MSc Sustainable Development
DT118

Full and part-time MSc, Diploma and Certificate

Dublin Institute of Technology

Faculty of Engineering and Built Environment

Contact: Ken Boyle, Programme Chair ken.boyle@dit.ie

Sustainable development ... “ability to make development sustainable—to ensure that it meets the needs of the present without compromising the ability of future generations to meet their own needs”

‘DIT’s MSc in Sustainable Development was an excellent launch board for my career in sustainability. The wide-ranging nature of the challenges of sustainability was captured in the variety of modules on offer. The high calibre lecturers together with a focused work placement scheme ensured that I was well equipped for future career opportunities.’


---

### Examples of graduate employment from MSc Sustainable Development

<table>
<thead>
<tr>
<th>COMPANY</th>
<th>POSITION</th>
<th>LOCATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>CARE International</td>
<td>Health Program Coordinator</td>
<td>Tanzania</td>
</tr>
<tr>
<td>Dept of the Environment</td>
<td>Policy adviser Climate Change</td>
<td>Dublin</td>
</tr>
<tr>
<td>Sustainable Nation</td>
<td>Programme Manager</td>
<td>Dublin</td>
</tr>
<tr>
<td>HSE</td>
<td>Decontamination</td>
<td>Sligo</td>
</tr>
<tr>
<td>Green Schools Green</td>
<td>Travel Education Officer</td>
<td>Galway</td>
</tr>
<tr>
<td>TF1 Sustainability</td>
<td>Consultant</td>
<td>Paris</td>
</tr>
<tr>
<td>Greenlight Training</td>
<td>Sustainability Manager</td>
<td>Donegal</td>
</tr>
</tbody>
</table>
Background & Context

Owing to the extent of the human impact on the environment it has been suggested that we are living in a new geological era, the Anthropocene.

Climate change, biodiversity loss, environmental injustice, water scarcity, access to clean affordable energy and social inequality are all issues that governments, NGOs, international agencies and industry seek to address through the application of sustainable development policies and practices.

The MSc in Sustainable Development is based in the School of Transport Engineering, Environment and Planning and aims to produce the environmental professionals who can pursue sustainable development actions and policies derived from evidence, experience and rigorous evaluation.

The programme aims and objectives are to provide graduates with the skills and ability to interpret principles of sustainable development and translate these into policy responses.

Features of the MSc Sustainable Development at DIT:

1. WORK PLACEMENT
   - students work with organizations on sustainable development projects and practice

2. EUROPEAN STUDY TOUR
   - a one week study tour of a selected region in mainland Europe

3. RESEARCH DISSERTATION
   - on a sustainable development topic
Sustainable Development Course Team

Henk van der Kamp, Head of School, Transport & Spatial Planning

Dr Ken Boyle, Programme chair, Conservation and Recreation Management

Dr Alan Gilmer, Modelling ecological systems, carbon cycling

Conor Skehan, Impact Assessment, Environmental Law

Dr Melinda Lyons, Ecology and habitat management

Lorcan McDermott, Governance and sustainable development

Dr Deiric O’Broin, Community Development

Ciaran Cuffe, Urban Planning and Architecture

Dr Marian Coll, Resource Management

David O’Connor, Transport and Urban design

Odron Reid, Community Development and Planning

Paul Lawlor, Spatial and Marine Planning

Chris Reid, Communications

Contact at: ken.boyle@dit.ie

Conservation and Recreation Management

Dr Conor Norton, Assistant Head of School, Urban Design, Sustainable Urban Fabric

Dr Conor Norton, Assistant Head of School, Urban Design, Sustainable Urban Fabric

Dr Conor Norton, Assistant Head of School, Urban Design, Sustainable Urban Fabric
MSc Sustainable Development Programme Objectives

The objective of the programme is to provide graduates from diverse disciplinary backgrounds with a detailed understanding of the most current and emerging concepts of sustainability and a high level of applied environmental knowledge and skills. Teaching in the School facilitates the development of high levels of self-learning and self-evaluation. These competencies are intended to prepare candidates to take up positions of leadership where they would have specific responsibility for environmental performance. The programme is not intended to produce environmental specialists but rather to equip professionals with the most current information, awareness, knowledge and understanding of how to optimally manage environmental factors while sustaining and enhancing society.

General Structure

The MSc Sustainable Development is a full time or part-time course that runs over 13 or 25 months at the DIT. Lectures take place on the Wednesday, Thursday and Friday in semesters 1 and 2. Mondays and Tuesdays are allocated to work placement. The Programme is structured to provide a first semester of modules which ensure that all candidates are exposed to the most current thinking about the core topics of sustainable development – such as ecology, the socio-economic environment, environmental law and institutions etc – while a techniques module ensures that candidates are aware of the research and writing standards necessary for participation in an MSc programme. The first semester is also used to prepare the candidate to select a Dissertation topic – largely through the ‘Research Conference’ (See below). Two modules – Case Studies and Sustainability and Public Policy in a European context – link the two semesters by providing opportunities to visit and experience examples of best practice – both in Ireland and abroad\(^1\). The second semester consists almost entirely of optional modules that provide the candidate with exposure to subjects they feel will develop an expertise in a particular aspect of sustainable development.

In the initial phase of the programme students have an intensive and in depth introduction and review of sustainable development as applied and measured in Irish, European and global economies.

In semester 2 students develop an element of specialisation. Students are asked to select 3 modules worth 5 credits from the suite of modules available to the programme (See Optional modules for DT118 for module summaries.)

\(^1\) Note that the Programme includes a one week study tour in semester 2 to visit and observe Sustainable Development in other EU Member States.
Research work

At the postgraduate conference (in the latter half of Semester 1 at the DIT) the students present research work based on the environmental, social or economic elements of sustainable development. A speaker from an appropriate sector/industry is invited to provide a keynote address. The conference is organised by staff with the assistance of the students and the audience is industry, the public/state sector and student and staff of the school.

Topics chosen for research dissertations reflect the student’s graduate and work experience and address themes in the context of Sustainable Development. Titles listed below are a few of the many that have been completed to date:

Adaption to Climate Change Through Farming Practices: The case of smallholder maize farmers in rural Tanzania  Favian Lihwa

Irish Agriculture: Feeding the World or Feeding the Problem  Antón McDermott

The Role of Knowledge in Ethical Clothing Consumption: An Irish Perspective  Aishath Shuaila Rasheed

My home, my street, my world: Children’s experiences of Ballymun and how their participation in local environmental decision-making could increase the sustainability of their urban community  Hedda Dick

The potential for a certified cycle training programme in Ireland  David Sellars

Natura 2000 sites and development pressure in Ireland: Are Natura 2000 sites adequately protected in the light of Article 6 of the habitats directive?  Sandrine Cadic

The power of the consumer: How public awareness of the secondary carbon footprints of food could reduce Ireland’s GHG emissions  Eloise Moore

The rate and directional flow of contaminants from septic tanks and their effect on groundwater quality in the Churchill & Oram group water scheme catchment  Dave Corrigan

A review of factors affecting the development of small hydro potential in Ireland  Fergal O'Hannrachain

The role for Irish environmental non-governmental organizations in waste management training/education for the small and medium enterprise sector  Lorraine Fitzgerald

Attitudes of Irish consumers towards ecolabels: confusion, credibility and cynicism  Tara Connolly

Are potential High Nature Value (HNV) farms along the west coast of Ireland facing socioeconomic pressures and is farmland abandonment a current threat to HNV farming systems in Ireland?  Sheila Hourigan
Outline of the programme structure:

**MSc Sustainable development, 90 credits**

- Full-time 13 months and Part-time 25 months
- 10 core modules  
  - Dissertation (25 credits)  
  - 3 elective modules

**Diploma in Sustainable Development, 60 credits**

- 10 months full-time, 22 months part-time
- 8 core modules  
  - 4 elective modules

**Certificate in Sustainable Development, 30 credits**

- 6 modules with a minimum of 3 core modules
- 1 or 2 semesters, 5 months or 10 months

**Core modules**: Ecology, Economy and Sustainable Development, Climate change Policy and Analysis, Society and Sustainable Development, Transport and Infrastructure, Spatial Planning & Sustainable Communities, Environmental Law and Institutions, Sustainability, Development and Public Policy in a European Context, Research Techniques *, Progress and Placement *, Dissertation *

* MSc candidates

**Elective modules**: Students can select elective from a range of level 9 programmes in the School and across DIT including: Environmental Management Plans, EU Policy, Renewable energy technologies, Environmental Design and Management, Spatial Data Assessment and Local Development and Project Appraisal

The modules listed are 5 credits each and the Dissertation module is 25 credits. A brief outline of the modules is given on pages 8 - 9
Admission requirements and procedures
The admission requirement for entry to the course is that the applicant must have an honours degree in any relevant discipline at 2.2 grade or higher, or equivalent. Mature applicants and those with a number of years work experience are encouraged to apply.

Curriculum and examinations
The programme is a 90 credit Masters programme. A total of 30 credits are assigned to research work [25 for the dissertation and 5 for the research progress and work placement reports]. The remaining 60 credits are divided amongst 12 individual programme modules 9 of which are Core and 3 of which are Options selected from a suite of up to 9 modules.

Facilities Available
Accommodation
Course lectures take place in the Bolton Street. There is a dedicated lecture and work room for postgraduate students.

Instrumentation & Laboratories
GIS and related specialist instruction and project work takes place in the School’s GIS laboratory. This accommodates up to 20 students and is equipped with advanced GIS software, hardware – including large-scale printers and plotters - and digital data for departmental research activities

Central Library Resource
Each of the DIT centres is equipped with a library containing modern lending and research facilities. Approximately 170,000 volumes are held and about 1,000 periodicals are subscribed to. The central library system is based in DIT Aungier St. and an automated library management system is in place at all DIT campus sites.

DIT, Bolton St. Library Resource
At DIT Bolton Street, the library has 420 seats, contains circa 40,000 volumes and subscribes to about 400 current periodicals. In addition, it has CDROM data bases, access to the internet, microfiche, maps, videos, slides and photocopying services. Staff at the library run tutorial on the use of databases and bibliographic techniques for researching and essay writing. There is online access to many academic journals through the ejournals portal.
CORE MODULES DT 118 MSc in Sustainable Development

These modules run in the first semester unless indicated otherwise

**Society and Sustainable Development (5 credits) SSPL 9062** Introduces the learner to the socio-political and ethical issues integral to the study of sustainable development. The module introduces the learner to the key concepts and theories of politics, ethics, sociology, social policy and evaluates the role of social equity for the practice of sustainable development.

**Spatial Planning and Sustainable Communities (5 credits) SSPL 9068** The module explores how communities are formed by the interaction of environmental, social and economic forces. It explores Irish planning legislation and its strengths and weaknesses in shaping communities.

**Ecology (5 credits) SSPL 9028** Provides an awareness and understanding of various areas of human activity and processes and how these impact on the natural environment.

**Climate change - Policy and Analysis SSPL 9032 (5 credits)** This module introduces the student to the concepts and processes of climate change policy development and analysis.

**Environmental Law and Institutions II (5 credits) SSPL 9031** Provides a proper understanding of environmental legislation and its impact on the process of monitoring and guiding the development process.

**Economy and Sustainable Development (5 credits) SSPL 9035** An introduction to the concepts and theories of economics. The module uses contemporary examples in Ireland and internationally to analyse the relationship between economics and sustainable development.

**Transport, mobility and healthy neighborhoods (5 credits) SSPL 9072** This module explores the relationship between transportation, human settlement patterns and quality of life.

**Sustainability, Development and Public Policy in a European Context (5 credits) SSPL 9033** This module is a forum for exploration of contemporary issues in sustainability and regional development through site visits in Ireland and Europe.

**Research Techniques (5 credits) SSPL 9006** Provides the skills to understand sources of information, data analysis and computation relevant to research. It also prepares the student for writing the dissertation.

**Dissertation (25 credits) SSPL 9027** Semester 1 and 2 This is a self-directed learning module which is reported in a dissertation between 15,000 and 20,000 words. The dissertation will be an original piece of work by the student on a research topic relevant to the theme of Sustainable Development. Examples of dissertation topics are listed in Appendix 1.

**Progress and Placement (5 credits) SSPL 9057** Semester 1 and 2 Each student is required to spend a minimum of 14 hours per week for 16 weeks in an approved and monitored work placement.
Sample Elective Modules in Sustainable Development

Students select 3 of these modules for semester 2, modules are available if sufficient students elect to take them

**Sustainable Construction SSPL 9055 (5 credits)**
The module aims to familiarize the learner with documentation and construction techniques commonly used by the construction sector and provide an understanding of key issues, relating to energy conservation techniques.

**Environmental Management Plans II SSPL 9029 (5 credits)**
The students work as a team or teams to develop a management plan of an extensive habitat or network of habitats that considers a number of scenarios such as intensification of tourism or agriculture or strict protection of habitats.

**Environmental Design and Management SSPL 9030 (5 credits)**
This module presents a holistic and integrated approach to design, at household, settlement, city or regional level. The module explores new ways in which resources can be used more effectively and efficiently.

**Entrepreneurship SSPL 9038 (5 credits)**
To ‘make development happen’ is often dependent on local business initiatives the success of which is usually because of shrewd appraisal of market opportunities, ability to take risks, and use of supporting structures. The module explores the key issues in bringing ideas into successful business concepts.

**EU Policy SSPL 9039 (5 credits)**
Examination of theories and practice of regional development.

**Local Development and Project Appraisal SSPL 9040 (5 credits)**
A critical evaluation of how local and regional developments are implemented having regard to the principles of sustainable development.

**Management Studies SSPL 9041 (5 credits)**
The module provides an introduction to managerial effectiveness and behaviour which will assist the student improve their organisational performance through the better use and the management of human resources.

**Spatial Data Assessment SSPL 9063 (5 credits)**
The module presents an overview of methods for the assessment of spatial data including geographic information systems and related technologies to enable the learner to appreciate their usefulness in the complex and multifaceted task of sustainable development.
Frequently asked questions MSc Sustainable Development

What are the fees for the MSc Sustainable Development programme?
Fees for postgraduate programmes are reviewed on an annual basis. Please check the current fees at [http://www.dit.ie/studyatdit/postgraduate/feesfunding/](http://www.dit.ie/studyatdit/postgraduate/feesfunding/)

What is the closing date for applications?
The closing date for application to the SD DT118 programme is in August. Applications should be made directly to graduate studies. Copies of the application forms and details on fees are available on the DIT web site at: [http://www.dit.ie/studyatdit/postgraduate/howtoapply/](http://www.dit.ie/studyatdit/postgraduate/howtoapply/)

What are the entry requirements for the course?
The minimum qualification is a 2.2 honours primary degree
We do place value on work experience particularly if gained after graduation.
In exceptional circumstances students not qualifying on academic grounds but with strong work experience may, following an interview, be offered a place on the programme.

Who studies Sustainable Development?
Graduates from a broad range of disciplines including arts, business/economics, engineering, architecture, communications, geography or the social sciences and science have completed the programme.

How is work placement organized?
MS students must do a work placement of two days per week over a minimum of 16 weeks with an approved employer. Monday and Tuesday are free to facilitate this and lectures are on Wednesday, Thursday and Friday.

We support students on the MSc programme to identify potential employers and to arrange work placement. This process is facilitated by the module coordinator, currently Dr Deiric O’Broin.

Work experience is generally unpaid.
Where do graduates of the course get employment?  
There is no definitive area of employment for graduates of the programme. Generally students tend to seek or get employment with the skills they developed in their primary degree but with the added advantage of having an in depth understanding of the process and application of sustainable development to environmental, economic or social sectors. With work placement and a suitable research dissertation you could develop the skills needed to help focus your career in a sector that is of particular interest to you.

Examples of graduate employment from MSc Sustainable Development

<table>
<thead>
<tr>
<th>COMPANY</th>
<th>POSITION</th>
<th>LOCATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boltz Sustainability</td>
<td>Founder</td>
<td>Dublin</td>
</tr>
<tr>
<td>Dept of the Environment</td>
<td>Policy adviser Climate Change</td>
<td>Dublin</td>
</tr>
<tr>
<td>Sustainable Nation</td>
<td>Programme Manager</td>
<td>Dublin</td>
</tr>
<tr>
<td>HSE</td>
<td>Decontamination</td>
<td>Sligo</td>
</tr>
<tr>
<td>Green Schools Green</td>
<td>Travel Education Officer</td>
<td>Galway</td>
</tr>
<tr>
<td>TF1 Sustainability</td>
<td>Consultant</td>
<td>Paris</td>
</tr>
<tr>
<td>Greenlight Training</td>
<td>Sustainability Manager</td>
<td>Donegal</td>
</tr>
<tr>
<td>Meinhardt Group</td>
<td>Environmental Engineer</td>
<td>Melbourne</td>
</tr>
<tr>
<td>Equilibrium Srl</td>
<td>General Manager</td>
<td>Milan</td>
</tr>
<tr>
<td>PWC</td>
<td>Sustainability Manager</td>
<td>Abi Dhabi</td>
</tr>
<tr>
<td>Greenstreets</td>
<td>Environmental Sustainability Manager</td>
<td>Dublin</td>
</tr>
<tr>
<td>National Transport Authority</td>
<td>Mobility Programme Coordinator</td>
<td>Dublin</td>
</tr>
</tbody>
</table>