ICT 301 INFORMATION TECHNOLOGY 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
Bachelor of Information Technology (BIT)	1 trimester	Level 3	Sarita Koirala sarita.koirala@koi.edu.au P: +61 (2) 9283 3583 L: 7-11, 11 York St. Consultation: via Moodle or by appointment.

1.2 Core / Elective

Core subject for BIT

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	BIT (96 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 (1 hour Lecture + 2 hour Tutorial)	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/Co-requisites

Pre-requisite: ICT204 Project Management, plus 40 credit points
Co-requisite: ICT272 Web Design and Development

1.7 General Study and Resource Requirements

- Dedicated computer laboratories are available for student use. Normally, tutorial classes are conducted in the computer laboratories.
- Students are expected to attend classes with the requisite textbook and must read specific chapters prior to each tutorial. This will allow them to actively take part in discussions. Students should have

elementary skills in both word processing and electronic spreadsheet software, such as Office 365 or MS Office.
- 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.
- Students will require access to the internet and email. Where students use their own computers, they should have internet access. KOI will provide access to required software.

Resource requirements specific to this subject: MS Imagine, MS Azure, Office365, Internet Connections, Moodle site access.

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

The subject is designed for final year students. It provides an opportunity to complete an information technology project related to each student's professional interests, and includes the necessary preparation for the project. Student will be asked to participate in project work including peer reviews. The main features of the subject are: Group-based project; learning collaboration, reflection, self-regulation methods through learning by doing; learning important steps that are used in projects in large organisations; role development in projects; and developing different project artefacts (e.g. requirements, design, prototypes) and activities (e.g., documenting, testing, implementing, reviewing). Students are required to apply, synthesize and demonstrate the skills that they have developed in earlier information technology subjects. Please refer to Appendix A for more details.

Students work in groups (maximum of 4) guided by an academic supervisor and industry mentor. Students are required to develop an integrated solution with a technical specification to real-world system requirements. The activities involve requirements capture, analysis and design, coding, and testing. Suitable projects are sourced from external organisations or within KOI. When the projects are sourced from external organisations, the academic supervisor may add additional requirements in order to increase the complexity of the given problems. Please refer to Appendix B for the minimum requirements of the Capstone Project.

2.2 Graduate Attributes for Undergraduate Courses

Graduates of Bachelor courses from King's Own Institute (KOI) will achieve the graduate attributes expected under the Australian Qualifications Framework (2nd edition, January 2013). Graduates at this level will be able to apply a broad and coherent 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 bachelor's level degree are summarised below:

	KOI Bachelor Degree Graduate Attributes	Detailed Description
	Knowledge	Current, comprehensive, and coherent and connected knowledge
	Critical Thinking	Critical thinking and creative skills to analyse and synthesise information and evaluate new problems
	Communication	Communication skills for effective reading, writing, listening and presenting in varied modes and contexts and for transferring knowledge and skills to a variety of audiences
	Information Literacy	Information and technological skills for accessing, evaluating, managing and using information professionally
	Problem Solving Skills	Skills to apply logical and creative thinking to solve problems and evaluate solutions
	Ethical and Cultural Sensitivity	Appreciation of ethical principles, cultural sensitivity and social responsibility, both personally and professionally
	Teamwork	Leadership and teamwork skills to collaborate, inspire colleagues and manage responsibly with positive results
	Professional Skills	Professional skills to exercise judgement in planning, problem solving and decision making

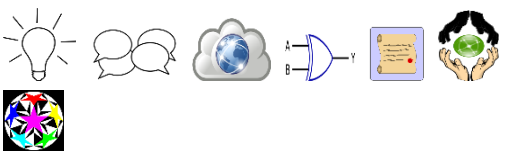
Across the course, these skills are developed progressively at three levels:

- **Level 1 Foundation** – Students learn the basic skills, theories and techniques of the subject and apply them in basic, standalone contexts
- **Level 2 Intermediate** – Students further develop the skills, theories and techniques of the subject and apply them in more complex contexts, and begin to integrate this application with other subjects.
- **Level 3 Advanced** – Students demonstrate an 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.

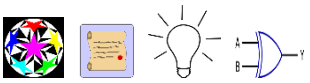
2.3 Subject Learning Outcomes

This is a Level 3 subject.

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

Subject Learning Outcomes	Contribution to Graduate Attributes
a) Analyse business and technical requirements to determine resource requirements and the impact the solution will have on the organisation	
b) Identify and resolve technical problems using trouble-shooting and research techniques	

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c) Design, plan, budget and propose an IT solution for an identified need within a specific scope	
d) Plan and develop a technical specification for the project and present a report.	

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 Management, Ethics and Professional Communication	No prescribed textbook. Project description provided by the supervisor ACS code of Ethics	Form project groups; please see Moodle subject website for introduction to project by academic supervisor. Email industry supervisor for first meeting.
Week 2 02 November	Introduction and Project Proposal	Reading resources provided on Moodle	• Group weekly meeting. • Weekly Participation and Presentation • Context and background of the Project • **Meeting 1:** First introductory meeting with client • Sign KOI industry agreement Summative worth 2%
Week 3 09 November	Literature Review, Technology Review and Project Planning	Reading resources provided on Moodle	• Group weekly meeting. • Weekly Participation and Presentation • Literature and Technology Review • Gantt Chart and Work breakdown Structure • **Proposal Submission** Summative worth 2%
Week 4 16 November	Requirements Gathering	Reading resources provided on Moodle	• Group weekly meeting. • Weekly Participation and Presentation • Requirement Gathering Questionnaire Email the industry supervisor for second meeting Summative worth 2%
Week 5 23 November	Requirements Analysis	Reading resources provided on Moodle	• Group weekly meeting. • Weekly Participation and Presentation

Week (beginning)	Topic covered in each week's lecture	Reading(s)	Expected work as listed in Moodle
		General Data Protection Regulation (GDPR)	• User stories and Acceptance Criteria • Functional and Non-functional requirements • **Meeting 2:** Second meeting with client about requirements Summative worth 2%
Week 6 30 November	Project Design	Reading resources provided on Moodle	• Group weekly meeting. • Weekly Participation and Presentation • System Design, Site/App maps and Flowcharts Summative worth 2%
Week 7 07 December	Database Design	Reading resources provided on Moodle	• Group weekly meeting. • Weekly Participation and Presentation • Database Design Summative worth 2%
Week 8 14 December	User Interface Design	Reading resources provided on Moodle	• Group weekly meeting. • Weekly Participation and Presentation • Wireframes Email the industry supervisor for third meeting Summative worth 2%
Week 9 04 January	Prototype	Reading resources provided on Moodle	• Group weekly meeting. • Weekly Participation and Presentation • Prototype Design • **Meeting 3:** Third meeting with the client to show design Summative worth 2%
Week 10 11 January	Documentation: Report Writing	Reading resources provided on Moodle	• Group weekly meeting. • Weekly Participation and Presentation • Improved wireframes and prototypes based on industry supervisor feedback Email the industry supervisor for final meeting Summative worth 2%
Week 11 18 January	Project Presentation Skills	Reading resources provided on Moodle	• Group weekly meeting. • Weekly Participation and Presentation • Final Prototype and Phase I summary document • **Meeting 4:** Client Presentation Summative worth 2%

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Week (beginning)	Topic covered in each week's lecture	Reading(s)	Expected work as listed in Moodle
			Assessment 2: Group project report due Summative worth 50%.
Week 12 25 January	Project Presentation	Project Presentation	**Assessment 3**: Project Presentation due Summative worth 30%
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* (2 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 assessment (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 within the BIT degree are:

- HD High distinction (85-100%) an outstanding level of achievement in relation to the assessment process.
- DI Distinction (75-84%) a high level of achievement in relation to the assessment process.
- CR 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.

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 and class participation	Weeks 2 - 11	Weekly Participation & Presentation 10% Weekly Submission 10% **Total value: 20%**	a, b
Assessment 2: Group Project Technical Report (3,000 words)	Week 11	Report 40% Group activity log: 10% **Total value 50%**	a, b, c, d
Assessment 3: Group project presentation (20 minutes)	Week 12	Group Presentation 20% Individual Presentation Skills 10% **Total value: 30%**	c, d

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 Texts:

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There are no required textbooks for this subject. Students are encouraged to read 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

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.

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

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

Orshalick, J., Reghunadh, J.M. and Thompson, D., 2026. *The developer's guide to AI: A field guide for the working developer.* O'Reilly Media. ISBN: 9781718504769.

Staiano, F., 2026. *Designing and prototyping interfaces with Figma*. 3rd ed. Packt Publishing. ISBN: 9781805805885.

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

Schwarzmüller, M., 2025, *React Key Concepts: An In-depth Guide to React's Core Features*, 2nd ed., Packt Publishing, Birmingham, UK. ISBN: 9781836202271.

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

Kumar, J., and Singh, M., 2025, *System Design on AWS: Building and Scaling Enterprise Solutions*, 1st ed., O'Reilly Media, Inc., Sebastopol, CA. ISBN: 9781098146894.

Dakić, M., 2023, *Mobile App Development for Businesses: Create a Product Roadmap and Digitize Your Operations*, Apress, New York, NY. ISBN: 9781484294765.

Caelen, O., and Blete, MA., 2024, *Developing Apps with GPT-4 and ChatGPT: Build Intelligent Chatbots, Content Generators, and More*, O'Reilly Media, Inc., Sebastopol, CA. ISBN: 9781098152482.

Jafari, M., Zahedi, M., and Khanachah, S.N., 2024, Identify and Prioritize the Challenges of Customer Knowledge in Successful Project Management: An Agile Project Management Approach, *Journal of Information & Knowledge Management*, vol. 23, no. 2, article 2350060. DOI: 10.1142/S0219649223500600.

Kirkpatrick, A ., 2023, *Web Content Accessibility Guidelines (WCAG) 2.2*, W3C, viewed 17 February 2026. Available at: https://www.w3.org/TR/WCAG22/

Visser, C5., 2023, *A Detailed Guide to WCAG Compliance in 2023*, Accessibility Checker, viewed 17 February 2026. Available at: https://www.accessibilitychecker.org/guides/wcag/

Kundariya, H., 2022, *11 Web Development Trends to Expect in 2023, According to Experts & Data*, HubSpot Blog, viewed 17 February 2026. Available at: https://blog.hubspot.com/website/web-development-trends

Patel, B., 2023, *Artificial Intelligence in Mobile App Development*, Space O Technologies, viewed 17 February 2026. Available at: https://www.spaceotechnologies.com/blog/artificial-intelligence-in-mobile-app-development/

Mendes, A., 2023, *Web App Development: The Ultimate Guide for 2023*, Imaginary Cloud, viewed 17 February 2026. Available at: https://www.imaginarycloud.com/blog/web-app-development-the-ultimate-guide/

Biørn-Hansen, A., Rieger, C., Grønli, TM., Majchrzak, TA., and Ghinea, G., 2020, An empirical investigation of performance overhead in cross-platform mobile development frameworks, *Empirical Software Engineering*, vol. 25, pp. 2997–3040. DOI:10.1007/s10664-020-09827-6.

Journals:

- IEEE Intelligent Systems
- IEEE Transactions on Software Engineering
- Information Resources Management Journal
- Applied Mathematical Modelling: simulation and computation
- Journal of Intelligent and Fuzzy Systems
- International journal for advances of computer science
- Information Systems Journal
- International Journal of Knowledge Based and Intelligent Engineering Systems
- IEEE Network: the magazine of global information exchange
- IEEE ACM Transactions on Networking

Useful Websites:

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

- Harbottle, P. (2023) *Website accessibility laws in Australia: Legal guidelines*, *Recite Me*. Available at: https://reciteme.com/au/news/understanding-website-accessibility-laws-in-australia/ (Accessed: 10 April 2024).
- Oaic (n.d.) *Mobile privacy: A Better Practice Guide for Mobile app developers*, *OAIC*. Available at: https://www.oaic.gov.au/privacy/privacy-guidance-for-organisations-and-government-agencies/more-guidance/mobile-privacy-a-better-practice-guide-for-mobile-app-developers (Accessed: 10 April 2024).
- *Complete guide to GDPR compliance* (no date) *European Commission*. Available at: https://gdpr.eu/(Accessed: 14 April 2025).
- 10 AI Tools Transforming Web Development in 2024: https://www.digitalocean.com/resources/article/ai-tools-web-development Australian Signals Directorate and Australian Cyber Security Center: https://www.cyber.gov.au/Cybersecurity Framework NIST: https://www.nist.gov/cyberframework
- Figma Tutorial: https://help.figma.com/hc/en-us/sections/4405269443991-Figma-for-beginners-4-parts
- MongoDB. (n.d.). *How to use the MEAN stack: Build a web application from scratch*. Retrieved April 14, 2025, from https://www.mongodb.com/resources/languages/mean-stack-tutorial

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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