ICT302 INFORMATION TECHNOLOGY PROJECT 2 T326

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 ICT301 Information Technology Project 1

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

This subject focuses on the detailed design and implementation of the requirements generated in ICT 301 Information Technology Project 1, as outlined in the requirement and specification document. Students work in groups (maximum of 4) to develop and deploy their information technology solution for their project. The subject is designed for final year students. The Capstone Project requires the technical and professional skills acquired in the previous BIT subjects, as detailed in Appendix A.

The subject blends an understanding of the framework and models for delivering an information technology project with the management style required. Students are required to produce documents as deliverables and working systems where applicable. The documents will include developer documentation, user documentation and administrator documentation. In order to deliver a robust solution, students will need to choose and employ an appropriate project management methodology and technology.

It is recommended that students work in the same group they have worked with in ICT 301.
Students work in groups 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. However, if circumstances require, they can choose to

change the group as this subject will focus on design and implementation of an already collected set of requirements. Individual students who have previously failed this subject will be allocated to a different group and work on an already collected set of requirements specifications. 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:

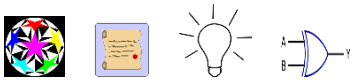
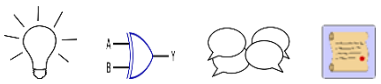
- **Level 1 Foundation** – Students learn the basic skills, theories and techniques of the subject and apply them in basic, standalone contexts
- **Level 2 Intermediate** – Students further develop the skills, theories and techniques of the subject and apply them in more complex contexts, and begin to 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 and select application and operating system settings to create an optimal user environment.	
b) Code, test and debug computer programs using an appropriate computer language and techniques.	
c) Demonstrate a strong working knowledge of ethics and professional responsibility.	
d) Demonstrate and apply effective project execution and control techniques.	
e) Develop the documentation to support the implementation of an IT 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.

Weekly Planner:

Week (beginning)	Topic covered in each week's lecture	Reading(s)	Expected work as listed in Moodle
Week 1 26 October	Meeting with your supervisor to establish project parameters. Discussion and Presentation on the Prototype from part 1 of the project	No prescribed textbook Project (phase 2) Description provided by the supervisor ACS Code of Ethics	Discussion with academic supervisor, Email industry supervisor for first meeting. Present and submit the prototype from part 1 of the project
Week 2 02 November	Workshop: Discussion about different technologies available for web/application development. How students can prepare their laptops for development. submit a project requirement (all	Reading resources provided on Moodle	Group weekly meeting. Weekly Participation and Presentation Context and background of the Project submit a project management plan for next 10 weeks Summative worth 2%

Week (beginning)	Topic covered in each week's lecture	Reading(s)	Expected work as listed in Moodle
	functional and non-functional) and project management plan for next 10 weeks		**Meeting: First meeting with Client to start with the implementation**
Week 3 09 November	Workshop on how to set up the server and domain, WordPress installation, Overview of local host, setting up environment for cross platform development. Detailed discussion about implementation plan	Reading Resources provided on Moodle	Group weekly meeting. Weekly Participation and Presentation Summative worth 2%
Week 4 16 November	Workshop: team and time management How programming tasks can be distributed among group members.	Reading Resources provided on Moodle	Group weekly meeting. Weekly Participation and Presentation Submission of Implementation plan Summative worth 2% **Meeting: Second meeting with client about requirements and implementation plan**
Week 5 23 November	Workshop on Developing a responsive application and website for Information Technology project.	Reading Resources provided on Moodle General Data Protection Regulation (GDRP)	Group weekly meeting. Weekly Participation and Presentation. Summative worth 2% **Meeting: Second meeting with client about requirements and implementation plan**
Week 6 30 November	Workshop on linking frontend with backend in mobile application and website.	Reading Resources provided on Moodle	Group weekly meeting. Weekly Participation and Presentation Summative worth 2%
Week 7 07 December	Workshop: Database options for android application, cross platform applications and websites. Importance of using database on project. Discussion on writing about features of projects	Reading Resources provided on Moodle	Group weekly meeting. Weekly Participation and Presentation Summative worth 2% **Meeting: Third meeting with the client about database**
Week 8 14 December	Workshop: Two factor authentication options available for websites and applications	Reading resources provided on Moodle	Weekly Meeting. Weekly Progress and class participation. Summative worth 2% **Meeting: Third meeting with the client about database**
Week 9 04 January	Workshop: managing implementation and reporting progress of project Chatbot options available for website and applications	Reading Resources provided on Moodle	Weekly Meeting. Weekly Progress and class participation. Summative worth 2%

Week (beginning)	Topic covered in each week's lecture	Reading(s)	Expected work as listed in Moodle
Week 10 11 January	Workshop on testing plan. Discussion about preparing surveys	Reading resources provided on Moodle	Weekly Meeting. Weekly Progress and class participation. Summative worth 2%
Week 11 18 January	Workshop on presentation skills. Discussion about handing over project to the client	Reading resources provided on Moodle	Weekly Meeting. Weekly Progress and class participation. Summative worth 2% **Assessment 2**: Final report due on group project. Summative assessment worth 50% **Meeting: Fourth meeting with Industry Supervisor for final presentation and IP handover**
Week 12 25 January	Workshop: final project completion and presentation	Reading resources provided on Moodle	Weekly Meeting. Weekly Progress and class participation. **Assessment 3**: Group presentation due (20 minutes. **Must be in class**). Summative assessment 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:

2 *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.
3 *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.

4 *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

5 *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 report	Weeks 2 - 11	20%	a, d
Assessment 2: Final report and Group Activity Log	Week 11	Final Report 40% Group Activity Log 10%	a, b, c, d, e
Assessment 3: Presentation and demonstration (20 minutes) **Presentation must be in class**	Week 12	Presentation 20% Demonstration 10%	b, 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:

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

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

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

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

Mahdhi, M., 2025. *Mastering ASP.NET Core 10: Web applications made easy with the biggest update yet*. Apress. ISBN: 9798868818912

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.

Allbee, B., 2025. *Hands-on software engineering with Python*. 2nd ed. Birmingham: Packt Publishing. ISBN: 9781835888018

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

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

Miola, A., 2020, *Flutter Complete Reference: Zero to Professional*, Independently published. ISBN: 9798691939952.

Freeman, A., 2023, *Pro ASP.NET Core 7*, 10th ed., Apress, New York. ISBN: 9781484254394

Bush, J., 2020, *Learn SQL Database Programming*, Packt Publishing, Birmingham, UK. ISBN: 9781838984762.

Flanagan, D., 2020, *JavaScript: The Definitive Guide*, 7th ed., O'Reilly Media, Sebastopol, CA. ISBN: 9781491952023.

Writing with Internet Sources
http://isites.harvard.edu/icb/icb.do?keyword=k24101&tabgroupid=icb.tabgroup35038

E-Journals:

- IEEE Intelligent Systems
- 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

Website:

- Australian Signals Directorate and Australian Cyber Security Center: https://www.cyber.gov.au/
- Cybersecurity Framework NIST: https://www.nist.gov/cyberframework

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.