



ICT303 PROFESSIONAL ETHICS IN COMPUTING T324 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	Dr Divya Leekha divya.leekha@koi.edu.au P: +61 (2) 9283 3583 L: Level 1-2, 17 O'Connell 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***
4 hours/week (2 hour Lecture + 2 hour Tutorial)	6 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 Successful completion of 48 credit points

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: Office 365.

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 will provide an understanding of ethical, legal, social and environmental issues related to the evolution of information technology in society. The topics include the professional code of conduct, intellectual property, privacy, data protection, quality assurance and IT compliance.

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 the transferring of 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) Apply methods and tools of analysis for identifying and resolving ethical issues using philosophical frameworks	    
b) Discuss professional and ethical responsibilities, including the purpose of codes of ethics for computing professionals	    
c) Evaluate risks and liabilities of computer based systems and the critical characteristics of information	   
d) Analyse legal, social, ethical and security issues in ICT	    

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
1 28 Oct	Catalysts for change	Ch.1 (Foundation of Information Ethics) Ch.1 (Ethics for the Information Age)	The tutorial class will cover various questions on Milestones in Computing, Milestones in Networking, Milestones in Information storage and retrieval and Information Technology Issues. Formative weekly tutorial.
2 04 Nov	Introduction to ethics part 1	Ch.2 (Foundation of Information Ethics) Ch.2 (Ethics for the Information Age)	The tutorial class will cover various questions on Introduction to Ethics, Subjective Relativism, Cultural Relativism, Divine Command Theory, Ethical Egoism, Kantianism, Act Utilitarianism, Rule Utilitarianism, Social Contract Theory, Virtue Ethics. Assessment 1: Summative assessment.
3 11 Nov	Revision on ethical theories	Ch.2 (Foundation of Information Ethics) Ch.2 (Ethics for the Information Age)	The tutorial class will cover various questions on revision to Subjective Relativism, Cultural Relativism, Divine Command Theory, Ethical Egoism, Kantianism, Act Utilitarianism, Rule Utilitarianism, Social Contract Theory, Virtue Ethics. Summative assessment
4 18 Nov	Networked communication	Ch.8 (Foundation of Information Ethics) Ch.3 (Ethics for the Information Age)	The tutorial class will cover various questions on Spam, Internet interactions, Text messaging, Censorship, Freedom of Expression, Children and Inappropriate content, Breaking trust and Internet addictions. Summative assessment.
5 25 Nov	Professional Ethics	Ch. 9 (Ethics for the Information Age)	The tutorial class will cover various questions on Professional Ethics, Software Engineering Code of Ethics, analysis of the code, case studies and whistle blowing. Summative assessment. Assessment 2: Ethical analysis. (Report due Sunday midnight) Summative assessment worth 20%
6 02 Dec	Privacy	Ch.5 (Foundation of Information Ethics) Ch. 5 (Ethics for the Information Age)	The tutorial class will cover various questions on Information Privacy, Information Disclosures, Data Mining, and examples of Consumer Backlash. Summative assessment.
7 09 Dec	Privacy and the government	Ch. 6 (Ethics for the Information Age)	The tutorial class will cover various questions on US Legislation Restricting Information Collection, Information collection by the government, Covert Government Surveillance, US Legislation Authorizing Wiretapping, USA Patriot Act, Regulation of Public and Private databases, Data mining by the



Week (beginning)	Topic covered in each week's lecture	Reading(s)	Expected work as listed in Moodle
			Government, National Identification Card, Information Dissemination, and Invasion Ethics. Summative assessment.
8 16 Dec	Computer and network security	Ch.9 (Foundation of Information Ethics) Ch. 7 (Ethics for the Information Age)	The tutorial class will cover various questions on Hacking, Malware, Cyber Crime and Cyber Attacks and Online Voting. Summative assessment.
9 06 Jan	Computer reliability	Ch.4 (Foundation of Information Ethics) Ch.8 (Ethics for the Information Age)	The tutorial class will cover various questions on Data entry or data retrieval errors, Software and Billing errors, Notable Software Systems Failures, Therac 25, Computer Simulations, Software engineering, Software warranties and Vendor Liability. Summative assessment.
10 13 Jan	Professional ethics	Ch. 9 (Ethics for the Information Age)	The tutorial class will cover various questions on Professional Ethics, Software Engineering Code of Ethics, analysis of the code, case studies and whistle blowing. Summative assessment. Assessment 3: Case study research report. Summative assessment worth 20%
11 20 Jan	Work and health	Ch.10 (Ethics for the Information Age)	The tutorial class will cover various questions on Automation and Employment, Workplace changes, Globalization, The digital divide, and the Winner-take-all society. Summative assessment.
12 28 (Tue) Jan	Revision & preparation for final exam	All Chapters	Revision
13 03 Feb	Study Review Week and Final Exam Week		
14 10 Feb	Examinations Continuing students - enrolments for T125 open		Please see exam timetable for exam date, time and location
15 17 Feb	Student Vacation begins New students - enrolments for T125 open		



Week (beginning)	Topic covered in each week's lecture	Reading(s)	Expected work as listed in Moodle
16 24 Feb	Results Released Review of Grade Day for T324 – 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.		
T125 3 Mar 2025			
1 03 Mar	Week 1 of classes for T125		

2.5 Teaching Methods/Strategies

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

- *On-campus 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: Tutorial participation and Homework	Weeks 2 - 11	10%	a, b, c and d
Assessment 2: Ethical analysis (1,500 words) (Summative)	Week 5	20%	a, b
Assessment 3: Case study report (2,000 words) (Summative)	Week 10	20%	b, c, d
Assessment 4: Final examination On-campus: 2 hours + 10 mins reading time	Final exam period	50%	a, 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:

Burgess, JTF, & Knox, EJM (eds) 2019, *Foundations of Information Ethics*. American Library Association, Chicago. Available from: ProQuest Ebook Central. [9 April 2021].

Quinn, M.J., 2019 *Ethics for the Information Age*, Global Edition, 8th ed., Pearson Higher Ed U.S.A.

Recommended Readings:

Segun, S. T. (2021). Critically engaging the ethics of AI for a global audience. *Ethics & Information Technology*, 23(2), 99-105.

Ratti, E., & Graves, M. (2021). *Cultivating Moral Attention: a Virtue-Oriented Approach to Responsible Data Science in Healthcare*. *Philosophy & Technology*, 34(4), 1819-1846.

John-Mathews, J.-M., Cardon, D., & Balagué, C. (2022). *From Reality to World: A Critical Perspective on AI Fairness*. *Journal of Business Ethics*, 178(4), 945-959.

Yamagata-Lynch, L. C., Garty, E. R., Hostetter, S. T., & Lunga, M. L. (2022). *Grappling with professional ethics in instructional technology by participating in an online service-learning course*. *Journal of Computing in Higher Education*, 34(1), 189-210.

Krening, S. (2023). *Q-learning as a model of utilitarianism in a human-machine team*. *Neural Computing & Applications*, 35(23), 16853-16864.

Shilton, K., Finn, M., & DuPont, Q. (2021). *Shaping Ethical Computing Cultures: Lessons from the recent past*. *Communications of the ACM*, 64(11), 26-29. DOI: 10.1145/3486639.

Choi, B. H. (2021). *Software Professionals, Malpractice Law, and Codes of Ethics: In pursuit of professional status for computing professionals*. *Communications of the ACM*, 64(5), 22-24.

Canca, C. (2020). *Computing Ethics Operationalizing AI Ethics Principles: A better ethics analysis guide for developers*. *Communications of the ACM*, 63(12), 18-21.

Becker, C.U. 2019, *Business ethics: methods and application*, Routledge, New York, N.Y.

Brooks, L.J. & Dunn, P., 2018, *Business & professional ethics for directors, executives & accountants*, 8th edn, Cengage Learning, Boston, MA.

Shafer-Landau, R. 2018, *The fundamentals of ethics*, 4th edn, Oxford University Press, New York, NY.

Pathni, R. K. (2023). *Artificial Intelligence and the Myth of Objectivity: Need for Regulation of Artificial Intelligence in Healthcare*. *Journal of Healthcare Management Standards*, 3(1), 14 pages.
<https://doi.org/10.4018/JHMS.329234>

Castaño Díaz, C. M. (2023). *Designing Games for Stealth Assessment: Dos and Don'ts of the Trade Based on Practical Experience*. In *Games as Stealth Assessments* (pp. 37). <https://doi.org/10.4018/979-8-3693-0568-3.ch007>

Recommended Journal articles:

Amundsen, D., & Msoroka, M. (2021). Responsive Ethics: navigating the fluid research space between HREC ethics, researcher ethics and participant ethics. *Educational Review*, 73(5), 563-579.



Denny, P., Prather, J., Becker, B. A., Finnie-Ansley, J., Hellas, A., Leinonen, J., Luxton-Reilly, A., Reeves, B. N., Santos, E. A., & Sarsa, S. (2024). Computing Education in the Era of Generative AI. *Communications of the ACM*, 67(2), 56-67

Bruckman, A. (2020). 'Have You Thought About ...' Talking About Ethical Implications of Research: Considering the good and the bad effects of technology. *Communications of the ACM*, 63(9), 38-40.

Canca, C. (2020) 'Computing Ethics Operationalizing AI Ethics Principles: A better ethics analysis guide for developers', *Communications of the ACM*, 63(12), pp. 18–21. doi: 10.1145/3430368.

Choi, B. H. (2021). Software Professionals, Malpractice Law, and Codes of Ethics: In pursuit of professional status for computing professionals. *Communications of the ACM*, 64(5), 22-24.

Douglas, D. M. (2019) 'Computing Ethics Should Researchers Use Data from Security Breaches?: Evaluating the arguments for and against using digital data derived from security breaches', *Communications of the ACM*, 62(12), pp. 22–24. doi: 10.1145/3368091.

Jones, K. M. L., Rubel, A., & LeClere, E. (2020). A matter of trust: Higher education institutions as information fiduciaries in an age of educational data mining and learning analytics. *Journal of the Association for Information Science & Technology*, 71(10), 1227-1241.

Moss, E. and Metcalf, J. (2020) "Too Big a Word: Ethics Owners: A New Model of Organizational Responsibility in Data-Driven Technology Companies".
<https://points.datasociety.net/too-big-a-word-13e66e62a5bf>

Kunjumammed, S. K., Madi, H., & Abouraia, M. (2024). *Risks and Challenges of AI-Driven Finance: Bias, Ethics, and Security*. Projected release date: April 2024. 320 pages. <https://doi.org/10.4018/979-8-3693-2185-0>. ISBN: 9798369321850, ISBN Softcover: 9798369350553, EISBN: 9798369321867.

Online Resources and examples on Ethical code of conduct:

- https://www.acs.org.au/data/assets/pdf_file/0005/7835/Code-of-Ethics.pdf
- <http://www.anz.com/documents/au/policies/ANZ-Employee-Code-of-Conduct.pdf>
- <https://www.sans.org/security-resources/ethics.php>
- <http://www.tomw.net.au/technology/it/ictethics.shtml>

Academic Paper on: The Development of A code of Ethics: IT Challenges

http://www.academia.edu/3167989/The_Development_of_A_code_of_Ethics_IT_Challenges

Useful Websites:

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

1. Australian Computer Society (ACS). (n.d.). *Professional ethics, conduct, and complaints*. [online] Available at: <https://www.acs.org.au/memberships/professional-ethics-conduct-and-complaints.html> [Accessed 29 Aug. 2024].
2. General Data Protection Regulation (GDPR). (n.d.). *General Data Protection Regulation (GDPR) – Official Legal Text*. [online] Available at: <https://gdpr.eu/> [Accessed 29 Aug. 2024].
3. Ethics in AI: <https://standards.ieee.org/initiatives/autonomous-intelligence-systems/>
4. Computer Professionals for Social Responsibility (CPSR): <http://cpsr.org/>

Others:

The Markkula Center for Applied Ethics: <https://www.scu.edu/ethics/>

The suggested websites are useful resources covering a range of information relevant to 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 staff in the Library if you are



unsure how to access Ebscohost. Instructions can also be found in Moodle. An important area of this subject involves the skill of finding appropriate ethical, social and legal cases. During lectures and tutorials, students will be informed where cases may be found. Students are also expected to use the library and the internet.