ICT729 CAPSTONE PROJECT 2 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 Sajad GHATREHSAMANI sajad.ghatrehsamani@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 Pre-requisites Satisfactory completion of 48 Credit Points including ICT728 Capstone Project 1

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, 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. This subject prepares students for developing and implementing real world industry based projects working in a team environment.

The capstone project is integrated across the two subjects ICT728 Capstone Project 1 and ICT729 Capstone Project 2. In this subject students will evaluate their proposal and design developed in ICT728 Capstone Project 1 and move to the implementation stage.

As with ICT728, academic and industry experts will provide workshops for students every week on aspects related to IT projects. Students will meet regularly with both the academic and industry supervisors to shape the project to meet the scope and requirements. At the completion of the project, students will provide a comprehensive final report which covers all of the project development phases. The final project implementation will be presented to students, academic supervisors and industry supervisors (where available).

2.2 Graduate Attributes for Postgraduate Courses

Graduates of postgraduate courses from King's Own Institute will gain 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:

*AUSTRALIAN INSTITUTE OF BUSINESS AND MANAGEMENT PTY LTD © ABN: 72 132 629 979 CRICOS 03171A

	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:

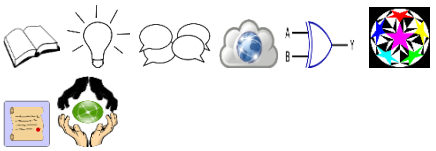
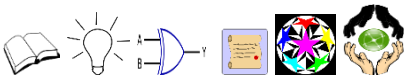
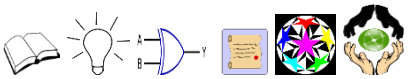
- **Level 1 Foundation –** Students learn the skills, theories and techniques of the subject and apply them in stand-alone contexts
- **Level 2 Intermediate –** Students further develop skills, theories and techniques of the subject and apply them in more complex contexts, beginning to integrate the 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 Course Graduate Attributes
a) Apply research evidence in the development of an implementation plan	
b) Analyse, synthesise and construct arguments justifying the implementation of a solution and the technologies to use	

c) Implement a sustainable solution which incorporates the latest IT theories, trends, tools and opportunities	
d) Manage a problem in information technology from design to delivery 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	Implementation steps for the project are discussed	No prescribed textbook. Students are encouraged to read journal articles	Project design revisited and analysed for implementation, supervisor selected, and weekly meeting schedule with supervisor and team members finalised
Week 2 02 November	Workshop: Prototyping	Show weekly progress	Weekly meetings with the project supervisor
Week 3 09 November	Workshop: Implementation plan	Show weekly progress	Weekly meetings with the project supervisor. **Assessment 1 due: Implementation plan and prototype**
Week 4 16 November	Workshop: Team and time management	Show weekly progress	Weekly meetings with the project supervisor
Week 5 23 November	Workshop: Managing implementation steps (I)	Show weekly progress General Data Protection Regulation (GDPR)	Weekly meetings with the project supervisor
Week 6 30 November	Workshop: Managing implementation steps (II)	Show weekly progress	Weekly meetings with the project supervisor

Week (beginning)	Topic covered in each week's lecture	Reading(s)	Expected work as listed in Moodle
Week 7 07 December	Workshop: Project evaluation methodologies	Show weekly progress	Weekly meetings with the project supervisor
Week 8 14 December	Workshop: Designing evaluation strategies	Show weekly progress	Weekly meetings with the project supervisor
Week 9 04 January	Workshop: Ethical issues in IT projects	Show weekly progress ACS Code of Ethics	Weekly meetings with the project supervisor
Week 10 11 January	Workshop: Testing plans	Show weekly progress	Weekly meetings with the project supervisor
Week 11 18 January	Workshop: Presentation skills	Show weekly progress	**Assessment 2 due: Project implementation and evaluation.**
Week 12 25 January	Workshop: Managing projects		**Assessment 3 due: Project presentation**
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	a) Results Released b) Review of Grade Day for T326 – see Sections 2.6 and 3.2 below for relevant information. c) 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: Implementation plan and prototype (report: 500 words each student)	Week 3	15%	a, b
Assessment 2: Project implementation, evaluation report (report: 1000 words each student)	Report: Week 11	Group Work: 35% Individual Contribution: 25%	a, b, c, d, e
Assessment 3: Presentation	Week 12	Group Work: 15% 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:

ACS Code of Professional Ethics: https://www.acs.org.au/content/dam/acs/ACSimages/ethicsdiscipline/CodeOfProfessionalEthics_Mar_2023.pdf

Albada, M., 2025. *Building Applications with AI Agents: Designing and Implementing Multiagent Systems*. 1st edn. Sebastopol, CA: O'Reilly Media.

Choi, D., 2025. *Full-stack React, TypeScript, and Node*. 2nd ed. Packt. ISBN: 9781803243009

Koenigstein, N., 2026. *AI agents: The definitive guide: Design, deployment, and evaluation*. O'Reilly Media.ISBN: 9798341666931.

Köseoglu, K., 2026. *Swift: The Practical Guide*. Rheinwerk Publishing. ISBN: 9781493227181.

Layton, M.C., Ostermiller, S.J. and Kynaston, D.J., 2025. *Agile project management for dummies*. 4th ed. John Wiley & Sons. ISBN: 9781394332106.

Machado, R., Russa, H. and Esmeriz, P., 2026. *Advanced SQL: Implementing modern data solutions and ML applications.* 1st ed, O'Reilly Media. ISBN: 979-8341627482.

McGregor, M., 2026. *Full stack JavaScript strategies: The hidden parts every mid-level developer needs to know*. 1st ed. O'Reilly Media. ISBN: 9781098122218.

Price, M.J., 2025. *C# 14 and .NET 10 – modern cross-platform development fundamentals*. 10th ed. Birmingham: Packt. ISBN: 978-1836206637

Selvaraj, S., 2026. *Advanced Flutter: Build high-performance, cross-platform apps for mobile, web and desktop*. Apress. ISBN: 979-8868821042.

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. DOI:10.1016/j.jksuci.2021.09.018.

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. DOI: https://doi.org/10.1038/s41598-022-10841-5.

Barros-Justo, J.L., Benitti, F.B. and Molleri, J.S., 2021. Risks and risk mitigation in global software development: an update. Journal of Software: Evolution and Process, 33(11), p.e2370. DOI: https://doi.org/10.1002/smr.2370.

Bush, J., 2020. Learn SQL Database Programming. Packt Publishing. ISBN: 9781838987787.

Dapshima, B.A., Ahmad, S.K. and Dawud, K.M., 2024. Constraints that Hinders Secure Software Implementation and Development Processes. International Journal for Research in Applied Science and Engineering Technology, 12(6), pp.2400-2404. DOI: 10.22214/ijraset.2024.62939. DOI: https://doi.org/10.22214/ijraset.2024.63494.

Flanagan, D., 2020. JavaScript: The Definitive Guide, 7th edn. O'Reilly Media, Inc. E-book O'Reilly Learning. ISBN: 9781491952023.

Getto, G., Labriola, J.T. and Flanagan, S., 2020, July. The state of mobile UX: Best practices from industry and academia. In 2020 IEEE International Professional Communication Conference (ProComm) (pp. 115-122). IEEE. DOI: 10.1109/procomm48883.2020.00024.

Leong, J., May Yee, K., Baitsegi, O., Palanisamy, L. and Ramasamy, R.K., 2023. Hybrid project management between traditional software development lifecycle and agile based product development for future sustainability. Sustainability, 15(2), p.1121. DOI: **https://doi.org/10.3390/su15021121**.

Rocha, F.G., Misra, S. and Soares, M.S., 2023. Guidelines for Future Agile Methodologies and Architecture Reconciliation for Software-Intensive Systems. Electronics, 12(7), p.1582. DOI: 10.3390/electronics12071582. https://www.mdpi.com/2079-9292/12/7/1582.

Wafa, R., Khan, M.Q., Malik, F., Abdusalomov, A.B., Cho, Y.I. and Odarchenko, R., 2022. The impact of agile methodology on project success, with a moderating role of Person's job fit in the IT industry of Pakistan. Applied Sciences, 12(21), p.10698. DOI: 10.3390/app122110698. https://doi.org/10.3390/app122110698.

Walker, V., 2025, *Next.js: A 2025 Guide to Building Modern Web Applications with Version 15*, Independently published. ISBN: 9798306136950.

Useful Websites:

The following websites are useful 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-app-design-development/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-to-learn-android-development-programming
- Data protection in the EU (no date) European Commission. Available at: https://commission.europa.eu/law/law-topic/data-protection/data-protection-eu_en
- ACS – Professional Ethics Conduct and Complaints at: https://www.acs.org.au/memberships/professional-ethics-conduct-and-complaints.html

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.

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