

Unit of Study: ICT5355 Emerging Network Technologies

Overview

Network technologies are dynamic. Practitioners must be aware of the developments and likely applications/applications and limitations of new approaches/technologies as they are developed. In this unit students will consider emergent networking technology innovations and standards. They will also develop the skill to persuade senior management of the potential application of these developments to business advantage.

Course(s)	Master of Information Technology
Credit Points	8 credit points
Duration	12 weeks (10 teaching weeks; 1 revision week; 1 final assessment week)
Level	Postgraduate Advanced
Student Workload	Students should expect to spend approximately 13 hours per week over 12 weeks (totalling approximately 156 hours) on learning activities for this unit.
Mode(s) of Delivery	On campus, Blended
Pre-Requisites	ICT5250 Computer Networks and Security
Unit Coordinator	As per current timetable
Contact Information	1 hour scheduled consultation

Unit Learning Outcomes

On successful completion of this unit, students will be able to:

- ULO1 Evaluate recent and emerging technologies in computer networking.
- ULO2 Propose possible applications of emergent technologies to enhance business outcomes.
- ULO3 Synthesize complex information and communicate this to both specialists and non-specialists.

Weekly Schedule

Detailed information for each week's activities can be found on Unit's Weekly Modules in [Canvas](#).

Week	Topic
Week 1	Software Defined Networks - Architecture
Week 2	Software Defined Networks - OpenFlow
Week 3	IEEE802.11 fundamentals
Week 4	802.11ax and 802.11ay key features
Week 5	Bluetooth and Zigbee
Week 6	5G fundamentals
Week 7	5G key features
Week 8	IoT fundamentals
Week 9	IoT applications
Week 10	FOG Computing
Week 11	Revision
Week 12	Final Assessments

Assessments



1. All assessments are compulsory.
2. To pass the unit students must:
 - achieve a total of 50% or more of marks offered; and
 - pass all individual invigilated assessments; and
 - have attempted all assessments.




Where one or more of these requirements are not met, the Board of Examiners will consider a student’s overall progress towards meeting the unit learning outcomes and any special circumstances before reaching a decision.

3. The Board of Examiners may grant a supplementary assessment where a student:
 - achieves a total of 45% or more; and
 - has passed all individual invigilated assessments in the unit; and
 - has attempted all assessments; and
 - has a recommendation for supplementary assessment by the Unit Coordinator and the Head of Discipline.

Where one or more of these requirements are not met, the Board of Examiners will consider a student’s overall progress towards meeting the unit learning outcomes and any special circumstances before reaching a decision. Attendance and engagement in class will be considered.

4. APIC awards common result grades as set out in the [Award of Grade Policy](#).
5. Detailed information for each assessment can be found on the Unit’s Home Page and in the Assessment Brief.

Assessment Task	Type	Weighting	Due	Length	ULOs
Assessment 1: Technology blog Each student will be assigned a set of topics that cover facets of emerging networking technologies. They will create a short ‘news’ item on the allocated topic aimed at evaluating the technology including a description, underpinning concepts, and potential use/impact/concerns, etc.		20%	Weeks 3, 5, 7, 9	500 words each (Total 2000 Words)	ULO1 ULO2 ULO3
Assessment 2a: Report Students will research an emerging network technology and create a report critically appraising that technology.		Part A 20%	Part A Week 6	Part A 2000 words	ULO1 ULO2 ULO3
Assessment 2b: Presentation The report generated in part A will be presented in a plenary session to the class.		Part B 10%	Part B Weeks 6, 7	Part B (equiv. 1500 words)	

<p>Assessment 3: Research Report Student will prepare a report on a specific topic related to an emerging technology. Topics can be allocated or negotiated. E.g., IoT. Example topics include but are not limited to:</p> <ul style="list-style-type: none"> • IoT in the mining • IoT supporting aged care • IoT and the finance industry • Security in IoT 	<p>Individual </p>	<p>30%</p>	<p>Week 11</p>	<p>2500 words</p>	<p>ULO1 ULO2 ULO3</p>
<p>Assessment 4: Pecha Kucha (Individual) Students will present their finding from assignment 3 in a Pecha Kucha presentation.</p>	<p>Individual  Invigilated </p>	<p>20%</p>	<p>Weeks 11, 12</p>	<p>(equiv. 1500 words)</p>	<p>ULO1 ULO2 ULO3</p>

equiv. – equivalent word count based on the Assessment Load Equivalence Guide.

Course Reserve

Course Reserve includes all required resources and reading material for the unit of study. You can access Course Reserve via [APIC Library](#) or via the Course Reserve link on the unit's homepage.

Academic integrity

Ethical conduct and academic integrity and honesty are fundamental to the mission of APIC and academic misconduct will not be tolerated by the College. It is the responsibility of every student to make sure that they understand what constitutes academic misconduct and to refrain from engaging in it. Please refer to APIC's [Academic Integrity Policy](#) for further details.

Other Important Information and Links

<p>Special consideration If your academic work is impacted by significant documented illness, hardship, or other adverse circumstances beyond your control, you may make an application for Special Consideration. Please refer to the Assessment Policy for further details.</p>	<p>Late submission Penalties apply when work is submitted after the due date without approval. Please refer to the Assessment Policy for information about late submission.</p>
<p>Assessment appeals If you are concerned about a mark you have received for an assessment or final grade, you may apply to formally appeal the grade. Please see the Assessment Policy for further details.</p>	<p>Award of grades APIC awards common result grades, set out in the Award of Grade Policy.</p>

<p>Expectations of student conduct</p> <p>Students are expected to conduct themselves in a manner that is consistent with a safe and respectful study environment. More information can be found in the Student Code of Conduct.</p>	<p>Study resources</p> <p>APIC Library and Student Learning Support resources and services can be accessed via the Student Lounge or your Dashboard on the OLS (Canvas).</p>
<p>Student Services</p> <p>The Student Services team provides administrative support for students and handles enquiries about enrolment, timetables, important dates and submitting forms. More information can be found on the Student Services page on the OLS (Canvas).</p>	<p>Key dates</p> <p>Key dates through the academic year, including teaching periods, census, payment deadlines and exams can be found on the Academic Calendar section of the APIC website.</p>

Changes and Updates to the Unit of Study Guide

This Unit of Study Guide may be updated and amended from time to time. Students will be notified of any changes to the unit via the Online Learning System (Canvas) space for the unit.

This Unit of study Guide was last modified on 13th May 2024.