



Institiúid Teicneolaíochta Chorcaí  
Cork Institute of Technology

## Team Project: Design

### Module Details

<b>Short Title:</b>	Team Project: Design	<b>DRAFT</b>
<b>Full Title:</b>	Team Project : Design Phase	
<b>Module Id:</b>	4638	
<b>Official Code:</b>		
<b>NFQ Level:</b>	9	
<b>ECTS Credits:</b>	5	

<b>Coordinator:</b>	JOHN BARRETT
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<b>Description:</b>	<p>This module focuses on a team project on the research, design and modelling phase to develop a network of embedded systems for a selected application. The application, to be selected each year, will be selected so that it presents challenging goals. The scale of the application and the team sizes will be selected based on an assessment of overall class background and skills. Such a project demands a multi-disciplinary team including hardware, software and networking. It also demands careful planning, management of information flow between disciplines, and appropriate scheduling of the tasks and deliverables of the various team members. This team project will, from a technological point of view, pull together and apply the learning from the core technology modules as well as informing the learning in those modules. It will also require the team to apply learning from the "Transferable Skills" module, will develop teamwork skills and self/mutual critical analysis. Interim and final written and oral communication and reporting will also form a critical element of the team project. This module will focus on background research, system specification, design and modelling with the objective of arriving at a full system design ready for construction, deployment and testing.</p>
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### Learning Outcomes:

*On successful completion of this module the learner will be able to...*

1. Act in a team environment carrying out both technical, team management and project management tasks.
2. Use technical and core transferable skills to prepare, execute and report on a project technical and management plan for the design, development, deployment and test of a network of embedded systems
3. Design and model a networked embedded system for a selected application
4. Prepare and deliver oral and written communication concerning the student's personal and group role in project execution and achievements

### Pre-requisite learning

#### Module Recommendations

*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).*

No recommendations listed

#### Incompatible Modules

*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.*

No incompatible modules listed

#### Module Requirements

*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.*

No requirements listed



## Module Content &amp; Assessment

## Indicative Content

## • Team Project

Design, development, deployment and testing of a networked embedded system. Phase 1: Project planning and management; team planning and management; preparation of detailed specifications; block level design and modelling of the system; budget estimation; draft commercialisation plan including competing product survey and market niche identification; project communication and reporting

## Assessment Breakdown

%

Course Work

100%

End of Semester Formal Examination

0%

## Coursework Breakdown

Type	Description	Outcome addressed	% of total	Assessment Date
Project	Individual student: project journal and critical self-assessment ; technical report/presentation on personal tasks and deliverables	1,2,3,4	50	Sem End
Project	• Team (each student getting the same mark as it is a team effort) a. 25% for team project management performance and achievement b. 25% for final team deliverables: project management journal and critical self-assessment; system model; detailed construction, deployment and test plan with clearly defined responsibilities for deliverables; outline commercialisation plan	1,2,3,4	50	Sem End

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



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#### Module Workload & Resources

Workload		Full-time mode		
Type	Description	Hours	Frequency	Average Weekly Learner Workload
Lab	Project planning and execution	3	Every Week	3.00
Independent & Directed Learning (Non-contact)	Research and independent project work	4	Every Week	4.00
Total Weekly Learner Workload				7.00
Total Weekly Contact Hours				3.00

Workload		Part-time mode		
Type	Description	Hours	Frequency	Average Weekly Learner Workload
Lab	Project planning and execution	3	Every Week	3.00
Independent & Directed Learning (Non-contact)	Research and independent project work	4	Every Week	4.00
Total Weekly Learner Workload				7.00

Resources	
<i>Recommended Book Resources</i>	
<ul style="list-style-type: none"> <li>• <b>Kazem Sohraby, Daniel Minoli, Taieb F Znati 2007, <i>Wireless Sensor Networks Technology, Protocols, and Applications: Technology, Protocols, and Applications</i>, Wiley Interscience [ISBN: 0470112751, 9780470112755]</b></li> </ul>	
<i>Supplementary Book Resources</i>	
<ul style="list-style-type: none"> <li>• <b>Ian Akyildiz, Derek P. Atherton, Mehmet Can Vuran 2008, <i>Wireless Sensor Networks</i>, John Wiley &amp; Sons, Limited [ISBN: 047003601X, 9780470036013]</b></li> </ul>	
<i>Recommended Article/Paper Resources</i>	
<ul style="list-style-type: none"> <li>• <b>Relevant topical papers from the literature will be made available</b></li> </ul>	