

Full Title:	Project A Semester 5
Language of Instruction:	English
Module Code:	53484
Credits:	5
Valid From:	Semester 1 - 2014/15 (September 2014)
Module Delivered in	1 programme(s)
Module Description:	Project will consist of three 5-week Technical Assignments in Semester 5
Learning Outcomes:	
<i>On successful completion of this module the learner should be able to</i>	
<ol style="list-style-type: none"> 1. Take a methodical approach to the solution of electronic engineering problems. 2. Gather and assess technical information in a systematic manner. 3. Use industry standard ECAD design tools and processes. 4. Select and use appropriate electronic instrumentation and techniques for fault-finding and performance testing of electronic hardware and software. 5. Develop and conduct experiments that test electronic hardware and to analyse and interpret the data gathered during these experiments. 6. Write technical reports that document the work that they undertook during the projects. 7. Use communications tools to illustrate the work undertaken during Project. 	

Module Content & Assessment

Indicative Content
<p>Technical Assignments The learner will undertake three 5-week technical assignments over the course of the module. Some examples of possible technical assignments are: Implement a simple measurement system using a USB data acquisition card, LABVIEW and a PC. Implement a simple control system using a USB data acquisition card, LABVIEW and a PC. Design build and test a microcontroller based temperature measurement system. Design build and test a microcontroller based distance measurement system. Design, simulate, layout, construct and test an active filter using an industry standard ECAD package. Design, simulate, layout, construct and test a simple audio amplifier using an industry standard ECAD package.</p>
<p>Learning and Teaching Methods The learning will take place in a specially assigned laboratory which is fully equipped for the purpose of delivering final year technical assignments and projects. All necessary computer hardware, test equipment, development boards, software and other resources needed for learning to take place will be provided in this laboratory space. Each learner will be provided with access to their own individual PC for the duration of the Technical Assignments A module. There will be 6 hours of lecturer time allocated for practical/tutorial sessions per week for this Module. This hours allocation will appear as one day per week for Project on the Learners timetable. Lecturers involved in the supervision of these technical assignments will be timetabled accordingly so that they can be present in the laboratory to supervise the technical assignment in question and to help the learner to complete their technical assignment and to clarify any technical issues that arise during the course of the assignment. However, as the technical assignment will involve a lot of self-study and directed reading on behalf of the learner, work in excess of timetabled hours will be expected from the learner.</p>

Assessment Breakdown	%
Course Work	100.00%

Full Time

Course Work							
Assessment Type	Assessment Description	Outcome addressed	% of total	Marks Out Of	Pass Marks	Assessment Date	Duration
Project	The Learner will undertake 3 five-week Technical Assignments.	1,2,3,4,5	40.00	100	40	Sem 1 End	0
Written Report	Detailed Technical Report written to defined standard.	6,7	20.00	100	40	Sem 2 End	0
Presentation	A technical presentation on the assignment or project by the learner.	7	10.00	100	40	Sem 2 End	0
Practical/Skills Evaluation	A practical demonstration of the project in its final state.	1,4,5	10.00	100	40	Sem 2 End	0
Portfolio	Engineering Notebook, Data Sheets and other technical material collated during Project.	2,7	20.00	100	40	Sem 2 End	0

No Project

No Practical

No End of Module Formal Examination

Reassessment Requirement
<p>Reattendance <i>The assessment of this module is inextricably linked to the delivery. Therefore reassessment on this module will require the student to reattend (i.e. retake) the module in its entirety.</i></p>
<p>Reassessment Description Student must re-attend to meet Learning Outcomes of Project Module.</p>

DKIT reserves the right to alter the nature and timings of assessment

Module Workload & Resources

Workload: Full Time

Workload Type	Workload Description	Hours	Frequency	Average Weekly Learner Workload
Practical	Development, Construction, Testing Project	2.00	Every Week	2.00
Directed Reading	Sourcing Technical Information for Project	4.00	Every Week	4.00
Independent Study	Design, Development of Hardware/Software	1.00	Every Week	1.00
Total Weekly Learner Workload				7.00
Total Weekly Contact Hours				2.00

This course has no Part Time workload.

Resources

Recommended Book Resources

Peatman J. B., *Design with PIC Microcontrollers*, Prentice Hall [ISBN: 0137592590]

Bishop R. H., *LabVIEW 8 Student Edition*, Pearson [ISBN: 0131999184]

John Nussey 2013, *Arduino for Dummies*, 1 Ed., Wiley England [ISBN: 978118446379]

Pong P. Chu 2008, *FPGA Prototyping by VHDL*, 1 Ed., Wiley - Interscience [ISBN: 9780470185315]

This module does not have any article/paper resources

Other Resources

Website: n/a
<http://www.microchip.com>

Website: n/a
<http://www.matrixmultimedia.com>

Website: n/a
<http://www.ti.com>

Website: n/a
<http://www.arduino.cc>

Website: n/a
<http://www.labcenter.com>

Website: n/a
<http://www.xilinx.com>

Module Delivered in

Programme Code	Programme	Semester	Delivery
DK_EELES_7	Bachelor of Engineering in Electrical and Electronic Systems	5	Elective