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Title: RESEARCH METHODS  
 Status: Definitive  
 Code: **7002ONLINE** (103109)  
 Version Start Date: 01-08-2016  
 Owing School/Faculty: Computer Science  
 Teaching School/Faculty: Computer Science

Team	Leader
Rubem Pereira	Y

**Academic Level:** FHEQ7      **Credit Value:** 15      **Total Delivered Hours:** 36  
**Total Learning Hours:** 150      **Private Study:** 114

**Delivery Options**

Course typically offered: Runs Twice - S1 & S2

Component	Contact Hours
Lecture	24
Seminar	12

**Grading Basis:** 40 %

**Assessment Details**

Category	Short Description	Description	Weighting (%)	Exam Duration
Report	AS1	Critical review of a range of academic sources on a subject of choice.	40	
Report	AS2	Research proposal for the student's dissertation.	60	

**Aims**

*To introduce the concept of evidence based research process.  
 To provide grounding in research methodologies applied to research in computing and information systems.*

*To outline the essential considerations when conducting experimental research, survey research, field research, action research, data analysis and evaluation/case study research.*

*To develop the skill in analysing research papers and familiarity with research areas and approaches.*

*To provide participants with an opportunity to plan and develop an individual research strategy suitable for a Master's dissertation.*

## **Learning Outcomes**

After completing the module the student should be able to:

- 1 Critically evaluate the empirical-logical character of science, the role and utility of theory, and the ways in which hypotheses are developed and tested.
- 2 Develop a personal model of inductive/deductive scientific endeavor and carry out the main activities in planning and developing a research project.
- 3 Propose a research question and indicate an appropriate research methodology to investigate it.
- 4 Define and execute an individual research project and present research findings.

## **Learning Outcomes of Assessments**

The assessment item list is assessed via the learning outcomes listed:

Critical review	1		
Research proposal	2	3	4

## **Outline Syllabus**

*Science and scientific methodology: Epistemology, classification of research: theory development and testing; the deductive-inductive research process; and the role of independent and dependent variables.*

*The research process: Problem identification; Research design; Data collection; Data analysis; Data evaluation*

*Criteria for good research: Reliability; Validity; Generalisation; Utility. Ethics in research.*

*Data collection techniques: Observational Techniques; Survey Techniques; Experimental Techniques.*

*Data analysis techniques: Descriptive Statistical Analysis; Inferential Statistical Analysis; Qualitative Analysis.*

## **Learning Activities**

Attend online lectures. Read all assigned papers and chapters. Prepare individual comments/analyses. Verbalize Hypotheses. Develop arguments. Present analysis/conclusions. Write up and Present group analysis.

## **Notes**

This module provides generic and specific research methods skills, which will help equip the student for the project module and also for possible future research. All online activities are scheduled.