



MA in Planning and Development Module Outlines [Subject to change]

MA in Planning and Development Module: Planning for built and environmental systems (10 ECTS)

Module Outline:

This module provides students with a comprehensive understanding of the fundamental role of planning in shaping places, the importance of planning management and the importance of the built environment within a context of environmental systems management and natural resource protection. The module introduces the history of planning and theories of planning intervention.

Lectures and practical sessions engage with aspects of strategic design, management, and integration of physical infrastructures and natural resources to promote sustainability, efficiency, and quality of life. The module highlights the importance for planning and planners to be aware of the role of related disciplines of architecture and engineering. The need for holistic approaches that consider both human-made systems (the built environment) and natural ecosystems is emphasised, aiming to ensure they function harmoniously. As part of this, students taking this module will consider ethics and values in planning, planning for the public good, and reflect on the notion of the professional planner, while also becoming informed on equality, diversity and inclusion in planning.

The built environment encompasses the human-made structures and spaces where people live, work, and interact. Planning for these systems involves development management and place design (designing cities and neighbourhoods that are liveable, functional, and connected). As part of this module, students will engage with relevant topics including principles of development management, the theory and practice of forward planning and area zoning, site appraisals, public realm layout and design and principles of building construction. The module also deals with the relationships to the physical systems supporting daily life (transportation, utilities), building systems: (e.g., residential, commercial, industrial buildings) and how planning engages with these infrastructural elements in place making. It addresses questions of how climate and energy management are incorporated into planning strategies, how the natural environment can be protected, and how GHG reduction goals can be achieved.

The module retains sustainability at its core as a central dimension of proper planning. Planning for both built and environmental systems requires careful consideration of planning law, regulations, and policies; therefore, this module focuses on evidence based planning, drawing from the existence of these elements.

Successful planning requires the involvement of the community in decision-making processes. Identifying and engaging with successful approaches to achieving this are central to this module. The module examines how local stakeholders, including residents, businesses, and advocacy groups, should contribute to the planning process to ensure that the built environment aligns with their needs and values. The module considers how planning is multifaceted and how it must balance the demands of development with environmental stewardship, ensuring that human development does not come at the cost of environmental sustainability.



Module outcomes

At the end of the module, students will be able to:

- Describe the origins and history of planning and development, and the need to serve the common good in order to deliver proper planning and sustainable development
- Demonstrate the need to integrate values in planning professional practice
- Identify the nature of planning and development management interventions in built and environmental contexts, and the critical importance of evidence-based planning in developing policies and strategies
- Recognise and critique the impact of differing social and political agendas upon planning;
- Critically engage with the various discourses surrounding the principles of sustainability
- Identify the role of the planner in considering the concept of rights, including the balance between individual and collective rights.
- Differentiate between and apply the concepts of representative and participatory democracy, and identify the relationship to other areas of specialisation and skills

MA in Planning and Development

Module : Economic and social dimensions of spatial planning (10ECTS)

Module Outline:

This module principally engages with the interrelationship between urban and rural spatial systems (e.g. labour and housing markets, energy and transport), social justice and cohesion, and economic development. In doing so the module introduces students to both the urban and rural sociology of place while considering interlinked ideas of urban regeneration and the spatial planning of rural areas. The module engages with the importance of evidence led, policy driven planning and placemaking.

The consideration of economic and social dimensions of spatial planning puts emphasis on the ways in which land use, resource allocation, infrastructure and design are influenced by, and, in turn, impact upon economic growth and social well-being of places, both urban and rural. Spatial planning aims to create balanced, sustainable, and inclusive communities by considering both the economic opportunities and social needs of a region. The economic dimension of spatial planning is concerned with how the use and organisation of land and resources can drive growth, productivity, and sustainable development. It integrates the location and design of economic activities with infrastructure and resource management.

This module examines how spatial planning plays a critical role in promoting local urban, rural and regional economic growth through determining the location of key economic sectors, such as industry, agriculture, services, and retail. The module discusses the ways in which spatial planning can ensure that resources are efficiently deployed to maximize economic output while fostering innovation and development. It explores how successful spatial planning strategy must consider both economic and social dimensions and recognise that these two aspects are deeply interconnected. It reviews how successful planning must keep in mind a long-term perspective, considering future social needs and economic shifts, such as innovations, technological advances or demographic changes.

Module Outline: continued

The lectures, practical site visits and studio sessions examine the ways in which strategic and policy informed land use can support sustainable industries, such as agriculture, tourism, or renewable energy projects, and help ensure that natural resources are managed responsibly. It reviews how the allocation of land for various uses (residential, commercial, industrial, agricultural) directly influences the economic opportunities available in each area. It explores how spatial planning has the potential to reduce or exacerbate regional economic disparities in this regard.

The social dimension of this module focuses on the well-being and quality of life of the population, on how spatial planning can and should contribute to equitable and inclusive societies. It addresses how land use can affect access to essential services, housing, social interaction, and opportunities for different groups. The module engages with how spatial planning has a role to play in addressing housing shortages and accessibility to housing. Ensuring that people can easily access workplaces, education, and social services is crucial for social mobility. This module explores how effective spatial planning helps create an interconnected urban, rural or regional structure where people are not isolated from the opportunities they need and where spatially just planning outcomes are achieved.

This module reviews the ways in which spatial planning can also address the need for resilience in the face of economic or social crises (e.g. pandemics) ensuring that communities are adaptable and able to respond to these shocks as part of creating a socially resilient society.

This module inform students as to the deeply interlinked elements of economic and social dimensions of spatial planning, and their role in creating well-functioning, inclusive, and sustainable societies. By effectively integrating economic opportunities with social and spatial equity, spatial planning can ensure that urban and rural areas thrive while promoting well-being for all.

At the end of the module students will be able to:

- Demonstrate critical understanding of the interrelationship between urban and rural spatial systems (e.g. labour and housing markets, energy and transport), social and spatial justice and cohesion, and economic development;
- Identify the role of cities and regions (territories) in balancing the interests of society as a whole and inter-generationally, with the needs and rights of disadvantaged groups and individual citizens;
- Recognise and address, in a professional planning context, issues of cultural diversity and identity, including the role of social, cultural and historical heritage and character;
- Engage in strategies that recognise the importance of involving and empowering residents, business communities and governmental bodies as well as marginalised and excluded groups in society;
- Identify systems of mobility and accessibility in promoting sustainable economic growth, social cohesion and balance in modal choices.
- Describe the interrelationships between economic globalisation and regional specialisation and their impacts on competitive advantage, endogenous resources, sustainable economic development in an inclusive economy
- Describe the contribution of spatial planning to local economic development and engage with hoe urban economics and economic topics such as property rights and property market

MA in Planning and Development

Title: Planning for infrastructure in an era of climate change (10ECTS)

Module Outline:

Planning in an era of climate change requires a comprehensive and forward-thinking approach. Climate change presents new challenges that affect the sustainability of infrastructure systems and the management of natural resources. Rising temperatures, extreme weather events, sea level rise, and changes in precipitation patterns all necessitate adjustments to how we plan and manage our built environments and natural systems. This module considers how infrastructure needs to be designed and adapted to withstand the impacts of climate change, ensuring it remains functional and effective under changing conditions. The module also considers aspects such as climate-resilient infrastructure design and green and renewable infrastructure integration. Energy efficiency and the transition to renewable energy sources (such as wind, solar, and hydropower) are essential to reduce greenhouse gas emissions and limit climate change. Marine spatial planning and renewable energy production are a main focus of this module, using the west of Ireland as a living lab.

The module explores how infrastructure planning should prioritise the use of energy-efficient technologies in buildings, transport, and industry. Climate change affects not only urban infrastructure but also natural resources like water, soil, forests, and biodiversity. Planning for sustainable resource management ensures that these resources are used efficiently and protected for future generations with long-term sustainability in mind. This module considers how rural and agricultural landscape planning and biodiversity, and natural landscape heritage are central considerations for planning for climate change. It examines how biodiversity plays a crucial role in regulating ecosystems and enhancing resilience to climate change. It also examines how protecting ecosystems such as forests, wetlands, and coastal habitats can help absorb carbon, reduce flood risks, and provide habitat for wildlife. It assesses the importance of establishing protected areas and conservation corridors as part of planning policies and strategies to safeguard biodiversity and ensure ecosystem services, like pollination, water filtration, and carbon sequestration, continue to function.

Adapting to climate change requires building resilience at all levels, from local communities to national infrastructure. The module explores the importance of climate change legislation and policies, data-driven decision-making, and collaboration across related sectors for successful planning and placemaking in a time of climate uncertainty.

At the end of the module students will be able to:

- Demonstrate knowledge of sustainable development, in a time of climate change, and an ability to devise planning solutions to a range of spatial planning challenges (including an ability to produce integrated plans and policies).
- Identify the challenges associated with climate change mitigation and adaptation and the delivery of appropriate responses in the fields of energy, building design, flood assessment and others.
- Recognise and incorporate into policy, strategy and practice knowledge on the linkage between health, lifestyles, and the quality of life and the sustainable use of ecosystems, landscapes, natural and open spaces, and energy resources.

MA in Planning and Development

Title: Planning for infrastructure in an era of climate change (10ECTS) continued

- Illustrate knowledge of key approaches to maintenance, enhancement and creation of natural resources including air quality, water regimes, soil conditions, forestry, agricultural systems
- Demonstrate detailed knowledge of the need for, and appropriate ways to, incorporate evidence-based planning with regard to mitigation and adaptation to the effects of climate change
- Incorporate flood risk assessments and the impact of land use decisions on flood risk into planning strategies and decisions, together with the impact of human, societal actions and displacement of flood risk
- Recognise key supranational legislation relevant to the national context e.g. European Directives including the underlying principles and application of the Habitats, Environmental and Water Framework Directions in the planning system and be confident in discussing their relationships to climate change.
- Demonstrate an ability to diagnose problems, define solutions and make decisions based on balancing a range of competing professional and stakeholder interests.
- Demonstrate an ability to and communicate effectively verbally, graphically and through written documents/web-sites and to communicate concepts, knowledge and conclusions to peers, specialist and non-specialist audiences within an inter-disciplinary environment.

MA in Planning and Development

Title: Urban design and placemaking (10 ECTS)

Module Outline:

Urban design and placemaking are two closely related concepts that shape the development and transformation of urban spaces, focusing on creating environments that are functional, aesthetically pleasing, and community focused.

Urban design is the process of planning and organising the physical, social, and environmental aspects of cities or urban areas. It involves the arrangement of buildings, streets, parks, transportation systems, and public spaces to ensure that a city is both liveable and sustainable. Students taking this module study dimensions of urban design including the layout of streets, public squares, green spaces, and buildings to create a coherent, navigable urban environment. They consider how spaces are designed, to be comfortable, and accessible for people. This includes things like the width of sidewalks/pavements, the scale of buildings, and the placement of street furniture. The module examines dimensions of functionality and practical needs such as traffic flow, accessibility, public transportation, and amenities like lighting and waste disposal. Beyond functionality, urban design also considers the beauty and harmony of the built environment, using materials, colour, and architectural styles that contribute to a sense of place.

As with all modules of the MA Planning and Development, sustainability holds a core focus, with students being informed on sustainable urban design and how it can emphasis energy efficiency, water conservation, green building practices, and the reduction of carbon footprints.

Title: Urban design and placemaking (10 ECTS) Continued

Placemaking is the community/people focused element of the planning, design, and management of creating public spaces. The goal is to create vibrant, welcoming places that foster community engagement, social interaction, and a sense of ownership. Placemaking focuses on making spaces meaningful and enjoyable for the people who use them. The module engages with public space design and the importance for planning to create spaces that are accessible, safe, and inviting for everyone. Central dimensions of identity, character, flexibility and adoptability of placemaking are also be engaged across the module.

Students of this module learn about the importance of community engagement and the importance of involving local residents and stakeholders in the design process to ensure the space reflects their needs, values, and aspirations. Creating environments where people can interact, whether through formal or informal gatherings, events, or casual encounters are considered.

This module offers students the opportunity to develop a critical knowledge of the interlinked elements of design and place. While urban design focuses on the physical structure of urban spaces, placemaking more strongly emphasises the social and cultural life within those spaces. It explores how both dimensions work together to create vibrant, functional environments. It demonstrates how urban design provides the framework and physical environment that facilitates placemaking, and how placemaking emphasizes the human experience within those spaces, ensuring they serve the needs of the people who use them. The module explores how successful urban design supports effective placemaking by creating spaces that encourage interaction, accessibility, and engagement, and how placemaking ensures that those spaces are used in meaningful ways by the community.

At the end of the module students will be able to:

- Apply theoretical and practical knowledge of the principles and processes of design in creating high quality places and enhancing the public realm for the benefit of all in society and identify the role of urban design and management to deliver places which are inclusive, safe, healthy and accessible to all
- Identify the principles of design assessment and review; and the potential of master-planning and strategic urban design;
- Recognise the implications of climate change for design; and understand the challenges of designing in/for historic environments and be informed of the principles of building conservation
- Combine and apply the knowledge and experience from the related spatial-based fields (e.g. transport, mapping and data communal infrastructure management);
- Diagnose problems, define solutions and make decisions based on balancing a range of competing professional and stakeholder interests.
- Identify means of engaging a wide range of groups and individuals in spatial planning processes
- Communicate effectively verbally, graphically and through written documents/web-sites and communicate concepts, knowledge and conclusions to peers, specialist and non-specialist audiences within an inter-disciplinary environment.
- Work effectively as part of a team in an interdisciplinary context

MA in Planning and Development

Title: Geospatial techniques 1 (5 ECTS)

Module outline

This course covers the fundamental concepts and practical applications of Geographical Information Systems (GIS). The course places a strong emphasis on hands-on learning with QGIS, an open-source GIS software renowned for user-friendliness, robust capabilities in spatial analysis and visualization, and its commitment to accessibility and community-driven development. Encompassing a diverse array of topics including spatial data models, concepts, and analysis techniques, as well as data acquisition, manipulation, and visualization, students will establish a strong foundational knowledge of GIS fundamentals. Upon successful completion of this course, students will have acquired the skills necessary to confidently undertake simple GIS projects of their own, and will have the ability to produce informative maps, conduct spatial analyses, and effectively present their findings.

On completion of this module students should be able to:

- Demonstrate the practical skills of Geographic Information Systems through project design and completion
- Perform analyses and interpolation of spatial data sets
- Produce maps and other visual products of analyses and interpolation

MA in Planning and Development

Title: Geospatial techniques 2 (5 ECTS)

Module outline

Based on the basic concepts and applications of GIS that were covered in Geospatial Techniques 1, this course focuses on the advanced topics and advanced functions of GIS, which are more practical and problem-solving. The concepts of advanced analysis functions of network analysis and spatial interpolation are explained, and the topics Google Earth and Big Data are discussed. Actual applications in geography are demonstrated and practical exercises are provided. Students will understand the latest development of the advanced GIS topics and perform advanced spatial data analyses.

On completion of the module students should be able to:

- Demonstrate advanced skills of a GIS project design and completion.
- Make practical maps and perform advanced analyses

MA in Planning and Development

Title: Planning Law 1

This course provides planning students a basic knowledge of the Irish legal system, the legal regime regulating planning and development and the environment in Irish Law and some legal topics in a planning context. The course looks at: the Irish legal system, the institutions of planning control; the application for planning permission; participation by objectors; the appeal process and judicial review of planning decisions; and compensation for refusal of development; the common law relating to the environment; environmental legislation including the Environmental Protection Agency Act 1992 as amended; and contract law relating to engineering projects. At the end of the module, engineering students will have knowledge of the central principles of Irish law, in particular those areas that they are likely to encounter while working as planners. A key element of the course is an interactive group project with Law and planning/engineering/environmental science students working together on practical application of a planning case study including taking part in a mock oral hearing. This will include drafting submissions related to the case study and presenting those submissions to the oral hearing.

At the end of this module students will be:

- Familiar with the Irish legal system and sources of law and the Irish planning code
- Familiar with the institutional framework of planning law
- Able to critically discuss the planning process
- Capable of researching planning & environmental law issues
- Familiar with key elements of contract law

MA in Planning and Development

Title: Planning Law 2

This module exposes students to the considerable amount of environmental legislation that exists in Ireland. It encourages students to think about how the legislation is implemented and how it could be used in their future careers. This module will examine the legal aspects of a number of different sources of pollution including water pollution (inland and coastal), air pollution, waste, and noise and how this interreacts with the planning system. The common law nuisance principles and the rule in *Rylands v Fletcher* will be examined, as well as recent case law in this area. Relevant domestic legislation (in particular the Water Pollution Act and the Air Pollution Act) as well as EU developments will be considered, particularly from the point of view of monitoring and penalties for breach. At the end of the module, students will have knowledge of the central principles of pollution control law and the structure of the system including the institutional arrangements, the role of the Environmental Protection Agency, and the development of Integrated Pollution Controls. In addition, special attention will be paid to specific topics such as wildlife protection, climate change, eco-system management, and access to information.

Learning outcomes

1. Consider both national and European legislation in the context of its impact on environmental quality.
2. Deconstruct legislation with reference to the purpose of the legislation, the powers within the legislation, the offences and penalties contained in the legislation construct.
3. Consider, using real life scenarios, the legislation that could be used in such scenarios for the betterment of the environment