

Title:	Computer Applications APPROVED
Long Title:	Computer Applications for Elec
Module Code:	ELEC7001
Credits:	5
NFQ Level:	Intermediate
Field of Study:	Electrical Engineering
Valid From:	Semester 1 - 2017/18 (September 2017)
Module Delivered in	3 programme(s)
Module Coordinator:	JOSEPH CONNELL
Module Author:	JOSEPH CONNELL
Module Description:	This module develops the student's capacity for effective use of computer software for the field of electrical engineering. It encompasses applications for business and engineering, it encourages efficient use of software tools and promotes a commitment to high quality documents.
Learning Outcomes	
<i>On successful completion of this module the learner will be able to:</i>	
LO1	Effectively use business type software packages (including word process, equation, presentation) in applications relevant to electrical engineering.
LO2	Effectively use engineering type software packages (including calculation, modeling) relevant to electrical engineering.
LO3	Effectively use software packages for design and project management, relevant to electrical engineering.
LO4	Deliver high quality documents integrating components from multiple sources for engineering teams.
Pre-requisite learning	
Module Recommendations	
<i>This is prior learning (or a practical skill) that is strongly recommended before enrolment in this module. You may enrol in this module if you have not acquired the recommended learning but you will have considerable difficulty in passing (i.e. achieving the learning outcomes of) the module. While the prior learning is expressed as named CIT module(s) it also allows for learning (in another module or modules) which is equivalent to the learning specified in the named module(s).</i>	
No recommendations listed	
Incompatible Modules	
<i>These are modules which have learning outcomes that are too similar to the learning outcomes of this module. You may not earn additional credit for the same learning and therefore you may not enrol in this module if you have successfully completed any modules in the incompatible list.</i>	
No incompatible modules listed	
Co-requisite Modules	
No Co-requisite modules listed	
Requirements	
<i>This is prior learning (or a practical skill) that is mandatory before enrolment in this module is allowed. You may not enrol on this module if you have not acquired the learning specified in this section.</i>	
No requirements listed	
Co-requisites	
No Co Requisites listed	

Module Content & Assessment

Indicative Content

Presentation

Word processing software, advanced formatting, style, tables, outlining, mail-merge, equations. Presentation software, master pages, layouts, themes, integration, graphics, linking, professional presentation.

Analysis

Spreadsheet software, data type, addressing, complex numbers, advanced formulae and functions, logical and lookup functions, advanced charting of engineering data. Database software, structure, fields, records, forms, queries, reports.

Calculation and modeling

Software for calculation, modeling of electrical engineering problems.

Design and project management

CAD software, blocks, symbol libraries, attribute extraction, overlay and xref. Project management software, tasks, schedules, resources, costing, analysis, tracking. Application to electrical projects.

Integration and quality

Concepts in quality documentation, layout, sharing data, linking and embedding, capture and use of digital images, sections in large documents, table of contents and index. Professional reports.

Assessment Breakdown

%

Course Work

100.00%

Course Work

Assessment Type	Assessment Description	Outcome addressed	% of total	Assessment Date
Practical/Skills Evaluation	Text, equation, presentation assignments	1,4	20.0	Week 3
Practical/Skills Evaluation	Spreadsheet engineering assignment	1,2	20.0	Week 5
Practical/Skills Evaluation	Database assignments	1,3	20.0	Week 7
Practical/Skills Evaluation	Calculation and modelling assignments	2	20.0	Week 9
Project	Design and project management assignments	3	20.0	Week 12

No End of Module Formal Examination

Reassessment Requirement

Coursework Only

This module is reassessed solely on the basis of re-submitted coursework. There is no repeat written examination.

The institute reserves the right to alter the nature and timings of assessment

Module Workload

Workload: Full Time				
<i>Workload Type</i>	<i>Workload Description</i>	<i>Hours</i>	<i>Frequency</i>	<i>Average Weekly Learner Workload</i>
Lab	Software exercises, assignments	3.0	Every Week	3.00
Independent & Directed Learning (Non-contact)	Student review	4.0	Every Week	4.00
Total Hours				7.00
Total Weekly Learner Workload				7.00
Total Weekly Contact Hours				3.00

This module has no Part Time workload.

Module Resources
<i>Supplementary Book Resources</i>
<ul style="list-style-type: none"> • Bernard V. Liengme; with David J. Ellert, <i>A guide to Microsoft Excel 2007 for scientists and engineers</i> [ISBN: 978-0-12-374623-8] • Microsoft 2010, <i>Microsoft Powerpoint 2010 Step-by-Step</i>, Microsoft Press [ISBN: 073562691X] • Carl Chatfield, Timothy Johnson D., 2010, <i>Microsoft Project 2010 Step by Step</i> [ISBN: 0735626952] • William J Palm III, 2007, <i>A Concise Introduction to Matlab</i>, 1 Ed., McGraw-Hill [ISBN: 0073385832]
<i>This module does not have any article/paper resources</i>
<i>This module does not have any other resources</i>

Module Delivered in			
Programme Code	Programme	Semester	Delivery
CR_EEPSY_8	<u>Bachelor of Engineering (Honours) in Electrical Engineering</u>	4	Mandatory
CR_EELEC_7	<u>Bachelor of Engineering in Electrical Engineering</u>	4	Mandatory
CR_EELEC_6	<u>Higher Certificate in Engineering in Electrical Engineering</u>	4	Mandatory