

THE UNIVERSITY OF MANCHESTER
MANCHESTER BUSINESS SCHOOL

Academic Year: 2007/2008

Course Code: BMAN 20890

Course Title: Systems Investigation Methods

Level: 2

Degree Programmes: Interactive Systems Design, Information Systems Engineering

Member of Staff Responsible:

Oscar de Bruijn,
MBS East rm. F38,
Phone: 0161 3065829
Email: o.de-bruijn@manchester.ac.uk
Availability: By email

Victor M. Gonzalez
MBS East room F40
Phone: 0161 306 3365
Email: vmgonz@manchester.ac.uk
Availability: By appointment Wednesdays 10:00 am – 12:00 pm

Pre-requisites: This course has no pre-requisites

Co-requisites: This course has no co-requisites

Dependent course units: This course is not a pre-requisite for further courses.

Semester: Full year

Unit Rating: 20

Course Aims:

This course unit aims to teach students how to design and conduct empirical investigations of socio-technical systems in order to maximise usability and acceptance. It will provide an understanding of and skills in qualitative and quantitative techniques for investigating and analysing socio-technical systems at several design stages.

Learning Outcomes:

On successful completion of this course unit, students should be able to

- * Academic knowledge
 - Design and conduct qualitative and quantitative investigations.
 - Analyse, understand and use empirical data to support the design of usable systems.
- * Intellectual skills
 - Demonstrate an understanding of different approaches to user research and their relationship to the software life-cycle
- * Subject practical skills

- Observe and understand user behaviour.
- Collect and analyse empirical data.
- Present and summarise quantitative and qualitative data set.
- * Transferable skills
 - Demonstrate report writing, presentation and communication skills.
 - Improve deductive reasoning.
 - Improve team work.

Syllabus:

- Qualitative research methods:
 - Behavioural observations: ethnography, field studies, case studies and contextual inquiries
 - Verbal reports: semi-structured interviews, focus-group and corpora analysis.
- Qualitative research analysis: Affinity diagrams and cultural models: Content analysis.
- Quantitative research methods:
 - Techniques for problem analysis and diagnosis
 - Surveys and questionnaires (design and validation)
 - Experiments and quasi-experiments (design and data collection)
- Quantitative research analysis:
 - Descriptive statistics: measurement scale, sample size and distribution;
 - Inferential statistics: correlation and comparing means; ANOVA
 - Survey analysis (basics of reliability and factor analysis)

Methods of Delivery

Lectures: 24 hours
 Tutorials: 48 hours
 Practical Work: 28 hours
 Private Study: 100 hours
 Total: 200 hours

Timetable

Semester 1

Week 1 Introduction to Systems Investigation Methods
 Week 2 Research Designs and Research Questions
 Week 3 Ethnography and Participant Observation
 Week 4 Interviewing in Qualitative Research
 Week 5 Contextual Inquiry
 Week 6 – Reading week
 Week 7 Focus Group Technique
 Week 8 Qualitative Data Analysis (Affinity Diagramming)
 Week 9 Qualitative Data Analysis (Grounded Theory Approach)
 Week 10 Mixed Methods approaches
 Week 11 Internet Research Methods
 Week 12 Review week

Semester 2

Week 1 Introduction to quantitative methods and analysis
 Week 2 Sampling and sampling error
 Week 3 Surveys and questionnaires
 Week 4 Variables and measurement
 Week 5 Reliability and validity
 Week 6 Univariate and bivariate analysis
 Week 7 Test of statistical significance
 Week 8 Experimental designs
 Week 9 Comparing means

Week 10 Analysis of variance
Week 11 Mixed designs
Week 12 Review week

Reading List

Core Text:

Bryman & Bell., Business Research Methods. 2nd Edition, Oxford, 2007

Supplementary Texts:

B. Johnson, L.B. Christensen and L. Christensen – Educational Research: Qualitative, Quantitative and Mixed Approaches, Allyn & Bacon, 2003

Kuniasky, Observing the User Experience, Morgan Kaufmann, 2003

Assessment Methods and Relative Weightings

60% coursework assignments
 3 assignments semester 1 (each 10%)
 2 assignments semester 2 (each 15%)
40% Multiple choice tests (no exam)

Examinations

No exam

Coursework

Assignments deadlines:

First semester

Observation exercise: Friday 19 October 2007

Interview exercise: Friday 9 November 2007

Analysis of data exercise: Friday 30 November 2007

All the reports of assignments must be in the MBSE/D20 Undergraduate reception not later than the indicated dates. The coursework collection point will close at 4pm.

Second semester

Survey exercise: Friday 7th March 2008

Experiment exercise: Friday 2nd May 2008

Feedback to Students on Progress

Feedback on the coursework (assignments) will be provided two weeks after the submission of reports.

Feedback on the multiple choice test for semester 1 will be provided not later than Friday 18th January 2008 via WebCT.

Feedback on the multiple choice test for semester 2 will be provided not later than Friday 9th May 2008 via WebCT.