KING'S OWN INSTITUTE*

Success in Higher Education

ICT727 CAPSTONE PROJECT 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	Advanced	Name: Dr. Van Lanh Nguyen Email: vanlanh.nguyen@koi.edu.au P: +61 (2) 9283 3583 L: Level 7-11, 11 York St Consultation: via Moodle or by appointment

1.2 Core / Elective

This subject 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
8	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***
6 hours/week plus supplementary online material (3 hours teaching + 3 hours consultation)	14 hours/week	20 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 Pre-requisites Yes

Successfully completed 12 MIT subjects (48 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 required textbook and to read specific chapters prior to the tutorials. 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.

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 provides students in the Master of Information Technology (MIT) program with the opportunity to apply the theoretical and practical skills gained throughout their studies by undertaking a real-world, industry-based capstone project. Students work in teams to scope, design, implement, and evaluate an industry-based solution. Weekly workshops and academic supervision support the development of professional, ethical, and technically sound outcomes. These workshops, led by academic and industry experts guide students by covering key aspects of IT project development and professional practice.

Students are encouraged to select a project aligned with their interests before the trimester begins, with the Subject Coordinator and academic supervisors providing guidance for those needing assistance in securing an appropriate industry project. Working in teams, students engage regularly with both academic and industry supervisors to ensure the project meets its objectives and professional standards. The subject culminates in the submission of a comprehensive final report and a formal presentation of the project outcomes. Through this capstone experience, students are well prepared to manage and deliver IT projects in real-world professional environments.

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 Master's degree under the Australian Qualifications Framework (2nd edition, January 2013). Graduates at this level will be able to apply an 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.

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

	KOI Master's 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 faced 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.

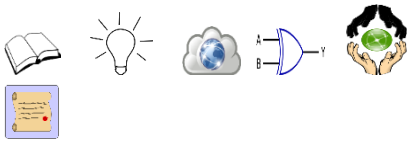
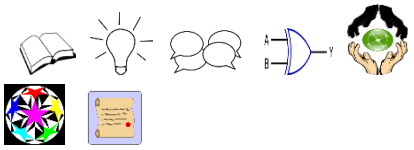
Across the course, these skills are developed progressively at three levels:

- **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

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 Course Graduate Attributes

a) Plan, justify, and manage a real-world IT project for a client from concept to delivery, incorporating research informed design, stakeholder requirements, ethical considerations, and implementation strategies	
b) Identify, evaluate, and apply appropriate tools, strategies, and methodologies to design and implement an IT solution that meets defined technical and stakeholder needs	
c) Conduct independent research by reviewing literature, gathering and analysing relevant data, and synthesising evidence to guide the design, development, implementation and evaluation of an IT solution	
d) Work independently and collaboratively to manage a significant IT project, demonstrating professional practice, ethical awareness, and accountability	
e) Communicate project objectives, processes, and outcomes effectively through professional reports, presentations, and stakeholder engagement through the project lifecycle.	

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.

Weekly Planner:

Week (beginning)	Topic covered in each week's lecture	Reading(s)	Expected work as listed in Moodle
Week 1 26 October	Project Planning Communication and professional skills in dealing with all project stakeholders. Discussion on requirements and specifications of the capstone project.	No prescribed textbook. Students are encouraged to read journal articles	Group creation and project allocation - guided by academic supervisor
Week 2 02 November	Project Planning Discussion on project planning and the project proposal.	Show weekly progress: engagement, participation and contribution in class	Discussion on the project plan and proposal Graded **Assessment 1: due** Weekly progress report
Week 3 09 November	Project Planning Discussion on the project methodology, requirement modelling using UML diagrams and research methodologies.	Show weekly progress: engagement, participation and contribution in class	Feedback on the initial project proposal and plan, discussion on research techniques to refine requirements Graded **Assessment 1: due** Weekly progress report

Week 4 16 November	Project Execution Discussion on information needs and design steps for the project.	Show weekly progress: engagement, participation and contribution in class	Discussion on design and data requirements of the project Graded **Assessment 1: due** Weekly progress report **Assessment 2: due** - Project Proposal
Week 5 23 November	Project Execution Discussion on implementation plan and steps for the project	Show weekly progress: engagement, participation and contribution in class	Feedback on the design and discussion on the design implementation techniques and strategies Graded **Assessment 1: due** Weekly progress report
Week 6 30 November	Project Execution Discussion on creating the prototype	Show weekly progress: engagement, participation and contribution in class	Show progress in implementation and draft prototype Graded **Assessment 1: due** Weekly progress report
Week 7 07 December	Project Execution Discussion on managing security and performance of Information Systems	Show weekly progress: engagement, participation and contribution in class	Show final prototype and discuss security/ performance requirements of the project Graded **Assessment 1: due** Weekly progress report
Week 8 14 December	Project Monitoring Discussion the testing strategies and create a testing plan.	Show weekly progress: engagement, participation and contribution in class	Discussion on creation of test plan Graded **Assessment 1: due** Weekly progress report **Assessment 3: due** Project Design and Prototype
Week 9 04 January	Project Monitoring Discussion on execution of testing plan and record keeping	Show weekly progress: engagement, participation and contribution in class	Show testing stage progress and discuss strategies to improve the solution Graded **Assessment 1: due** Weekly progress report
Week 10 11 January	Project Consolidation Discussion on the technical documentation and presentation techniques Project Write-up.	Show weekly progress: engagement, participation and contribution in class	Show final test results and progress in documentation of the final report Graded **Assessment 1: due** Weekly progress report
Week 11 18 January	Project Consolidation Product presentation to the client. Industry engagement	Show weekly progress: engagement, participation and contribution in class	Discussion about final presentation, client feedback – draft ppt Graded **Assessment 1: due** Weekly progress report

			Assessment 4: due Project Report
Week 12 25 January	Project Consolidation Product demonstration to academic supervisor. Industry engagement	Show weekly progress: engagement, participation and contribution in class	Assessment 5: due Project Presentation and Demonstration
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 and e
Assessment 2: Project Proposal (Group) (800 words)	Week 4	10%	a, b and c
Assessment 3: Project Design and Prototype (Group) (1500 words)	Week 7	20%	a, b and d
Assessment 4: Project Report (2000 words; peer review and evaluation form individual task)	Week 11	Group: 20% Individual: 10%	d and e
Assessment 5: Project Presentation and Demonstration	Week 12	Group: 10% Individual: 10%	d and e

2.7 Prescribed and Recommended Readings

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

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

Recommended readings

Aljofey, A., Jiang, Q., Rasool, A., Chen, H., Liu, W., Qu, Q. and Wang, Y., 2022. An effective detection approach for phishing websites using URL and HTML features. Scientific Reports, 12(1), p.8842.

Atlassian, 2024. What is version control. [online] Atlassian. Available at: https://www.atlassian.com/git/tutorials/what-is-version-control.

Aydos, M., Aldan, Ç., Coşkun, E. and Soydan, A., 2022. Security testing of web applications: A systematic mapping of the literature. Journal of King Saud University-Computer and Information Sciences, 34(9), pp.6775- 6792.

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.

Bet project ideas, 2025. Best 199+ IT Capstone Project Ideas for Students 2025-26 - Best Project Ideas. [online] Available at: https://bestprojectideas.com/it-capstone-project-ideas/.

Chowdhury, B., Sultana, N., Chowdhury, S. and Chowdhury, S., 2025. Agile Approach to Enhance Student's Capstone (Industry-based) Product Delivery in Tertiary Education. WSEAS TRANSACTIONS ON ADVANCES in ENGINEERING EDUCATION, 22, pp.17–32. doi: https://doi.org/10.37394/232010.2025.22.3.

Farayola, O.A., Olorunfemi, O.L. & Shoetan, P.O., 2024, 'Data privacy and security in IT: a review of techniques and challenges', Computer Science & IT Research Journal, vol. 5, no. 3, pp. 606–615, doi: 10.51594/csitrj.v5i3.909.

Kimberly Chappell, E.D. and Greg Voykhansky, J.D. (2023). Research Design. fhsu.pressbooks.pub. [online] Available at: https://fhsu.pressbooks.pub/graduatecapstone/chapter/researchdesign/.

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. Pp. 408-415. doi: 10.30574/wjarr.2024.21.3.0735.

National Careers Institute, 2022. Australian Blueprint for Career Development. [online] Available at: https://content.yourcareer.gov.au/sites/default/files/2023-02/Australian%20Blueprint%20for%20Career%20Development%20FINAL.pdf.

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/examiningworkpractices-in-the-ict-sector-reinforcing-frameworks-for-intellectual-property-ethics-and-privacy

Raghunath, K.M. & Tulasi Devi, S.L., 2022, 'Risk assessment in the information technology industry: an imperative phenomenon', in N. Vajjhala & K. Strang (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.

Taboada, I, Garrido, L, Sánchez, J & Rodríguez, M., 2023, 'Artificial intelligence enabled project management: a systematic literature review', Applied Sciences, vol. 13, no. 8, p. 5014, doi:10.3390/app13085014.

Victorian Government n.d., ICT project quality assurance framework for non-high value high risk ICT projects, Victorian Government,

https://www.vic.gov.au/sites/default/files/2020-07/ICT%20Project%20Assurance%20Framework%20V1.0%20-%20Approved.PDF

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. However, most are not considered to be sources of Academic Peer Reviewed theory and research. If your assessments require academic peer reviewed journal articles as sources, you need to access such sources using the Library database, Ebscohost, or Google Scholar. Please ask in the Library if you are unsure how to access Ebscohost. Instructions can also be found in Moodle.

- Organise work with Trello: https://trello.com/
- How to use Git and GitHub: https://www.freecodecamp.org/news/introduction-to-git-and-github/
- How to Create an App in 2024: https://www.designrush.com/agency/mobile-appdesigndevelopment/trends/how-to-develop-an-app
- WordPress: https://wordpress.com/
- Android Tutorial: https://www.tutorialspoint.com/android/index.htm
- How to Learn Android Development Programming: https://www.thedroidsonroids.com/blog/how-tolearn-android-development-programming
- 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/professionalethics-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/currentstudents/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