KING'S OWN INSTITUTE*
Success in Higher Education

ICT726 WEB DEVELOPMENT T320 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) Graduate Diploma of Information Technology (GDIT)	1 trimester	Postgraduate	Dr Mubashir Hussain mubashir.hussain@koi.edu.au P: 92833583 L: Level 1-2, 17 O'Connell St. Consultation: via Moodle or by appointment.

1.2 Core/Elective

This subject is

o   an elective subject for the Master of Information Technology (MIT)

o   an elective subject for the Graduate Diploma of Information Technology (GDIT) for students from a cognate background

Note: GDIT students from a non-cognate background do <u>not</u> have any elective subjects

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); GDIT (32 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   Blended, that is face-to-face/online

1.6 Pre-requisites   ICT711 Programming and Algorithms

1.7   General Study and Resource Requirements

o   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.

o   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.
o   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: Office 365, MS Imagine, HTML editor, jQuery, AJAX, PHP MySQL, XML.

2. Academic Details

2.1 Overview of the Subject

This subject introduces students to the development of interactive, dynamic websites and web applications. Topics include website security, website administration, content management systems and search engine optimisation (SEO). Students will gain experience in a range of web technologies including HTML, CSS, Javascript, jQuery, AJAX, PHP MySQL and XML. These skills will allow students to design dynamic websites that are functional, usable and accessible.

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 postgraduate degree under the Australian Qualifications Framework (2nd edition, January 2013). Graduates at this level will be able to apply advanced body of knowledge in a range of contexts for professional practice or scholarship and as a pathway for further learning.

King's Own Institute's key generic graduate attributes for a postgraduate degree are summarised below:

	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:

- o **Level 1 Foundation –** Students learn the skills, theories and techniques of the subject and apply them in stand-alone contexts
- o **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
- o **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 Graduate Attributes
a)	Create web pages which demonstrate a working knowledge of HTML, CSS, web media, web forms, error handling, and validation of user input	
b)	Create and demonstrate functional and usable data-driven web sites which comply with accessibility, usability, privacy, ethical, and other web standards	
c)	Implement server-side authentication and access control to a web application	
d)	Critically evaluate the use of content management systems	
e)	Apply search engine optimisation (SEO) techniques to increase organic traffic	

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 02 Nov	Introduction to web development and HTML	Chs. 1, 3	HTML tutorial exercises Formative not graded
2 09 Nov	Cascading styles sheets (CSS)	Chs. 2, 7	CSS tutorial exercises Formative not graded
3 16 Nov	Tables and forms. Web media	Chs. 5, 6	Tutorial exercises on layout and using rich media Formative not graded
4 23 Nov	Javascript fundamentals. Document Object Model (DOM)	Chs. 8, 9	Javascript tutorial exercises Formative not graded

5 30 Nov	Extending Javascript – jQuery, AJAX	Ch. 10	Tutorial exercises using jQuery and AJAX Formative not graded
6 07 Dec	Server-side development with PHP	Ch. 11	PHPL tutorial exercises Formative not graded. **Assessment 1 due**
7 14 Dec	MySQL database access. Managing state	Chs. 14, 16	MySQL tutorial exercises Formative not graded
20 Dec 2020 – 03 Jan 2021	**Mid trimester break**		
8 04 Jan	Error handling and validation. Search engine optimisation	Chs. 15, 23	Tutorial exercises on error handling and validation Formative not graded
9 11 Jan	Web security	Ch. 18	SEO tutorial exercises Formative not graded
10 18 Jan	XML processing and web services	Ch. 19	XML tutorial exercises Formative not graded
11 25 Jan	Web server administration and virtualisation	Ch. 22	**Demonstrations** **Assessment 2 due**
12 01 Feb	Content management systems	Ch. 21	**Demonstrations**
13 07 Feb	Study review week		
14 15 Feb	Final Examination		
15 21 Feb	Student Vacation begins Enrolments for T121 open		
16 02 Mar	Results Released 02 Mar 2021 Certification of Grades 05 Mar 2021		
T121 begins 09 Mar 2021			
1 08 Mar	Week 1 of classes for T121 **Friday 05 Mar 2021 – Review of Grade Day for T320** – see Sections 2.6 and 3.2 below for more information.		

2.7 Teaching Methods/Strategies

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

- o *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.
- o *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.
- o *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
- o *Other contact* - academic staff may also contact students either via Moodle messaging, or via email to the email address provided to KOI on enrolment.

2.8 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:

- o *HD High distinction* (85-100%): an outstanding level of achievement in relation to the assessment process.

- o *D Distinction* (75-84%): a high level of achievement in relation to the assessment process.

- o *C Credit* (65-74%): a better than satisfactory level of achievement in relation to the assessment process.

- o *P Pass* (50-64%): a satisfactory level of achievement in relation to the assessment process.

- o *F Fail* (0-49%): an unsatisfactory level of achievement in relation to the assessment process.

- o *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: Static website	Week 6	15%	a, b
Assessment 2: Dynamic website	Website: Week 11 Demonstration: Week 11-12	Website 20% Demonstration 10% Individual contribution 5%	a, b, c, e
Assessment 3: Final exam	Final exam period	50%	a, b, c, d, e

Assessment Type	When Assessed	Weighting	Learning Outcomes Assessed
(2,5 hours plus 10 minutes reading time)			

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.

2.9 Prescribed Readings

Prescribed Texts:

Connoly, R., & Hoar, R., 2018. *Fundamentals of Web Development*, 2nded., Pearson.