

Scoil Ghnó agus Eacnamaíochta J.E. Cairnes J.E. Cairnes School of Business and Economics



MSc Health Economics

College of Business, Public Policy & Law School of Business and Economics

The MSc in Health Economics is offered within the Economics Discipline

This handbook is issued for the **guidance** of students only. Course content and course options may change and students are advised to verify information in this handbook with the Programme Director and, where appropriate, module coordinators.

The information provided is intended for those who are joining the MSc Health Economics, whether part-time or full-time, in **2023**.

The information provided here is correct and up-to-date, to the best of our knowledge, at the time of writing (14 August 2023), but is subject to change, particularly with respect to public health guidance and university policies.

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Introduction & Welcome

Dear class of 2023/24,

I am delighted to welcome you to Economics at University of Galway, for those who are joining us for the first time, and to welcome back those who have studied with us previously. I, along with all the teaching and support staff involved in the programme, are very much looking forward to meeting you in the coming weeks.

You are joining a programme that is unique in Ireland in terms of the focus on health economics, and we hope that studying with us will be a highly rewarding and enjoyable experience. This is an important and exciting time to study health economics.

The team of lecturing staff that contribute to the programme are experienced, dedicated and highly expert. As I hope you will discover throughout the time you spend with us, you are also joining an Economics discipline that is highly research active in the area of health economics, across a range of sub-themes including economic evaluation, health preference elicitation, health policy and health econometrics, and this is reflected in the more specialist modules on the programme. Economics at the University of Galway also hosts two relevant research centres: the Health Economics and Policy Analysis Centre (https://www.universityofgalway.ie/health-economics/) and the Centre for Economic Research on Inclusivity and Sustainability (CERIS).

We are continually striving to improve our programme offering. In recent years we have introduced a number of exciting innovations to the MSc Health Economics programme. We have developed two mentorship programmes in conjunction with Janssen and the Healthcare Businesswomen's Association which gives most students the opportunity to be mentored by an experienced professional in the health economics field in Ireland. We have expanded the number of guest lectures from former graduates of the programme. In March 2024, we hope that several students will attend the Fourth Masterclass on Health Economics which will be held in Cork.

Students now have the option to either write an applied placement report or a traditional academic research dissertation after the end of semester 2 teaching. Further details of these and other innovations on the programme will be included here in the handbook and discussed in detail during the in-person orientation session, which is planned <u>for Monday 4th September</u> <u>at 3 p.m.</u>

In terms of the mode of delivery, students are expected to attend <u>in-person on campus</u> for all aspects of their programmes, with attendance monitored throughout the academic year. We are conscious that many of our students have professional obligations that may make it difficult for them to attend all lectures in person. We will endeavour to facilitate remote learning as much as possible.

I trust you will find the contents of this handbook useful and that it will provide a first point of reference for general information about the programme and about the university more generally. If you have any questions or concerns, I would point you in the first instance to the various links and resources that are provided here in this handbook. There are many supports available to you from the university, and you should feel free to avail of these as needed. Please also feel free to contact me, and/or Charmain Byrne (who provides excellent administrative support for the programme), directly if you wish, and we will do our best to help and support you in any way we can.

Finally, I would like to wish you all the very best for the year ahead.

With best wishes,

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Brendan Kennelly Senior Lecturer in Economics University of Galway Director <u>M Sc. Health Economics</u> e: <u>brendan.kennelly@universityofgalway.ie</u> | a: Room 235, Aras Cairnes, North Campus, University of Galway.

Useful Contacts:

- 1. Brendan Kennelly (Programme Director)
 - E: <u>brendan.kennelly@universityofgalway.ie</u>
- 2. Charmain Byrne, Administrator (Economics) Supports programme administration.
 - E: <u>charmain.byrne@universityofgalway.ie</u>
- 3. Professor John McHale, Head of Economics.
 - E: john.mchale@universityofgalway.ie

About University of Galway

Founded in 1845, we've been inspiring students for over 175 years. University of Galway has earned international recognition as a research-led university with a commitment to top quality teaching. Galway ranks among the top 1% of Universities in the world. Our prestigious history spans almost two centuries. Our spectacular location boasts the unique landscape and culture of the west of Ireland. Our global network connects us to partners around the world. Our researchers are shaping the future. Our students are shaping their own. Visit www.universityofgalway.ie to learn more about the University of Galway.

Health Economics at University of Galway

The MSc Health Economics is hosted by the Discipline of Economics at University of Galway, part of the J.E. Cairnes School of Business and Economics, which is in turn one of three Schools in the College of Business, Public Policy and Law at University of Galway.

Throughout the programme you will mainly be engaged with academic staff of the Economics discipline. You can find staff profiles and contact details at this link (see also the profiles of core staff teaching on the programme towards the end of this document).

www.nuigalway.ie/economics/people/

Economics at University Of Galway has a long and proud tradition of engaging with health issues, both through our teaching and research. The MSc in Health Economics was introduced in 2010. It has since established itself as the only postgraduate programme in Ireland dedicated to health economics. By now, well over 200 people have graduated from the programme. Many graduates are employed in leading public sector organisations in Ireland including the National Centre for Pharmacoeconomics, the Health Information and Quality Authority, and the Irish Government Economic Evaluation Service. A large number of graduates are employed by leading pharmaceutical companies in Ireland including Novartis, Janssen, MSD, Pfizer and GSK. In addition, several graduates have proceeded to study for their doctorates in health economics at various universities in Ireland and elsewhere. A considerable number of our graduates have been international students and several of these have taken up important positions in health policy in their home countries.

Health Economics represents one of the core areas of research focus within Economics at University Of Galway, and this is reflected in the presence of a highly active research group in the area of health economics:

Health Economics and Policy Analysis Centre (please link to https://www.universityofgalway.ie/health-economics/)

The aim of the Health Economics and Policy Analysis Centre is to develop, apply and teach methods for the economic analysis of health and health care.

Economics events

Economics at University Of Galway strongly encourages economics students' wide and deep engagement in your studies. One avenue to do that is through attending our many economics events on campus, such as conferences, workshops, and the regular seminars given by academic staff, researchers and PhD students from economics at University Of Galway, and by external visitors. As a class you will be notified of and invited to attend relevant events in Economics.

Class representatives

It has proved very valuable at times to have good class representatives (at least one or perhaps two, depending on numbers in the class) to raise issues and help communication amongst the class, so I hope some of you will consider putting your names forward for this role, which is not onerous. The class representatives are the first point of contact for raising issues and providing feedback to the programme director.

Academic Term Dates

The first semester 2023-24 academic year begins on Monday 4th September 2023.

	Academic Year 2023 -2024		
Orientation 1st years *	 Online College Orientation: Tuesday through to Thursday, 12-14 September (depending on the programme) On-campus Orientation: Friday & Saturday, 15-16 September 		
Start of teaching – 1 st Years*	Monday 18th September		
End of teaching – 1 st Years*	Friday 24th November (10 weeks of teaching)		
Start of teaching all years	Monday 4th September		
End of teaching all years	Friday 24th November (12 weeks of teaching)		
Study week	Monday 27th November to Friday 1st December		
Semester 1 exams start	Monday 4th December		
Semester 1 exams end	Friday 15th December (10 days of exams)		
Christmas Holiday	Saturday 16th December		
2024			
Start of Teaching	Monday 8th January		
End of Teaching	Thursday 28th March (12 weeks of teaching)		
Easter	Good Friday 29th March to Easter Monday 1st April		
Field Trips	Tuesday 2nd April to Friday 5th April		
Study Week	Monday 8th April to Friday 12th April		
Semester 2 Exams Start	Monday 15th April		
Semester 2 Exams End	Wednesday 1st May (13 days of exams)		
Autumn Repeat Exams	Tuesday 6th to Friday 16th August (9 days of exams)		
Holidays	St Brigid's Day: Monday 5 th February 2024		
	Easter: Good Friday 29th March to Easter Monday 1st April 2024		
	Bank Holidays: Monday 30th October 2023 / Monday, 18th March 2024 /		
	Monday 6th May 2024/ Monday 3rd June 2024 / Monday 5th August 2024		

M.SC. IN HEALTH ECONOMICS

Course Outline

Note: The following information is intended to give an overview of the programme, and a flavour of the main themes of each module. Full details of module content, assessments, reading lists etc. will be provided by individual lecturers in the form of module outlines at the beginning of each semester.

The MSc in Health Economics is a taught Masters programme which introduces the student to the theoretical principles and practical techniques of economic analysis which are applied to inform health policy and health care decision-making within the evolving global context of technological development, population ageing, rising healthcare costs and changing patient preferences and expectations.

In particular, the programme seeks to equip students with the tools to examine individual behaviours with respect to health and health care, to explore alternative systems of health care finance and delivery, and to apply economic evaluation, preference elicitation and econometric techniques to inform health care resource allocation.

Programme objectives

The programme objectives of the MSc in Health Economics are:

- Core economic knowledge our graduates will understand and analyse health issues from an economic perspective.
- Analytical skills our graduates will have advanced knowledge of economic methods used to analyse Health problems.
- Influence public policy our graduates will have the required knowledge and skills to critically evaluate and inform future public policy in relation to health and health care.
- Global perspective our graduates will be able to understand interlinkages regarding health problems and how these differ around the world.
- Communication skills our graduates will have effective communication skills and be proficient with various media.

Learning objectives

On successful completion of this programme, graduates should be able to:

- Apply suitable theoretical and practical economic methods to analyse health challenges;
- Conduct economic evaluations of health policies and projects;
- Apply advanced econometric and statistical methods to analyse various health problems;
- Utilise economic theory and practical skills to inform public policy;

- Discuss and explain differences and similarities regarding health problems around the world;
- Critically evaluate and summarize the current scholarly health economics literature in selected specialized fields;
- Communicate clearly the outcomes of analyses and recommended actions and decision.

Programme Structure (Full-time)

Semester 1 Core

Module Code	Module Title	ECTS credits
EC5120	Economics of Health and Health Care	10
EC506	Econometrics	10
EC5143	Research Methods for Health Economics and Policy	10
EC584	Economic Evaluation in Health Care	10

Semester 2 Core

Module Code	Module Title	ECTS credits
EC579	Applied Health Technology Assessment and Decision Modelling	10
EC572	Health Policy and Systems Analysis	10

EC505	Dissertation	10
	OR	
EC5141	Applied Health Economics Placement	10

Plus 20 credits from the following optional modules (in semester 2)

Module Code	Module Title	ECTS credits
EC526	Public Sector Economics	10
EC517	Cost Benefit Analysis & Evaluation	10
EC5121	Applied Econometrics	10
MD515	Systematic Review Methods	10
MD518	Observational and Analytical Research Methods	10

Programme Structure (Part-time) Year 1

Module Code	Module Title	ECTS credits
EC5143	Research Methods for Health Economics and Policy	10
EC584	Economic Evaluation in Health Care	10

Semester 1 Core

Semester 2 Core

Module Code	Module Title	ECTS credits
EC579	Applied Health Technology Assessment and Decision Modelling	10

Plus 10 credits from the following optional modules (in semester 2)

Module Code	Module Title	ECTS credits
EC526	Public Sector Economics	10
EC517	Cost Benefit Analysis & Evaluation	10
EC5121	Applied Econometrics	10
MD515	Systematic Review Methods	10
MD518	Observational and Analytical Research Methods	10

Programme Structure (Part-time) Year 2

Semester 1 Core

Module Code	Module Title	ECTS credits
EC506	Econometrics	10
EC5120	Economics of Health and Health Care	10

Semester 2 Core

Module Code	Module Title	ECTS credits
EC572	Health Policy and Systems Analysis	10

EC505	Dissertation	10
	OR	
EC5140	Applied Health Economics Placement	10

Plus 10 credits from the following optional modules (in semester 2)

Module Code	Module Title	ECTS credits
EC526	Public Sector Economics	10
EC517	Cost Benefit Analysis & Evaluation	10
EC5121	Applied Econometrics	10
MD515	Systematic Review Methods	10
MD518	Observational and Analytical Research Methods	10

Additional (optional) courses

Note that these are non-credit bearing elements of the programme and are offered as additional supports and training for students who wish to avail of them. Further details to follow at the orientation session and via Canvas.

Semester 1:

Maths for Economists (refresher course) - required for all

Overview: This course in *Mathematics for Economists* aims to give students the necessary mathematical skills to successfully complete the more quantitative and technical modules in economics offered under the various Master's degree programmes in economics at University Of Galway. It provides a thorough revision of a range of mathematical concepts commonly used in economic analysis.

COURSE DELIVERY: This short course will run on Thursday mornings for the first four weeks of semester (7th to 28th September).

Semester 2:

- Introduction to R for economists (TBC)

Short practical course delivered over 4 weeks (two hours per week)

In person delivery (in computer labs)

EC505 Dissertation or EC5141 Placement

Students will have the option to choose between a traditional Research Dissertation (EC505) and an Applied Health Economics Placement (EC5141). These are technically year-long modules, and some engagement throughout the year will be required, regardless of which option you choose. The bulk of the work in either case will be carried out after the end of semester 2 exams (i.e. over the summer months). The Dissertation or Applied Placement modules are each worth 10 credits – equivalent to one core taught module on the programme. Each will be evaluated and marked against a set of pre-defined criteria, details of which will be provided to students in advance. Some indicative guidance is provided here for information.

Placements

It is important to understand that the placement process is a competitive one, and if you wish to secure a placement you should treat it as a job search (with many advantages – e.g. supports from the university, introductions to potential placement organisation and opportunities etc.). In order to participate in the placement process, it is <u>mandatory</u> to attend all information and support sessions provided by the placement officer, Grainne Carey, and more generally to engage with the process from the outset. This includes submitting documents as requested, meeting deadlines, engaging with employers, making yourself available for interview etc. Failure to do so will result in you not being in a position to secure a work placement. Full details of the placement process will be provided in a separate guidance document and discussed with the programme director and placement officer during our orientation session and in subsequent information sessions. Here are some general guidelines:

 Some students will be selected for an external placement. If you do not secure an external placement, the default option will be to take the EC505 dissertation module (traditional research dissertation) instead.

- Most placements will be paid, but a small number are likely to be unpaid. Students are strongly encouraged to view the placement opportunities as <u>investments</u> in their future career prospects. Many of our students have been offered full-time paid positions (graduate contracts and even permanent positions) with their host organisations following completion of the placement.
- Usually students undertake their work / research placement after the completion of semester 2 exams. Placements should be for a period of not less than 2 months (usually Mid-May to end of July or beyond).
- The placement organisation will generally be expected to nominate a supervisor/mentor and/or line manager to whom students on placement will be reporting on a day-to-day basis.
- Students will also be assigned an academic contact (a member of University Of Galway academic staff), who will provide a first point of contact at University Of Galway during the placement.
- Students going on placement will be required to submit a dissertation or a placement report (details on requirements will be provided in a separate guidance document), which will be evaluated by the programme director and/or by another nominated member of the academic faculty in the Discipline of Economics.
- Placements are competitive, and will usually involve students applying for and engaging in a competitive process to win the placement.
- A range of placement opportunities and contacts will be provided.
- Students are also encouraged to self-source placement opportunities. However, all
 placements and placement organisations must be approved by the placement officer
 and/or the programme director.

Dissertations

Dissertation Guidelines: Full detailed guidance on the dissertation requirements and expectations will be provided separately, including information sessions in semester 2.

The dissertation provides an opportunity for independent and original work. The aim of the dissertation is to enable the student to critically evaluate research in economics; to demonstrate independent research and to apply theoretical knowledge acquired; to demonstrate critical thinking skills and to produce a well written minor dissertation of not less than 6,000 words in length that contributes to existing knowledge. This module involves a series of discussions and meetings with supervisors, submission of research proposals, progress reporting to supervisors within agreed timeframes, and delivery of a final academic dissertation report.

Deadline: Generally the end of July. You will be required to submit an electronic copy to the Programme Director and to your Supervisor. No hard copy of the dissertation is required. Details in relation to formatting requirements, marking schemes and general approaches to writing a dissertation will be provided in a separate guidance document.

Length: The dissertation should be not less than 6,000 words.

- An academic supervisor from University Of Galway will be assigned to supervise the research project for your dissertation and grade your final submission.
- The research topic will be agreed by the supervisor and the student. In some cases, supervisors may propose topics, or invite students to join existing research projects.
 In other cases, students may propose their own topics based on their interests.
- The research will involve applying the theories and techniques introduced in the taught modules to an applied research question.
- In most cases, the research should involve an applied research question and typically data analysis using econometric or other statistical techniques. However there are a range of acceptable formats for the dissertation, provided the approach you wish to take is agreed with your supervisor.
- The objective of the dissertation is to provide training and experience in conducting independent research. The result of this research should represent a contribution to knowledge and (ideally) a publication-quality academic output.

Canvas (on-line learning platform)

Canvas is the web-based learning environment used at University Of Galway. There is a Canvas page for each module, including course content, and information on class projects, assignments and assessments. *All students are required to familiarise themselves with Canvas and to log on regularly to keep up to date with the requirements of each module.* Canvas will not only be used to contain and circulate key module materials (lecture notes, announcements, assignments, etc.), it may also be used for hosting live and recorded lecture sessions. These will be accessed through Canvas Collaborate and the Virtual Classroom.

In most modules, submission of assignments will also be facilitated through Canvas, via Turnitin Assignments. Turnitin generates a 'Similarity Report' which identifies unoriginal submitted material.

For a quick guide to Canvas, please see the following link: <u>https://www.universityofgalway.ie/information-solutions-services/services-for-students/canvas/</u>

Module Descriptions – taught modules

Semester 1

EC5120 Economics of Health and Health Care

The objective of this course is to introduce students to the most important economic theories of health and health care. In doing so, we take some basic concepts of microeconomics and apply them to interesting questions in health and in health care. These basic concepts include individual and collective choice and theories of how equity and efficiency are used to analyse outcomes. Health economics is largely an applied field and we will study empirical papers as well as theoretical ones during the course.

Upon completion of this course, you should be able to:

- Relate economic theory to the allocation of resources for health and healthcare.
- Understand and appraise the fundamental theoretical and practical concepts and tools of health economics
- Critically engage with the key global health policy questions of care system finance and delivery

EC506 Econometrics

The main aim of this module is to provide students with a thorough and practical understanding of regression analysis, in order to test economic theories and measure magnitudes relevant for economic policy and other decisions. The module also aims to introduce students to a range of other econometric techniques, focusing on issues relating to causality and identification. These skills are one of the key elements in the professional training of an economist. Applied examples and practical experience are a key part of this module and, to this end, a range of interesting and relevant real- world applications and datasets are used, while the module also emphasizes examples that have implications for policy or provide evidence for or against economic theories. Weekly computer-based 'lab' sessions using the statistical software package Stata form an integral part of the module and will help to develop students' applied econometric skills and their understanding of the methods presented in lectures.

Upon completion of this module, you will be able to:

- Discuss the importance and methods of identification in applied econometrics research
- Highlight the pitfalls of using observational data for causal analysis
- Estimate and interpret a range of regression models
- Use regression methods for analysis and evaluation
- Present results and findings from an econometric analysis in written form
- Summarise and critique the key results from an econometric analysis undertaken using observational data

EC5143 Research Methods for Health Economics and Policy

The aim of the course is to introduce students to the concepts and practice of research in health economics and policy. It is intended to be a practical course so that students become familiar with how to do research, the broad set of research methods available and what is considered good research practice. Students will be introduced to quantitative, qualitative and evidence synthesis research methods, and the course will also introduce students to quantitative data management techniques using Stata. As part of the course, students will conduct their own mini research project.

By the end of the course students should be able to:

- Understand the methods used to design and deliver a reliable and valid research project, using either or both, quantitative and qualitative methods
- Understand how to inform policy through a critical assessment of policy-orientated research and research methods
- Undertake applied research to inform policy or practice

EC584 Economic Evaluation in Health Care

This module introduces and examines the methods of health economic evaluation which are applied to assess the value of health technologies and/or healthcare interventions.

Upon completion of this course, you should be able to:

- Understand the role of health economic evaluation in healthcare decision making
- Outline the different forms of health economic evaluation and understand the theoretical and normative frameworks that underpin the methods
- Understand the principles and steps of the method of health economic evaluation for the identification, valuation, measurement and analysis of outcomes, costs and uncertainty
- Conduct a critical appraisal of published health economic evaluation studies as they relate to national and international best practice guidelines

EC572 SEPHealth Systems and Policy Analysis

The main objective of this course is to apply economic theory and evidence to the analysis of health policy-making. A second objective is to develop our understanding of how health systems are organized and financed.

Upon completion of this module, students will be expected to be able to:

- Understand and distinguish the main attributes of health systems and health policy
- Understand and apply the principles of economics to health policy analysis
- Appraise the impact of different financing models to efficiency, equity and effectiveness in health care provision
- Critically assess the causal links between socio-economic variables and health indicators
- Analyse the pattern of health inequalities in Ireland and other countries
- Understand the key issues in recent proposals for reforming the health care system in Ireland and other countries

EC579 Applied Health Technology Assessment & Decision Modelling

This module introduces and examines the practical methods for conducting health economic evaluation to assess the value of health technologies and/or healthcare interventions.

Upon completion of this course, students should be able to:

- Outline and assess the practical methods of conducting health economic evaluation using randomized controlled trials and/or decision analytic models
- Outline and implement the practical methods of health economic evaluation for identifying, synthesizing, valuing, and measuring costs, health outcomes and uncertainty
- Conduct trial-based health economic evaluation and decision model- based health economic evaluation using EXCEL.
- Outline the guidelines for conducting health economic evaluation in Ireland and critically appraise and assess trial-based and model-based economic evaluations in the published Irish and international literature.

EC517 Cost Benefit Analysis & Evaluation

Evaluation of public sector projects or programmes is important and is required to ensure that resources are used in the best possible way and to ensure that the government is getting value for money. The objective of this module is to introduce students to evaluation procedures and to Cost Benefit Analysis, a commonly employed method for the evaluation of public sector projects or programmes.

Upon completion of the course students should be able to:

- Understand the fundamental theoretical and practical concepts and tools of CBA
- Undertake applied CBA to inform public policy.
- Critically appraise CBA case studies/reports used to inform public policy

EC5121 Applied Econometrics

This module consists of two main parts: (i) regression analysis of limited dependent variables (LDVs) and (ii) identification and causal inference. The first part (Weeks 1-5) will discuss the different types of dependent variables routinely considered in applied micro econometric analysis using non-experimental (observational) data and the lectures will, in turn, examine a number of different LDV regression models. These include models of binary, ordered, multinomial, and count variables, along with a discussion of other common LDVs. Since economists place a particularly strong emphasis on understanding the causal mechanisms that drive statistical relationships, the second part of the module (Weeks 6-10) will focus on identification and causal inference. Without a clear view on causation, inferring meaningful results can be challenging. Lectures for this part will examine instrumental variables, panel data methods, the potential outcomes framework, matching, difference-in-differences, and regression discontinuity.

On completion of this module, you will be able to:

- Estimate and interpret a range of LDV models
- Use at least one LDV model for analysis/evaluation
- Present results and findings from an LDV econometric analysis in written form

- Discuss the importance of identification in applied econometrics
- Describe the main approaches to causal inference using observational data
- Interpret results from quasi-experimental analyses
- Present results and findings from an empirical project to an audience of your peers
- Critically evaluate the analysis of your peers

EC526 Public Sector Economics

Public sector economics is the study of the role of the government in the economy. This involves studying a series of basic questions:

- When should the government intervene in the economy?
- How might the government intervene?
- What is the effect of those interventions on economic outcomes?
- Why do governments choose to intervene in the way that they do?

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

- Distinguish different normative and positive arguments for government intervention in an economy
- Compare and contrast behavioural public economics and neoclassical public economics
- Explain the characteristics of public goods, club goods and externalities and the various policy mechanisms for dealing with these concepts
- Analyse trends in inequality in developed countries
- Understand key concepts of traditional and behavioural public choice theory
- Understand the political economy of public policy
- Analyse current public policy issues from various theoretical and empirical perspectives

MD518 Observational and Analytical Research Methods

Review of observational research methods, including survey research, retrospective study, prospective cohort study, case-control design, scale development, diagnostic testing and qualitative research methods.

On completion of the course the student should have an in-depth understanding of;

- Sampling (Unit and Frame)
- Causation
- Survey research
- Cohort study (retrospective and prospective)
- Case-control
- Confounding + Bias in Observational research
- Multivariable analysis
- Propensity analysis

MD515 Systematic Review Methods

Systematic reviews use rigorous and explicit methods to search for, appraise and bring together existing evidence to provide reliable answers for a specific research question and

are a valuable mechanism for informing good health care decisions. This module will enable participants to develop the necessary knowledge and core skills for conducting systematic reviews in healthcare, focussing on the conduct of systematic reviews and meta-analyses of randomised trials of the effects of health care interventions.

On successful completion of this module students will be able to:

- Critically discuss the role of systematic reviews within the context of evidence generation and evidence based health care;
- Identify the key stages of the systematic review process;
- Develop a review question and understand how to develop a review protocol;
- Develop clear study inclusion and exclusion criteria;
- Identify and develop appropriate search methods for identification of studies including the development of a comprehensive search strategy;
- Apply inclusion and exclusion criteria to identify relevant studies;
- Critically appraise the quality of included studies using methods appropriate to included study design types;
- Develop and pilot a data extraction form
- Understand how to extract relevant outcomes from included studies;
- Critically explore the principles of data synthesis and recognise the relevance of different methods of synthesis to different study designs;
- Explore methods for statistical (meta-analysis) and non-statistical synthesis of data/findings;
- Be familiar with processes for writing and disseminating a review

On-Campus Facilities & Services

Services available to students can be accessed when you click on the University Of Galway Students portal: <u>https://www.universityofgalway.ie/students/</u>. Here we have tried to group some of those that you may find particularly useful during the course of your studies.

Registration

Before you embark on your studies at University of Galway, you will first need to register. Registration for the 2023/2024 academic year opens on August 17th and closes on September 12th (for courses) and September 19th (for modules). Please be aware these dates may change, and can be checked at:

https://www.universityofgalway.ie/registration/quick-links/registration-dates/#tab2

Information on how to register and further help are available here: https://www.universityofgalway.ie/registration/how-to-register/

Module registration/change of mind for Semester 2 will become available early 2024 (usually closing on or around 1st of February – but as above, please double check these dates on the registration office website).

Student ID Card

The name and spelling of your name AND date of birth on your birth cert/passport/driver licence is what will appear on your Galway student ID card. Your Student ID Card will be your official identification card for the duration of your programme at University Of Galway and for all college related matters only.

ID card distribution

The main form of distribution of Student ID Cards for postgraduates and undergraduates will be for the students to call in person to the Registration Helpdesk in Áras Uí Chathail on the 1st Floor, on allocated dates / date ranges (as outlined below). The Registration Desk will be open from 09:00 - 17:00, Monday to Friday during the card collection dates.

Áras Ui Chathail, University of Galway, University Rd Gaillimh - Google Maps

If a student is unable to collect his/her Student ID Card, they can contact Registration via email <u>registration@universityofgalway.ie</u> or 091 494949 and arrange for an alternate means of distribution e.g. send in the post to home address.

Library Facilities

All registered students of this programme are automatically entitled to use the library. ID cards are issued to new students at registration. This ID card enables the user to enter the library and entitles him/ her to borrow material. Please remember that without an ID card you may not borrow and at any time you may be asked to produce it for security reasons. ID cards are not transferable and users are responsible for all material borrowed on their .card. Students are encouraged to avail of the many facilities offered by the James Hardiman Library at times which are convenient to their study programme. The library charges **fines** for overdue material solely to secure its prompt return so that others may avail of it. Further details may be found at <u>https://library.universityofgalway.ie/</u>

Computer Facilities

PCs are available for students in PC suites around the campus. PCs are available on a "first come first served" (open access) basis for at least an hour each day. These open access hours are advertised on the door of each suite and on the notice board in the suite at the start of term. PCs are also available at times when they are not booked for classes. Should you have any difficulties using the PCs or you wish to report a hardware fault please contact the User Support Centre, Room 118, Computer Services (ext 3325). If necessary, the User Support Centre staff will make an appointment for a technical advisory session for you. Detailed information regarding use of University of Galway computer facilities is available at: https://www.universityofgalway.ie/cs/

Academic Skills Hub

The Academic Skills Hub aims to support all University Of Galway students to develop the key skills required for academic success. The Academic Skills Hub:

- Provides brief introductions to, and top tips on, **eight key academic skills**, as well as some information to help you get started
- Offers advice and resources for studying in the online learning environment
- Links to a range of **additional sources of support** for students, including Library resources and academic skills workshops

Further details and resources are available at <u>https://www.universityofgalway.ie/academic-skills/</u>

Academic Writing Centre

The mission of the Academic Writing Centre is to help students to become better writers. They provide free one-on-one tutorials on essay writing and also support student writing through workshops, modules, and competitions. They offer help in the following areas:

- Brainstorming your essay topic and outline
- Structuring an argument
- Developing your dissertation
- Improving sentence structure and punctuation
- Avoiding plagiarism
- Using secondary sources
- Editing and proofreading techniques

More information on the Academic Writing Centre here: <u>https://library.nuigalway.ie/awc/</u>

The Students Union (SU)

The Students Union provides information for First Year students which is useful for anyone who is new to University Of Galway: <u>https://su.nuigalway.ie/help-advice/firstyear/</u> or call into the Students' Union at Áras na Mac Léinn. Check out the University's student services page: <u>https://www.universityofgalway.ie/student-services/</u> The Students Union is very useful with regard to welfare and helping with academic performance. They usually run an excellent study skills workshop during the year.

Student Health Unit

The Student Health Unit provides on-campus medical care to full-time registered students in a confidential, professional and courteous manner. Students must be registered for the current academic year in order to avail of this service.

The unit is operating on a very strict 'BY PRIOR APPOINTMENT ONLY' basis to ensure that optimal infection prevention and control measures can be maintained at all times. Students must be registered for the current academic year in order to avail of this service. STUDENTS ARE NOT PERMITTED TO ENTER THE STUDENT HEALTH UNIT FACILITY WITHOUT FIRST CONTACTING THE PRACTICE.

The Health Unit is located upstairs in Áras na Mac Léinn (beside the Students Union Office). Tel: 091-492604. <u>https://www.universityofgalway.ie/health_unit/</u>

Counselling

You may meet some challenges during university life. Counselling can be an important resource for you. If you would like to set up an appointment please email: <u>counselling@universityofgalway.ie</u> or phone 091 492484.

They are located at No. 5 Distillery Road (on the right hand side in a two storey house). The website is: <u>https://www.universityofgalway.ie/counsellors/</u>

Business Student Advisor

Our Student Advisor, Teresa Lydon, is a support for students throughout their time at university. Students may seek advice or guidance on a variety of matters including academic, personal, professional or financial at various stages of their education. On speaking with our Student Advisor, a student may be referred to an individual staff member or another support service for further advice, relevant to the nature of the query.

Teresa is available to students by email and telephone during the mornings of Monday to Friday. It is a confidential service.

You can make an appointment by emailing <u>businessstudentadvisor@universityofgalway.ie</u> Teresa's contact number is 086 0836646. Further details: <u>https://www.universityofgalway.ie/businessstudentadvisor/</u>

Disability Office

Bernie McGee, Disability Officer, Room 216, Áras Uí-Cathail Tel. 353 (0) 91 492813

E-mail: <u>disabilityservice@universityofgalway.ie</u>

Postgraduate Admissions

Please see <u>Frequently Asked Question</u> section as your question may already have been answered there prior to presenting a query.

E : postgradadmissions@universityofgalway.ie

T : +353 91 495 999

Fees Office

E <u>fees@universityofgalway.ie</u> www.universityofgalway.ie/fees

Accommodation Office

Accommodation advisory service: <u>https://www.universityofgalway.ie/student-life/accommodation/</u>

Parking

University Of Galway enjoys a central location in Galway City and with this, comes parking restrictions. A system to manage parking was agreed with the staff and students' union as follows:

- There are different types of spaces on campus, including spaces for:
 - staff permit holders only,
 - student permit holders only,
 - shared use (staff student permit holders) and
 - visitor/non-permit holder pay-and-display (P&D) spaces.
- You need a permit to park in University Of Galway, or you can buy a ticket from P&D machines. Please note, that P&D tickets ONLY apply to spaces marked in blue adjacent to the meters P&D tickets do not allow you to park anywhere else. Permit holders can use P&D spaces, but you must buy a ticket.
- Your permit/P&D ticket allows you to park in specific places and you must familiarize yourself with the zones, and which permit applies to what carpark.
- There are also 'reserved' spaces and loading bays do not park in these.
- You may use the universally accessible parking spaces if you have correctly procured and display an IWA 'blue badge' permit.
- If you park in the wrong place, or outside of a parking space, you may be clamped. If you don't display your permit, you may also be clamped. Clamp release fee is €60 and €80 after 6pm.
- You can get your student parking permit for a charge at the Parking and Information Office, Arts/Science Concourse. There are application forms on this site.

Allow plenty of time on your first visit to campus with your car. If you have any doubts whatsoever, check the website (below) or telephone/drop into the parking office on the concourse!

How to get a Student Parking Permit

Fulldetailsavailableat:https://www.universityofgalway.ie/buildings/service-helpdesk/parking-get-to-around/

If you park in a "Pay and Display" space, you must display a valid Pay & Display ticket and park only in spaces marked "Pay and Display". In accepting a student parking permit, you are deemed to have read and understood this Student Parking web page and the following rules and regulations. Please note that abuse of the parking management system may result in a disciplinary procedure.

Health & Safety

In the event of a medical, fire or Gardaí emergency prioritise the call to Emergency Services on 999/112.

In the event of a local building emergency (eg leak, electrical, plumbing), the Security Office or Buildings & Estates Helpdesk are available at the following numbers:

- University Security Office, telephone (091) 493333, available 24/7
- Buildings & Estates <u>Helpdesk</u>, telephone (091) 49**2134** (during office hours, 09:00-16:00 Mon-Thurs and 09:00-15:00 on Friday)

Emergency contacts (further details):

https://www.universityofgalway.ie/buildings/contacts-emergency/

University of Galway Safety Statement

https://www.universityofgalway.ie/media/healthsafety/Safety-Statement-2022-with-Presidents-Signature.pdf

Students are strongly encouraged to consult the University Of Galway website for information on college policies.

University Of Galway Campus Map

Please see the Campus map below for the locations of all the main University services and teaching buildings. The Economics discipline is located in the older part of the Cairnes building (marked 35 on the map), known as St Anthony's. You can expect your main location for on campus activity related to the programme to be in the Cairnes building, but other venues around the university campus may also be used, depending on class size, room capacities and availability etc. Full details of lecture times and venues will be provided prior to the start of each semester.

Some of the main room numbers for lectures are coded as follows:

- AM -- the Arts Millennium Building on the main campus
- AC -- The Arts/Sciences Concourse
- CA -- Cairnes Building (including the "St Anthony's" part of it)
- ENG -- the Engineering Building (by the river, near Cairnes)

- IT -- the Information Technology Building on the main campus
- MRI -- Marine Research Institute
- UC -- Áras Uí Chathail, on the main campus, (near Áras na mac Léinn)

There are also various other campus maps online at: <u>https://www.universityofgalway.ie/buildings/maps/</u>



Gaillimhe UNIVERSITY OF GALWAY

An Campas Spóirt, an Daingean - an tlonad Spóirt Réigiúnach san áireamh Sports Campus, Dangan - including **Regional Sports Centre**

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An tÁras Spóirt								
Sports Pavilion	 	 		 				
Teach Maryville								

Maryville House

An Campas Thuaidh North Campus

An Daingean A Dangan A
Cúrsa Saoil Lifecourse
Baile na Coiribe Corrib Village
Baile an Chíorbhuí Goldcrest Village
Eolaíochtaí Bithleighis Biomedical Sciences
Institiúid na hEolaíochta Sonraí Data Science Institute
Naíolann na hOllscoile University Crèche
Páirceáil agus Taisteal Park and Ride
An Campas Láir Central Campus
An tIonad Nuálaíochta agus Gnó Business and Innovation Centre
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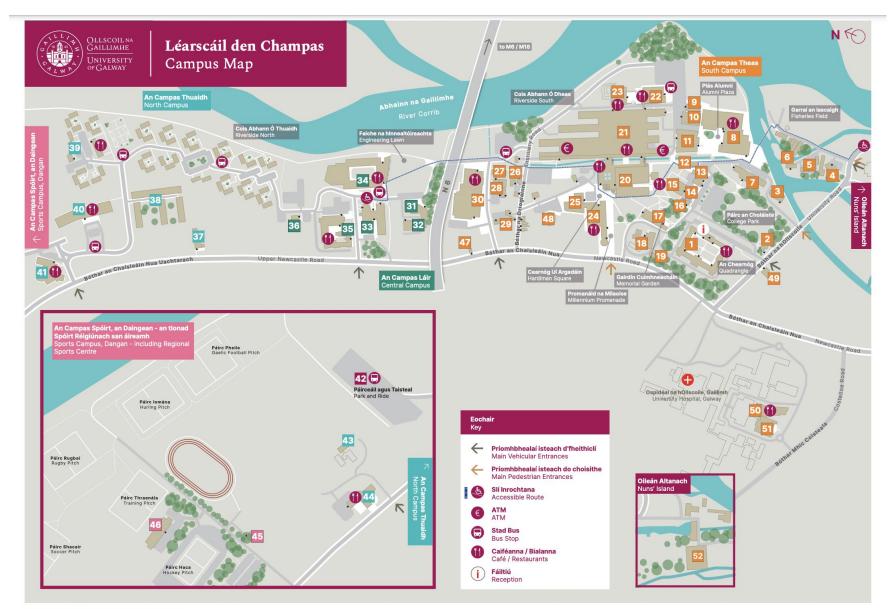
An tIonad Taighde agus Nuálaíochta 31 Research and Innovation Centre

An tIonad Taighde don Chothú Sláinte 36 Health Promotion Research Centre Áras Cairnes 35 **Cairnes Building** Áras Innealtóireachta Alice Perry 34 Alice Perry Engineering Building Áras Mhaighe Seola 33 Moyola Building An Clinic Teiripe Urlabhra agus Teanga 33 Speech and Language Therapy Clinic An Campas Theas South Campus 47 10 Bóthar an Chaisleáin Nua 10 Newcastle Road 14 Bóthar na hOllscoile 49 14 University Road 14 Bóthar na Drioglainne 27 (An Oifig Slándála) 14 Distillery Road (Security) An Chearnóg 1 Quadrangle An Foirgneamh Anatamaíochta 18 Anatomy Building An Foirgneamh IT 23 IT Building An tionad Spóirt 30 Sports Centre Áras Dán na Mílaoise 24 Arts Millennium Building Áras de Brún 17 Áras Mhairéad (Ma) Ní Éimhigh 16 Áras Mháirtín Uí Riain 7 Martin Ryan Building

Áras na Bitheolaíochta Daonna Human Biology Building	11	Ins Cli
Áras na Gaeilge	15	lor
Áras na Mac Léinn	8	Iris
Áras Oirbsean Orbsen Building	22	lor Ma
Áras Uí Argadáin Hardiman Building	20	lor Dra aq
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Bloc E Block E	13	Oi Ed
Bloc F Block F	19	Oi Ed
Bloc S Block S	12	Ré Riv
Block T Block T	28	Ré Th
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Ceoláras Emily Anderson The Emily Anderson Concert Hall	1	Sé Th
Comhaltas na Mac Léinn Students' Union	8	Sío Ps
Deasc Eolais na Mac Léinn (SID) Student Information Desk (SID)	10	Te Ga
Foirgneamh na nDán / na hEolaíochta Arts / Science Building	a 21	
Fortheach Institiúid Uí Riain Ryan Institute Annexe	3	
Halla Bailey Allen Bailey Allen Hall	8	

itiúid na hEolaíochta Cliniciúla 51 ical Science Institute d na hÉireann do Chearta an Duine 4 Centre for Human Rights ad na Seirbhísí Poist 9 Services Centre ad Uí Dhonnchadha - An 8 maíocht, an Amharclannaíocht s an Taibhléiriú onoghue Centre - Drama, Theatre Performance itiúid Lambe 50 nbe Institute achas 14 cation achas 52 cation mhdhéantán Cois Abhan 29 rside Terrapin mhdhéantán Scoil Huston 5 Huston School Bubble il Scannán agus Meán 6 teach Huston ton School of Film and Digital Media éal Naomh Columbán 48 Chapel of St Columbanus olaíocht 25 chology ch an Gheata 2 Lodge

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Meet the Lecturers

The following economics staff usually teach on the core modules of the MSc Health Economics programme, and are also the main members of staff normally allocated to supervise student dissertations on the programme.



Edel Doherty

Edel Doherty is a lecturer in Economics at the J.E. Cairnes School of Business and Economics and a member of the Health Economics & Policy Analysis Centre (HEPAC). Her research is focused on the application of discrete choice experiments, economic evaluation and econometrics in Health and Health Economics. She has published across a range of areas and she is particularly interested in exploring the socio-economic drivers of health, health inequalities and preferences for health and healthcare. Her work to date has been published in a number of leading international peer-reviewed journals such as Social Science and Medicine, the Journal of Economic Behaviour and Organisation, Health Affairs, Economics and Human Biology, European Review of Agricultural Economics and the Journal of Agricultural Economics. Since joining University Of Galway Edel has participated in a number of successful European and National research funding applications to the value of over ϵ 3.5 million euro. Previously Edel worked at Queen's University Belfast and she was a visiting scholar to the UC Berkeley in 2009 and Simon Fraser University in 2019.



Brendan Kennelly

Brendan Kennelly studied economics at University College, Cork and at the University of Maryland, College Park. He was a lecturer at NUI Galway between 1991 and 2022 when he was appointed as a senior lecturer. He was a Visiting Professor in the Department of Economics at Lehigh University in Pennsylvania from August 2002 to December 2003 and from January 2010 to August 2011. Brendan Kennelly has published articles on welfare economics, public choice, the welfare state and health economics in journals such as Social Choice and Welfare, Public Choice, Social Science and Medicine, and Health Policy, and in several books. Much of his recent research has been in health economics, particularly in the area of mental health. He is currently working on a number of projects that evaluate different programmes for preventing suicide and is also working on various economic aspects of mental health problems such as the cost of mental illness and the cost effectiveness of different interventions for mental illnesses.

He has also developed a strong interest in economics education. He has published a number of

papers on the effectiveness of online assignments in economics and is currently working on a series of papers that focus on students' preferences for assignment systems.



Paddy Gillespie

Paddy Gillespie is Professor of Health Economics and Director of the Health Economics & Policy Analysis Centre (HEPAC) at the J.E. Cairnes School of Business & Economics and the Institute for Lifecourse and Society (ILAS). Paddy's research activity is focused on the application of the techniques of health economic evaluation and health technology assessment to inform health policy and healthcare practice. Paddy is a research affiliate at the Economic and Social Research Institute (ESRI), an educator for the Trials Methodology Research Network (HRB TMRN), and health economics lead for the Primary Care Clinical Trials Network Ireland (HRB PCCTNI), the Diabetes Collaborative Clinical Trial Network Ireland (HRB DCCT-N-I), and the SFI Research Centre for Medical Devices (CÚRAM).



Sharon Walsh

Dr Sharon Walsh is a Lecturer in Economics at the J.E. Cairnes School of Business and Economics at the University of Galway. Prior to joining the Discipline of Economics, Sharon worked as a Postdoctoral Researcher in both the Centre for Economic and Social Research on Dementia, and the Health Economics and Policy Analysis Centre at the University of Galway. She completed a PhD in Economics at the University of Galway in 2017, and she also holds a Masters in Economics, and Bachelor of Arts in Economics and Geography from University College Cork (UCC).

Her research interests lie in the application of applied economic methods to explore and inform important policy questions related to health and ageing. In particular, she applies these techniques to examine key economic issues of finance, provision, and access in the context of ageing and health policy. In terms of her methodological expertise, she employs discrete choice experiments, applied econometrics, geographic information systems and evidence synthesis, including systematic reviews and meta-analysis to explore these questions.



John Cullinan

I am Professor in Economics at the JE Cairnes School of Business and Economics at University of Galway. I hold a primary degree in Actuarial and Financial Studies and an MA in Economics from University College Dublin (UCD), an MSc in Econometrics and Mathematical Economics from the London School of Economics, and a PhD in Economics from University of Galway. I was a Visiting Scholar at the University of California, Berkeley in 2008 and a Visiting Researcher at the University of Wisconsin-Madison in 2015. I previously held lecturing positions at the University of Limerick, Maynooth University, and UCD, and have worked at the European Bank for Reconstruction and Development in London and with Indecon Economic Consultants' Public Policy Division.

My research focuses on the causes and consequences of socioeconomic and geographic inequalities in the areas of health, disability, and education. It generally involves the application of econometric and spatial modelling techniques. I am currently Associate Editor of The Economic and Social Review, Secretary of the Irish Economic Association, and Director of the Centre for Economic Research on Inclusivity and Sustainability.



Martin O'Donnell

Martin O'Donnell is Executive Dean of College of Medicine, Nursing and Health Sciences, taking-up the role in February 2022.

He is Professor of Neurovascular Medicine at NUI Galway, and Consultant Geriatrician at University Hospital Galway, Ireland. A medical graduate of University College Cork, he trained in Geriatric and Stroke medicine in Ireland, Canada (McMaster University) and the US (Stanford University), during which time he completed a PhD with the Department of Clinical Epidemiology and Biostatistics (McMaster University).

He has considerable experience of international research collaborations and led a key study of risk factors for stroke (INTERSTROKE study) that included 26,000 individuals from 32 countries. Martin joined NUI Galway and Saolta University Healthcare Group in 2010, developed a successful MSc in Clinical Research.

He has served as Director of HRB-Clinical Research Facility (until 2020) during a time of substantial growth in clinical trial research. Prof O'Donnell has a strong track-record of leadership, high-impact publications and securing major research funding awards, including a European Research Council award.



Andrew Smyth

Prof Smyth is Professor of Clinical Epidemiology at University of Galway and a Consultant Nephrologist at Galway University Hospitals. After graduating with a Bachelors in Medicine from University of Galway, he trained in Internal Medicine and Nephrology in Ireland, Mayo Clinic (Rochester, MN, USA) and McMaster University (Canada). He holds a MSc of Medical Science from University of Galway and a Structured PhD in Medicine / Clinical Epidemiology from University of Galway. He is the former Director of the HRB Clinical Research Facility Galway and MSc Clinical Research at University of Galway. Prof Smyth continues to teach on the MSc in Clinical Research Program in the School of Medicine at the University of Galway; he developed a number of modules in observational research, clinical trials, systematic reviews and meta-analysis and the ethics and regulatory frameworks for clinical research.

His research interests are in the epidemiology of chronic kidney disease, particularly modifiable risk factors for chronic kidney disease and the relationship between diet and health outcomes. He was the first Irish-based recipient of a Wellcome Trust Clinical Research Career Development Fellowship and collaborates closely with the Population Health Research Institute (PHRI) of McMaster University. He has published over 70 peer-review papers including first author publications in Lancet, Circulation and Kidney International, has >4300 citations and a H-index of 29. As part of his role as Director of HRB-CRFG, Prof Smyth was also a Director of Clinical Research Development Ireland, a Senior Management Team Member of HRB Clinical Research Coordination Ireland / National Clinical Trials Office and an Executive Committee member of the HRB Trials Research Methodology Network.