

Advanced Network Applications - Course Outline

NWEN 304: 2016 Trimester 1

This document sets out the workload and assessment requirements for NWEN 304. 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

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

1. Explain the application of techniques such as authentication, confidentiality, authorisation, caching, replication, consistency and transactions in engineering scalable and reliable networked and distributed applications (GA [3\(a\)](#), [3\(e\)](#)).
2. Be able to analyse the security, scalability and fault tolerance of networked and distributed applications using a mix of mathematical and empirical methods (GA [3\(b\)](#), [3\(c\)](#), [3\(d\)](#), [3\(e\)](#)).
3. Explain the responsibilities of developers of networked and distributed applications with respect to social, cultural and environmental issues and include these aspects in the evaluation of the final group project (GA [1\(a\)](#)).
4. Be able to use web application development frameworks and middleware technologies to build, deploy and test web applications on a cloud computing infrastructure (GA [3\(f\)](#)).
5. Be able to work in a team to design, develop and evaluate networked and distributed applications (GA [2\(a\)](#)).
6. Present explanations in written and oral form (GA [2\(b\)](#)).

Textbook

There are no assigned textbooks for the course. A list of readings and other resources that you may find helpful will be announced in lectures and also included in lecture handouts.

Lectures, Tutorials, Laboratories, and Practical work

A [schedule](#) of lecture topics, readings, and assignment due dates is available online

Lectures for NWEN 304 are: ***Mondays and Wednesdays 16:10 - 17:00 in LT105, Alan MacDiarmid Building, Kelburn Parade***

Labs start from Week 2 till Week 12: **every Tuesday from 13:00 to 14:00 in CO246 and every Friday from 13:00 to 15:00 in CO219.**

One Friday lab session will be used the group project progress presentation. Groups will be also be formed in one Friday lab session.

Workload

In order to maintain satisfactory progress in NWEN 304, you should plan to spend an average of **10** hours per week on this paper. A plausible and approximate breakdown for these hours would be:

- Readings and notes review: 2 Hours
- Technical reports: 1 Hour
- Projects : 5 Hours
- Lectures: 2 Hours

School of Engineering and Computer Science

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

The notice board for NWEN 304 is located on the second floor of the Cotton Building.

Staff

The course organiser for NWEN 304 is Aaron Chen. The lecturers for the course are Ryan Chard and Aaron Chen. Their contact details are:

- *Aaron Chen*
- AM405

- +64 4 463 5114
- aaron.chen@ecs.vuw.ac.nz

- Ryan Chard
- AM406
- ryan.chard@ecs.vuw.ac.nz

Tutor:

- Mohammad Nekooei
- AM407
- mohammad.nekooei@ecs.vuw.ac.nz

Announcements and Communication

The main means of communication outside of lectures will be the NWEN 304 web area at http://ecs.victoria.ac.nz/Courses/NWEN304_2016T1/. There you will find, among other things, this document, the [lecture schedule](#) and [assignment handouts](#), and the [NWEN 304 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 NWEN 304 will be determined based on the following assessment weightings:

<u>Item</u>	<u>Weight</u>	<u>Learning Objectives</u>
Individual mark		
4 technical reports	40%	1,2
Individual programming project -- building an online todo list application	20%	4
Group project -- building an online shopping application		3, 4, 5, 6
Project progress presentation	2%	3, 4, 5, 6
Project interview (with weekly progress logs)	23%	3, 4, 5, 6
Group mark		
Group project presentation and demonstration	15%	3, 4, 5, 6

Individual work:

You must complete all technical reports individually. Each report must have a maximum of 2 pages. All written reports will be checked for plagiarism by using the Turnitin system. Technical reports will cover topics discussed in lectures and require some reading. You will be assessed on your ability of demonstrating understanding of conceptual materials and relation to real-world problems.

Programming projects are done individually and assessed individually. You will submit code, evidence of testing and a short report on what was achieved. All of these will be used to determine an overall grade.

Weekly progress logs will be used to assess your individual contribution to the work done in the weekly labs. Each log is no longer than a page and will be submitted individually during the project interview. Each log will briefly cover the following questions: (i) what did you plan to do this week/lab; (ii) what you did individually and as a group; (iii) what problems have you encountered.

Important things to cover during the individual project interview are: (i) What did you plan to do vs what you did and why; (ii) What concepts from the coursework did you apply; (iii) What did you learn that wasn't covered by the coursework; (iv) What was your technical contribution (in detail) relative to your group members.

Group work:

Although you will do some group project work in the labs, you will need to meet with your project groups outside the lab times (suggest regular weekly meetings, each for half a hour).

Where assessment involves group work, the course coordinator and lecturer will ensure the marks you receive will reflect an *holistic assessment of your overall demonstrated contribution to each assessment item*. In this course we will expect you to use your initiative and resources as a group (such as material from past courses and industry experience) to gather information and to ask questions of relevant staff and members from around the University.

Group project presentation will cover the design, implementation and testing of both the client and server side of the final project deliverable as well as a consideration of societal issues such as privacy. In addition, you will give a quick demo of your project deliverable as part of a final presentation. You will also take part in a progress presentation that is an opportunity for you to receive formative feedback on your project so far.

All written reports will be checked for plagiarism by using the Turnitin system.

Important Dates

Week	Date	Milestone
3		Technical report 1
5		First milestone for the individual programming project
6		Technical report 2
8		Second milestone for the individual programming project
9		Technical report 3
10		Group project progress presentation (5 minutes)
12		Technical report 4
Exam period		Mandatory final presentation of group project and software demonstrations

Tests and Exams

There are no internal tests and no final exam for NWEN 304.

Group presentations and project interviews will be scheduled as an exam during the examination period.

The examination period for trimester 1 is 10 June - 29 June.

Practical Work

A key feature of the NWEN 304 is group work. We expect attendance at the labs to allow you to work together with your groups and so we can assess your contribution. In addition, you will need to arrange group meetings outside our scheduled labs.

Individual work items should be handed in via the online submission system.

All individual and group work components must be handed in on time - and may be marked "as it is" at the deadline. Approval for late submission will only be given in exceptional circumstances. Assessment for the group project will include individual and group components. The group project will be conducted under the [University's group work guidelines](#).

Guidance on Group Work

In addition to the University's group work guidelines we also have the following recommendations.

Have respect for each other.

- Respect each other's ideas
- Respect the other group members
- Don't interrupt each other
- Everyone's opinion should count
- Be honest with each other

All group members should do an equal amount of work.

- Everyone should share the responsibility of the tasks
- Don't take over and don't let others take over

Your group should have a common understanding of goals that need to be achieved.

- Help each other to understand all concepts

Be open to compromise.

- Be willing to cooperate with others on their ideas
- Keep an open mind
- Vote on disagreements

Effective communication.

- Make sure everyone is able to be vocal about their ideas and problems

- Give ideas no matter how “off” you may think they are

Listen effectively.

- Don't be critical

Time management.

- Attend and arrive on time to all group meetings
- Be flexible about meeting times
- Keep on task (limit talk about non-related events)

Be happy in the group you are in.

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

You must:

1. Attend the project interview
2. Participate in the progress report presentation
3. Participate in the final group project presentation

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

Passing NWEN 304

To pass NWEN 304, a student must satisfy mandatory requirements and gain at least a **C-** grade overall.

Withdrawal

The last date for withdrawal from NWEN 304 with entitlement to a refund of tuition fees is Friday 11 March 2016. The last date for withdrawal without being regarded as having failed the course is Friday 13 May 2016 -- 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](#)
