



NUI Galway  
OÉ Gaillimh

## Course Highlights

- Students will study subjects from Science, Engineering, Health Promotion and Law. This will include specific health and Safety topics such as Ergonomics, Occupational Health, Occupational Hygiene, Health and Safety Law, Risk Assessment
- Students will have the opportunity to interact with a multi disciplinary teaching staff drawn from academia, research and Industry
- Students will complete a research thesis in the area of Occupational Health and Safety
- Graduates of this programme are eligible to apply for membership of the Institute of Occupational Safety and Health (IOSH) and the British Occupational Hygiene Society (BOHS)

### Graduates of this course will

- Receive a high quality academic qualification
- Acquire problem solving skills and critical reasoning skills
- Apply academic theory within laboratory and workplace settings
- Develop their written, presentation and communication skills

### Duration of Course

The programme will extend over at least one academic year. The course work and practical sessions will cover the period September to May.

### Entry Requirements

The M.Sc. course is open to students who have obtained an Honours B.Sc. Degree or its equivalent as determined by the College of Science, in an appropriate discipline. Students without an adequate academic background but with relevant work experience may be required to attend for interview.

### Applications

The application process is on-line. Information on the application process is available on the National University of Ireland, Galway website at [www.pac.ie/nuig](http://www.pac.ie/nuig).

The course is advertised in the National Press, usually in the Spring.

### For Further Information contact:

[www.nuigalway.ie/ohs](http://www.nuigalway.ie/ohs)



## National University of Ireland, Galway

With a history of more than 160 years of teaching excellence, NUI Galway is one of Ireland's most popular universities for undergraduate study.

Here you will benefit from the truly unique student experience that only Galway can offer.

We are proud of our reputation as a student-centred University with staff who are friendly and approachable, and always ready to make time for you.

In addition to its academic programmes, the University has excellent sports facilities and a wide range of clubs and societies.

As a study location Galway is one of Europe's most vibrant cities; it is young at heart with students making up 20% of the population.



# M.Sc. Occupational Health & Safety and Ergonomics GYS12



# M.Sc. Occupational Health & Safety and Ergonomics GYS12 involves the application of engineering and scientific principles to ensure the welfare and well-being of people at work

## Course Background

Health & Safety has become a major concern for society. Its growing significance is highlighted by increasing legislation and regulation at Irish, European and international levels.

Health & Safety is a discipline that is primarily focused on the welfare and well-being of people at work. It is also concerned with the safety of technological systems within the workplace, and with the impact of workplace activity on the wider environment.

Health and Safety is viewed as an integral part of an organisation's activity, contributing to the welfare of employees, to public perception of the organisation and ultimately to the quality and success of the product or service delivered.

NUIG has been at the forefront of providing postgraduate education in the area of Occupational Health and Safety since the early 1990's.

## Introduction to the course

The Masters programme is multidisciplinary in nature, involving contributions from the College of Science, The College of Business Public Policy and Law, The College of Engineering and Informatics and the College of Medicine, Nursing and Health Sciences.

Graduates of the programme will receive a high quality qualification in the broad multidisciplinary area of occupational health & safety which will enable them to take on managerial responsibilities for these matters within an industry or to work with a regulatory agency or consultancy firm. They will also acquire the necessary skills to pursue further research in the areas of occupational health, ergonomics, occupational hygiene, and safety engineering.

The programme has been recognised by the Irish Health and Safety Authority and satisfies the academic requirements for membership of the Institute of Occupational Safety and Health (IOSH) and the British Occupational Hygiene Society (BOHS).

## Graduates

The employment record of programme graduates is excellent. Graduates of the programme are employed as Health and Safety Professionals, Health and Safety Managers, Health Promotion Officers, Occupational Hygienists, Ergonomists, and Health and Safety Engineers across a broad range of sectors including PharmaChem, Health Care, Medical Device, Consulting Firms, Local Authorities and Statutory Bodies in Ireland and abroad.

## Course Content

**The MSc Occupational Health and Safety and Ergonomics is truly a multidisciplinary programme.**

The course consists of three elements: formal course work; laboratory practicals & continuous assessment; and a minor research thesis. Students will study specific Health and Safety topics and will be exposed to relevant domain experts through seminars, team-based projects and workplace visits.

The course is divided into a number of subject areas including;

### 1. Occupational Health – 6 ECTS Credits

Basic anatomy and physiology, toxicology; history of occupational health; principles of occupational health including commonly occurring occupational diseases; principles of disease prevention and promotion of health and safety in the workplace.

### 2. Ergonomics – 6 ECTS Credits

Ergonomics approach; ergonomics analysis; anthropometrics; posture analysis; manual handling; shiftwork; hand tool design; work-related upper limb disorders (WRULD's); workplace assessment; information processing; design of displays; arrangement of components; systems design; allocation of functions; human error, accidents and safety.

### 3. Occupational Hygiene – 6 ECTS Credits

Historical development of occupational hygiene; radiation safety; noise and vibrations; thermal environments; workplace gases, vapours and dusts; air quality monitoring; controlling worker exposures; ventilation; Occupational Hygiene exposure monitoring strategies.

### 4. Legal Studies – 6 ECTS Credits

Legal requirements of health and safety programmes and their implementation; legal requirements in the design of workplaces.

### 5. Management Studies – 6 ECTS Credits

Industrial psychology; managerial skills and organisational requirements related to health and safety programmes and their implementation; project management; case studies, workshops and literature reviews.

### 6. Safety and Risk Management – 6 ECTS Credits

Hazard analysis and control; risk assessment techniques; design of protective systems; elements of a safety management system; review of hazards: electrical, farming, fire, machines, construction, biological, chemical, etc.; environmental impact.

### 7. Research Methods – 6 ECTS Credits

Review of basic statistics; bayesian decision theory; basic computing; knowledge of relevant software packages. Principles of epidemiology and biostatistics as applied to occupational health.

### 8. Specialised Studies – 12 ECTS Credits

Specialised studies is designed to develop the skills required to complete research thesis. Material covered includes; research critiques; literature reviews; advanced laboratory work; presentation skills; guest speaker symposia.

### 9. Research Thesis - 36 ECTS Credits

The research thesis is one of the key elements of the M.Sc. degree, and comprises approximately 40% of the overall marks for the course. Students will have the opportunity to complete their research thesis in one of the following subject areas: Ergonomics; Occupational Health; Occupational Hygiene; Occupational Safety and Risk Management or Health and Safety Law.

