

<https://courseoutline.auckland.ac.nz/dco/course/INFOSYS/730/1213>



Business and Economics

INFOSYS 730 : Telecommunications Management (15 POINTS)

2021 Semester One

Course Prescription

Seeks to expose students to current issues in telecommunications and computer networking as the involved industries move towards network and service convergence. Uses a multidisciplinary approach consisting of communications technology evolution, network economics principles and legal and regulatory frameworks. Cases include: Ethernet and the battle for the local area standard, Carrier Ethernet as a wide area technology, MPLS and VPLS, cellular and data wireless communications, next-generation networks VoIP, IPTV.

Course Overview

The 2020 Commerce Commission's Annual Telecommunications Report of March stated that in late 2019 "for the first time fibre broadband connections outnumbered copper broadband connections", total copper broadband connections dropped to 581,000 and there were 880,000 fibre connections out of the 1.6 million households and businesses able to connect to the Ultra-fast Broadband (UFB) network. NZ investment in the telecommunications industry was \$1.70 billion, 2.9% more than the year before. The average data consumption per fixed broadband connection increased from 172GB to 208GB per month. The average data consumption per mobile connection increased from 2.0GB to 2.7GB per month. NZ mobile plan prices are now below the OECD average, with 6 million mobile connections in the country. The sector is dynamic, vibrant and increasingly more complex.

Our course presents and explains technical and business-related tools that will allow students to comprehend the fast-changing, complex telecommunications sector at large, with practical emphasis on the NZ sector in particular. This will be facilitated by the three pillars of the course: technology, markets, and policy. First, we will discuss technical issues surrounding telecommunications and information technologies, amongst them: fundamentals of data transmission and networking, historic perspective of the telephone network and how it has been replaced by its successor, the Internet, and mobile and wireless communications technologies. Next, we will study various fundamental microeconomic concepts via the Economics of Networks and discuss how they can be used to understand market aspects of the telecommunications industry, useful to the managerial task. Then recent developments in telecommunication markets and disruptive events brought about by technological change will be presented to understand how policy and regulation shape the industry. To sum up, we will focus on the concept of platform and will demonstrate how platforms have impacted the business, drawing from the nascent area of the Economics of Platforms.

Course Requirements

No pre-requisites or restrictions

Capabilities Developed in this Course

Capability 1: Disciplinary Knowledge and Practice

Capability 2: Critical Thinking

Capability 3: Solution Seeking

Graduate Profile: [Bachelor of Commerce \(Honours\)](#)

Learning Outcomes

By the end of this course, students will be able to:

1. Understand and explain the main telecommunications technologies available to organisations. (Capability 1)
2. Understand the main issues associated with data and voice transmission, internetworking, transport protocols, evolution of Internet protocols, mobile and wireless technologies. . (Capability 1)
3. Understand and apply basic economic principles underlying network value, network growth, network effects and service pricing. (Capability 1 and 2)
4. Understand and critically evaluate technological issues and drivers of value creation for services to be provided over open access platforms (Capability 2)
5. Present in written a critical summary of how a given telecommunications technology evolves to impact markets, organizations or society in the New Zealand context. (Capability 3)

Assessments

| Assessment Type | Percentage | Classification |
|-----------------|------------|-------------------------------|
| Assignments | 40% | Group & Individual Coursework |
| Midterm test | 20% | Individual Coursework |
| Quizzes | 15% | Group & Individual Coursework |
| Final Project | 25% | Group Coursework |
| 4 types | 100% | |

| Assessment Type | Learning Outcome Addressed | | | | |
|-----------------|----------------------------|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 |
| Assignments | ✓ | ✓ | ✓ | | |
| Midterm test | ✓ | ✓ | | | |

| | | | | | |
|---------------|---|---|---|---|---|
| Quizzes | ✓ | ✓ | ✓ | | |
| Final Project | | | | ✓ | ✓ |

Workload Expectations

This course is a standard 15-point course and students are expected to spend 10 hours per week involved in each 15 point course that they are enrolled in.

The course is delivered within the following components:

Lectures: 1 x 3-hour lecture per week

Readings: Students are expected to read a number of journal articles and other selected readings BEFORE attending the lecture. Weekly readings will demand on average 3 to 4 hours.

Assignments: An assignment will typically involve 5 hours of work.

Quizzes: A quiz will take 10 to 15 minutes. It is expected students will have to answer 8 to 10 quizzes.

Delivery Mode

Campus Experience or Online

This course is offered in two delivery modes:

Campus Experience

Attendance is required at scheduled activities including labs to receive credit for components of the course.

Lectures will be available as recordings.

The course will not include live online events.

Attendance on campus is required for the test.

The activities for the course are scheduled as a standard weekly timetable.

Online

Attendance is expected at scheduled online activities.

The course will not include live online events.

Where possible, study material will be released progressively throughout the course.

This course runs to the University semester timetable and all the associated completion dates and deadlines will apply.

Learning Resources

Readings: papers and other material will be posted on Canvas.

Student Feedback

At the end of every semester students will be invited to give feedback on the course and teaching through a tool called SET or Qualtrics. The lecturers and course co-ordinators will consider all feedback and respond with summaries and actions.

Your feedback helps teachers to improve the course and its delivery for future students.

Class Representatives in each class can take feedback to the department and faculty staff-student consultative committees.

Digital Resources

Course materials are made available in a learning and collaboration tool called Canvas which also includes reading lists and lecture recordings (where available).

Please remember that the recording of any class on a personal device requires the permission of the instructor.

Academic Integrity

The University of Auckland will not tolerate cheating, or assisting others to cheat, and views cheating in coursework as a serious academic offence. The work that a student submits for grading must be the student's own work, reflecting their learning. Where work from other sources is used, it must be properly acknowledged and referenced. This requirement also applies to sources on the internet. A student's assessed work may be reviewed against online source material using computerised detection mechanisms.

Inclusive Learning

All students are asked to discuss any impairment related requirements privately, face to face and/or in written form with the course coordinator, lecturer or tutor.

Student Disability Services also provides support for students with a wide range of impairments, both visible and invisible, to succeed and excel at the University. For more information and contact details, please visit the [Student Disability Services' website](http://disability.auckland.ac.nz) <http://disability.auckland.ac.nz>

Special Circumstances

If your ability to complete assessed coursework is affected by illness or other personal circumstances outside of your control, contact a member of teaching staff as soon as possible before the assessment is due.

If your personal circumstances significantly affect your performance, or preparation, for an exam or eligible written test, refer to the University's [aegrotat or compassionate consideration page](https://www.auckland.ac.nz/en/students/academic-information/exams-and-final-results/during-exams/aegrotat-and-compassionate-consideration.html) <https://www.auckland.ac.nz/en/students/academic-information/exams-and-final-results/during-exams/aegrotat-and-compassionate-consideration.html>.

This should be done as soon as possible and no later than seven days after the affected test or exam date.

Learning Continuity

In the event of an unexpected disruption we undertake to maintain the continuity and standard of teaching and learning in all your courses throughout the year. If there are unexpected disruptions the University has contingency plans to ensure that access to your course continues and your assessment is fair, and not compromised. Some adjustments may need to be made in emergencies. You will be kept fully informed by your course co-ordinator, and if disruption occurs you should refer to the University Website for information about how to proceed.

Student Charter and Responsibilities

The Student Charter assumes and acknowledges that students are active participants in the learning process and that they have responsibilities to the institution and the international community of scholars. The University expects that students will act at all times in a way that demonstrates respect for the rights of other students and staff so that the learning environment is both safe and productive. For further information visit [Student Charter](https://www.auckland.ac.nz/en/students/forms-policies-and-guidelines/student-policies-and-guidelines/student-charter.html) <https://www.auckland.ac.nz/en/students/forms-policies-and-guidelines/student-policies-and-guidelines/student-charter.html>.

Disclaimer

Elements of this outline may be subject to change. The latest information about the course will be available for enrolled students in Canvas.

In this course you may be asked to submit your coursework assessments digitally. The University reserves the right to conduct scheduled tests and examinations for this course online or through the use of computers or other electronic devices. Where tests or examinations are conducted online remote invigilation arrangements may be used. The final decision on the completion mode for a test or examination, and remote invigilation arrangements where applicable, will be advised to students at least 10 days prior to the scheduled date of the assessment, or in the case of an examination when the examination timetable is published.