Special Topic: Information Visualisation - Course Outline

SWEN 439: 2015 Trimester 2

This document sets out the workload and assessment requirements for SWEN 439. It also provides contact information for staff involved in the course. If the contents of this document are altered during the course, you will be advised of the change by an announcement in lectures and/or on the course web site. A printed copy of this document is held in the School Office.

Objectives

This course will examine ideas and techniques used in information visualisation. Several common techniques will be investigated in detail, along with research being done to improve them. Methods for analysing data will be considered, including big data, and those techniques and issues arising when processing or visualising it.

By the end of the course, students should be able to:

1. Describe and critique the basic principles and techniques of Information Visualisation.
2. Describe and critique the inherent issues related to the analysis and visualisation of data.
3. Construct an appropriate visualisation for an appropriate dataset.
4. Undertake research into the development of [novel] visualisations.

Textbook

There are no required textbooks for SWEN 439. For interested students Edward Tufte's books on visualization are recommended:

- The Visual Display of Quantitative Information
- Envisioning Information
- Visual Explanations: Images and Quantities, Evidence and Narrative
- Beautiful Evidence

Lectures, Tutorials, Laboratories, and Practical work

A schedule of lecture topics, readings, and assignment due dates is available online. The course starts on the 13th of July, and lectures finish after the 16th of October. The final project will be due during the exam period 23 October - 14 November.

Lectures for SWEN 439 are: *1:10 - 2pm Monday AM106, Tuesday KK203, Thursday EA201*

The Tuesday lecture slot will not be used unless previously announced.

Assignments and Projects

The course is internally assessed and has five assessments. These are split between research and implementation, with 3 of them focusing on the implementation and practical aspects.

Workload

In order to maintain satisfactory progress in SWEN 439, you should plan to spend an average of at least 10 hours per week on this paper. A plausible and approximate breakdown for these hours would be:

- Lectures and tutorials: 2
- Readings and reading summaries: 2
- Other assignments: 6

School of Engineering and Computer Science

The School office is located on level three of the Cotton Building (Cotton 358).

The notice board for SWEN 439 is located on the second floor of the Cotton Building.

Staff

The course organiser and lecturer for SWEN 439 is Roman Klapaukh. His contact details are:

- Roman Klapaukh
- Cotton 230
- Roman.Klapaukh@ecs.vuw.ac.nz

The class rep is:
- Marcel Blokker
- blokkemarc@ecs.vuw.ac.nz

Announcements and Communication

The main means of communication outside of lectures will be the SWEN 439 web area at http://ecs.victoria.ac.nz/Courses/SWEN439_2015T2/. There you will find, among other things, this document, the lecture schedule and assignment handouts, and the SWEN 439 Forum. The forum is a web-based bulletin board system. Questions and comments can be posted to the forum, and staff will read these posts and frequently respond to them.

Assessment

Your grade for SWEN 439 will be determined based on the following assessment weightings:

Item	Weight	Due
Reading summaries	20 %	Each lecture
Research Essay	20%	August 24th (Monday Mid-Trimester break)
Visualisation Design	10%	August 17th (Monday Week 6)
Visualisation Implementation	40%	Exam Period
Final Report	10%	Exam Period

Tests and Exams

There are no test or exams for SWEN 439.

Practical Work

This course will require students to complete five assignments. The first is regular write ups about papers that are read. The second is a research essay on visualisations. The following three assignments go through the development of a visualization. The assignments look at: design (oral presentation), implementation (oral presentation), and an overall report. The implementation presentation and overall reports will be in the exam period. All the presentations are mandatory.

Late submissions without prior approval or medical grounds will lose 10% per day they are late.

Note that written work may be checked using the online Turnitin system.

Turnitin

Student work provided for assessment in this course may be checked for academic integrity by the electronic search engine http://www.turnitin.com. Turnitin is an online plagiarism prevention tool which identifies material that may have been copied from other sources including the Internet, books, journals, periodicals or the work of other students. Turnitin is used to assist academic staff in detecting misreferencing, misquotation, and the inclusion of unattributed material, which may be forms of cheating or plagiarism. At the discretion of the head of School, handwritten work may be copy typed by the School and subject to checking by Turnitin. You are strongly advised to check with your tutor or the course coordinator if you are uncertain about how to use and cite material from other sources. Turnitin will retain a copy of submitted materials on behalf of the University for detection of future plagiarism, but access to the full text of submissions will not be made available to any other party.

Plagiarism

Working Together and Plagiarism

We encourage you to discuss the principles of the course and assignments with other students, to help and seek help with programming details, problems involving the lab machines. However, any work you hand in must be your own work.

The School policy on Plagiarism (claiming other people's work as your own) is available from the course home page. Please read it. We will penalise anyone we find plagiarising, whether from students currently doing the course, or from other sources. Students who knowingly allow other students to copy their work may also be penalised. If you have had help from someone else (other than a tutor), it is always safe to state the help that you got. For example, if you had help from someone else in writing a component of your code, it is not plagiarism as long as you state (eg, as a comment in the code) who helped you in writing the method.

Mandatory Course Requirements

1. *Presented all the required presentations (where required by assignments)*

Any student who is concerned that they have been (or might be) unable to meet any of the mandatory course requirements because of exceptional personal circumstances, should contact the course coordinator as soon as possible.

Passing SWEN 439

To pass SWEN 439, a student must satisfy mandatory requirements and gain at least a **C-** grade overall.

Withdrawal

The last date for withdrawal from SWEN 439 with entitlement to a refund of tuition fees is Friday 24 July 2015. The last date for withdrawal without being regarded as having failed the course is Friday 25 September 2015 -- though later withdrawals may be approved by the Dean in special circumstances.

Rules & Policies

Find key dates, explanations of grades and other useful information at http://www.victoria.ac.nz/home/study.

Find out about academic progress and restricted enrolment at http://www.victoria.ac.nz/home/study/academic-progress.

The University's statutes and policies are available at http://www.victoria.ac.nz/home/about/policy, except qualification statutes, which are available via the Calendar webpage at http://www.victoria.ac.nz/home/study/calendar (See Section C).

Further information about the University's academic processes can be found on the website of the Assistant Vice-Chancellor (Academic) at http://www.victoria.ac.nz/home/about/avcacademic

All students are expected to be familiar with the following regulations and policies, which are available from the school web site:

Grievances
Student and Staff Conduct
Meeting the Needs of Students with Disabilities
Student Support
Academic Integrity and Plagiarism
Dates and Deadlines including Withdrawal dates
School Laboratory Hours and Rules
Printing Allocations
Expectations of Students in ECS courses

The School of Engineering and Computer Science strives to anticipate all problems associated with its courses, laboratories and equipment. We hope you will find that your courses meet your expectations of a quality learning experience.

If you think we have overlooked something or would like to make a suggestion feel free to talk to your course organiser or lecturer.

Course Outline as PDF