OMIS 607 Theories and Methods of Information Systems

Course Syllabus, Teaching Plan and Reading List

2014/15 Academic Year - Semester One

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Instructors and Contact Information

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Background:
The idea behind this module is to examine the theories and methods used in the design and conduct of information systems research.

Aim & Content:
This course will discuss the theoretical concepts, frameworks and methods used in information systems (IS) research. The course will also explore the philosophical assumptions which underpin information systems research including positivist, interpretive and critical approaches research.

By becoming familiar with the research process in information systems practice, students should become competent in developing research proposals for IS research, designing IS research projects, collecting and analyzing IS research data and results. Topics include information systems research, information systems theories, reviewing IS literature, inquiry into emerging issues in information systems, IS research design, data collection and analysis in IS research, design of information systems research proposals, and IS publication and resources outlets.

Participants:
This is essential for anyone involved in research in information systems and development informatics. The learning points include both theories and practices. However, we expect that, after finishing this module, the students can review literature, identify research gaps and conceptualize frameworks and research designs to address research gaps.

Having completed the course the student should be able to
- present, analyze and discuss theories and methods used in the Information Systems community in particular
- present, explain and critically examine theories and methods used in Information Systems research, how these are used, and what the contested issues are
- discuss and critically examine the concept “research quality”, “research validity” and “research reliability” as defined by different research methods.

Course Sessions
The course consists of 13 weekly sessions of each three hours. It will be structured to include three related parts:

- Week 1: Introduction to Research
- Week 2 - 7: Research Paradigms, Literature Review and Research Design
- Week 8 -13: Research Methods and Analysis
**Recommended Text**


**Further Readings**

**You will be provided with adequate electronic materials to support learning and teaching during this course. However, this is list of a few of references we will be using.**

1. When teaching begins, Kindly visit [www.vivaafrica.net](http://www.vivaafrica.net) for more electronic resources.

**Methodology**

The course will be a combination of lecture sessions, class discussions, and group assignments/presentations. Lectures will follow the course outline (given below) and text presentation of the relevant chapters of the recommended text. The instructor may utilize additional information to supplement the text.

**Students are expected to read topics in textbooks ahead of class and will use lecture sessions to clarify difficult materials.** Any changes to the schedule and assignments will be given in class. If for some reason a student must miss a class, it is his/her responsibility to find out what was discussed on that day. For example, the absence from class on a particular day will not be an excuse for a late submission of an assignment.

**Class Power Points Slides:**

To obtain a copy of the class power point slides, consult your instructor and also the class website (which will be announced in class).
### Assessment

The assessment for this course has been designed to help all students to maximise their individual learning opportunities. A summary of the assessment tasks is provided below.

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<thead>
<tr>
<th>ITEM</th>
<th>MARKS</th>
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<tbody>
<tr>
<td>Assignment</td>
<td>20%</td>
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<tr>
<td>Quiz</td>
<td>10%</td>
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<tr>
<td>End of semester examination</td>
<td>70%</td>
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<td><strong>Total</strong></td>
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### POLICIES

**Attendance:** Regular class attendance is expected.

**Policy Revision:** The instructor reserves the right to make changes to the syllabus or to the above stated procedures if deemed appropriate. Students will be advised of such changes as soon as practicable.
Topics to Be Covered in Theories

**Volume 1**
The first section of Volume 1 presents detailed descriptions of a set of theories centered around the IS lifecycle, including:

- DeLone and McLean's Success Model
- Technology Acceptance Model
- Unified Theory of Acceptance and Use of Technology
- User Resistance Theories
- Task-Technology Fit Theory
- Process Virtualization Theory
- Theory of Deferred Action

The second section of Volume 1 contains strategic and economic theories, including:

- Resource-Based View
- Theory of Slack Resources
- Portfolio Theory
- Theory of the Lemon Markets
- Technology – Organization – Environment Framework
- Contingency Theory
- Porter’s Competitive Forces Model
- Business Value of IT
- Diffusion of Innovations
- Punctuated Equilibrium Theory
- Discrepancy Theory Models
- Institutional Theory
- A Multi-level Social Network Perspective
- Expectation Confirmation Theory
- Stakeholder Theory

**Volume 2**
The first section of Volume II concerns socio-psychological theories. These include:

- Personal Construct Theory
- Psychological Ownership and the Individual Appropriation of Technology
- Transactive Memory
- Language-Action Approach
- Organizational Information Processing Theory
- Organizational Learning, Absorptive Capacity, and the Power of Knowledge
- Actor-Network Theory
- Structuration Theory
- Social Shaping of Technology Theory
- An IT-Innovation Framework
- Yield Shift Theory of Satisfaction
- Theory of Planned Behavior
- An Interpretation of Key IS Theoretical Frameworks using Social Cognitive Theory

The second section of Volume II deals with methodological theories. These include:

- Critical Realism
- Grounded Theory and Information Systems: Are We Missing the Point?
- Developing Theories in Information Systems Research – The Grounded Theory Method Applied
- Narrative Inquiry
- Work System Method
Topics to Be Covered in Methods

For each method: it is required that, the presentations:

a) Describe the Method
b) Discuss Benefits of the Method in IS Research
c) How it is used in IS Research – Principles and Examples
d) Challenges or problems in using the Method

Case Study in IS Research


Read More at:
http://www.qual.auckland.ac.nz/case.aspx#Dubé,_L.,_and_Paré,_G

Action Research in Information Systems Research


Interviews in IS Research


Coding Qualitative Data

1. Mason, Qualitative Researching, Ch. 8.
2. Miles and Huberman, Qualitative Data Analysis, Ch. 4.

Read More at:
http://www.qual.auckland.ac.nz/case.aspx#Dubé,_L.,_and_Paré,_G
Within-Case Analysis
1. Miles and Huberman, *Qualitative Data Analysis*, Chs. 5-6.

Research Quality, Reliability and Validity in IS Research

Resources to be provided in class.

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STUDENT PRESENTATIONS

Divide the class into four groups and work in groups for these assignments
Each student is required to take active part of the assignment and know the presentation.

- Interactive Presentation with clear diagrams and concepts
- All presentations should be accompanied by a paper on the topic of presentation.
  - Paper should be single-spaced, font-size 11, times new roman.
  - Cover page should be included - List of students (in the group) with index numbers, full names, email addresses and mobile numbers
  - References
  - Assignments should bound – comb binding.
  - Each presentation should be accompanied by a paper not less than 1500 words summarizing the presentation.
### Session Outline

#### Week 1
Course Introduction  
Understanding Theories and its Role in Research  
2. *Prepare an essay of 1500 words explaining what is theory and using one theory as the example.*  
3. *Submit in the Third week*

#### Week 2-3
**Applying Theory in Research**  
*Read These Papers and Prepare a Presentation covering the following:*  
  a) Research Topic  
  b) Research Problem  
  c) Literature Review  
  d) Research Framework  
  e) Research Method  
  f) Research Results/Findings  
  g) Discussion and Analysis  
  h) Conclusion  
*Please do not use more than 30 slides*  

#### Week 4-5
**IS Cycle Theories**  
1. Technology Acceptance Model  
2. Unified Theory of Acceptance and Use of Technology  
3. Diffusion of Innovations  
4. Theory of Planned Behaviour  
**Volume 1**  

#### Week 6-7
**Strategic and Economic theories**  
1. Technology – Organization – Environment Framework  
2. Porter’s Competitive Forces Model  
3. Business Value of IT  
4. DeLone and McLean’s Success Model  
**Volume 1**  

#### Week 8-9
**Social theories**  
1. Institutional Theory  
2. A Multi-level Social Network Perspective  
3. Stakeholder Theory  
4. Social Shaping of Technology Theory  
**Volume 1**  
**Volume 2**  

#### Week 10-13
**Qualitative Methods in IS and Qualitative Data Analysis**  
**Qualitative Research Methods**  
**Qualitative Researching**  
**Qualitative Data Analysis**

#### Week 12-13
Fact or Fiction: Qualitative Research Results in Information System