



Landbúnaðarháskóli Íslands  
Agricultural University of Iceland

# Planning

## Master of science program



Agricultural University of Iceland

The Master of Planning program at the Agricultural University of Iceland (AUI) is an educational credential for professional planning practice in Iceland. It is set up as a two-year program. Upon completion of the study the students are expected to be able to deal with planning issues, to assist government agencies with planning decisions and to estimate the likely consequences of planning decisions.

Iceland is located in the North Atlantic Ocean on the Mid-Atlantic Ridge, halfway between two continents. Iceland's unique location has resulted in the impact of different cultures on the development of the society through time as well as the effects of the physical environment in which it has grown. Glaciers and icecaps cover parts of the country and impact its landscape, vegetation and meteorology.

Iceland's northerly location affects lighting condition, vegetation and the climate. Due to the Gulf Stream, however, Iceland enjoys a warmer climate than might be inferred from its latitude.

Many fjords punctuate the island's almost 5,000 km long coastline, where most settlements are situated. The island's interior, is a cold and uninhabitable combination of sand, mountains and glaciers. The major towns are the capital of Reykjavík, along with its outlying towns of Kópavogur, Hafnarfjörður and Garðabær, Reykjanesbær, where the international airport is located, and Akureyri, in northern Iceland. A little less than 2/3 of the population live in the capital region.

Due to the country's unique situation it is important that planners in Iceland have

gathered knowledge of the local environment, nature, climate, community, economy, legal issues, technology, culture, aesthetics, history, transportation, urban development and the inner structure of the built environment.

There is a growing need for educated planners with local knowledge as according to Icelandic legislation local authorities shall prepare regional, municipal and local plans, as well as a plan for the whole country. While being tailored to meet local requirements the programme follows latest trends in planning theory and the planning profession. The students are trained in the use of quantitative and qualitative research methods, spatial design and applied planning approaches which engage collaboration between various stakeholders.



## Program Objective

The program combines planning theory and practice and the study of Icelandic circumstances, aiming for sustainable development and the creation of a livable environment. Students will gain a broad, multidisciplinary knowledge of planning. Three quarters of the program consist of courses and one quarter of a research project. The courses focus on a skeptical approach to planning with a mixture of courses on planning theory, ethics and a variety of practical methods in order to improve planning solutions which form the frame for a livable community.

Upon completion of the studies the students are supposed to have acquired a solid knowledge of planning as a profession and to be able to work independently on consulting, problem solving and

development in the planning field. Students will take courses at the AUI as well as in other universities which the AUI is in collaboration with, such as the University of Iceland and universities abroad. The program's flexibility allows for the opportunity to attend other universities, e.g. abroad, during parts of the study, as well as allowing for some specialization, e.g. in the fields of urban planning and designing, environmental planning, or rural planning.

The study emphasizes individual work as well as practical case studies where students tackle real problems, thus practising skills for independent work. Graduating students have gained necessary knowledge of planning required for certification by the Icelandic Planners Association.

## Content

The core courses include planning theory and methods, planning processes, governmental system, legal environment and stakeholders in planning. Economic, sociological, technological, transportation and environmental aspects of planning and the basic elements of built and natural environments are also studied, as well as cartography (GIS) and graphic presentation.

Specialization in planning and various planning methodologies aiming for optimal solutions and sustainable development and a livable environment are taught. Elective courses present the students with the opportunity to specialize within a particular field of planning. The elective courses are chosen to support the student's research project, enabling them to further their knowledge within the chosen field.



## *Semester 1*

During the first semester students attend lectures on planning theory and methods. The perspective is on planning in Iceland. Major acts of Icelandic planning legislation are covered as well as the basic features of the administrative system. Scientific methods are studied with a particular focus on ethics. Students will also participate in a studio course, focusing on human behavior and planning.

Students do also have the opportunity to broaden their knowledge base by attending elective courses or using that flexibility to fulfill any prerequisites they may be lacking (see page 11).

## *Semester 2*

The second semester focuses on urban planning and design. The students will work on a practical studio assignment, solving a planning problem related to a real world situation from their surroundings. A course in urban economics is also taught in this semester. Research in planning is discussed emphasizing that students familiarize themselves with academic research in the field. At the end of the semester the students will have chosen a topic for their master thesis.

### *Semester 3*

This semester the students will choose elective courses related to their masters topic. They have the option to choose courses from the AUI and other universities. Thus they can build a solid knowledge base and specialize in their selected topic. Two courses are taught on methodologies, cost benefit analysis and qualitative research methods, introducing the students to methods, which can be applied in the completion of the thesis topic. Courses on public participation and transportation are also offered.

### *Semester 4*

In the final semester the main focus is on the writing of the master thesis. Students are encouraged to work individually under the guidance of supervisory staff. The master thesis should aim at combining the theories and methods, which the student has mastered in order to solve a real life planning problem. We encourage our students to choose a topic of personal interest so that they will excel in their field of specialization. This way we obtain a variety of different topics related to current planning events in Iceland.

*Semester 1*

07.60.04

**Planning Theory and Methods (8ECTS)**

The first part of the course deals with ideology, definitions and systems of thinking in planning theory. The course looks at the influence of the administrative system, social background and value framework on planning theory. It seeks to identify the main forces and interest groups that influence the planning process. The course looks especially at the international field and its connection to Icelandic society. Icelandic history of planning is also examined from a critical viewpoint.

The second part of the course deals with the main processes in planning. The planning background: economic, democratic, social, aesthetic, legal, technical, developmental and environmental. The course provides an overview of the most important methods that are used in data collection and data processing in plan preparation. It explains evaluation methods and comparison in planning, along with models and forecasting methods.

07.61.03

**Planning law and regulations (6ECTS)**

The course looks at the Icelandic legal system, the division of power between three branches of government and the role and importance of each branch. The main rules of administrative law. Discussion of property rights and their protection under the law, and the legislation on confiscation and compensation.

The rules and regulations relating to the planning and building laws, environmental impact assessment, preservation of nature and other such issues relating to planning. Case studies, court decisions, decisions by the Planning and Building Tribunal and by the European Court of Human Rights.

07.62.01

**Human behavior and planning (4ECTS)**

The course introduces the human factor in planning and the interaction between the population and the built environment formed by planning. The spatial experiences of travelling on foot through the urban space are discussed. The origin of actions are discussed: necessity, individual decisions (leisure) or social activities.

Quantitative and qualitative research methods for analysing human actions and public spaces are discussed. Students work in studio on solving practical problems.

07.07.03

**Research Methodology and Scientific Writing (6ECTS)**

The module centers on technical aspects of the MS study and research work, such as the layout of the MS thesis, literature search and preparation and writing of research applications. Special emphasis is given to the writing of scientific papers and the proper use of references. The course is taught in two blocks of one week each.

07.06.03

**Ethics and Philosophy of Science (6ECTS)**

The course introduces the basic issues in the philosophy of science. The first half of the course is dedicated to the major theories and concepts of philosophy in the 20th century including logical positivism, the problem of induction, scientific realism, explanation in science and artificial intelligence. The second half of the course deals with the philosophy of biology. Covering the notion of evolution, the received view of evolution, adaptationism, the hierarchical view etc.

## *Semester 2*

08.61.02

### **Urban Planning and design (4ECTS)**

The course is intended to show the importance of good urban design. Core theories on urban planning and design are introduced through examples. Historical factors concerning urban design are introduced as well as the relation of urban spaces to culture and its importance for the identity and roots of the inhabitants. Theories focusing on good urban form are discussed, location and urban design, local spatial dimensions. Urban morphology and how its theories can be applied to improve urban planning solutions and how the space is used and how it affects the social interactions of the inhabitants. Urban planning and public health is discussed. Legal planning conditions and design guidelines are discussed.

08.62.02

### **Applied research for planning (4ECTS)**

The course deals with urban planning research. It is aimed at preparing the student for professional work as a planner as well as preparing for a masters project. Methods and aspects of applied research, particularly through discussions related to the course text. Students work on a series of projects where they define their masters topic. Reference search and reading of academic papers supporting their research topic. The level of knowledge in the field and how their topic will expand it. In order to understand the level of knowledge in a particular field addressed by an individual masters project the students will discuss relevant research papers. Students will turn in a fully developed research proposal for their Master thesis.

08.65.03

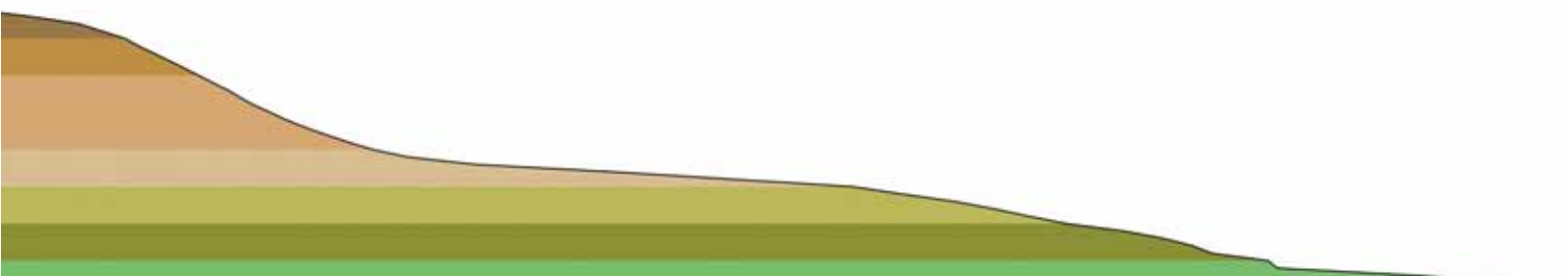
### **Urban Economics (6ECTS)**

The course gives theoretical background for economics of city development and real estate markets. The role of market forces in the development of cities is discussed. Land value and land use, commuting, travel cost and congestion. The economics of real estate markets is discussed and the role of government intervention. The role of governments at the national and municipal levels, their expenditures and revenues. The core concepts of microeconomics are also introduced: marginal value and marginal cost, supply and demand, market equilibrium, consumer surplus, producer surplus, price elasticity of demand, complements and substitutes, present value and future value, discounting and yield, isoquants and budget constraints.

08.64.06

### **Studio (12ECTS)**

The aim of the studio course is to provide students with hands-on experience working on a contemporary planning project. The students will go through the entire plan-making process. They will have to decide what kind of plan is appropriate for the site, identify stakeholders, gather relevant data, analyze important factors, decide on a design-idea for the site and present their idea in the form of a planning proposal. The course is divided into several phases, where each phase begins with a lecture concerning its theme. The project will give the students experience in map presentation, communicating ideas in writing, model making and in using computer software (e.g. CAD and SketchUp).



### *Semester 3*

HAG101F

#### **Cost Benefit Analysis (6ECTS)\***

The purpose of the course is to introduce to the student the foundation of CBA. CBA is used in many applications where governmental agencies at all levels are involved. CBA is routinely used to assist in making decisions regarding highway projects, health-care projects and so on. CBA is also useful to evaluate projects involving environmental damage or renewal. Topics include: Conceptually correct measures of social surplus vs. measures actually used. Estimating consumer surplus, producer surplus, and government revenue (i.e., social surplus) in primary and secondary markets, the social discount rate, uncertainty and the value of information. Existence value, contingent valuation and the value of time, crime, life, noise, and other pleasures and pains.

FOM102F

#### **Introduction to Qualitative Research (10ECTS)\***

An introductory course in qualitative research methods. Students will gain knowledge of the qualitative research tradition in social sciences, its origin, history, theoretical background and will learn to apply its major methods.

08.66.02

#### **Transportation Planning (4ECTS)\*\***

The course deals with transportation planning from a general and sustainable perspective. Transportation planning, background and methodology are explained with special emphasis on sustainable transportation. The course deals with effects on the environment

and the interplay between transportation systems and urban and rural development.

The course investigates regional and international systems for transportation of people and goods on land, sea and air, along with other communication systems. The course compares different transportation modes from a technical, economic, social, aesthetic, juridical, developmental and environmental perspective.

08.60.02

#### **Power and democracy in planning practice (4ECTS)\*\***

The course deals with the difference between the idea of planning and real planning practice and how this difference can shape the urban form. It explores the development of the urban form from the perspective of power and how power influences planning practice. The goal of the course is that students develop a deep and useful understanding of how policy and planning are interwoven with institutions, economical and social propositions, power relations and discourses. It deals with questions such as: Who owns the city? Who rules? Who gains and who loses? Furthermore the difference between planning vision and reality is explored and the students are shown how power in planning can manifest itself in reality. To explore this aspect of power the students work on a practical project based in real life planning.

#### **Elective courses**

Elective courses related to the subject of the masters thesis.

*\* Taught at University of Iceland*

*\*\*Taught semi-annually*



## *Semester 4*

10.10.15

### **Master thesis (30ECTS)**

For a research project, students consult faculty members about a topic. After deciding on a topic, students work on their thesis with the help of two supervisors, a faculty member of AUI and a certified planner. The research project generally constitutes 30 ECTS units (one semester) but can be expanded to 60 ECTS units (two semesters). It is expected that students apply skills and methods learned in earlier courses on their research.

*Example from a Master thesis in Planning at AUI*





## *The Educational Settings*

The master program in planning is taught at the main research facility of AUI at Keldnaholt. Keldnaholt is located near beautiful natural areas at the eastern edge of the dynamic capital city of Reykjavík. The research facility is close to large outdoor recreational areas and just a short bus-ride away from the old town center.

The teaching is a mixture of lectures, discussions, studio work and field trips. These methods are aimed at developing the skills outlined above. Lectures and research work develop knowledge and understanding. Work on research projects develops applied knowledge and skills in information gathering and presentation. Independent work is emphasized through a variety of projects throughout the program, which are theoretical as well as practical. Discussions and research or studio classes are emphasized and course grades usually reflect a combination of skills in solving problems and working on projects and taking exams.

Most textbooks are in English or Scandinavian languages.

## *Mode of study*

Full time study for two years or a part time study for a longer period according to an individual study agreement - 120 ECTS. Students are encouraged to select courses at other universities in Iceland as well as abroad through the ERASMUS program.

## *Admission criteria*

In order to enroll in the Master of Planning program, an applicant is required to have successfully completed a BS degree from AUI, or to hold an equivalent academic qualification, which the faculty recognizes. Minimal grade is 7.25 to obtain admission.

## *Prerequisites*

Students planning to enter the graduate program are expected to have finished at least one undergraduate course in each of the following subjects: economics, environmental studies (ecology and natural sciences), cartography (GIS), statistics, computer aided design and graphic presentation.

Students without sufficient background will be counseled to take the undergraduate level prerequisite courses concurrent with their graduate studies.

## *Application*

For further information on admission visit the website [www.lbhi.is](http://www.lbhi.is).

## *Contact*

If you wish to contact the Master of Planning Program please send an email to [sigridur@lbhi.is](mailto:sigridur@lbhi.is)



## Master of science in Planning Keldnaholt, Reykjavík

[www.lbhi.is](http://www.lbhi.is)



The AUI is one of Iceland's most innovative institutions of higher education with approximately 500 students. The AUI consists of two university faculties: the Faculty of Land and Animal Resources – and the Faculty of Environmental Sciences. The headquarters of the AUI are located at Hvanneyri, about one hour's drive north of Reykjavík. The Master of planning program is located at Keldnaholt in Reykjavík, AUI main research facility, where many faculty members have their offices. The students have easy access to research faculty when they work on inter-disciplinary projects on real life problems.

The Agricultural University of Iceland  
Keldnaholt - 112 Reykjavík - Iceland  
Tel. 433 5000 - fax 433-5201