer review process, reporting and publishing including displaying data and writing up results.				
5. Pre-requirements for this course (if any)**:**				
None				
6. Pre-requirements for this course (if any)**:**				
None				
7. Course Main Objective(s):				
The purpose for this course is to provide the students with basic and advanced skills of doing research in the areas of information systems, computer science and computer networks.				

2. Teaching Mode: (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	Traditional classroom		

No	Mode of Instruction	Contact Hours	Percentage
2	E-learning		
3	Hybrid • Traditional classroom • E-learning	12 33	27 73
4	Distance learning		

3. Contact Hours: (based on the academic semester)

No	Activity	Contact Hours
1.	**Lectures**	45
2.	**Laboratory/Studio**	-
3.	**Field**	-
4.	**Tutorial**	-
5.	**Others (specify)……**	-
	Total	45

B. Course Learning Outcomes (CLOs), Teaching Strategies and Assessment Methods:

Code	Course Learning Outcomes	Code of CLOs aligned with program	Teaching Strategies	Assessment Methods
1.0	Knowledge and understanding			
1.1	Improve understanding of the research process and creation of knowledge	K1	Lectures	Quizzes Exams Assignments
1.2	Study research approaches, tools, techniques and methodologies used in computing research	K1	Lectures	Quizzes Exams Assignments
2.0	Skills			
2.1	Identify a research topic and justify its worth	S1	Lectures	Project
2.2	Develop and apply fundamental research skills, including literature reviews,	S1, S6	Lectures	Project

Code	Course Learning Outcomes	Code of CLOs aligned with program	Teaching Strategies	Assessment Methods
	collection and analysis of data and designing a research project			Assignments
2.3	Develop research writing and presentation skills	S5	Lectures	Project Assignments
3.0	Values, autonomy, and responsibility			
3.1	To work autonomously to develop innovative approaches for solving computer based systems issues	S3	Lectures	Project

C. Course Content:

No	List of Topics	Contact Hours
1.	**The philosophy of Science and scientific Method**	**3**
2.	**Essentials of Computer Based Systems Research**	3
3.	**The Research Process: Questions, Design and Methodology**	3
4.	**Problem Identification(case study)**	3
5.	**Literature review**	3
6.	**Research Model**	3
7.	**Quantitative Research Methods**	6
8.	**Student presentations(progress)**	3
9.	**Qualitative Research Methods**	3
10.	**Mixed Methods and Design Science Methods**	6
11.	**Research ethics and Plagiarism**	3
12.	**Research writing and reporting**	3
13.	**Manuscript preparation , submission and peer review Process**	3
Total		**45**

D. Students Assessment Activities:

No	Assessment Activities *	Assessment timing (in week no)	Percentage of Total Assessment Score
1.	**Assignment #1**	**3**	**5**
2.	Assignment #2	5	5

No	Assessment Activities *	Assessment timing (in week no)	Percentage of Total Assessment Score
3.	**Mid Term Exam**	**8**	**20**
4.	**Assignment #3**	**12**	**5**
5.	**Project**	**14**	**30**
6.	**Final Exam**	**End of semester**	**35**
...			

*Assessment Activities (i.e., Written test, oral test, oral presentation, group project, essay, etc.)

E. Learning Resources and Facilities:

1. References and Learning Resources:

Essential References	**1. The Craft of Research: Chicago Guides to Writing, Editing and Publishing by Booth, Colomb & Williams, 3rd Edition, University of Chicago Press, 2008. ISBN: 0226065669.** **2. Recker, J. (2013). Scientific Research in Information Systems: A Beginner's Guide. Springer.**
Supportive References	1. Avison, D. and Pries-Heje, J. "Research in Information Systems: A Handbook for Research Students and Their Supervisor", Elsevier Butterworth Heinemann, Oxford, 2005, ISBN: 0750666552. 2. Berndtsson, Mikael, et al. Thesis projects: a guide for students in computer science and information systems. Springer Science & Business Media, 2007. **3.** Zobel, J. (2014). Introduction. In Writing for Computer Science (pp. 1-7). Springer London. **4.** Bernard, H. R., & Bernard, H. R. (2012). Social research methods: Qualitative and quantitative approaches. Sage.
Electronic Materials	**Electronic Materials Google Scholar, Research Gate, IEEE Explore, Hindawi etc.**
Other Learning Materials	

2. Educational and Research Facilities and Equipment Required:

Items	Resources
facilities (Classrooms, laboratories, exhibition rooms, simulation rooms, etc.)	
Technology equipment (Projector, smart board, software)	
Other equipment (Depending on the nature of the specialty)	

F. Assessment of Course Quality:

Assessment Areas/Issues	Assessor	Assessment Methods
Effectiveness of teaching	Students	Survey (Indirect)
Effectiveness of students assessment	Faculty	Rubrics (Direct)
Quality of learning resources	Students	Survey (Indirect)
The extent to which CLOs have been achieved	Others(QAC)	Direct
Other		

Assessor (Students, Faculty, Program Leaders, Peer Reviewer, Others (specify)

Assessment Methods (Direct, Indirect)

G. Specification Approval Data:

COUNCIL /COMMITTEE	
REFERENCE NO.	06/02/2018
DATE	