



Institiúid Teicneolaíochta Chorcaí
Cork Institute of Technology

Managing Innovation

Module Details

Short Title:	Managing Innovation DRAFT
Full Title:	Managing Product and Process Innovation
Module Id:	4672

Official Code:		NFQ Level:	9	ECTS Credits:	5
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Coordinator:	Caroline Oreilly
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Description:	This module is designed to allow an engineering student to appreciate the impact of a product or process change / innovation on an organisation. The impact of such a change (assumed to be innovative at some level) whether product or process is considered from the perspective of the impact on the organisation, its strategy, resources, operations, and people and also the impact of the business environment or vice versa. Case studies of successful technologies will be investigated to learn how they were developed and implemented.
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Learning Outcomes:

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

1. Describe the importance of innovation to the success of a firm and view innovation as a management process.
2. Analyse the commercial perspectives in the design and development of a new product or process from an operations management view.
3. Critically analyse the knowledge based activities which must be executed in the development of a new product or process.
4. Critique the impact of product and process change driven by the business environment on implementation of an organisations strategy.

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



Indicative Content

• Innovation:

The study of innovation, innovation process, Interaction between development activities and design environment, innovation and invention, successful and unsuccessful innovation, types of innovation, models of innovation, Innovation as a management process. Innovation and Management strategies, first to market and follower.

• Innovation and Operations Management

The nature of design and innovation in the context of operations. Design requirements, volume, simplification, Process Design and innovation, Innovation in the management of the operations process, Quality circles and process improvement teams, TQM, QFD, ISO 9000 and EFQM. Supply chain. Business Process Reengineering, Operations and Technology.

• Managing Technology and Knowledge

Managing Organisational knowledge, technology trajectories, the learning organisation, technology strategy. Strategic alliances and networks. Managing R&D and R&D projects. The role of technology transfer in innovation.

• Strategy

Mission and Strategy, The Strategic process. Business Functions, The Business Environment, and Tools for Strategic Analysis. PEST, SWOT, Porters Five Forces Model, Organisational aspects of strategy, resource analysis, core competencies, the value chain and portfolio analysis. Strategic options.

• New Product Development

New Product Development Process, Assembling Knowledge, NPD across industries, Organisational structures and cross-functional teams. Teams and project, management, Functional Structures. Matrix Structures, Corporate venturing, Project Management, Marketing and R&D interface.

• Commercial Viability

Accounting and finance function, costing, cost benefit analysis, investment appraisal,

• Marketing

Definitions and orientations, Elements of marketing, Branding, segmentation and the product life cycle, Strategic aspects of marketing. Product and Brand Strategy

• Managing Teams

Managing the New product Development team, key activities, NPD across industries. Organisational structure and cross functional teams. Marketing / R&D interface.

Assessment Breakdown		%
Course Work		100%
End of Semester Formal Examination		0%

Coursework Breakdown				
Type	Description	Outcome addressed	% of total	Assessment Date
Written Report	Analysis and presentation of case scenario material	1,2	50	Week 6
Project	Innovation Plan	1,2,3,4	50	Sem End

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



Module Workload & Resources

Workload		Full-time mode			
Type	Description	Hours	Frequency	Average Weekly Learner Workload	
Lecture	In class review of course material	2	Every Week	2.00	
Tutorial	In class case discussion of business scenarios	1	Every Week	1.00	
Independent & Directed Learning (Non-contact)	Self directed learning	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	
Lecture	In class review of course material	2	Every Week	2.00	
Tutorial	In class case discussion of business scenarios	1	Every Week	1.00	
Independent & Directed Learning (Non-contact)	Self directed learning	4	Every Week	4.00	
Total Weekly Learner Workload				7.00	

Resources	
<i>Recommended Book Resources</i>	
<ul style="list-style-type: none"> • Paul Trott 2008, <i>Innovation Management and New Product Development</i>, 4th Ed., Prentice Hall UK 	
<i>Supplementary Book Resources</i>	
<ul style="list-style-type: none"> • David O Sullivan & Lawrence Dooley 2008, <i>Applying innovation</i>, Sage Publications USA • Edward B. Roberts MIT 2002, <i>Innovation, Driving Product, process and market change</i>, Jossey-Bass: MIT Sloan Management review USA • David Needle 2004, <i>Business in Context: An introduction to business and its environment</i>, 4th edition Ed., Thomson USA • Joe Tidd, John Bessant and Kevin Pavitt 2005, <i>Managing Innovation, Integrating Technological, Market and Organisational Change</i>, 3rd edition Ed., John Wiley & Sons Ltd. UK 	