ICT728 CAPSTONE PROJECT 1 T326 BRIEF

All information in the Subject Outline is correct at the time of approval. KOI reserves the right to make changes to the Subject Outline if they become necessary. Any changes require the approval of the KOI Academic Board and will be formally advised to those students who may be affected by email and via Moodle.
Information contained within this Subject Outline applies to students enrolled in the trimester as indicated

1. General Information

1.1 Administrative Details

Associated HE Award(s)	Duration	Level	Subject Coordinator
Master of Information Technology (MIT)	1 trimester	Postgraduate	Dr Saeid Iranmanesh saeid.iranmanesh@koi.edu.au P: +61 (2) 9283 3583 L: 7-11, 11 York Street. Consultation: via Moodle or by appointment.

1.2 Core/Elective

This is a core subject for the Master of Information Technology (MIT)

1.3 Subject Weighting

Indicated below is the weighting of this subject and the total course points

Subject Credit Points	Total Course Credit Points
4	MIT (64 Credit Points)

1.4 Student Workload

Indicated below is the expected student workload per week for this subject

No. Timetabled Hours/Week*	No. Personal Study Hours/Week**	Total Workload Hours/Week***
3 hours/week plus supplementary online material	7 hours/week	10 hours/week

* Total time spent per week at lectures and tutorials
** Total time students are expected to spend per week in studying, completing assignments, etc.
*** Combination of timetable hours and personal study

1.5 Mode of Delivery Classes will be face-to-face or hybrid. Certain classes will be online (e.g., special arrangements).

1.6 1.6 Pre-requisites Satisfactory completion of eight subjects (32 Credit Points) including ICT712 Information Technology Project Management and ICT713 Advanced Database Design and Development

1.7 General Study and Resource Requirements

- Students are expected to attend classes with the weekly worksheets and subject support material provided in Moodle. Students should read this material before coming to class to improve their ability to participate in the weekly activities.
- Students will require access to the internet and their KOI email and should have basic skills in word processing software such as MS Word, spreadsheet software such as MS Excel and visual presentation software such as MS PowerPoint.
- Computers and WIFI facilities are extensively available for student use throughout KOI. Students are encouraged to make use of the campus Library for reference materials.

Software resource requirements specific to this subject: MS Imagine, Office 365, MS Visio, MS Project, Trello and software recommended by the industry client

1.8 Academic Advising

Academic advising is available to students throughout teaching periods including the exam weeks. As well as requesting help during scheduled class times, students have the following options:

- Consultation times: A list of consultation hours is provided on the homepage of Moodle where appointments can be booked.
- Subject coordinator: Subject coordinators are available for contact via email. The email address of the subject coordinator is provided at the top of this subject outline.
- Academic staff: Lecturers and Tutors provide their contact details in Moodle for the specific subject. In most cases, this will be via email. Some subjects may also provide a discussion forum where questions can be raised.
- Head of Program: The Head of Program is available to all students in the program if they need advice about their studies and KOI procedures.
- Vice President (Academic): The Vice President (Academic) will assist students to resolve complex issues (but may refer students to the relevant lecturers for detailed academic advice).

2. Academic Details

2.1 Overview of the Subject

This subject gives students the opportunity to apply the theoretical knowledge and practical skills acquired during their course of study in the Master of Technology (MIT) program. Students undertake a real-world industry-based project integrated across the two subjects ICT728 Capstone Project 1 and ICT729 Capstone Project 2. Academic and industry experts provide workshops for students each week on aspects related to IT projects.

Students are encouraged to identify and select their project according to their interests prior to the start of the trimester. Subject coordinators will provide support and assist students in this process if students experience difficulty in finding an appropriate industry project.

For their capstone project, students engage in the entire process of solving a real-world information technology project in terms of systems proposal, design, implementation, evaluation, and report writing. Work in each assessment builds towards the final report which is to be completed at the end of ICT729. In ICT728 students are required to finalise the project topic, scope, proposal, literature review, and design method for their capstone project.

2.2 Graduate Attributes for Postgraduate Courses

Graduates of postgraduate courses from King's Own Institute will achieve the graduate attributes expected from successful completion of a postgraduate degree under the Australian Qualifications Framework (2nd edition, January 2013). Graduates at this level will be able to apply advanced body of knowledge from their major area of study in a range of contexts for professional practice or scholarship and as a pathway for further learning.

King's Own Institute's generic graduate attributes for a master's level degree are summarised below:

	KOI Postgraduate Degree Graduate Attributes	Detailed Description
	Knowledge	Current, comprehensive and coherent knowledge, including recent developments and applied research methods
	Critical Thinking	Critical thinking skills to identify and analyse current theories and developments and emerging trends in professional practice
	Communication	Communication and technical skills to analyse and theorise, contribute to professional practice or scholarship, and present ideas to a variety of audiences
	Research and Information Literacy	Cognitive and technical skills to access and evaluate information resources, justify research approaches and interpret theoretical propositions
	Creative Problem Solving Skills	Cognitive, technical and creative skills to investigate, analyse and synthesise complex information, concepts and theories, solve complex problems and apply established theories to situations in professional practice
	Ethical and Cultural Sensitivity	Appreciation and accountability for ethical principles, cultural sensitivity and social responsibility, both personally and professionally
	Leadership and Strategy	Initiative, leadership skills and ability to work professionally and collaboratively to achieve team objectives across a range of team roles Expertise in strategic thinking, developing and implementing business plans and decision making under uncertainty
	Professional Skills	High level personal autonomy, judgement, decision-making and accountability required to begin professional practice

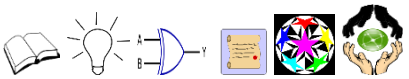
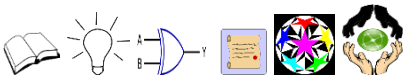
Across the courses, these skills are developed progressively at three levels:

- **Level 1 Foundation –** Students learn the skills, theories and techniques of the subject and apply them in stand-alone contexts
- **Level 2 Intermediate –** Students further develop skills, theories and techniques of the subject and apply them in more complex contexts, beginning to integrate the application with other subjects
- **Level 3 Advanced** – Students have a demonstrated ability to plan, research and apply the skills, theories and techniques of the subject in complex situations, integrating the subject content with a range of other subject disciplines within the context of the course

Generally, skills gained from subjects in the Graduate Certificate and Graduate Diploma are at levels 1 and 2 while other subjects in the Master's degree are at level 3.

2.3 Subject Learning Outcomes

Listed below, are key knowledge and skills students are expected to attain by successfully completing this subject:

Subject Learning Outcomes	Contribution to Graduate Attributes
a) Apply the process of research and design in the development of a project proposal	
b) Evaluate effective and emerging technology options in the design of an IT project	
c) Develop sustainable solutions that can be applied which incorporate the latest IT theories, trends, tools and opportunities	
d) Demonstrate an ability to handle a real world problem in IT from the point of problem definition through to the design of a solution	
e) Assess and manage ethical and management issues in an IT team project	

2.4 Subject Content and Structure

Below are details of the subject content and how it is structured, including specific topics covered in lectures and tutorials. Reading refers to the text unless otherwise indicated.

From Trimester 3 2020, KOI partners with Practera, an experiential learning technology and programs provider, to facilitate students' engagement with authentic industry projects as part of the ICT728 and ICT729 capstone project units.

Weekly Planner:

Week (beginning)	Topic covered in each week's lecture	Reading(s)	Expected work as listed in Moodle
Week 1 26 October	Requirements and specifications of the capstone project are discussed; project topics discussed	No prescribed textbook. Students are encouraged to read journal articles	Projects introduced during the class and groups created; Weekly meeting schedule with supervisor and team members should be finalised
Week 2 02 November	Workshop: Team and time management. Selecting and designing your capstone project	Show weekly progress ACS Code of Professional Ethics	Weekly meetings with the academic supervisor

Week (beginning)	Topic covered in each week's lecture	Reading(s)	Expected work as listed in Moodle
Week 3 09 November	Discussion on project proposal and literature review	Show weekly progress	Weekly meetings with the academic supervisor **Assessment 1: Project Proposal Draft**
Week 4 16 November	Workshop: How to do research for your project	Show weekly Progress General Data Protection Regulation (GDPR)	Weekly meetings with the academic supervisor
Week 5 23 November	Workshop: Finding relevant titles and research articles	Show weekly Progress	Weekly meetings with the academic supervisor **Assessment 1 due: Final Project proposal**
Week 6 30 November	Workshop: Summarising technical papers and providing supportive arguments for the proposal.	Show weekly progress	Weekly meetings with the academic supervisor
Week 7 07 December	Workshop: Design methodologies for projects	Show weekly progress	Weekly meetings with the academic supervisor **Assessment 2 due: Literature and technology review**
Week 8 14 December	Workshop: Evaluating and comparing design options	Show weekly progress	Weekly meetings with the academic supervisor
Week 9 04 January	Workshop: Ethical issues in IT projects	Show weekly progress	Weekly meetings with the academic supervisor
Week 10 11 January	Workshop: Project requirements and UML diagrams	Show weekly progress	Weekly meetings with the academic supervisor
Week 11 18 January	Workshop: Implementation requirements	Show weekly progress	Project presentation **Assessment 3 due: Project design and planning**
Week 12 25 January	Workshop: Managing projects		**Assessment 4 due: Project presentation**

Week (beginning)	Topic covered in each week's lecture	Reading(s)	Expected work as listed in Moodle
Week 13 01 February	Study review week and Final Exam Week		
Week 14 08 February	- Final Exam Week - Continuing students - enrolments for T127 open		Please see the exam timetable for the exam date, time and location
Week 15 15 February	- Student Vacation begins - New students - enrolments for T127 open		
Week 16 22 February	• Results Released • Review of Grade Day for T326 – see Sections 2.6 and 3.2 below for relevant information. • Certification of Grades NOTE: More information about the dates will be provided at a later date through Moodle/KOI email.		
T127 01 March 2027			
Week 1 01 March	Week 1 of classes for T127		

2.5 Teaching Methods/Strategies

Briefly described below are the teaching methods/strategies used in this subject:

- *Lectures* (1 hours/week) are conducted in seminar style and address the subject content, provide motivation and context and draw on the students' experience and preparatory reading.
- *Tutorials* (2 hours/week) include class discussion of case studies and research papers, practice sets and problem-solving and syndicate work on group projects. Tutorials often include group exercises and so contribute to the development of teamwork skills and cultural understanding. Tutorial participation is an essential component of the subject and contributes to the development of many of the graduate attributes (see section 2.2 above). Tutorial participation contributes towards the assessment in many subjects (see details in Section 3.1 for this subject). Supplementary tutorial material such as case studies, recommended readings, review questions etc. will be made available each week in Moodle.
- *Online* teaching resources include class materials, readings, model answers to assignments and exercises and discussion boards. All online materials for this subject as provided by KOI will be found in the Moodle page for this subject. Students should access Moodle regularly as material may be updated at any time during the trimester
- *Other contact* - academic staff may also contact students either via Moodle messaging, or via email to the email address provided to KOI on enrolment.

2.6 Student Assessment

Assessment is designed to encourage effective student learning and enable students to develop and demonstrate the skills and knowledge identified in the subject learning outcomes. Assessment tasks during the first half of the study period are usually intended to maximise the developmental function of assessment (formative assessment). These assessment tasks include weekly tutorial exercises (as indicated in the weekly planner) and low stakes graded assessments (as shown in the graded assessment table). The major assessment tasks where students demonstrate their knowledge and skills (summative assessment) generally occur later in the study period. These are the major graded assessment items shown in the graded assessment table.

Final grades are awarded by the Board of Examiners in accordance with KOI's Assessment and Assessment Appeals Policy. The definitions and guidelines for the awarding of final grades are:

- *HD High distinction* (85-100%): an outstanding level of achievement in relation to the assessment process.
- *D Distinction* (75-84%): a high level of achievement in relation to the assessment process.
- *C Credit* (65-74%): a better than satisfactory level of achievement in relation to the assessment process.
- *P Pass* (50-64%): a satisfactory level of achievement in relation to the assessment process.
- *F Fail* (0-49%): an unsatisfactory level of achievement in relation to the assessment process.
- *FW:* This grade will be assigned when a student did not submit any of the compulsory assessment items.

Provided below is a schedule of formal assessment tasks and major examinations for the subject.

Assessment Type	When Assessed	Weighting	Learning Outcomes Assessed
Assessment 1: Weekly progress (presentation - Individual task)	Weeks 2-11	20% (2% each week)	a,b,c,d,e
Assessment 2: Proposal (2500 word report, Group task)	Week 6	30%	a, b
Assessment 3: Project Design and the analysis (Group Report: 4000 words, peer review and evaluation form individual task)	Week 11	Group Work: 25% Individual task: 5%	a, b, c, d, e
Assessment 4: Presentation (Group and Individual task)	Week 12	Group Work: 10% Individual Contribution 10%	a, b, c, d, e

Requirements to Pass the Subject:

To gain a pass or better in this subject, students must gain a *minimum of 50%* of the total available subject marks.

2.7 Prescribed and Recommended Readings

Provided below, in formal reference format, is a list of the prescribed and recommended readings.

Prescribed Text:

There is no prescribed text book for this subject. Students are to conduct a literature review of published journal articles and peer-reviewed conference papers.

Recommended Readings:

Badir, A., Koka, A., Darmawan, B., Nordin, M.N., Ikhwan, H., Noor, A.F. and Suryanegara, M. (2023) 'Fostering project-based learning through industry engagement in Capstone Design Projects', Education Sciences, 13(4), p. 361. DOI: 10.3390/educsci13040361.

Bilir, C. (2022) Project Success Criteria, Critical Success Factors (CSF), and Agile Projects. In Naidoo, V. & Verma, R. (eds.) Contemporary Challenges for Agile Project Management. IGI Global, pp. 52-72. doi:10.4018/978-1-7998-7872-8.ch004

Larson, E. and Gray, C.F. (2020) ISE EBook Online Access for Project Management: The Managerial Process. McGraw-Hill US Higher Ed ISE. Available from: Project Management: the Managerial Process.

Leong, J., Wu, J., Yap, J., Chong, K. and Lee, S. (2023) 'Hybrid project management between Traditional Software Development Lifecycle and agile based product development for future sustainability', Sustainability, 15(2), p. 1121. DOI:10.3390/su15021121.

Lottu, Oluwaseun & Jacks, Boma & Ajala, Olakunle & Okafor, Enyinaya. (2024). Towards a conceptual framework for ethical AI development in IT systems. World Journal of Advanced Research and Reviews. 21. 408-415. DOI: 10.30574/wjarr.2024.21.3.0735.

Martin, A. (2023) 'Introduction to an agile framework for the management of Technology Transfer Projects', Procedia Computer Science, 219, pp. 1963–1968. DOI: 10.1016/j.procs.2023.01.496.

Nellyet, A (2024), Examining Work Practices in the ICT Sector: Reinforcing Frameworks for Intellectual Property, Ethics and Privacy. International Journal of Innovative Science and Research Technology (IJISRT) IJISRT24MAR343, 915-918. DOI: 10.38124/ijisrt/IJISRT24MAR343. https://www.ijisrt.com/examining-work-practices-in-the-ict-sector-reinforcing-frameworks-for-intellectual-property-ethics-and-privacy

Oluwatoyin Ajoke Farayola, Oluwabukunmi Latifat Olorunfemi and Philip Olaseni Shoetan (2024) "DATA PRIVACY AND SECURITY IN IT: A REVIEW OF TECHNIQUES AND CHALLENGES", Computer Science & IT Research Journal, 5(3), pp. 606-615. DOI: 10.51594/csitrj.v5i3.909.

Orieno, O.H., Paul, O.S. and Emmanuel, C.I. (2024) 'Sustainability in project management: A comprehensive review', World Journal of Advanced Research and Reviews, 21(1), pp. 656–677. DOI: 10.30574/wjarr.2024.21.1.0060.

Raghunath, K.M. and Tulasi Devi, S.L. (2022) 'Risk Assessment in the Information Technology Industry: An Imperative Phenomenon', in Vajjhala, N. and Strang, K. (eds.) Global Risk and Contingency Management Research in Times of Crisis. IGI Global, pp. 122-141. DOI: 10.4018/978-1-6684-5279-0.ch007.

Schilling, M. (2022) ISE EBook for Strategic Management of Technological Innovation. McGraw-Hill US Higher Ed ISE. Available at: https://ebookcentral-proquest-com.ezproxy.koi.edu.au/lib/kingsowninst-ebooks/detail.action?docID=6953659 (Accessed: 7 November 2022). ISBN: 9781264387809

Taboada, I., Garrido, L., Sánchez, J. and Rodríguez, M. (2023) 'Artificial Intelligence Enabled Project Management: A systematic literature review', Applied Sciences, 13(8), p. 5014. DOI: 10.3390/app13085014.

Thesinga, T., Feldmann, C. and Burchardt, M. (2021) 'Agile versus Waterfall Project Management: Decision Model for Selecting the Appropriate Approach to a Project', Procedia Computer Science, 181, pp. 746-756. DOI: 10.1016/j.procs.2021.01.227.

Conference/ Journal Articles:

Students are encouraged to read peer reviewed journal articles and conference papers. Google Scholar provides a simple way to broadly search for scholarly literature. From one place, you can search across many disciplines and sources: articles, theses, books, abstracts and court opinions, from academic publishers, professional societies, online repositories, universities and other web sites.

Useful Websites:

The following industry websites are useful introductory sources covering a range of information useful for this subject.

- ACS - The Professional Association for Australia's ICT sector. Available at: https://www.acs.org.au/.
- ACS – Professional Ethics Conduct and Complaints at: https://www.acs.org.au/memberships/professional-ethics-conduct-and-complaints.html
- Grad Connection - Graduate Jobs and Internships in Australia. Available at https://au.gradconnection.com/
- NSW Jobs Connect for International Students. Available at https://www.study.nsw.gov.au/current-students/nsw-jobs-connect/
- Data protection in the EU (no date) European Commission. Available at: https://commission.europa.eu/law/law-topic/data-protection/data-protection-eu_en