THE UNIVERSITY OF AUCKLAND
Te Whare Wānanga o Tāmaki Makaurau
NEW ZEALAND

BUSINESS SCHOOL

Course Outline 2017
INFOSYS 320: Information Systems Design (15 POINTS)

Semester 2 (1175)

Course Prescription

Information systems that are specifically designed for an organisation provide a considerable competitive advantage. This course addresses design at several levels: user experience, architecture and software design. Students learn to manage the design process in a team environment, drawing on previous courses to take a system from analysis through design to a prototype implementation using the latest modelling and development environments.

Programme and Course Advice

Prerequisite: Either INFOMGMT 291 or INFOSYS 220 and either INFOMGMT 292 or INFOSYS 222 and either INFOSYS 280 or COMPSCI 280 or equivalent.

Goals of the Course

This course focuses on the design of information systems. Through current design and development environments, students will be exposed to a number of experiential learning elements to assist with the understanding and development of necessary skills for information systems design. The student will gain practical experience in modelling, design and the construction of an integrated prototype.

Goals:

- To prepare students to be self-sufficient and self-motivated information systems designers.
- To become aware of design as both a structured and unstructured activity including the need to experiment and continually explore emerging techniques and components.
- To facilitate students to gain skills necessary for successful team work.
- To develop a practical knowledge of design and development in contemporary environments in which to implement a solution.
- To understand the architectures required to deliver high quality information systems solutions.

Learning Outcomes

By the end of this course it is expected that the student will be able to:

1. Follow the Design Thinking Process to create a information systems design
2. Create an Information Model based on design patterns such as Objects/Events and Inheritance.
3. Evaluate the user experience of an existing information system based on a predefined but open ended rubric
4. Demonstrate and document an information system design by creating a,
    - forms based prototype for to support business processes
    - 3D graphical prototype
    - Report containing appropriate analysis and design artefacts

5. Create visualisations to show how with appropriate tools and environments end users can explore and add value to data for themselves
6. Propose design elements for emerging technologies
7. Describe how security be a primary design focus
8. Prepare, plan and execute a systems design using a collaborative environment
9. Research and present an evaluation of components, such as machine learning, to be used in a systems design

Content Outline

To be announced in Canvas

Learning and Teaching

This course has two lecture hours and one design studio hour per week involving in-class activities, debate and group discussion.
In addition, there will be approximately 2 hours of laboratory work to complete each week. The lab exercises are designed to teach the skills required to complete the assignments. The design studios will focus on producing specific artefacts for the assignments
Students should spend approximately 5 additional hours per week in course-related activities. These include readings and videos related to the course content, online tutorials and working on practical assignments.

Personal Computers

Students must be prepared to bring their own computers to all classes. In the labs students will primarily use their own computers. Windows 10 is required. Please upgrade if you have not done so. If you have a Mac please install Windows 10 using software such as Parallels or Bootcamp.

Teaching Staff

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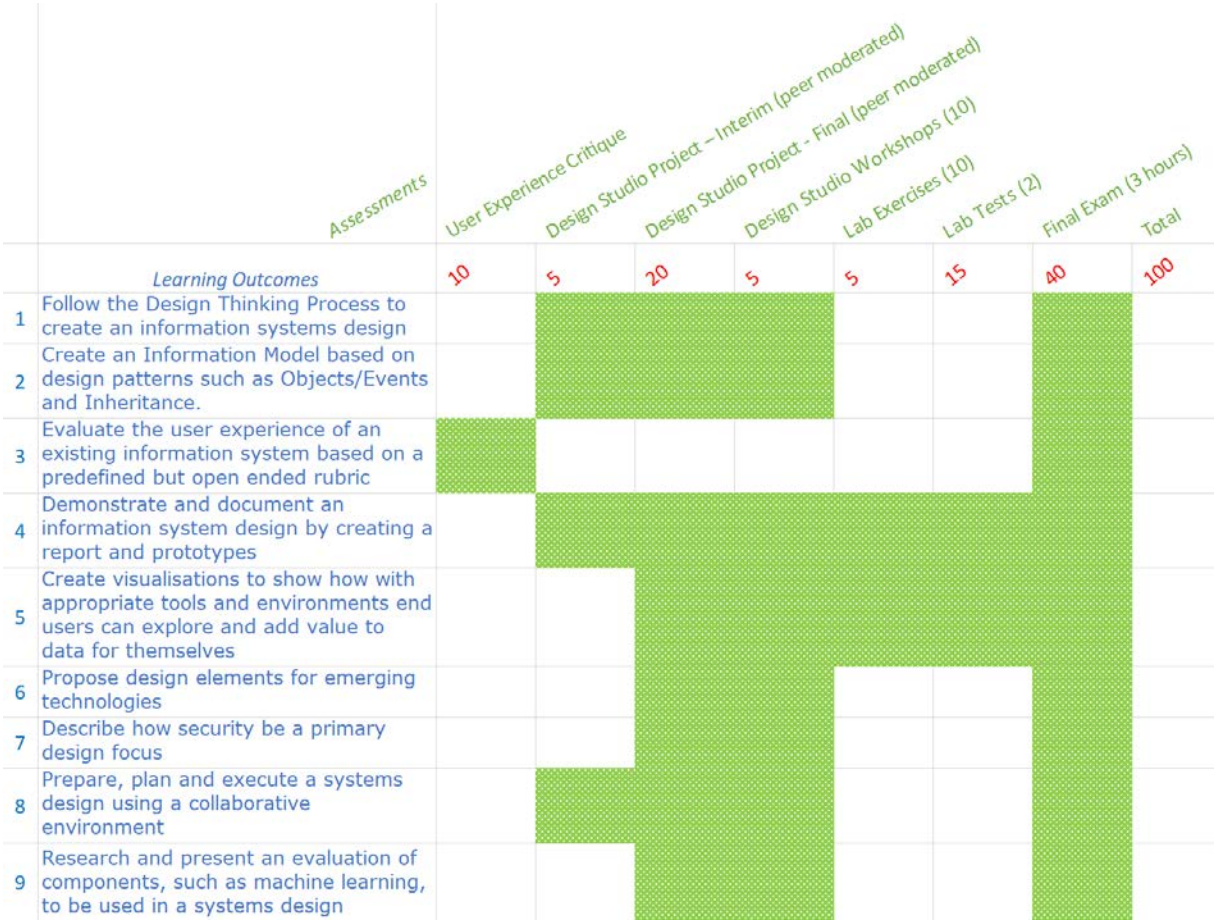
Learning Resources

There is no prescribed textbook or coursebook for this course. Online readings and videos will be assigned in class.
All course material will be available in Canvas and the course Kanban Board, including lecture notes, laboratory work and links to readings and videos. There is also an online discussion forum (Piazza) where students can discuss course topics and seek assistance from staff and other students.
The software packages we use in the course are available to students free of charge, including the help libraries.

Assessment

Students must achieve a pass (50%) in both the internal coursework (Assignments, Group Project, Lab Tests and Exercises) and the Exam separately in order to pass this course. Detailed specifications will be posted on Canvas.



	Assessments / Learning Outcomes	User Experience Critique	Design Studio Project – Interim (peer moderated)	Design Studio Project - Final (peer moderated)	Design Studio Workshops (10)	Lab Exercises (10)	Lab Tests (2)	Final Exam (3 hours)	Total
		10	5	20	5	5	15	40	100
1	Follow the Design Thinking Process to create an information systems design		■	■	■			■	
2	Create an Information Model based on design patterns such as Objects/Events and Inheritance.		■	■	■			■	
3	Evaluate the user experience of an existing information system based on a predefined but open ended rubric	■						■	
4	Demonstrate and document an information system design by creating a report and prototypes		■	■	■	■	■	■	
5	Create visualisations to show how with appropriate tools and environments end users can explore and add value to data for themselves			■	■	■	■	■	
6	Propose design elements for emerging technologies			■	■			■	
7	Describe how security be a primary design focus			■	■			■	
8	Prepare, plan and execute a systems design using a collaborative environment		■	■	■			■	
9	Research and present an evaluation of components, such as machine learning, to be used in a systems design			■	■			■	