



## Overview

### **GST10: Innovation & Research Commercialisation** Module Descriptor

This GST10 module is delivered by MaynoothWorks in collaboration with Design Innovation. GST10 aims to equip researchers with the skills and tools to improve their ability to innovate and act with an entrepreneurial mindset. This includes identifying the wider impact of their research, commercialising a research outcome, effectively collaborating within a team and engaging with industry.

**At present we plan to deliver the module face to face on campus – virtual delivery is a backup option.**

Some of the key themes explored include understanding the research landscape, intellectual property, legal contracts, spin-out companies, technical marketing, team building and interacting with industry and NGOs. This module adopts a group work approach to introduce students, in a practical way, to team leadership and relationship building, as well as to enable the development of their communication skills.

This year we have optimized the module content and designed workshops to help empower students and provide them with the tools to address specific COVID challenges and opportunities in the new normal.

Working from opportunity identification and problem statement to shaping a spin-out opportunity.

### **GST10 Module Content**

The module content is delivered over three days on October 26, 27<sup>th</sup>, 28<sup>th</sup> and Dec 8<sup>th</sup> 2021 and includes:

1) Introduction to Commercialisation of Research (30 minutes)

This aim of this session is to provide researchers with an understanding of the current research landscape by identifying and discussing the following:

- The national research strategy and Irish funding agencies
- The role of industry/NGOs: hi-tech ecosystems, public sector, IP market-place
- The role of the University and the role of MaynoothWorks

2) Intellectual Property (30 minutes) Tutorial/Workshop (30 minutes)

This session explores the potential to develop IP from the student's research and to introduce different types of IP including patents, copyright, trademarks, trade secrets, etc. The session will also explore the implications of Open Access.

3) Building better collaborations through understanding contracts (30 minutes) Tutorial Workshop (30 minutes)

Research students will be provided with an understanding of the legal obligations of research funding terms and conditions and contracts and how to dissect a legal contract. In addition, the session will review the role of licensing contracts, Material Transfer Agreements (MTAs) and Non-Disclosure Agreements (NDAs).

4) Spin-Out Companies (30 minutes) Tutorial /Workshop (30 minutes)

This session aims to explore, with researcher students, the potential for their research/knowledge to spin-out a company, as well as how to use Winning Business Plans/Canvas templates, how to select and approach investors and how to structure the funding transaction. This will be explored through case studies. Introduction to Business Canvas template/Lean Launchpad process

5) Technical Marketing & Product Development: Understanding the Impact of your Research (30 minutes) Tutorial /Workshop (30 minutes)

Within this session, research students will reflect upon the value of their research/knowledge and learn how to use market analysis, market drivers, proof of concept/proof of market and product development to understand how their research/knowledge can provide solutions to existing problems, or as a platform to develop emerging technologies.

6) Interacting with Industry and/or NGOs (30 minutes) Tutorial/Workshop (30 minutes)

This session aims to introduce researchers to the anatomy of an industrial organization and/or NGO, industry/policy needs and drivers, as well as the basics of presentation and negotiation.

7) MaynoothWorks 3 x 1hr Tutorial/Workshops (Options)

This interactive session employs case studies to review examples of Business Model Discovery, Lean Canvas, Value Proposition and Customer Development.

Students will prepare an elevator pitch on how their research/knowledge could impact industry.

Examples may include:

- Problem Statement development...Framing the right question
- Business Canvas...Value Proposition/Product/Market fit
- 10 types of Innovation canvas for Company/Industry re-invention.

8) Business Exercise: Team Building (presentations interactive Q&A)

Students develop and present a presentation for a new product /company in groups. The presentation will be supported by Business Canvas which is a strategic management and lean startup template for developing new or documenting existing business models both for the private and the public sector. This session will introduce students to team, leadership, communication and relationship building.

Each Team to present for 10 minutes/10 slides on:

- Their chosen Product/Technology or
- Canvas to re-invent existing COVID challenged company or Industry
- Canvas to exploit new COVID opportunity.

### Learning Outcomes

Upon completion of this module, the student will be able to:

- Identify and discuss the key players involved (State, University, Industry/NGO's), and the systems/interactions required to commercialise research.
- Evaluate the potential impact of research/knowledge and its potential value proposition.
- Demonstrate an awareness of IP issues relating to research.
- Articulate the legal obligations of the University and the research student, as well as the legal constraints in relation to dissemination of research and confidential information.
- Implications for your research when entering into contracts with different funding agencies.
- Develop a business plan/canvas and present to potential investors.

- Evaluate tools provided to develop a Business Canvas to re-invent a COVID challenged company or Industry or exploit a new COVID opportunity.
- Distinguish market research options and channel partners for commercially viable research.
- Characterise the anatomy of an industrial organization and/or NGO and industry needs and drivers.
- Negotiate and function as part of an effective team.

Teaching & Learning Methods (requires clarification)

Module engagement will be virtual only this year, with self-paced components and group components.

<b>Delivery methods</b>	<b>Hours</b>
Lectures	16-24
Labs / Practicals / Tutorials	0
Planned learning activities	0
Independent student activities	90 (up to)
Total	106

Assessment (requires further detail)

**Module Graded (numeric value) or Ungraded (Pass/Not Passed):** Ungraded

**Continuous Assessment detail(s):** Continual assessment - including group business presentation – all participants are required to attend and participate in all 4 days of GST10 to be eligible for module credits.

<b>Assessment type</b>	<b>Weighting</b>	<b>Duration</b>
Business Canvas development/Presentation	80%	
Customer Development	20%	
Other	0%	
Total	100%	

The module will be assessed on the basis of Pass/ Not pass. Attendance and participation on all 4 days is a requirement.

Repeat Options

**Are Supplemental registrations permitted?** No

Pre-requisites

N/A

Co-requisites

N/A

## Timetable

This graduate skills module is offered in the form of virtual seminars/workshops run over 3 days in semester 2.

Dates: (Tuesday 26<sup>th</sup>, Wednesday 27<sup>th</sup> Thursday 28<sup>th</sup> October & Wednesday, December 8th). The module also includes up to 90 hours of self-directed study and project work. Attendance on all 4 days of GST10 is compulsory.

### **Profile of Trainers: GST10 is run through MaynoothWorks and Design Innovation, brief biographies of trainers below:**

**Paul Tyndall**, Commercialisation Executive, MU PhD DNA Technology, Paul joined Maynooth University as a Commercialisation Executive in 2009 and is employed as a case manager for the Biosciences thematic area, working from invention disclosure through to spin-off or license. Paul has shaped multiple licenses and spin-out companies from a number of Irish Universities and Institutes of Technology. Paul has 20+ years Industry work experience including positions as Technical Manager with Zeneca, Business Development Manager with Enfer, an Irish SME and Technical Director with an indigenous start-up company.

**Peter Conlon**, Commercialisation Executive, MU BEng Electronic Systems, CEng. Peter is a Professional Chartered Engineer with 20 years industry experience including product development and management roles with Agilent Technologies and MV Technology - a successful Irish start-up company.

**Karen Griffin**, Karen obtained a PhD (Neurophysiology, UCD) in 2011 and subsequently went on to complete a Master's in Management with UCD Smurfit School of Business. More recently she has completed RTTP recognised courses with the aim to apply for RTTP registration in Q2 2019. Karen has worked in both the private and public sectors, starting her career with a digital pathology company (spin-out, later acquired by Leica).

**Trevor Vaughn**, Trevor is an Assistant professor of Design Innovation at Maynooth University and an expert in human-centered innovation, strategy and design. In 2018 Trevor founded the Maynooth University Innovation Lab (Mi:Lab) with the support of the Higher Education Authority. As Principal investigator, Trevor leads a team of Designers and Anthropologists in exploring, defining and creatively tackling higher education system challenges. Trevor is a founding partner of Actionable, an insight and innovation consultancy which combines human insight, business intelligence & creative thinking to tackle organisational challenges. Here he works with many of Ireland's leading organisations and state agencies. Prior to entering Academia, Trevor headed design at ASC, which developed several world-first surgical innovations, among these, his work on single-site surgery for Olympus was awarded a place in the prestigious Cleveland Clinic's top 10 innovations of 2009. Across his innovation career, Trevor has accumulated a portfolio of over 50 patents, published widely on innovation and founded a number of entrepreneurial ventures. Recently, Trevor appeared as an expert on the critically acclaimed RTE series "The Big Life Fix".