

Advanced Network Applications - Course Outline

NWEN 304: 2015 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.

The course is co-taught with [MDDN 352 Mobile Media](#).

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 protocols 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 and mobile application frameworks and tools for build, deploy and test applications to mobile devices and cloud computing infrastructure (GA [3\(f\)](#)).
5. Be able to work in a team with designers from other disciplines to design, develop and evaluate networked and distributed applications (GA [2\(a\)](#)).
6. Present explanations in written and oral form (GA [2\(b\)](#)).

Lectures and Design Studios

A schedule of lecture topics, readings, and assignment due dates will be available online on the VUW blackboard site for the course.

Lectures for NWEN 304 are Tuesday and Wednesday 11:00-11:50 in Murphy LT101 and Friday 10:00-12:00 in WG401 (it is scheduled 9.30-12.20 to allow time to move between campuses).

Note that WG401 is at the School of Architecture and Design, Wigan Street (note that you should use the Dunlop Terrace while renovations are being completed).

Texts and Readings

There are no assigned texts for the course. There will be a list of readings and other resources that you may find helpful placed on the VUW blackboard site for the course.

Workload

In order to maintain satisfactory progress in NWEN 304, 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: 2 Hours
- Readings: 1-2 Hours
- Studios: 2 Hours
- Assignments and projects : 4 Hours

School of Engineering and Computer Science

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

Staff

The course organiser for NWEN 304 is [Ian Welch](#). [Aaron Chen](#) is also lecturing on the course. The tutor is [Mohammad Neekooei](#). Their contact details are:

- [Ian Welch](#)
- Ian.Welch@ecs.vuw.ac.nz

- [Aaron Chen](#)
- Aaron.Chen@vuw.ac.nz

Tutor:

- [Mohammad Nekooei](#)

The student representative for this course is: Jahn Winskill (jahn.winskill@ecs.vuw.ac.nz)

Several guest lecturers from the local industry will also be contributing to the course.

Announcements and Communication

The main means of communication outside of lectures will be the NWEN 304 page on the Blackboard website. There you will find, among other things, this document, the lecture schedule and assignment handouts, and the course forum. The forum is a web-based bulletin board system. Questions, answers, 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>
<i>Individual Mark</i>		
2 written assignments	30%	1, 2
10 weekly reflection reports (weeks 2-11)	10%	5
Programming project -- news server	10%	4
Programming project -- learning management system	15%	4
Group Programming project -- final reflective essay	15%	5
<i>Group Mark</i>		
2 integration exercises	5%	5
Group Project project: group essay, demonstration and presentation	15%	3, 4, 5, 6

Given the nature of the course we have received special permission for group assessment marks to contribute 20% of your final mark. Group work accounts for no more than 50% of your overall mark for the course. 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.

Although you will do some project work in the studios you will need to meet with your project groups outside the studio times.

Weekly reflective reports will be used to assess your individual contribution to the work done in the weekly studios. Each report is no longer than a page and will be submitted via Blackboard by the Monday following the studio. Each report will briefly answer the following questions: (i) what did you plan to do this week/studio; (ii) what you did individually and as a pair/group; (iii) what problems have you encountered.

Programming projects are done individually and assessed individually. You will submit code, evidence of testing and a short report on what was achieved.

Integration exercises will see you integrate code developed by design students with code developed by yourself for the programming projects. We acknowledge that you might not be able to get your project running prior to the integration exercise so you will initially integrate against a server representing a model solution and for full marks you would go on to integrate (or make good progress towards) this with your project code. Pairs who have worked well together will get full marks for integrating real code that they have written.

Assignments are "take home exams", that is you must work on these individually. We will use the Turnitin plagiarism system to detect copying of each other's work or wholesale copying of answers from the Internet. You must write your own answers to the assignments.

Group report will describe 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 work with the design students on the creation of a video and this will be presented as part of a final presentation. You will also take part in an unmarked interim presentation that is an opportunity for you to receive formative feedback on your project so far.

Generally, where we are happy with your progress you will be told so in the studio when presenting and groups with problems will be asked to stay behind for full feedback from the lecturers and tutors.

Final reflective essay (3000 words +/- 10%) is written individually. Some things to cover 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 contribution relative to your other members of the group.

As for the written assignments we will use the Turnitin system for plagiarism detection.

Important Dates

Week	Date	Milestone
1	20 March	Integration exercise #1
5	3 April	Formation of final groups
Break	10 April	Submit programming project #1
6	24 April	Mandatory group pitch
7	1 May	Integration exercise #2
8	8 May	Submit written assignment #1
11	29 May	Interim presentation
12	5 June	Submit written assignment #2 and programming project #2
Exam period 15	26 June	Mandatory final presentation of group project and submit group and individual essays
2-11	Mondays	10 weekly reflection reports

Tests and Exams

There are no tests or exams in NWEN 304. There is no final exam for NWEN 304.

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

Practical Work and Penalties

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

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, and to help and seek help with the development tools. The group project will involve substantial collaboration. However, any work you present as your own individual work must be accomplished by you; any work presented as the work of the group must be accomplished by members of the group. It is essential that you give appropriate credit to part of the work that came from any other sources (whether other students in the course or outside).

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. If you have had help from someone else (other than a tutor), it is always safe to state the help that you got.

Mandatory Requirements

You must:

- Submit all of the weekly reports.
- Participate in group pitch.
- Participate in the final presentation.

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 13 March 2015. The last date for withdrawal without being regarded as having failed the course is Friday 15 May 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](#)
