Ollscoil na Gaillimhe
University of Galway

Coláiste an Leighis, an Altranais & na nEolaíochtaí Sláinte
College of Medicine, Nursing & Health Sciences

MSc Evidence-Based Future Healthcare

Course Handbook

Full Time & Part Time

University of Galway.ie

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Welcome Message

Welcome to the MSc in Evidence-Based Future Healthcare at the School of Nursing and Midwifery, College of Medicine, Nursing and Health Sciences, University of Galway. It is a pleasure to have you join our vibrant and forward-thinking academic community and we are so excited to have you with us.

This programme is designed to equip you with the critical skills, knowledge, and mindset needed to shape the future of healthcare through innovative thinking and the rigorous application of evidence. Whether you're from a clinical, research, or policy background, your journey here will challenge and inspire you to think differently, question deeply, and lead change. I have every confidence you will find this course engaging, interactive and relevant to your daily work.

We look forward to supporting you as you explore the evolving landscape of healthcare and work collaboratively to create impactful solutions for tomorrow's challenges.

Dr Elaine Toomey, BSc, MSc, PhD, PG Cert (Ed.), MISCP
Programme Director

Course Overview

The MSc in Evidence-Based Future Healthcare is an exciting new fully online interprofessional postgraduate course designed for busy healthcare workers seeking to transform their current practice, optimise healthcare outcomes and advance their careers in a rapidly evolving field. Our future-facing programme aims to equip healthcare workers from all backgrounds with the skills and knowledge to tackle current and emerging healthcare challenges by utilising cutting-edge approaches to evidence identification, appraisal, and implementation.

Students will learn about the key concepts, principles and application of evidence-based healthcare, health research methods, searching and appraising evidence, using statistics to inform healthcare decisions, person-centred care and shared decision-making in the age of mis/disinformation, the role of digital health and technology in clinical decision-making and advancing health equity through evidence-based practice. An applied final capstone project will ensure the applicability of learning to the student's own workplace.

Our flexible online learning approach means learning at a time and place that suits you. We will use cutting-edge technology to deliver diverse online teaching and learning methods, including recorded lectures, live online tutorials, groupwork and interactive discussion boards, to maximise an engaging learning experience. Students will be assessed through a variety of methods including written assignments, online assessments, individual and group presentations. Each module and assessment is highly applied to real-world settings and targets the development of critical thinking, problem-solving skills and interprofessional evidence-based practice.

Intake is in September every year. The academic calendar for the University of Galway can be found on https://www.universityofgalway.ie/registry/academic-term-dates/

Course Structure

Full time MSc or Part time MSc (Evidence-Based Future Healthcare)

The course consists of four compulsory semester one modules and three compulsory semester two modules. An applied final capstone project will take place across both semesters and should be submitted by June 30th of the student's final academic year. There are no optional modules. The breakdown of modules for full and part-time students is detailed below.

FULL TIME PROGRAMME STRUCTURE

Module Name	ECTS	Semester
Introduction to Evidence-Based Healthcare: Principles and Practice	10	1
Foundations of Research in Healthcare: Methods and Design	10	1
Person-Centered Care and Shared Decision-Making	10	1
Innovations in Healthcare: Exploring the Role of Digital Health and Technology	10	1
Art and Science of Evidence-Based Healthcare: Searching, Synthesizing, and Appraising Evidence	10	2
Interpreting Statistical Tests in Healthcare: A Practical Approach	10	2
Advancing Health Equity through Evidence Based Practice	10	2
APPLIED PROJECT: Interdisciplinary Healthcare Innovation: A Capstone Project	20	1-2

PART TIME PROGRAMME STRUCTURE

Year 1	ECTS	Semester
Introduction to Evidence-Based Healthcare: Principles and Practice	10	1
Foundations of Research in Healthcare: Methods and Design	10	1
Art and Science of Evidence-Based Healthcare: Searching, Synthesizing, and Appraising Evidence	10	2
Interpreting Statistical Tests in Healthcare: A Practical Approach	10	2
Year 2		
Person-Centered Care and Shared Decision-Making	10	1
Innovations in Healthcare: Exploring the Role of Digital Health and Technology	10	1
Advancing Health Equity through Evidence Based Practice	10	1
APPLIED PROJECT: Interdisciplinary Healthcare Innovation: A Capstone Project	20	1-2

Module Descriptions

Introduction to Evidence-Based Healthcare: Principles and Practice (Semester 1, ECTS 10)

Module Leader: Dr Elaine Toomey

Brief Description

This module aims to provide students with an in-depth understanding of evidence-based healthcare, including its emergence, core concepts, and principles. Students will learn to identify key challenges and facilitators to implementing evidence-based practice in a modern healthcare landscape. They will also develop the ability to critique their own healthcare practice in relation to evidence-based healthcare and identify potential areas for improvement. Additionally, students will learn to critique the current evidence-based healthcare culture within their own working environment and identify potential areas for improvement.

Learning Outcomes

1. Describe the emergence of evidence-based healthcare, its core concepts and principles
2. Identify and describe key barriers and enablers to the implementation of evidence-based practice within a modern healthcare landscape
3. Critique the strengths and limitations of their own healthcare practice in relation to evidence-based healthcare and identify potential areas for improvement
4. Critique the current evidence-based healthcare culture within their own working environment and identify potential areas for improvement based on the principles of evidence-based healthcare
5. Develop a critical understanding of the ethical and professional implications of evidence-based healthcare practice
6. Navigate and use the learning platform and other resources provided in the MSc in Evidence-Based Future Healthcare program

Student Evaluation

Students will have to gain a pass rate of 40% overall for a combination of group and individual-based continuous assessment throughout the semester and an end-of-semester individual written assignment.

Foundations of Research in Healthcare: Methods and Design (Semester 1, ECTS 10)

Module Leader(s): Johanna Pope, Dr Eimear Morrissey

Brief Description

This module aims to provide students with a comprehensive understanding of various research methods and study designs specifically tailored for healthcare research. Students will learn how to develop clear, answerable research questions and appreciate the importance of selecting the most appropriate research design and methodology to address these questions. The module will focus on understanding different study designs, their strengths and limitations, and the context in which they are applied. By mastering the knowledge of research methods and design, students will be well- equipped to effectively evaluate and utilise research findings in their healthcare practice, ensuring evidence-based and informed decision-making.

Learning Outcomes

1. Describe the scientific method and its value for understanding health issues
2. Differentiate between the major philosophical perspectives underpinning health research methods, and recognise researchers' philosophical stances when reading research reports
3. Formulate appropriate and focused research questions relevant to evidence-based healthcare
4. Describe various study designs/methodologies, and their strengths/weaknesses
5. Select an appropriate and ethical study design to achieve a research objective
6. Identify appropriate and ethical strategies for collecting and analysing data to achieve a research objective
7. Evaluate the rigor, reliability, relevance, and ethics of research they encounter

Student Evaluation

Students will have to gain a pass rate of 40% overall for a combination of individual written assignments, and participation in group activities throughout the semester.

Art and Science of Evidence-Based Healthcare: Searching, Synthesizing, and Appraising Evidence (Semester 1, ECTS 10)

Module Leader: Dr Saif-Ur Rahman

Brief Description

People working in healthcare face an ever-growing, and often overwhelming, body of research evidence. This module aims to empower students with the advanced skills needed to search, synthesise, and appraise research evidence effectively and efficiently. By mastering these skills, students will contribute to enhancing care quality, promoting better health outcomes, and developing a robust, evidence-based healthcare system. This module is designed to meet the demands of both current and future healthcare settings, ensuring that graduates are well-prepared to lead and contribute to improving care through evidence-based practice.

Learning Outcomes

1. Understand the types and basic steps of evidence syntheses
2. Conduct comprehensive and systematic searches for relevant research studies using appropriate databases and search terms
3. Conduct study screening and apply data extraction techniques
4. Critically appraise research studies using a range of tools and checklists
5. Assess the quality of evidence and interpret research findings
6. Synthesise research evidence to inform decision-making in healthcare
7. Apply evidence-based practice principles to inform clinical decision-making in real-world healthcare scenarios and settings

Student Evaluation

Students will have to gain a pass rate of 40% for continuous assessment activities throughout the semester.

Interpreting Statistical Tests in Healthcare: A Practical Approach (Semester 1, ECTS 10)

Module Leader: Prof Declan Devane

Brief Description

The ability to critically interpret and apply statistical tests in research papers, policy documents, and practice guidelines is essential for informed decision-making. This module is designed to equip students with the practical skills needed to effectively appraise and interpret statistical tests and apply these skills to real-world healthcare scenarios. The module covers statistical concepts commonly used in healthcare research, such as p-values, confidence intervals, odds & risk ratios, effect sizes, Forest Plots, etc. Students will gain practical experience in critically evaluating statistical results and learn how to apply these skills to real-world healthcare scenarios, enabling them to make evidence-based decisions that drive improvements in care and health outcomes.

Learning outcomes

1. Understand and apply core statistical concepts in healthcare research interpretation
2. Critically evaluate different types of healthcare data and their appropriate analysis
3. Interpret key statistical measures including p-values, confidence intervals, and measures of effect
4. Assess diagnostic test performance and risk communication in healthcare settings
5. Apply statistical interpretation skills to real healthcare research papers
6. Make evidence-based decisions considering statistical and clinical significance

Student Evaluation

Students will have to gain a pass rate of 40% for a written end-of-semester statistical assignment.

Person-Centered Care and Shared Decision-Making (Semester 1, ECTS 10)

Module Leader: Dr Eimear Morrissey

Brief Description

This module aims to introduce the principles and practice of person-centered care and shared decision-making, essential components of evidence-based healthcare. Students will learn how to empower patients and their families and incorporate diverse perspectives in healthcare decisions, amid increased information accessibility and cultural diversity. The module examines how healthcare professionals can facilitate collaborative decision-making processes using clinical practice guidelines, patient decision aids, and communication techniques. Students will develop competencies to address challenges such as misinformation while promoting equitable, person-centered approaches that respect individual values and preferences across multiple contexts.

Learning Outcomes

1. Define person-centred care, shared decision-making and outline their importance in contemporary healthcare settings
2. Describe and critique various models, theories and frameworks of person-centred care and shared decision-making in healthcare
3. Identify, appraise and understand how to apply patient decision aids to inform decision-making with people receiving care
4. Describe the purpose and scope of evidence-based clinical practice guidelines and understand how to apply their recommendations within shared decision-making
5. Communicate effectively with people receiving care and other healthcare workers about healthcare, research evidence and present information in a clear and understandable manner to facilitate effective shared decision-making
6. Critically reflect on the current levels of person-centred care and shared decision-making within their own workplace and identify potential areas for improvement
7. Outline how to evaluate the impact and effectiveness of person-centred care and shared decision-making processes

Student Evaluation

Students will have to gain a pass rate of 40% overall for a combination of individual continuous assessment throughout the semester and end-of-semester assignments.

Innovations in Healthcare: Exploring the Role of Digital Health and Technology (Semester 2, ECTS 10)

Module Leader: Dr Eimear Morrissey

Brief Description

Technology is evolving rapidly, and digital health innovations are playing an increasingly important role in transforming modern healthcare. This module explores how emerging technologies are shaping the future of healthcare delivery, with a particular focus on their integration within evidence-based healthcare. Students will examine the latest developments in digital health and consider their potential impact on patient outcomes and healthcare systems. The module will also explore the benefits and challenges of adopting these technologies in practice, including ethical, regulatory, and implementation considerations.

Learning Outcomes

1. Describe the current landscape of digital health and technology in healthcare and its potential impact on healthcare delivery and patient outcomes.
2. Identify key innovations in digital health, including telehealth, mobile health applications, wearable devices and electronic health records.
3. Evaluate the benefits and challenges associated with the integration of digital health technologies into healthcare practice.
4. Explore the role of Artificial Intelligence (AI) in healthcare innovation, including its applications in diagnosis, predictive analytics and personalised medicine and critically evaluate its potential benefits, limitations, and ethical implications.
5. Analyse ethical, legal, and regulatory considerations related to the use of digital health technologies in healthcare.
6. Critically assess the evidence supporting the effectiveness and safety of digital health interventions.
7. Evaluate the benefits and challenges associated with the integration of digital health technologies into healthcare practice and develop strategies for the successful implementation of digital health solutions in healthcare settings, considering patient needs, organisational context, and stakeholder perspectives.

Student Evaluation

Students will have to gain a pass rate of 40% overall for individual assignments submitted throughout the semester and end-of-semester.

Advancing Health Equity through Evidence Based Practice (Semester 2, ECTS 10)

Module Leader: Dr Claire Kerins

Brief Description

Despite improvements in healthcare, health inequities persist, with specific groups experiencing poorer health outcomes and reduced access to quality healthcare. This module aims to equip students with the knowledge and skills to examine health inequities through an evidence-based lens and develop strategies to promote equity. Students will explore key concepts and frameworks related to health equity, analyse social determinants of health, examine how healthcare can perpetuate disparities, and evaluate evidence-based approaches to address these issues. Through case studies and practical applications, students will gain experience in critically appraising research evidence, developing equity-focused interventions, and applying advocacy principles in various healthcare settings.

Learning Outcomes

1. Define key concepts, frameworks, and principles related to health equity and health disparities
2. Analyse factors contributing to health disparities and health inequities, and evaluate evidence-based approaches for addressing them
3. Evaluate the role of evidence-based healthcare in promoting health equity
4. Develop evidence-based strategies to address health disparities and promote health equity in various healthcare settings
5. Appraise research evidence related to health disparities and health equity interventions to inform decision-making in healthcare
6. Apply advocacy principles to promote health equity and social justice in healthcare practice.

Student Evaluation

Students will have to gain a pass rate of 40% overall for individual assignments submitted throughout the semester and end-of-semester.

APPLIED PROJECT: Interdisciplinary Healthcare Innovation: A Capstone Project (ECTS 20)

Module Leader(s): Dr Elaine Toomey and Dr Eimear Morrissey

Brief Description

The applied capstone project is an important culminating component of the MSc degree. This module accounts for 20 ECTS credits out of a total of 90 ECTS credits allocated to the MSc degree. In this capstone project, students identify an evidence-based solution to an issue relevant to their workplace or professional context and develop a detailed implementation plan. The project is completed in stages throughout the academic year, including an oral presentation with peer feedback, an initial written report focusing on problem identification and solution development, and a final integrated report that includes a comprehensive implementation and evaluation plan. This module allows students to synthesise and apply knowledge gained across the MSc programme to address real-world healthcare challenges.

Learning Outcomes

1.Create a proposal for an evidence-based solution to a significant healthcare challenge
2.Apply learning and skills from the other MSc modules to their own healthcare setting and context
3.Apply problem-solving and critical thinking skills in an interdisciplinary healthcare environment
4.Clearly communicate about evidence-based healthcare to a variety of audiences
5.Demonstrate effective peer communication and feedback skills

Student Evaluation

Students will have to gain a pass rate of 40% overall for an initial individual written report (due Semester 2, Week 8) and a final integrated individual written report (due June 30th of their final year). Students will also be expected to participate in non-graded group presentations (Semester 1) as part of formative assessment.

Additional Information

Students will work on this project over Semesters 1 and 2 (Y2 for part-time) and will be supported with taught workshops and contact with the module faculty throughout the year.

Marks and Standards

MSc. Evidence-Based Future Healthcare – Full Time; 1 Year (12 months)

Level 9
Mode of study: Taught, Online
90 ECTS

Students must achieve a minimum pass mark of 40% in each module.

Honours classification awarded based on final award mark:

- First Class Honours (H1): 70% and above
- Second Class Honours, Grade 1 (Upper H2): 60-69%
- Second Class Honours, Grade 2 (Lower H2): 50-59%
- Third Class Honours: 40-49%
- Fail: Below 40%

MSc. Evidence-Based Future Healthcare – Part Time; 2 Year (24 months)

Level 9
Mode of study: Taught, Online
90 ECTS over 2 years

Students must achieve a minimum pass mark of 40% in each module.

Honours classification awarded based on final award mark:

- First Class Honours (H1): 70% and above
- Second Class Honours, Grade 1 (Upper H2): 60-69%
- Second Class Honours, Grade 2 (Lower H2): 50-59%
- Third Class Honours: 40-49%
- Fail: Below 40%

Useful Information

General Enquiries

For any enquiries or concerns, please contact the Course Director, using the email address FutureEvidenceMSc@universityofgalway.ie.

University of Galway Code of Conduct

Please familiarise yourselves with the University of Galway Code of Conduct, procedures associated with examinations and assessment and other important matters. All students should read this document www.universityofgalway.ie/media/studentservices/files/Student-Code-of-Conduct.pdf.

Attendance Guidelines

Students are required to attend all live synchronous sessions and to complete all other directed academic activities, unless prevented by some unavoidable cause of absence (extenuating circumstances). In this event, please inform the module coordinator. Students who miss classes are responsible for updating themselves on any information provided during those classes. Dates and deadlines associated with this course are subject to change therefore students must plan on being present (online) and available for the whole semester.

Deadline/Deadline Extensions Guidelines

Students are required to submit assignments by the due deadline. Students must make a formal request via their University of Galway email address to the relevant module leader for an extension to a submission deadline. Extensions are granted based on a medical certificate or other personal matters such as family bereavement, illness or a personal matter. Extensions must be applied for **before** the coursework submission date. Where an extension has not been agreed in advance, or where a student submits an assignment after an agreed extension has expired, the School will impose a penalty for late submission.

Plagiarism Guidelines

Each student is responsible for ensuring that all work is handed in for assessment is his/her own. Plagiarism is the act of copying, including or directly quoting from the work of another without adequate acknowledgement, in order to obtain benefit, credit or gain. Plagiarism can apply to many materials, such as words, ideas, images, information, data, approaches or methods. Sources of University of Galway Plagiarism can include books, journals, reports, websites, essay mills, another student, or another person.

Self-plagiarism, or auto-plagiarism, is where a student re-uses work previously submitted to another course within the University or in another Institution.

All work submitted by students for assessment, for publication or for (public) presentation, is accepted on the understanding that it is their own work and contains their own original contribution, except where explicitly referenced using the accepted norms and formats of the appropriate academic discipline.

Plagiarism can arise through poor academic practice or ignorance of accepted norms of the academic discipline. Schools should ensure that resources and education around good academic practice is available to students at all levels.

How can Plagiarism be avoided?

Most cases of plagiarism can be avoided by citing your sources. Simply acknowledging that certain material has been borrowed, and providing your reader with the information necessary to find that source, is usually enough to prevent plagiarism. See below on 'Referencing' for information on how to cite properly.

Changing the words of an original source is not sufficient to prevent plagiarism. If you have retained the essential idea of an original source, and have not cited it, then no matter how drastically you have altered its context or presentation, you have still plagiarised. If you use a direct quotation from another source (using their words exactly), you must enclose it in "quotation marks" and quote the source, giving the page number.

How can plagiarism be detected?

All coursework you submit for assessment will be automatically submitted to "Turnitin", a plagiarism detection software programme which compares submitted work with hundreds of thousands in their database, as well as internet sites. You are strongly advised to submit a draft of any assignment/thesis to Turnitin to determine its originality and to take corrective action, if necessary, before submitting the final version.

What are the consequences of plagiarism?

This MSc programme follows the University of Galway's plagiarism policy available at www.universityofgalway.ie/plagiarism

Penalties may include automatic failure or disciplinary procedures.

The information above has been adapted from Turnitin

How to access e-journals through the library

http://library.universityofgalway.ie

Access to current literature will be required during this MSc course, for reports, projects and for the thesis/independent study. The Library at University of Galway can provide access to the full text of many articles, including journals which are not held as paper copies.

Student Services

Using the Library

The library at University of Galway can provide access to the full text of many articles, including journals which are not held as paper copies. You can access this material in the library, on campus and from home if you login to the system appropriately. Our library webpage has some excellent 'how to' advice, which is a great place to start orienting yourself.

Career Development Centre

The University of Galway Career Development Centre is a useful resource; I suggest you avail of the many workshops and mentoring opportunities they provide. They can give you help finding and applying for jobs, for PhD positions and for obtaining funding for research positions. They will also give advice about preparing an effective cover letter and *curriculum vitae*.

Academic Writing Centre

Many learners find writing assignments challenging; particularly if they have not written for some time. The Academic Writing Centre can provide support for students who feel that they have a recurrent problem with grammar, punctuation, spelling, or essay structure. They offer free one-on-one teaching sessions on campus tailored to your needs. You can find out more information about the service including contact details via this link. That link also includes some helpful links including video tutorials.

Contact Details

All course related queries should be directed to our dedicated MSc in Evidence Based Future Healthcare email address:
FutureEvidenceMSc@universityofgalway.ie

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