

## ***MSc in Urban Planning and Transport (Cycle 2, level 4)***

MSc in Urban Planning and Transport is a 2 year full-time graduate study programme of 120 ECTS credits (4 semesters, 30 ECTS each semester). Students can either take 90 ECTS in specialized courses and a 30 ECTS MSc thesis, or 60 ECTS in courses and a 60 ECTS MSc thesis with a stronger research focus.

The programme focuses on both practical and theoretical aspects of spatial and transport planning, management and design. Emphasis is on the interaction between social, aesthetic, environmental and technical considerations of land use and transport planning. Students are introduced to evolving theories and methods in planning and design, as well as established theories and methods, with special consideration to sustainability and inter-disciplinary approaches. The research emphasis is on applied research in cooperation with key stakeholders in the practice of spatial and transport planning.

The programme leading to MSc in Urban Planning and Transport at Reykjavik University runs parallel to a programme leading to MSc degree in Civil Engineering with specialization in Transport and Urban Planning. Reykjavik University offers MSc programmes in four different fields of specialization within Civil Engineering: Transport and Urban Planning, Construction Management, Structural Design and Concrete Technology. Emphasis is on interdisciplinary cooperation between these MSc Civil Engineering and the MSc in Urban Planning and Transport programmes, where appropriate. In the case of specialization in Urban Planning and Transport, students are encouraged to take elective courses from the Construction Management programme.

Admission requirements are a BSc or BA degree in engineering, geography or other environmental or social sciences relevant to spatial planning.

After successful completion of the programme the student is awarded the degree Master of Science in Urban Planning and Transport. The programme is designed to meet the curriculum requirements for the professional title of Chartered Planner (Icelandic: skipulagsfræðingur), as defined by the Ministry of Industry and the Icelandic Planners Association.

On the completion of the MSc programme in addition to relevant undergraduate studies, the following criteria shall be fulfilled, in addition to the criteria fulfilled at former levels. For further information, i.e. learning outcomes for each course, see the Course Catalogue [www.ru.is](http://www.ru.is)

<b>KNOWLEDGE AND UNDERSTANDING</b>
<p>On completion of the MSc programme, the student shall possess a systematic generalized understanding and knowledge of the following topics:</p> <ul style="list-style-type: none"> <li>• Basic principles and more important theories relevant to spatial planning and their application and the interaction of land use and transport.</li> <li>• Role of planning and the history of planning and understanding of the case for and against different planning and design approaches.</li> <li>• Main methods and tools applied in spatial planning at different scales and in different geographical contexts for analysis, stakeholder analysis and</li> </ul>

participation, assessment, policy formulation, presentation and implementation.

- Current standards, handbooks and guidelines and the development of new methods and practice.
- Basic research and development principles and practices relevant to spatial planning.
- Role of the spatial planner as an important professional in society and the interaction of spatial planners with other professions.
- Key professional and ethical issues arising in spatial planning.
- Time-management and work planning issues related to the organization, implementation and successful completion and reporting of an individual Masters level research project.
- Research methodology, including the fundamentals of scientific writing, literature search, how to give a scientific presentation, how to evaluate a scientific paper, and research ethics.

### **TYPE OF KNOWLEDGE**

On completion of the MSc programme, the student should have an understanding of fundamental subjects for spatial planning and should be able to make use of that knowledge in exercising planning methods and judgment in all tasks. These include:

- General knowledge of the main context and developments in the physical, social and economic environment.
- Principles of sustainable development.
- Qualitative and quantitative methods for analysis of population, land use etc.

On completion of the MSc programme, the student shall possess specific, advanced knowledge and understanding of the following topics:

- Nature, purpose, theory and method of planning.
- History of planning.
- Political, legal and institutional context of planning practice.
- The public interest and the needs of individuals.
- Planning at different spatial scales and time horizons and the interrelationship and characteristics of different planning levels: national, regional and local.
- Planning in urban and rural contexts.
- Interaction between land use and transport.
- Sustainable mobility and spatial development.

On completion of the MSc programme, the student shall possess the following significant, in-depth knowledge and understanding of the research leading to his or her MSc thesis:

- The theories introduced during specialized courses and the application of these to analyze and solve problems in the field of spatial planning.
- The background and theoretical base in the chosen research area.
- State-of-the-art knowledge in the chosen research area.
- The student will have established knowledge of and be competent in applications of methods and techniques developed within the chosen area of research.

### **PRACTICAL SKILLS**

On completing the programme students should have acquired and maintain the skills necessary to practice as spatial planners; more specifically be able to:

- Integrate environmental, social and economic aspects and information to identify problems and develop strategies and solutions for spatial development.
- Seek and assemble contribution from different disciplines and professions to identify and develop strategies and solutions for spatial development.
- Anticipate future needs of society, appreciating new trends and emerging issues in planning and the values of sustainability.
- Generate strategic planning proposals and device plans, programmes and measures, guiding the implementation of policies.
- Propose, plan and manage well defined research projects involving a team of individuals.
- Prioritise, organise and schedule work activities effectively and comply with project deadlines
- Work effectively in a team of individuals.
- Interpret and critically assess existing theories, methods and results, both qualitatively and quantitatively, within the broad framework of spatial planning.
- Recognize and appreciate problems inherent in a given environment or context, and be able to synthesise, and propose evaluation methods or develop alternative strategies.
- Work with technical uncertainty.
- Appreciate the meaning and importance of professionalism, including integrity and adherence to independent informed judgement.

### **THEORETICAL SKILLS**

On completion of the MSc programme, the students shall have sufficient, comprehensive understanding to be able to:

- Assimilate and integrate their knowledge, make assessments and utilize their knowledge and understanding in solving relevant problems.
- Identify, adapt and develop methods appropriate to the study of a wide-range of different spatial planning problems.
- Demonstrate effective research and appraisal skills, evident in data sourcing, collection, investigation, quantitative and qualitative analysis, weighing evidence and reaching sound conclusions.

### **COMMUNICATION SKILLS AND INFORMATION LITERACY**

On completion of the MSc programme, the student should be able to:

- Work as a part of an inter-disciplinary planning/design or research teams.
- Communicate effectively and professionally and formulate sound arguments, both in writing, graphically and by means of oral presentations, using appropriate technical language.
- Work with and recognise the importance of the range of different

stakeholders and interests in spatial planning processes and within democratic decision-making structures, involving explaining, mediation and communication.

- Find information that is relevant to research using search engines, on line libraries and repositories.
- Effectively utilize modern information resources and technologies.
- Report on their work, and that of others, both to a specialist and a general audience.
- Report on a research project and execute a research report.
- Discuss ethical issues in research work with their peers in an informed and reasoned fashion and apply an ethical approach to all work.
- Understand the use of technical literature and other information sources.

### **LEARNING SKILLS**

On completion of the MSc programme, the student should be able to:

- Use professional judgement in analysis, planning and design.
- Solve non-trivial problems independently using the acquired skills or knowledge.
- Ask new questions based on available information and knowledge and use known facts to create new ones.
- Make creative use of known information, methods, concepts and theories in new situations.
- Generalize from a collection of specific instances. Infer possible causes from available data, discovering patterns in the available information.
- Interpret facts by comparing them and contrasting them with one another, drawing conclusions and predicting possible outcomes.
- Make choices based on reasoned arguments, and evaluate the outcomes of those choices by comparing them with alternative solutions.
- Know how to assess one's own work against accepted standards of performance. Appreciate the factors that evaluators look for when considering proposals, including proposals for research work.
- Understand the need for, and the basis of, peer-group assessment. Understand how performance in a research project is judged and the basis of the criteria for judgement.
- Recognise and apply different approaches to learning.
- Appreciate the importance of continuing education and lifelong learning and undertake the study required to maintain and expand professional competence and keep up with evolving technology.
- Continue studies within this field towards an advanced degree i.e. at PhD level, having developed the necessary personal autonomy and knowledge to do so.