NUI Galway
OÉ Gaillimh

ATLANTIC UNIVERSITY ALLIANCE

Specialist Diploma in ENVIRONMENTAL SUSTAINABILITY

Duration: 1 year part-time

- **Curriculum focused on emerging subject area of environmental sustainability**
- **Delivery via blended learning teaching methodologies**
- **Medium-term up-skilling for career advancement or specialisation and/or cross-skilling for career change or cross-team roles**
- **Minor award at Degree level (NFQ level 8)**

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ENTRY REQUIREMENTS

- Applicants must be in receipt of the Diploma in Science & Technology Studies or a related Diploma or higher qualification. Applicants may use experience in addition to academic qualifications to demonstrate that they satisfy the course prerequisites.

WHAT TYPE OF COURSE IS IT?

- This one-year, part-time Diploma course aims to develop knowledge around the issues and opportunities associated with achieving and maintaining environmental sustainability in industry, business and society, and to develop associated technical and soft skills. The qualification is considered a minor award at Degree level.

  The programme is delivered by blended learning, participants receive learning materials in both online and in hard copy format for each module. Materials are specifically designed for independent study and will be supplemented by supporting online learning resources where appropriate. The course requires attendance at tutorials in NUI Galway once every four weeks, or approximately ten Saturdays, from September to June. Between campus visits you will interact with tutors and fellow students via an online learning system.

HOW WILL I BENEFIT?

The course is intended for those who wish to focus their skills with a view to moving into specialist and hybrid environmental roles e.g. internal environmental policy consultants, waste minimisation specialists, energy optimisation advisors.

On completion of the course graduates will have highly marketable, up-to-date and confidence-building knowledge and skills relevant to the green economy. They will have practiced and been assessed on a range of technical and transferable skills which will be beneficial at the personal, enterprise and community levels.

If graduates so wish, they can progress to the B.Sc. in Science & Technology Studies (NQF level 8) with credit for their studies. In this case they will be exempt from one elective stream in the Degree cycle.

CURRICULUM

This Specialist Diploma consists of four interrelated taught modules and a project, each worth 6 ECTS, giving a total of 30 ECTS.

The four taught modules are:

- Environmental Management Systems
- Environmental Impact Assessment
- Design for Environment
- Sustainable Energy

The module contents are presented at the end of this document. The project topic is chosen by the participant in consultation with their supervisor.

LEARNING OBJECTIVES

On completion of the course participants should have:

- An appreciation of environmental factors, standards and policies which impact on industry and business sectors
- Specialised knowledge and skills in the areas of environmental policy, compliance and auditing
- Developed insight of national and international issues in relation to green energies and the green economy in general
- Technical knowledge and skills in the design of products and process with a view to minimising environmental impact by streamlining processes, decreasing waste and optimising reuse, recycling and waste disposal
- Enhanced their management and leadership capabilities to facilitate organisational change towards environmentally sustainable processes, products and procedures

ASSESSMENT

Assessment of the taught modules is through continuous assignments and written examinations. Exams take place at the end of each semester. The project is assessed through staged delivery of a project report. The award mark is based on an average result of all five modules.

COURSE STRUCTURE

The course is offered over one academic year (September to June) on a part-time basis. Two taught modules are completed each semester (September to December and January to June) while the project is completed over the academic year.

FEES

The fees for the course are €1,900 for EU students and €2,400 for non-EU students.

This fee includes:

- Registration
- Tuition fees
- Course materials
- Examinations and assessments

HOW DO I APPLY?

Applications should be made online at www.nuigalway.ie/apply

CONTACT

Further information is available from:

Niamh McHugh
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Nuns' Island,
NUI Galway.
091 495845
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www.aua.ie

MODULE CONTENTS

ENVIRONMENTAL MANAGEMENT SYSTEMS

ENVIRONMENTAL IMPACT ASSESSMENT

SUSTAINABLE ENERGY

UNIT 1	ENERGY TRENDS CURRENT OPTIONS
UNIT 2	UTILISATION OF ENERGY – SUSTAINABLE CONSUMPTION AND ENERGY AWARENESS
UNIT 3	TRADITION FUELS USED FOR ENERGY USE
UNIT 4	SOLAR THERMAL HEATING
UNIT 5	SOLAR PHOTOVOLTAICS
UNIT 6	BIOENERGY
UNIT 7	HYDROELECTRICITY
UNIT 8	TIDAL AND WAVE POWER
UNIT 9	WIND ENERGY
UNIT 10	GEOTHERMAL ENERGY
UNIT 11	ELECTRICITY GENERATION AND INTEGRATION
UNIT 12	ELECTRICITY DISTRIBUTION
UNIT 13	NUCLEAR POWER
UNIT 14	SUSTAINABLE BUILDING
UNIT 15	PASSIVE HOMES AND SICK BUILDING SYNDROME
UNIT 16	CASE STUDIES

DESIGN FOR ENVIRONMENT

UNIT 1	INTRODUCTION TO DESIGN FOR ENVIRONMENT (DFE)
UNIT 2	CONCEPTUAL PRINCIPALS OF DFE
UNIT 3	PRODUCT AND PROCESS DEVELOPMENT
UNIT 4	ENVIRONMENTAL PERFORMANCE METRICS
UNIT 5	METHODS FOR ASSESSING AND IMPROVING ENVIRONMENTAL PERFORMANCE
UNIT 6	INTEGRATED LIFECYCLE MANAGEMENT
UNIT 7	CASE STUDY: AT&T
UNIT 8	CASE STUDY: ENVIRONMENTAL CONSCIOUS PRODUCTS – AN IBM INITIATIVE
UNIT 9	CASE STUDY: APPLIED MATERIALS INCORPORATED - SEMI CONDUCTOR EQUIPMENT DESIGN
UNIT 10	TEN WAYS TO PREVENT POLLUTION BY DESIGN
UNIT 11	ORGANISATIONAL ISSUES IN DFE
UNIT 12	DFE: CORPORATE PLANNING AND COMPLIANCE
UNIT 13	SUSTAINABILITY IN DESIGN RESEARCH AND PRACTISE
UNIT 14	ENVIRONMENTALLY SUSTAINABLE DESIGN-ORIENTING TOOLS
UNIT 15	DESIGN FOR ENVIRONMENT IN PERSPECTIVE
UNIT 16	THE ROAD TO ECO – EFFICIENCY

For further information see www.aua.ie