



TU Dublin Postgraduate Certificate in DESIGN THINKING AND INNOVATION

Student Handbook

Part 1 – Welcome and general introduction to the School and Programme

A welcome from the Programme Chair

Let me take this opportunity to welcome you to the Postgraduate Certificate in Design Thinking and Innovation and give you some practical information about the year ahead.

The Postgraduate Certificate in Design Thinking and Innovation looks at how individuals and organisations use creativity and design thinking skills to identify and choose opportunities that enable innovation. Creative problem-solving skills are developed and enhanced through a range of real-world activities. The programme will provide students with a clear understanding of the importance of innovation. It will provide students with an excellent grasp of the principles underlying creative thinking and problem solving and how to map innovation opportunities, and will explore different types of innovation strategies. You will also discover tools and techniques for developing ideas and managing innovation.

A range of specific career development supports will be provided to help your career planning, and if you have enterprise startup ambitions will be linked to the University's enterprise support functions, as well as our Growth Hub project which will provide guidance to support your ambitions.

This document is your guide to the programme and everything concerning the academic dimension of your studies. Modules are detailed here, with the content, assessment methods and reading lists provided. In addition, we would like to draw your attention to the student regulations which can be accessed on the University website. If there is anything else that you wish to find out or something that you are unsure of, please contact a member of the programme team, their contact details are listed in this handbook.

Wishing you an enjoyable and exciting time in TU Dublin.

Programme Chair

Programme Award Title

Title of Programme	Postgraduate Certificate in Design Thinking and Innovation
Award	Level 9 Postgraduate Certificate
Duration	1 year (Part time)

Graduate Business School

The Graduate Business School (GBS), TU Dublin (City Campus) is a leading provider of postgraduate business education. Internationally accredited, the School was recognized by Chambers Ireland as the leading provider of Postgraduate Business and Executive MBA programmes 2020. The School manages a suite of postgraduate offerings and has a marketing and support role for the Faculty's postgraduate programmes, which are home to over 1,000 students (see table 1). The College has a strong reputation for delivering high quality, impactful education with an applied ethos. Our programmes are designed to equip students with the latest theories and concepts and the ability to apply this learning to make a real and tangible impact in the workplace. The Faculty's portfolio of full-time and part-time programmes cater for both recent graduates and experienced professionals, providing conversion offerings for non-business and business graduates. The Postgraduate Certificate in Digital Leadership and Transformation is an important component of the Faculty's emerging postgraduate portfolio.

Full Time	Part Time	Partnership
MSc Strategic Management	MSc Strategic Management	MSc Digital Marketing and Analysis (Marketing Institute of Ireland)
MSc International Business	Executive MBA	PG Dip/ MSc Management and Marketing (Marketing Institute of Ireland)
MSc Business and Entrepreneurship	MSc Technology and Innovation Management	PG Dip/ MSc Product Management (Technology Ireland Software Skillnet)
MSc Marketing	PG Dip Advertising and Digital Communications	MSc Leadership, Innovation and Technology (Technology Ireland Software Skillnet)
MSc Advertising	MBS Retail Management	PG Dip/ MSc Global Business Services (Technology Ireland Software Skillnet)
MSc Digital Marketing	MSc Fashion Buying and Management	PG Dip International Selling (Enterprise Ireland)
MBS Retail Management	MSc HRM	PG Dip/ MSc Global Business (Ibec)
MSc Accounting	MSc Project Management	
MSc Finance	MSc Sales Management	

	PG Certificate in Sustainability Leadership	
	PG Diploma in Digital Technology (FinTech)	
	PG Certificate in Business Resilience	

Table 1: Level 9 programmes in Faculty of Business

The Graduate Business School is supported in the programme delivery by **GROWTHhub**. This is an initiative funded by the Higher Education Authority Human Capital Initiative that seeks to develop initiatives, including modules, programmes, and extracurricular activities that support the development of growth mindsets and entrepreneurial orientations among TU Dublin students. In relation to this programme GROWTHhub contributes the following:

- Programme design.
- Specialised ideation space and creativity resources.
- Sources exciting challenges from enterprises for students to apply their learning.
- Provides guest speakers to demonstrate linkages between programme learning and application in the real world.

GROWTHhub is also supporting the development of new teaching and learning approaches that will be applied during the programme.

The Programme Team

The Postgraduate Certificate in Digital Entrepreneurship has a very experienced and committed teaching team. The team are active researchers and have extensive industry experience. The teaching team have developed their modules to ensure the learning experience is both challenging and exciting. The team integrate theory and practice extensively within their modules.

Induction

Induction will take place during the week prior to the commencement of lectures, the indicative schedule is provided below.

Activity
Postgraduate Certificate in Design Thinking and Innovation – Welcome and Programme information
Introduction to academic staff
Library resources workshop
Team building exercises

Programme accommodation

The programme will be delivered through a blend of online and on campus delivery, on campus delivery will be in TU Dublin, City Campus, Aungier Street. Lecture rooms will be appropriate for executive education. The college has a number of PC labs which the programme will avail of. TU Dublin (City Campus) libraries have a combined book-stock of 400,000 items, including an increasing number of e-books, and subscribe to 35,000 journals across a wide variety of subject areas. There is also an extensive range of databases catering for the great diversity of courses offered across the University. All resources are listed on the library catalogue <https://www.tudublin.ie/library/cc/> . Most of the electronic resources are accessible via the web, both on and off campus. The Aungier Street Library caters for Business programmes and has a comprehensive collection of resources.

For the purposes of this programme, students will also have access to the GROWTHhub ideation space on the 4th floor at Aungier Street. This is a flexible space where students can work in groups for different creativity and ideation activities. There is also access to adjacent space for students to meet and prepare video and audio content.

The library facilities at Aungier Street support student learning with a range of study spaces, including 2 training rooms, 8 group study rooms, more than 100 open access PCs, wireless access throughout the library and a copy/print room. The library subscribes to more than 65 databases over a broad range of subject areas. The databases are all available online through the library website. Specific business databases include Business Source Complete (one of the world's largest full text business databases, providing full text for close to 3000 scholarly business journals in all major business disciplines), Emerald (contains full text access to over 100 management, accounting and business journals and a great collection of Case Studies and Podcasts that enhance teaching and learning across the College of Business), *Mintel* (provides access to over 50 full text Irish reports from Mintel International, a leading supplier of consumer-based market research information), *Factfinder* (provides full text articles from major Irish business publications, including comprehensive summaries of articles from the business pages of all daily and Sunday national newspapers. It also provides an overview of over 5,000 top Irish companies and analytical reports on a number of industrial sectors) and many more.

GROWTHhub will also provide students with access to a repository of creativity, ideation, entrepreneurship, and innovation resources.

Class notes, pre-reading and additional material will be provided via the College's virtual learning environment Brightspace. All assessments will be uploaded via Brightspace.

Part 2 – Programme information

Common Programme Learning Outcomes

The table below details the College of Business Level 9 Programme Learning Outcomes. These learning outcomes have been adopted across all Level 9 programmes in the past year, with some discretion at a programme level to adapt the learning outcomes where required.

Postgraduate Learning Outcomes: Faculty of Business
Communication: Programmes develop each graduate to be a persuasive communicator and negotiator. Students will be able to use a range of communications strategies to reach agreement with others about appropriate responses to complex and unfamiliar problems within one or more fields of business practice.
Business Analysis & Problem Solving: Programmes develop each graduate to be a capable business analyst & strategic problem-solver. Students will be able to apply a range of quantitative & qualitative research skills to identify & diagnose complex, unfamiliar problems & to use the evidence & findings generated to formulate strategically appropriate solutions within one or more fields of business practice.
Critical Thinking: Programmes develop each graduate to be an autonomous & constructive critical thinker. Students will be able to question, assess & respond independently & creatively to assumptions, propositions & debates within one or more fields of business practice.
Teamworking: Programmes develop each graduate to be a capable team leader in work related contexts. Students will be able to influence others to work collaboratively to address complex and unfamiliar problems within one or more fields of business practice.
Business Knowledge: Programmes develop each graduate to be a knowledgeable business practitioner. Students will be able to demonstrate an integrated understanding of key concepts, techniques & trends in one or more fields of business practice & the challenges & opportunities involved in applying this knowledge in diverse contexts.

Ethics & Social Responsibility: Programmes develop each graduate to be an ethically- and socially- responsible professional. Students will be able demonstrate ethical & social awareness & responsibility in personal decision-making & behaviour within one or more fields of business practice.

Programme Specific Learning Outcomes

On successful completion of this programme learners will have achieved the following programme specific learning outcomes:

1. Demonstrate a systematic understanding of design thinking process using user involvement, problem framing and understanding, problem solving, experimentation, and visualisation in the context of startup and innovation projects.
2. Examine innovation from the perspective of company strategy through the lens of products, services, business models, processes, experiences, and organisation.
3. Select and apply agile management and collaboration tools.
4. Be able to scope, plan, and execute a market research project for a new product, service, or market.
5. Have a systematic understanding and be competent in developing the business model for a new venture.

Graduate Attributes

It is important that all TU Dublin programmes provide students with a range of opportunities to develop, practice and be assessed on an agreed range of key employability skills or graduate attributes. TU Dublin graduate attributes include:

Engaged: Civically engaged, socially responsible graduates with an international outlook who contributes meaningfully and positively in their professional, community and social environments.

Enterprising: Graduates who have the skills, knowledge and attributes needed to apply creative ideas and innovations and to find practical solutions.

Enquiry based: Graduates with a spirit of curiosity and a desire to learn, motivated to draw upon existing knowledge, generating new ideas, seeking out learning opportunities, exploring the application of theory to practice and actively creating new knowledge.

Effective: Effective, highly skilled, and confident graduates with the capacity to achieve desired results, believing that they can make a positive difference.

Expert in chosen subject discipline: Graduates with the professional knowledge and capacity independently to practice, reflect, review, and build upon disciplinary expertise and judgment.

More details of TU Dublin graduate attributes can be found at <http://www.dit.ie/teaching/graduateattributes/usingthegraduateattributes>

The programme provides students with the opportunity to develop these graduate attributes across the programme modules, examples are provided below:

Graduate Attribute	
Engaged	Programme learning will be on specific and real-world contexts, including engaging a creativity and design thinking challenge for a context provided by an enterprise in the Creativity and Design Thinking module, and developing an actual enterprise opportunity across other modules and particularly in the Venture Validate module.
Enterprising	The modules Creativity and Design Thinking, Disciplined Innovation Process , and Venture Validate all contribute to supporting the development of enterprising graduates. Each module will focus on the application of theory to practice.
Enquiry based	Students will acquire competencies in enquiry-based approaches in the Creativity and Design Thinking, Disciplined Innovation. Process , and Venture Validate modules.
Effective	Students will learn frameworks and tools to apply in the context of a creativity processes in the Creativity and Design Thinking and Disciplined Innovation Process modules. These modules will focus on the application of theory to practice.

Expert	Students will generate a deep understanding of the innovation management frameworks in the Innovation Management module and innovation processes in the Disciplined Innovation Process module.
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Programme schedule

Module	Sem	ECT	Core/ Optional	Assessment weightings
Creativity & Design Thinking	1	5	Core	Team based project – 60% Individual reflection – 20% Individual e-tivity – 20%
Innovation Management	1	5	Core	E-tivity – 30% Team case study – 30% Market research plan – 40%
Market and Customer Analysis	2	5	Core	E-tivity – 30% Team case study – 30% Individual case assignment – 40%
Agile Project Management	1	5	Core	Team based project – 50% Individual assignment – 50%
Disciplined Innovation Process	2	5	Core	Team project presentation – 40% Individual reflection – 30% Student led seminar – 30%
Venture Validate	2	5	Core	Venture report – 60% Video presentation – 20% Reflection – 20%

Part 3 - Module Descriptors

Module Code	Pre-requisite Module codes	Co-Requisite Modules code(s)	ISCED Code	Subject Code	ECTS Credits	NFQ Level (CPD) #
					5	9
Module Title	Creativity and Design Thinking					

School Responsible:	Graduate Business School
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Module Overview:

This module provides students with a range of skills and tools to allow them to unlock their creativity in a focused manner and enable them to generate ideas creatively and communicate them. The module focuses on increasing the student's creative thinking skills, problem solving skills, team-working skills, design thinking and lateral thinking abilities through hands on exercises, tasks, and challenges. Over the course of the module, the student will actively engage in developing creative solutions to problems and learn methods to critically evaluate these solutions.

The module will include a particular emphasis on Design Thinking, an iterative process that focuses on understanding user needs, challenging assumptions, and redefining problems. The Design Thinkers approach challenges from a human point of view, by (i) identifying the right discovery tools to build empathy and better understanding, (ii) thinking creatively and collaboratively to inspire new ideas, and (iii) testing and validating ideas and prototypes.

This module is designed to build the students' understanding and practical application of creativity techniques and design thinking.

Learning Outcomes (LO):

On Completion of this module, the learner will be able to

1	Demonstrate an in-depth knowledge and critical understanding creativity and design thinking and how they can be applied in a variety of areas to generate solutions.
2	Use problem-solving and design thinking tools and techniques and understand the process for initiating and using creative techniques within project structures

3	Demonstrate the applications of each of the Design Thinking steps and the implementation of design thinking philosophy to appropriate aspects of innovation practices.
4	Combine a variety of different techniques to approach problems / opportunities that will ensure they have fully investigated the root issues associated with problem or opportunity.
5	Develop team working, communication and presentation skills.

Indicative Syllabus:

Creative Thinking: Exploring creativity through tasks, techniques and discussion
 Innovation Sprint: Solving real-world problems set by host organisations
 Idea Generation Techniques & Ideation Tools
 Design Thinking – principles, strategy, and steps
 De Bono Thinking Methods
 Narrative Structure for Pitching and Presenting
 Teamwork Frameworks: Theory and Practice
 Practical Prototyping

Learning and Teaching Methods:

The modules take a 'learning by doing' approach, combining individual, and group activities and tasks including task-based learning, real world challenges, peer and group work, enquiry and problem based learning, presentations, discussion and reflection.

An industry challenge project is used to assess this module, where the students are set a challenge from an industry partner and are required to present their solution based on creativity and design thinking techniques to the industry partner and peers.

Facilitating online engagement students will be required to undertake two e-tivity assignments where they make a submission on a selected creativity and design thinking topic and peer review the submissions of two other students.

At the end of the module, the students are asked to turn in a reflective essay about the industry project.

Module Delivery Duration:

This module will be delivered over one semester.

Assessment		
Assessment Type	Weighting (%)	LO Assessment (No.)
Group Project	60%	2, 3, 4,5
Individual Reflective Assignment	20%	1, 2, 4, 5
Individual E-tivity Assignment	20%	1

Module Code	Pre-requisite Module codes	Co-Requisite Modules code(s)	ISCED Code	Subject Code	ECTS Credits	NFQ Level (CPD) #
					5	9
Module Title	Agile Project Management					

School Responsible:	Graduate Business School
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Module Overview:
<p>Agile Project Management (APM) is emerging as standard practice in industries as varied as Finance, Marketing and Construction and is ubiquitously applied in technical projects in all sectors. Agile Project Management is an iterative and incremental process, where developers and project stakeholders actively work together to identify and prioritise requirements while managing inevitable change.</p> <p>Agile is an umbrella term that encompasses several processes. This module focuses on common practices and frameworks used by teams including Scrum, Kanban and XP. Content is applied in practical exercises to illustrate how Agile project management techniques can be used to manage a project led by value driven delivery.</p>

Learning Outcomes (LO):	
On Completion of this module, the learner will be able to	
1	Have a systematic understanding of the different Agile methods
2	Apply Agile Project Management methods to form successful Agile teams
3	Engage and utilise Agile practices to manage agile projects
4	Select from and apply a range of Agile management and collaboration tools

Indicative Syllabus:
<p>Agile Framework: Benefits, Values, Principles, Practices</p> <p>Methodologies: Scrum, XP, Kanban, DSDM</p> <p>Scrum Teams: Team Roles, Responsibilities</p> <p>Scrum Process Flow: Scrum Cycle</p> <p>Agile Management Events: Plan, Sprint, Review, Retrospective</p> <p>Extreme Programming (XP): Concepts, Practices</p> <p>User Stories: INVEST characteristics, User Story creation</p> <p>Artefacts: Sprint & Product backlog management</p> <p>Estimation & Prioritization: Challenges, Practices</p>

Testing: Test Driven Development (TDD), Testing types
 Metrics: Measurements, Burndown charts, Velocity
 Management & Collaboration Tools: Jira, Slack
 Technical Project Management Trends: Internet of Things, Big Data (Architectures, Hadoop, NoSQL, Data Science)

Learning and Teaching Methods:

The module assessment will be a mixture of in class simulation exercises and written/multiple choice exam questions requiring the participants to apply module learning in a structure manner that addresses the learning outcomes.

Module Delivery Duration:

Over one semester.

Assessment

		LO Assessment (No.)
This module is assessed by means of formative and summative assessment.		
Formative assessment This will take the form of simulation exercises.	50%	1,2,3,4
Summative assessment Team case study assignments.	50%	1,2,3,4

Module Code	Pre-requisite Module codes	Co-Requisite Modules code(s)	ISCED Code	Subject Code	ECTS Credits	NFQ Level (CPD)#
					5	9
Module Title	Innovation Management					

School Responsible:	Graduate Business School
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Module Overview:
<p>Innovation is recognised as critical to the achievement of competitive advantage in both manufacturing and service organisations however managers face many challenges if they are to innovate successfully. Innovation covers a range of activities from the development of new product/service offerings through to the improvement of operational processes and business models. Successful commercialisation distinguishes innovation from invention through the delivery and capture of customer value. Innovation extends beyond the capability to develop and renew product offerings, to encompass how they are created and delivered to the market.</p> <p>The module focuses on key thematic areas namely: innovation strategy, idea generation, prioritisation, implementation, and people/organisation. Through the themes, students will gain an understanding of the complex processes needed to ideate, prototype, validate and commercialise products supported by theoretical models and practical tools. Because innovation is context dependent, emphasis is placed on the application of models and analytical tools that clarify the interplay between competition, new ideas, patterns of technological and market change, and the structure and development of internal capabilities to manage innovation successfully, regardless of the organisation or sector.</p>

Learning Outcomes (LO):	
On Completion of this module, the learner will be able to:	
1	Examine Innovation from the perspective of company strategy.
2	Identify and have a critical awareness of the role of innovation as a key source of competitive advantage through the lens of products, services, business models, processes, experiences, and the organisationc
3	Demonstrate a high level and critical awareness of the mechanisms required

	for effective innovation – otherwise defined as the successful commercialisation of new ideas
4	Examine the role of structure, process, and culture in enhancing innovation capabilities
5	Apply advanced innovation and commercialisation methodologies to competitive business.
6	Demonstrate a systematic understanding of the degree of integration (people, processes, technology required for innovation.
7	Develop an Innovation Management Toolkit.

Indicative Syllabus:

Innovation: Role and Impact:

Innovation; ideas; creativity and knowledge. Characteristics of innovation and value creation. Innovation across the value chain. Linking innovation to business discipline and strategy.

Aligning Innovation with Organisational Strategy

Strategic Analysis, choice and implementation.

Business Model Innovation, Product & Service Innovation, Organisational Innovation, Experience Innovation, Process Innovation.

The Innovation Audit and Diffusion of Innovations:

Innovation as a process. The innovation pentathlon framework. Analysing the process from research to development to commercialisation. The development funnel, linking strategy and resources. The innovation audit.

Prioritising, selecting and managing the portfolio:

Types of business and individual creativity. Managing and promoting knowledge transfer. Identifying customer needs – outcome driven innovation, empathic design and lead users. Identifying priorities through conjoint analysis.

Implementing New Product Development

Evolution of innovation/project development. The stage gate process. Rules of engagement. Scorecards. Next generation product development.

Contrasting services and products

Services and the economy. Understanding service sector innovation. Research and development in services. The product-service portfolio. New service development processes and service blueprinting.

Open Innovation

Open approaches to developing and commercialising. Technology. Innovation outsourcing. Strategic advantage/disadvantage of internal R&D. Division of labour within and across organisations. Making good use of partners.

People, Organisation and Innovation

Organisational culture and innovation. Managing innovation teams. Marking project teams' work. Managing people for innovation. The Ambidextrous Organisation. The Leadership Role. Organisation and the Innovation Rules.

Innovation Performance

Assessing current performance. Roles of a measurement system. Innovation process and outcomes and the role of digitisation. The innovation audit. Priorities and linkages. Change management and innovation. Inputs, processes, outputs and outcomes. Measuring sustainable value creation. The barriers to effective performance measurement.

Learning and Teaching Methods:

The course combines lectures, case studies and guest seminars. Class sessions will consist of interactive discussion, exercises and application of models and tools. Assignment work will have a bias towards theoretical rigor with application to practice. To the extent possible, learners will employ organisational practice as a framework for learning.

Module Delivery Duration:

Module is delivered in: One Semester

Assessment		
Assessment Type	Weighting (%)	LO Assessment (No.)
Continuous Assessment		
Discussion board critiques of selected innovation domains	30%	2,3,4,5,6
Case/Topic Analysis: Analysis, debate, presentation, and discussion of contemporary innovation themes.	30%	1
Critique: The written assignment involves a critique of innovation audit frameworks vis a vis the assessment of innovation capacity in an organisation of the student's choosing. The output of the critique is a suggested blueprint (no primary research) for analysis of that organisation given its profile and context.	40%	1,2,7

Module Code	Pre-requisite Module codes	Co-Requisite Modules code(s)	ISCED Code	Subject Code	ECTS Credits	NFQ Level (CPD)#
					5	9
Module Title	Venture Validate					

School Responsible:	Management
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Module Overview:
<p>The aim of this module to develop and harness learner entrepreneurial and creativity skills. The course is designed to develop a student's ability to discover, evaluate and develop ideas into commercially viable concepts, and build those concepts into promotable venture propositions.</p> <p>The course is based on the premise that there is a very identifiable process involved in developing and testing new venture ideas. A central learning outcome for the course is to provide learners with the tools and processes to address each of the stages of new venture planning, including (i) team formation and alignment; (ii) ideation; (iii) business model development; (iv) testing the market; (5) finalizing the business plan; and (vi) pitching and promoting the new venture proposition.</p>

Learning Outcomes (LO):	
On Completion of this module, the learner will be able to:	
1	Have an in-depth knowledge of the dynamics of entrepreneurial teams.
2	Have a critical awareness of the mechanisms for new venture ideation processes.
3	Have a systematic understanding and be competent in developing the business model for a new venture using the business model canvas.
4	Select from and apply advanced skills to market test the desirability, feasibility, and validity of the business model.
5	Develop and present a pitch and portfolio for a new venture.

Indicative Syllabus:

1. Team formation & Alignment

Aligning the aspirations and expectations of the members of a founding team.

Align each team member's objectives.

The importance of Revenue in a new venture.

Estimate the revenue requirements for a new venture.

2. Ideation

Potential sources of opportunities.

Processes for identifying opportunities

Processes for evaluating opportunities

Criteria for selecting an opportunity

3. Business Model Development

The business model and its importance to a new venture

Desirability of the business model

Feasibility of the business model

Viability of the business model.

4. Testing The Market

Critical assumptions for the venture

Appropriate test for critical assumptions

Collate and analyse test results

Adapt and refine business model based on findings

5. Plan/Portfolio

Select and present the information as a new venture portfolio/ outline business plan

Prepare a pitch deck for the new venture

Learning and Teaching Methods:

The module is delivered over six 3-hour workshops with learning between workshops facilitated by an online new venture validation software – SimVenture Validate. This helps people to develop, map, and test their entrepreneurial ideas. Working with the platform and through the process, users develop greater confidence in their own thinking and ability. The online resource allows users to structure thoughts to a greater depth and as a result explore concepts not previously considered. All work is saved to a Canvas as 'digital cards' which can be viewed and edited at any time.

Module Delivery Duration:

Module is delivered in one Semester.

Assessment**Assessment Type****Weighting (%)****LO Assessment****Continuous Assessment**Venture Validation Report

60%

1-4

A final report produced based on the SimVenture Validate software.

Presentation

20%

5

A video pitch presentation of business plan.

Individual Reflection

20%

1-5

Students will be required to prepare a reflective piece on their learning during the module. This encourages students to reflect on their entrepreneurship learning in relation to their venture project and identify future preparation requirements.

Module Code	Pre-requisite Module codes	Co-Requisite Modules code(s)	ISCED Code	Subject Code	ECTS Credits	NFQ Level (CPD)#
					5	9
Module Title	Market and Customer Analysis					

School Responsible:	Graduate Business School
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Module Overview:
<p>Market and Customer analysis are critical stages for an organisation that uncover and validate the market potential for a product or service. The aim of this module is to provide students with the knowledge and skills to implement a process for gathering, analysing, and verifying market intelligence for a new product or service or market.</p> <p>The module instructs on the processes for market research and analysis, customer profiling and positioning, and how the synthesis of such in-depth, qualified information reduces the risk of expensive investment mistakes when conducted prior to product or service development.</p> <p>The module offers a set of analytic tools to research and then prioritise markets based on their attractiveness along key comparative dimensions. The trade and market research process can be used to underpin the market sequencing, entry, and development process.</p> <p>This module combines theory and instruction on structured processes, highlighted by practical industry examples, and backed up with case studies and readings.</p>

Learning Outcomes (LO):	
On Completion of this module, the learner will be able to:	
1	Have a systematic understanding of how to scope, plan and execute a market research project for a new product, service or market.
2	Have a critical awareness of how market intelligence is used in strategic decision-making.
3	Deliver detailed competitor analysis information for a product or service, highlighting potential areas of differentiation/ distinct competence
4	Demonstrate a range of standardized and specialised market research tools appropriate for business to business and business to customer environments.

Indicative Syllabus:*Product and Market Lifecycles:*

Stages of market lifecycle. Identifying and understanding the implications of introducing new products at each stage of the market lifecycle. Product lifecycle, stages, process and the product manager role.

Market Research:

Definitions, methodologies, terminology. Primary and secondary research. Information – what is relevant, where and how to find it. Market research process. Quantitative vs Qualitative research. Recommended methodologies when introducing market research.

Competitor Analysis:

Definitions, methodologies, terminology. Competitor profiling. Competitor Array. Feature/Functionality matrix. Potential Competitors.

Customer Profiling:

'User' and 'Buyer' definitions. Technical, Political and Financial buyers. Customer personas. Identifying customer needs. 'Voice of the customer'. Segmentation.

Learning and Teaching Methods:

The course combines lectures, case studies and guest seminars. Class sessions will consist of interactive discussion, exercises and application of models and tools. Assignment work will have a bias towards theoretical rigor with application to practice. To the extent possible, learners will employ organisational practice as a framework for learning.

Module Delivery Duration:

Module is delivered in: One Semester

Assessment		
Assessment Type	Weighting (%)	LO Assessment (No.)
Continuous Assessment		
Discussion board critiques of selected market research assignments.	30%	2
Group Case Analysis: Analysis, debate, presentation, and discussion of market research case studies.	30%	1, 2, 3, 4
Individual Assignment: The written assignment involves preparation of a market research study for a given product and market including detailing appropriate quantitative and qualitative data collection and analysis approaches.	40%	1, 3, 4

Module Code	Pre-requisite Module codes	Co-Requisite Modules code(s)	ISCED Code	Subject Code	ECTS Credits	NFQ Level (CPD)#
					5	9
Module Title	Disciplined Innovation Process					

School Responsible:	Management
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Module Overview:
<p>Innovation is often equated with its products, not its process. That's one of the reasons it's often misunderstood and poorly done at an entrepreneurial level because the emphasis is placed on the idea, not the means of generating, realising, refining, executing, and evaluating those ideas. These are the often invisible, yet critical features: the mindsets, skillsets, and tools that help people to innovate. This module is based on the three building blocks that underscore innovative thinking for entrepreneurs:</p> <ul style="list-style-type: none"> - Toolset: The collection of tools and techniques used to generate new options, implement them in the organization, communicate direction, create alignment, and cause commitment. - Skillset: A framework that allows innovative entrepreneur to use their knowledge and abilities to accomplish their goals. More than tools and techniques, it requires facility, practice and mastering the process. - Mindset: The attitudes and resulting behaviours that allow the tools and skills to be effective. The mindset is the fundamental operating system of the creative thinker and distinguishes those entrepreneurs who enable creative thinking and innovation from those who shut it down. <p>These things can be learned and are foundational if one wants to become and succeed as an innovative entrepreneur. The Disciplined Innovation Process module aims to deliver the learning opportunity for students to master all three areas. It will not only equip students who are either current or aspiring entrepreneurs with the necessary skillset, but also allow developing the mindset required to identify and develop new ventures, with an implicit goal to promote value creation. Disciplined Innovation Process module aiming towards development of participant's entrepreneurial mindset by equipping them with a skillset required for managing innovation process and subsequent value creation and delivery.</p>

Learning Outcomes (LO):	
On Completion of this module, the learner will be able to:	
1	Critically understand the various disciplined innovation processes for managing value-driven innovation.
2	Select from and apply innovation tools from the worlds of design thinking and Lean Startup to business model design.
3	Design and validate the conceptual business model using approaches like value proposition canvas, lean canvas, and the business model canvas.
4	Understand the principles of design thinking as a creative, innovative, data intensive and user-driven iterative approach within product development.
5	Demonstrate a systematic understanding of the different phases of the design thinking process including user involvement, problem framing and understanding, problem solving, experimentation and visualisation in the context of startup and innovation projects.

Indicative Syllabus:

The module consists of three parts as explained below:

1. Mastering Disciplined Innovation Processes

This part of the module will focus on managing innovation processes using a disciplined approach.

It will present relevant concepts and enable the learner to successfully manage the innovation process through all stages from idea generation to commercialisation on a reliable and repeatable basis.

2. Mastering value propositions and business models

This part of the module aims at teaching participants how to better understand customers and create value propositions, it will also enable them to map, design, assess, and test value-driven business models. During this part of the module, participants will be introduced with various canvas-based approaches and techniques like Lean canvas, business model canvas and value proposition canvas.

3. Mastering Innovation driven design thinking

This part of the module introduces the learner to the essentials of Design Thinking and will guide participants who are considering incorporating design thinking into their current or future business development projects. The learner

will be introduced to the key theories and concepts of Design Thinking and then work in a team to address a real-world challenge. Over the course of the module, participants will be introduced to the five stages of Design Thinking through experiential learning activities and team-based activities.

Learning and Teaching Methods:

The designed module is proposed to be delivered through blended/hybrid approach (Combining face-to-face and online delivery) to maximize the participation. It will be based on learning by doing approach, combining individual, group and often team activities, tasks and projects including presentations, discussions, and reflection.

Students will learn through a series of lectures, tutorials, workshops, exercises, and projects. Practical exercises and projects will provide students with the opportunity to develop critical thinking, creative problem solving, and visualisation methodologies.

The course will also include a dedicated session where students will work on a real case problem which will require them to apply the design thinking framework, concepts, and tools to deal with innovation problems.

Module Delivery Duration:

Module is delivered in: One Semester

Assessment		
Assessment Type	Weighting (%)	LO Assessment (No.)
Continuous Assessment: Team Project Presentation	40%	2,3
Continuous Assessment: Individual Reflection Report	30%	1
Continuous Assessment: Student led seminar	30%	4,5