

INFS 7003 ADVANCED TOPICS IN ICT

Credit Points 10

Legacy Code 300694

Coordinator Ante Prodan ([https://directory.westernsydney.edu.au/search/name/Ante Prodan/](https://directory.westernsydney.edu.au/search/name/Ante%20Prodan/))

Description In the ever-changing landscape of Information and Communications Technologies (ICT), this subject places a strong emphasis on computer simulation as an essential tool for understanding and influencing complex systems in various domains, from Social Sciences, Innovation and Entrepreneurship, Management, Networking to Space Science. The subject unfolds over three topics with a primary focus on the practical and theoretical aspects of computer simulation. Students are equipped with the skills needed to develop, analyse, and apply simulations to real-world scenarios. Supplementing the core curriculum, guest lectures cover additional ICT trends in specialisation domains of individual students. Assessment methods comprise of a group simulation project portfolio, a report on state-of-the-art literature review and a report on societal perspective and application to specific domain area, where students demonstrate both simulation expertise and a grasp of broader ICT topics.

School Computer, Data & Math Sciences

Discipline Information Systems, Not Elsewhere Classified.

Student Contribution Band HECS Band 2 10cp

Check your fees via the Fees (https://www.westernsydney.edu.au/currentstudents/current_students/fees/) page.

Level Postgraduate Coursework Level 7 subject

Pre-requisite(s) COMP 7015

Restrictions

Students must be enrolled in a postgraduate program.

Assumed Knowledge

Basic programming skills

Learning Outcomes

On successful completion of this subject, students should be able to:

1. Develop a working prototype software using computer simulation in a specific domain, such as healthcare, logistics and social sciences.
2. Critique methodologies and applications of computer simulation to support decision making.
3. Assess the current "state of the art" in selected topic areas of Advanced ICT.
4. Critically analyse technical publications in selected topic areas of Advanced ICT.
5. Apply knowledge gained during the subject to contextualise new ideas in ICT and discuss them with experts in the field.

Subject Content

The major content of this subject is focused on computer simulation. It aims to give students an in-depth understanding of the methodologies and applications of computer simulation to support decision making across various sectors and solve complex problems in the areas of their

different specialisations: Social sciences (Digital Futures), Innovation and Entrepreneurship, Management, Networking, and Space Science.

The subject is rigorously designed to foreground computer simulation as its principal component, complemented by a selection of two advanced topics that align with the evolving landscape of ICT. Emphasis is placed on endowing students with the proficiency to collaborate, as well as conceptualise, deconstruct, and implement sophisticated computer simulations, addressing the multifaceted challenges inherent in contemporary business environments. Concurrently, the subject integrates ancillary themes relevant to the current ICT advancements, which are tailored to the students' areas of specialisation.

Assessment

The following table summarises the standard assessment tasks for this subject. Please note this is a guide only. Assessment tasks are regularly updated, where there is a difference your Learning Guide takes precedence.

Type	Length	Percent	Threshold	Individual/Group Task
Portfolio	3000-4000 words + software prototype	50	N	Group
Presentation	15 Mins (approximate! 10 slides)	10	N	Group
Report	1000-1500 words	20	N	Individual
Report	1000-1500 words	20	N	Individual

Prescribed Texts

- No specific textbook is prescribed because of the nature of topics which will change from one year to another. The subject will use research journals, white papers and case studies as well as material available on the Web.

Teaching Periods

Autumn (2024)

Parramatta - Victoria Rd

On-site

Subject Contact Ante Prodan ([https://directory.westernsydney.edu.au/search/name/Ante Prodan/](https://directory.westernsydney.edu.au/search/name/Ante%20Prodan/))

View timetable (https://classregistration.westernsydney.edu.au/even/timetable/?subject_code=INFS7003_24-AUT_PS_1#subjects)