



University College Dublin
National University of Ireland, Dublin

Regional & Urban Planning

University College Dublin

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Introduction:

The Department of Regional and Urban Planning

The Department of Regional and Urban Planning is one of more than ninety departments which make up University College Dublin. Regional and Urban Planning is one of the constituent departments within the Faculty of Engineering and Architecture. Because of the eclectic nature of planning, the Department also maintains close links with a wide range of other departments, courses and specialisms within the University. The Department is located at Richview, Clonskeagh which adjoins the Belfield campus.

The welfare of societies, economies and the environment is increasingly dependent upon the unique perspective which members of the planning profession can bring to bear upon global and regional problems. Regional and Urban Planning is a profession engaged in guiding the development of the physical environment, 'natural' and man-made, in response to the needs of society. As environmental problems increase in complexity and the rate of change of societies accelerates, the need for planning becomes ever greater. The profession embraces a wide variety of disciplines, including the social and behavioural sciences and the design professions, in order to understand and analyse the relationships between man and the environment (see diagram on page 6).

Within this broad framework, the primary goal of the Department of Regional and Urban Planning is to serve Irish society through the development of the art and science of planning. Because it is the only planning school in the Republic of Ireland, its approach to that goal is broad-based, involving a wide variety of socio-economic and land use issues ranging from the detail of a local action area plan to the broader strategies of metropolitan and regional development. Reflecting the needs of the country, the course places special emphasis on the positive promotion of development in a planned and orderly fashion. This national interest is reflected in the course structure and the Department's educational and research endeavours.

Stemming from this philosophy, the major objectives of the Department are:

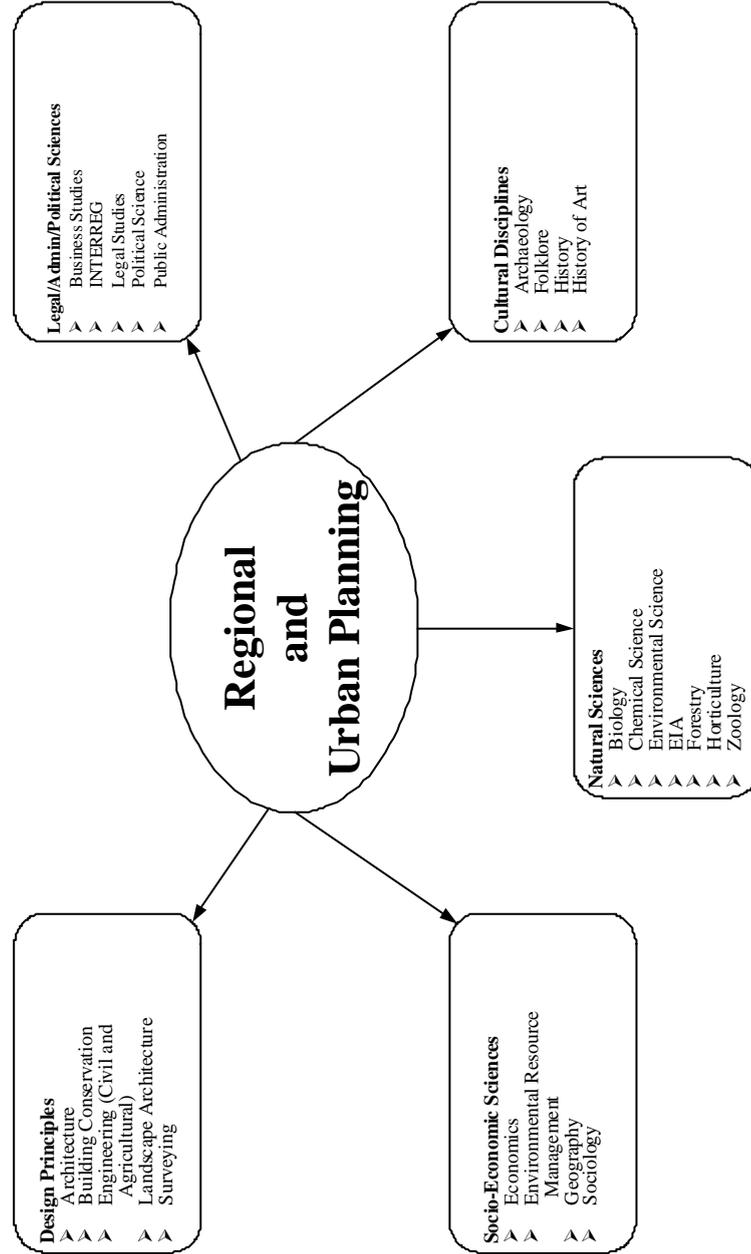
- to provide planners with knowledge, planning skills and the ability to adapt these to changing circumstances and the needs of society;
- to foster an awareness of the social dimension of planning and development and to ensure that planning policies and practices promote equality of opportunity so as to avoid or eliminate discrimination against any group in society;
- to add to planning knowledge and to improve practice and planning procedures through the promotion and publication of research;

- to advance planning education through the continuing revision of the programme and the adoption of new and more effective methods of teaching and learning;
- a practical commitment to public service in the areas of development and the environment and the development of links with the community through applied research;
- to further planning and development education and Continuing Professional Development through public lectures, seminars and workshops and to co-operate with professional institutes, other educational organisations, public and private bodies and community groups in the provision of such educational services;
- to strengthen links with other planning schools and institutes through continued participation in exchange programmes, membership of international planning organisations and committees and participation in international programmes.

The philosophy of the Department is one of service, based on concepts of social justice, economic efficiency and the effective delivery of public service. The Department seeks to continually improve the quality of the educational inputs through staff development programmes. In turn this leads to a continuing enhancement of graduate knowledge, skills and values which transmit to planning practice and increases acceptability of graduates by employers. In addition, the Department is increasingly linked into developments at European Union level, and the implications of EU policies and directives are integrated into all the Department's teaching and research activities where appropriate.

The Department's goals and objectives are realised through a range of programmes described in this booklet.

Planning as an Eclectic Discipline/Profession



Degree of Master of Regional and Urban Planning

The Master of Regional and Urban Planning is a full-time postgraduate course extending over four semesters. This course is intended to give planners the necessary understanding of the processes of planning and to develop in them the capacity to co-operate with professionals in related disciplines. It provides an understanding of the physical, social and economic aspects of the human environment, and of the systems of government and organisations of society which affect its condition. Emphasis is placed on the development of professional skills for identifying, analysing and solving a variety of planning problems.

The course content is subject to continuous review to facilitate response to changing academic and professional requirements at the national, European and international scales.

The programme leads to a professional qualification which is recognised for planning practice in Ireland, Great Britain and internationally. The course is also recognised by the Planning and Development Divisions of the Surveying institutions in Ireland and Great Britain.

Admission Requirements and Procedures

Candidates for admission to the programme, leading to the Degree of Master of Regional and Urban Planning, must have obtained a degree in Architecture or in Engineering, or at least a Second Class Honours degree in Economics, Geography or Sociology/Social Policy and Social Work, or some other qualification approved by the Faculty. The number of places is limited.

Candidates seeking admission should obtain an application form from the Department of Regional and Urban Planning, University College Dublin, Richview, Clonskeagh, Dublin 14 (Telephone: +353-1-7162711; Fax: +353-1-7162788; e-mail: planning@ucd.ie). Applicants will be required to satisfy an interview board as to their suitability and their interest in planning before being allowed to enter on the course. They must also supply the names of academic referees and confirm the results of their undergraduate studies.

Examinations

There are two examinations, the First Examination and the Degree Examination. Examinations may be held either at the end of each semester or at the end of each year. Candidates will be required to complete a thesis in the fourth semester. Candidates who fail to submit theses before the end of the course will normally be required to resit the Degree Examination.

MRUP Course Curriculum

The course covered during the first year of the MRUP programmes (semesters 1 and 2) includes:

- History of Planning and Development
- Planning for Diversity
- Economics and Land Use Planning
- Design and the Urban and Rural Environment
- Environmental Resource Management
- Infrastructure Planning
- Transportation and Land Use Planning
- Housing Policy
- Research Methods
- Public Policy and Planning
- GIS for Planners
- Studio Planning Projects
- Study Tour

The course content of the second year (semesters 3 and 4) is:

- Regional Planning: Theory and Practice
- Planning Practice
- Planning Philosophy and Theory
- Planning Law
- Planning Methodology
- Rural Planning Practice and Management
- Property Development and Planning
- International Spatial Planning
- Specialised Studies
- Thesis

Students may be allowed an element of choice in the selection of courses, outside the core subject areas.

MRUP Course Structure

The programme is undertaken through a series of lectures, seminars, tutorials, workshops, planning exercises (projects), specialised studies and the preparation of a thesis.

The major focus of study throughout the course is on the planning of change in the physical environment to meet the needs of society, and all other subjects are considered in relation to this central theme. In each field of knowledge, a balance is sought between the theoretical and the practical to ensure a broadly-based education which is directly related to professional practice.

There are three major components within the course of studies – knowledge, skills and values/attitudes. Within this framework, the objectives for each year may be summarised as follows:

Year 1 (Semesters 1 and 2)

1. To provide an understanding of the built environment, its design, construction and servicing.
2. To provide an understanding of the social and economic systems which interact to influence the nature of the environment.
3. To provide detailed knowledge of planning administration and of the wider political and administrative systems within which it must operate.
4. To provide students with a knowledge of planning techniques and their application.
5. To introduce students to the planning policy tools and incentives necessary for promoting, implementing and controlling development.
6. To introduce students to concepts of social equality and to promote an awareness of the needs of various sections of the community.

Year 2 (Semesters 3 and 4)

1. To develop a greater understanding of the theoretical basis of planning and its implementation.
2. To examine the means and extent of community participation in the planning process.
3. To provide an understanding of planning legislation and its application in practice.
4. To undertake in-depth studies in areas of planning concern within the framework of the specialised courses and options.
5. To enable students to select an area for concentrated thesis research which allows each candidate both to specialise and to develop particular interests.

Exercises are conducted, where possible, in real situations, in co-operation with planning authorities or interest groups.

First Year Courses (Semesters 1 and 2)

RUPP001 History of Planning and Development

This course examines the growth and achievements of a planning movement during this century and seeks to assess the achievements of this movement. This course has a strong Irish focus. The course offers an introduction to, and a critical appraisal of, the rational-comprehensive model as applied in planning practice.

RUPP002 Planning for Diversity

The aim of this course is to introduce students to the socio-spatial context of planning and to provide an understanding of the social environment in which planning takes place. The course consists of four complementary elements. The first component of the course focuses on the key paradigms in urban sociology. The second component of the course explores a number of concepts of interest to sociology, notably class, community, and social exclusion. The third component of the course explores some of these themes in relation to Dublin, while the final component of the course deals with questions of equal opportunities, social justice and the diversity of cultures. The course has an urban emphasis as cities provide a useful setting in which to study social structuring and organisation. The course runs for one and a half semesters.

RUPP003 Economics and Land Use Planning

This foundation course focuses upon the important relationships between economics and land use planning and management. The objective of the course is to provide an understanding of the manner in which economic forces interact at national, urban and regional level, influencing the allocation of resources and land use patterns. The course introduces students to relevant macro and micro economic theories and concepts as well as to concepts of economic measurement, means of government intervention and the fundamentals of micro-economic policy formulation in the context of their spatial implications. The course runs for one semester.

RUPP029 Design and the Urban and Rural Environment

The purpose of this course, offered over two semesters, is to develop the prospective planner's abilities to critically understand, organise and manage the urban, spatial and physical environment, and to appreciate its influence on the daily experience of its inhabitants.

Amongst the objectives of the course are:

- the development of students' design capabilities;

- the stimulation of students' powers of observation and analysis;
- the engendering of an awareness of the importance of design and its influence on the lives of people;
- the provision of an understanding of how change occurs in the physical environment and the constraints imposed by the existing physical fabric on the design process.

RUPP030 Environmental Resource Management

This course consists of a number of complementary elements relating principally to the 'natural' environment. In the first instance, the fundamental principles of environmental conservation are detailed and examined. Students' attention is focused on the nature of the environment, its different physical/biological components and their limited assimilative and carrying capacity. The course focuses on the dependence of man on the resources of air, soil, water, plant and animal life and on the promotion of the wise use of these resources. Measures aimed at controlling pollution and the abatement of nuisances, the adoption of preventive rather than curative actions and environmental protection policy and instruments are also examined.

The second part of this course examines the fundamental concerns of rural planning and management - the changing nature of rural economies and society, the carrying capacities of the rural environments, the relationship between rural and urban areas and the future of rural society, with particular reference to Ireland in a European context.

A field trip is deemed an integral part of this course.

RUPP006 Infrastructure Planning

This course deals with infrastructure in relation to planning. It offers an introduction to the main physical infrastructure elements: water supply, sewerage systems and other forms of waste disposal. The course also covers new approaches in relation to sustainable water and waste management at local, regional and national levels. Particular attention is devoted to the requirements of new residential areas.

The course also provides students with an introduction to Irish construction technologies, to the building processes and to building control and regulation in Ireland. The course also provides for an introduction to minimum standards in relation to noise, light etc.

RUPP007 Transportation and Land Use Planning

This course introduces the students to the concept of integrating land use planning with transportation planning, and the problems associated with this. The characteristics of transportation supply and demand are addressed. The principles involved in undertaking a transport study are examined. Modelling of urban transportation systems and the traditional four-stage transport model will be discussed in detail, including relevant survey techniques.

Various transportation policies, studies and transport interchange nodes will be focused on, both nationally and from a European perspective, to highlight the continuous development of

transportation systems. The contribution of transport infrastructure to local, regional and national development is examined. The theoretical and technical elements of the course will be complemented by focusing on current transportation and urban planning issues in practice.

RUPP031 Housing Policy

This course provides an introduction to and overview of housing policy. It focuses primarily on an analysis of the main tenures, owner occupation, the private rented sector and social housing, while also analysing issues such as homelessness and housing disadvantage. The course also explores key issues such as affordability, which cuts across all tenure types, and the interaction between housing policy and planning policy. Access to good quality, affordable housing is a key public policy objective. However, the extent to which this is achieved is dependent on the complex interactions between the housing market, housing policy instruments and socio-economic trends. The course thus concludes by examining the housing system and the degree to which it achieves these objectives and whether we can learn anything from an examination of comparative housing policies and systems.

RUPP010 Research Methods

In what is often termed the 'information age' demands for information are growing. Advances in planning knowledge rest heavily upon a continuing improvement in the understanding planners have of the methods of social inquiry. Appropriate information is essential if planners are to be confident in preparing plans and in making the decisions, which are central to their working lives. Increasingly planners need to have an understanding and appreciation of both qualitative and quantitative research methods.

The course aims to provide an introduction to research methodology and some of the basic techniques that allow researchers to undertake investigations. There are many areas in the field of planning in which social research could be undertaken if the investigator had both the skills to formulate a problem and the confidence to use research techniques. This course aims to equip students with skills in both quantitative and qualitative techniques.

RUPP038 Public Policy and Planning

This course aims to give a broad introduction to the institutional landscape of public policy in Ireland, the framework within which planning is carried out. It is based on the premise that planning is a political act which has a technical, a legal and an administrative content. Much of the course is devoted to an analysis of how the administrative content relates to the technical and legal aspects and how all of these are contained within the political envelope. The course provides students with an understanding of the institutional context of both central and local government and a comparative insight into the administrative systems in other European countries.

RUPP032 GIS for Planners

This course has two inter-related components. As part of a foundation component, subjects covered include the use of presentational, spreadsheet and database applications, using the

popular application packages that students will encounter in practice. A dedicated GIS component then provides a conceptual overview and hands-on experience of ArcView GIS software. The course teaches ArcView GIS functionality and enables students to quickly take advantage of the software's powerful display and analysis capabilities.

RUPP033 Studio Planning Projects

This course is conducted throughout the first year of study (semesters 1 and 2). A sequence of projects are undertaken to develop the skills and problem-solving abilities needed in town planning practice. In the initial projects, emphasis is placed on learning to observe and make records of the formal and spatial environment, and on developing skills of graphic expression. Surveys and analyses of existing areas are done prior to preparing a plan for a residential area layout. The aim of these projects is to understand the inter-relationship of land uses and to develop the ability to understand and manage land use change.

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| <p><i>Second Year Courses (Semesters 3 and 4)</i></p> |
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RUPP013 Regional Planning: Theory and Practice

This course, offered over one semester, is offered for three principal reasons:

- (i) To demonstrate the need for a national-regional planning structure and to show the inadequacy of local planning proposals devised without reference to such a framework.
- (ii) To show that within the Republic of Ireland there has been a lengthy search for a rational and optimum settlement framework to accommodate future development, having regard to the economic and social goals set out in government policy. Such development frameworks have been envisaged within an integrated planning system incorporating national, regional and local planning activities.
- (iii) To assess the success or failure of regional planning as an interventionist tool in the spatial investment processes.

The course deals with the fundamentals of regional policy theory and practice in respect of both Ireland and developments within the European Union. These developments in regional policy are related to the availability of regional planning structures and instruments.

RUPP034 Planning Practice

The purpose of this course is to provide students with an understanding of planning practice and implementation in Ireland. As part of this course students are introduced to practice in respect of plan formulation, urban design, conservation and the control of development as well as the enforcement of such controls. Part of the course focuses particularly upon the Dublin experience in relation to plan making, renewal and the funding of projects.

A second component of this course focuses on wider and often specialist aspects of planning practice, the role of various actors in the process and the increasing importance of planners as managers.

RUPP015 Planning Philosophy and Theory

The course provides an introduction to the theoretical and philosophical underpinnings of planning. Procedural and substantive planning theories are critically reviewed and evaluated in an effort to provide a conceptual basis for the understanding of planning as an activity and as a professional discipline. The paradigmatic shifts in theory are explored and there is a specific focus on recent theoretical debates relating to communicative and collaborative planning and the developing emphasis on environment and sustainability.

RUPP016 Planning Law

This course builds on the first year programme (RUPP011) by studying the legal structures involved in the implementation of the planning process.

The objectives of the course are to introduce the principles of the Irish legal system, to explain the law relating to administration (with particular emphasis on local government) and to provide a clear working knowledge of the Planning Acts and Regulations. The course also addresses issues relating to EU legislation and its implementation in Ireland.

RUPP035 Planning Methodology

Planning methodology is concerned with the array of methods and techniques which planners use to make decisions and to evaluate the outcome of actions taken. Thus, the aim of this module is to familiarise students with a wide range of commonly used planning methods and techniques. Planning methodology is best understood as the professional toolkit which helps planners to make decisions across a range of issues. For example, the preparation of development plans requires that planners have a working knowledge of how to gather, interpret and forecast socio-economic information; to set strategic options; to appraise the plan environmentally and to set indicators for performance measurement among other issues. With regard to development control, techniques such as environmental impact assessment and retail impact assessment allow planners to evaluate the likely impact of development proposals. The course seeks to introduce students to, and develop a proficiency in, some of the main practical methods and means by which planners seek to achieve the strategic and tactical goals they have set.

RUPP018 Rural Planning Practice and Management

This course builds upon the foundation set down in Course No RUPP030 - Environmental Resource Management and focuses on rural planning practice and management. Drawing upon its European context, the course is concerned primarily with contemporary rural planning and development issues. The development element of the course will examine opportunities for rural development, the role of state, semi-state and EU initiatives, bottom up development and the funding of development. Part of the course deals with the role and potential of rural

tourism and the need to protect and enhance the rural endowment. The management element of the course focuses on the role of development plans as management tools, the conservation of the rural environment and the management of rural tourism and of housing in the countryside. The issue of enforcement is also addressed.

RUPP036 Property Development and Planning

In a market economy, private sector property development is a key force in the shaping and reshaping of the urban environment, through peripheral expansion on green field sites, the redevelopment of older sites, the provision of new uses for older buildings and so on. This course examines the main components of the property development and investment process and its relationship with planning. First, the economic context for property development is analysed. Second, the logic and operation of the property development and investment process is examined, including an examination of property valuation techniques and public sector property development. Third, the relationship between property development and planning is explored. This can be said to be strategic, in the sense that planning provides a context for property development through zoning and area planning. Moreover, planning is the arena for negotiation, mediation and conflict resolution between the market demands of private sector property developers and the application of planning standards.

RUPP021 International Spatial Planning

Within the framework of the European Spatial Planning Programme, this course is designed to give students an understanding of comparative planning practice in other relevant European countries. The course will pay particular attention to the development of E.D.S.P. and other EU planning material and their adoption and implementation within various Member States.

RUPP037 Specialised Studies

The Department offers a number of parallel fields of Specialised Studies to final year students. These afford students an opportunity to study in greater depth particular themes of importance to planning practice. Studies may include:

- (i) Form and Design in Local Planning
- (ii) Regional Planning and Policy
- (iii) Housing Policy and Planning
- (iv) Community Planning
- (v) Rural Planning Policy and Practice

Each Specialised Study comprises a mix of project work, targeted lectures and seminars, supported by appropriate application of IT based techniques.

RUPP034 Thesis

In the final year, the programmes are so arranged as to permit maximum possible time for reading and research towards the completion of a dissertation. Each student is required to submit, at an interview, an outline of a proposed thesis topic for approval by the department.

Choice of thesis topics is related to the chosen specialised study area (see RUPP037 above). The thesis programme is underpinned by a series of lectures and seminars on research methods (particularly course RUPP010), presentation techniques and the orderly development of themes.

Regulations

Candidates for the Degree Examination must submit their theses by the required date in the academic year in which they sit for their final written examination. Candidates who fail to meet this requirement will normally be required to re-sit the entire Degree Examination. Where a re-submission of thesis is required, the submission must be made at the beginning of the second semester. The presentation of a thesis must conform with Department and University regulations.

The final year programme is normally taken in the academic year immediately following completion of year one. Where final year has not commenced within five semesters of completing year one, it will be necessary for the candidate to re-sit year one in its entirety.

Student Requirements

Students will be expected, at their own expense, to provide drawing materials and equipment, typed papers, and to participate in all organised study tours.

Study Tours

Each year the study tour is related to aspects of local and European planning problems and practice.

Planning Internship

Students are expected to spend the vacation at the end of the first year in employment with an approved planning agency.

Degree of Master of Science (Planning) (MSc)

This degree is offered in the Department of Regional and Urban Planning to address the needs of both the planning profession and society which require a greater focus on planning research. This degree parallels the existing professional MRUP programme and it complements a PhD programme. In addition, this research degree may be viewed as a means of career development for professionals and a practical response to available research funding in specific circumstances.

Public policy and practice at the levels of Local Authority, Regions, National Government and the EU, require the enrichment and understanding available through high quality, well-run research into all facets of planning, and the MSc (Planning) provides a means to address these challenges.

The MSc (Planning) is a one-year, full-time research degree. In certain circumstances completion may be allowed over a two-year period on a part-time basis but with no extension of time limits beyond two academic years. The degree will be awarded on the completion of a thesis based on a topic agreed by the Department, supervised by approved staff. Where specific topics require external skills, it is envisaged that these would be brought in on a tutorial basis in consultation with the research thesis supervisor and with the approval of the Head of Department.

Entry Requirements for MSc (Planning)

Normally, candidates will hold a minimum of a second class honours degree in a subject relevant to planning, such as social sciences, economics, geography, architecture, law, surveying, public policy, engineering, environmental studies, transportation.

Degree of Master of Science (Urban Design) MSc (Urban Design)

The degree is offered on an inter-departmental basis by the School of Architecture and the Department of Regional and Urban Planning. The degree is administered and supervised by a Joint Academic Board for MSc (Urban Design) drawn from both Departments.

Candidates for the Degree of Master of Science (Urban Design) must obtain the permission of the Faculty before entering the course. The course is open to architects, planners and landscape architects with a professional degree, normally at honours level. Civil engineers and chartered surveyors may be admitted subject to examination.

The degree is offered as a one year, full-time (46 weeks) programme which may be taken as a part-time programme divided over two years to facilitate secondment from employment.

Mode 1

A candidate must carry out a research project, or a series of research projects under the direction of the Supervisor recommended by the Joint Academic Board for MSc (Urban Design) and approved by the Faculty. The thesis presented by the candidate is to embody the results of this or these research projects. A candidate may be required to pass an oral examination on the subject matter of the thesis if the examiners so decide. The Board may require that candidates should attend specified available courses in the School of Architecture and the Department of Regional and Urban Planning.

Mode 2

The Mode 2 programme has a significant research orientation, with a coherent sequence of studio projects and an Irish- or European-based research assignment, leading to the production of a thesis. It is underpinned by a core lecture programme. Options are available from courses in the School of Architecture and the Department of Regional and Urban Planning, to ensure that candidates have an adequate inter-disciplinary background for research. Each candidate must carry out the programme under the direction of the supervisor(s) recommended by the Joint Academic Board for MSc (Urban Design). The course will be subject to prerequisite specified course requirements which will be assessed according to the candidates' professional and academic background; for example, architectural candidates may be required to take predominantly planning-oriented optional subjects, whilst candidates from a planning background may be required to take design-based prerequisites. Core and optional courses will be examined, and studio and placement activities will be assessed and will contribute to the marking of the degree. The structure is based on a twelve-month programme of studies as follows: Core Courses; Optional Courses; Urban Design Studio; Research Assignment and Thesis.

Applications to the course must be received by the end of July.

Department of Environmental Studies

***Degree of Master of Science
(Environmental Policy) (MSc)***

The Master of Science (MSc) degree in Environmental Policy is directed at those wishing to conduct research into the economics and policy of environmental issues. It is the only such degree available in Ireland. Candidates are required to prepare a major thesis in a minimum period of one year. Prior to beginning the thesis, candidates attend short courses in environmental economics and research methods. The number of places on offer is limited to five. Studentships are available which cover fees and provide a stipend.

Admission Procedure

Applications must be made to the Head of Department, Environmental Studies. If the Head of Department is satisfied as to the applicant's general suitability to undertake the programme, the Department shall forward the candidate's application to the Dean for consideration by the Faculty. Candidates for the Degree of Master of Science (Environmental Policy) must obtain the permission of the Faculty of Engineering and Architecture before commencing the programme.

There are three intakes each academic year in September, January and March to the programme leading to the award of Master of Science (Environmental Policy). It may be possible to commence at a different time, subject to the agreement of the Supervisor and with Faculty approval. Normally the closing dates are:

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|--------------------------|-----------------------------|----------------------------|----------------------------|
| | (i) September Intake | (ii) January Intake | (iii) April Intake |
| non-EU candidates | 31 ^s March | 31 st July | 30 th September |
| EU Candidates | 31 st July | 30 th November | 28 th February |

Entry Standards

Applicants should have a good undergraduate degree in economics or a related subject. Normally a second class Grade I Honours degree is required.

Year One (MSc and PhD)

ENVSP901 Research Methods and Presentation Skills in Environmental Economics and Policy

This course provides students with the basic skills necessary for embarking on a research degree. Topics covered include: introduction to the department and its workings; choosing a thesis topic; working with a supervisor; devising a thesis outline and work programme; reviewing literature (including using electronic databases etc.) and writing a literature review;

developing a methodology; target setting; team work; interpersonal skills; presentation skills including use of overhead, multimedia presentations and whiteboard. The course provides plenty of opportunity for discussion and will involve set work.

ENVSP902 Topics in European Environmental Economics and Policy

This course examines the rationale, use and importance of economic approaches in European Environmental Policy including the use of market based instruments and cost-benefit analysis. Applications of such approaches will be examined with topics varying from year to year but previous topics have included: global warming, acidification, biodiversity, ozone depletion and water quality.

ENVSP903 Resource and Environmental Economics in a European Context

The key objectives of this course are to understand the key principles of economics as they apply to environmental endowments, to develop the capacity to apply these principles to improve the quality of analysis and decision-making, to understand some of the technical and scientific underpinnings of some key global, regional and national environmental challenges, and how economics can be employed to address them. Topics include: underlying theory; market failure; Coasian solutions; sustainability measures and their application; green accounting and environmental protection expenditure; command and control and integrated pollution control; emission trading; environmental taxes and charges; the impediments to environmental policy reform; introduction to cost-benefit analysis and environmental valuation. Applications will be drawn from the EU and international experience.

ENVSP904 Advanced Environmental Economics and Policy

This course presents some of the major themes in the academic literature on the economics of natural resources and the environment. The majority of the course concerns itself with applying the findings of advanced academic research to answering the following two questions: what are the causes of national and international environmental problems? What are the appropriate policy responses to these problems? In addition the course examines the legitimacy of claims that the earth's natural resources are being depleted too rapidly. Topics include: the theory of environmental externalities, environmental policy design, cost-benefit analysis and environmental valuation, models of natural resource exploitation, international environmental issues.

ENVSP905 European Union Environmental Policy in a Global Context

The driving force behind regulatory reform in the context of EU environmental policy is the increased prominence of sustainable development and environmental protection in EU legislation and the shift in emphasis from regulatory environmental policy instruments to economic instruments. This course examines the development of EU environmental policy, the environmental policy instruments in use, and explores how a shift from regulation to economic instruments in the EU can result in the more effective protection of the environment. The course compares and contrasts performance at member-state level. In

addition, it examines the global context for EU environmental policy including, for example, the Gothenburg Protocol on acidification precursors and the Kyoto Protocol on greenhouse gas emissions. In this regard and with regard to policy instrument use (such as environmental taxes, emissions trading, integrated pollution control etc.), the EU position is compared with that of other jurisdictions such as the US, the CEECs and the rest of the OECD.

ENVSP906 Statistical Computing Methods in Environmental Economics and Policy

The course presents an overview of statistical computing methods including elements of survey research and the analysis of datasets. Topics include inferential statistics; hypothesis testing, statistical significance and confidence intervals; analysis of variance; correlation; OLS regression; multiple regression; logistic regression, Probit analysis. The application of these methods to environmental economics and policy analysis is discussed and set work is provided.

ENVSP907 Professional Preparation: Teaching of Environmental Economics and Policy

This course prepares advanced graduate students for careers in teaching environmental economics and policy at university level. Successful completion of the course allows students to be considered for Teaching Assistant posts. The course follows a workshop format. Topics include: an introduction to learning; getting to know the class; teaching methods for different groups; appropriate presentation methods; presentation skills (including multimedia presentation, whiteboard, overhead); stimulating discussion; problem review and development; course development; standards; setting of examinations; conflict resolution.

Degree of Doctor of Philosophy (PhD)

Candidates for this degree are required to be admitted by the Faculty on the recommendation of the Professor.

No candidate can be allowed to enter on a course of study and research for the Degree of PhD unless he/she has reached at least a high Honours standard at the examination for the primary degree or presented such other evidence as will satisfy the Professor and the Faculty of his/her fitness.

The expected completion date for the PhD degree is three years from the date of registration. Exceptionally, candidates will be allowed four years in which to complete their thesis.

The thesis must normally be prepared under the supervision of the Professor or, on the recommendation of the Professor, another member of the academic staff. The thesis must be prepared in the University, unless permission is given to the candidate to work elsewhere.

Candidates will be required to pass an oral examination on the subject matter of their thesis.

This degree will not be awarded unless the examiners report that the work is worthy of publication, as a whole or in part, as a work of serious scholarship.

For details regarding presentation and examination of PhD theses, please see the *UCD Postgraduate Prospectus*.