Programme Curriculum for Master Programme in Innovation and Global Sustainable Development

1. Identification

<table>
<thead>
<tr>
<th>Name of programme</th>
<th>Master Programme in Innovation and Global Sustainable Development</th>
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<tbody>
<tr>
<td>Scope of programme</td>
<td>120 ECTS</td>
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<tr>
<td>Level</td>
<td>Master level</td>
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<tr>
<td>Programme code</td>
<td>EAIGH</td>
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<tr>
<td>Decision details</td>
<td>Board of the School of Economics and Management</td>
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<td>Amendment details</td>
<td>2019-10-11. Applicable for students accepted at the Autumn 2020 semester and onwards</td>
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2. Programme description

Innovation, and sustainable development and its dynamics in time and space are areas of intense research in several countries around the world. A combination between the areas in a master programme meets a need in analytical and planning work for ability to combine knowledge about economic modelling, and the role of innovation with empirical evidence about economic, social and environmentally sustainable development across time and space.

The proposed master program builds on modern, well-defined concepts of innovation and development that are relevant in both analytical and policy oriented contexts. The focus is on the development of countries and regions around the world with strong emphasis in their historical evolution and specific spatial context. Sustainable development refers not only to environmental sustainability, but also to economic sustainability and social inclusiveness.

Innovation is a main driver of development. Sustainable development cannot be understood or affected if learning and innovation are not taken on board and innovation cannot be grasped and correctly evaluated if its role in economic growth, development and structural change is not analyzed. Innovation is here defined as creation, introduction and utilization of new knowledge in society. It is seen in a systems perspective in which the innovation performance of the economy depends not only on the innovation capability of the individual firms and organizations but also on how they interact with each other, with the financial sector and with the public sector including universities and other research organizations. As a part of such a system perspective interactive learning of private as well as public individuals, firms and organizations is regarded as a central factor in successful innovation and a key to understanding the development process and to affect it by policies.

Development in the North as well as in the South is regarded as a process of structural change driven by repeated introductions into the economy of new elements of knowledge, i.e. new technologies, new organizations and new institutions as well as repeated elimination of obsolete knowledge.
Furthermore, it is a process in which interactive learning and innovation is going on between as well as within countries. This global perspective – considering both the Global North and the Global South and its interactions – is at the core of the programme.

Thinking about economic development in a learning and innovation perspective implies that technical change is at the core of development. Another central aspect of this approach is that institutions and institutional change matter for both innovation and development. Even if, for example, technical change, improvements in the quality of labor, capital accumulation and international trade, are crucial drivers of economic growth and development they are only proximate causes. The deeper question is why some countries or regions are better than others at supporting these development factors. Institutions are an important part of the answer to this question in the sense that they form the vital rules of behavior, which enable or disable other development factors. Such a double emphasis on technical and institutional change implies that the interdependence between technical and institutional change becomes the basic driver of development. This makes the approach cross disciplinary, evolutionary, systemic and institutional.

The overall purpose of the Master’s in Innovation and Global Sustainable Development is the understanding of how learning, knowledge creation and innovation on the one hand and economic growth and development on the other hand interact with each other and how this interaction affects the opportunities and restrictions in the processes of both innovation and development.

The program has a special focus on long-term dynamics of change, which are the basis of long-term development, economic catching up and sustainability transitions. At the same time, the geography of innovation and the importance of both the local environment of innovation and its increasingly global character are emphasized.

Career opportunities
Masters’ of Innovation and Global Sustainable Development will qualify for any profession that requires capability of intellectual judgement, evaluation and analysis of economic facts and ideas, and good communication skills. Graduates of this programme are particularly equipped for analytical and planning work in government and international organisations as well as non-government organisations and consultancy.

Connection to further studies
Successful completion of the programme will enable students whom choose to specialise in economic history to apply to doctoral programmes in economic history, and students whom choose to specialise in social and economic geography to apply to doctoral programmes in social and economic geography.

3. Learning outcomes
The programme builds on previous studies at the undergraduate level in social sciences. In accordance with the Higher Education Ordinance, a Master of Science (120 credits) is awarded to students who at the completion of the programme accomplish the following:
Knowledge and understanding
- demonstrate knowledge and understanding in the field of Innovation and Global Sustainable Development, including both broad knowledge in the field and substantially deeper knowledge of certain parts of the field, together with deeper insight into current research and development work; and
- demonstrate deeper methodological knowledge in the field of Innovation and Global Sustainable Development.
- demonstrate a comprehensive knowledge of theories of innovation, growth and sustainable development.
- be trained to understand the process of economic growth and sustainable development and the structures underlying it. In particular, this concerns the role of innovations and how different social, economic and institutional contexts influence processes of innovation and technical change.

**Competence and skills**
- demonstrate an ability to critically and systematically integrate knowledge and to analyse, assess and deal with complex phenomena, issues and situations, even when limited information is available;
- demonstrate an ability to critically, independently and creatively identify and formulate issues and to plan and, using appropriate methods, carry out advanced tasks within specified time limits, so as to contribute to the development of knowledge and to evaluate this work;
- demonstrate an ability to clearly present and discuss their conclusions and the knowledge and arguments behind them, in dialogue with different groups, orally and in writing, in national and international contexts; and
- demonstrate the skills required to participate in research and development work or to work independently in other advanced contexts.
- demonstrate an ability to work individually as well as in groups with students from different cultures in order to solve practical problems as well as to manage a more extensive project.
- be trained to communicate their own and others results, both in writing and orally. Emphasis will be put on the ability to present results clearly, both to specialists and non-specialists in the field.

**Judgement and approach**
- demonstrate an ability to make assessments in the field of Innovation and Global Sustainable Development, taking into account relevant scientific, social and ethical aspects, and demonstrate an awareness of ethical aspects of research and development work;
- demonstrate insight into the potential and limitations of science, its role in society and people’s responsibility for how it is used; and
- demonstrate an ability to identify their need of further knowledge and to take responsibility for developing their knowledge.
- be able to independently read, interpret and assess current research in growth and innovation as well as advanced professional reports and analyses.

**Independent project (degree project)**
For a Master of Science (120 credits) students must have completed an independent project (degree project) worth at least 30 higher education credits in the field of Innovation and Global Sustainable Development, within the framework of the course requirements. The independent project may comprise less than 30 higher education credits, but not less than 15 higher education credits, if the student has already completed an independent project at the second level worth at least 15 higher education credits in their main field of study.

Students have the possibility to leave the programme after one year and in accordance with the Higher Education Ordinance obtain a Master of Science (60 credits).
4. Course information

The preceding paragraphs outline the main themes of the master programme Innovation and Global Sustainable Development. The themes are clearly of primary relevance for the 21st century and a master in Innovation and Global Sustainable Development will be well prepared for pursuing analytical work and investigations in private as well as public governance and publishing. Properly completing two years study at the programme will give the student a master's degree. However, the student can also choose to complete only the first year of the programme and receive a one-year master’s degree.

The programme is coordinated by the department of Economic History in collaboration with Human Geography. Besides coursework including both mandatory and optional courses, students carry out an independent research task and write a paper. The student choses a topic and formulates one or more research questions that are relevant within the broad range of the programme. The cooperating departments pursue high quality research in areas closely related to the programme and are well equipped for the supervision of students’ thesis work.

In addition to the programme, the core courses and the paper writing, the student also has to take optional courses. Optional courses can be taken at the School of Economics and Management, at other faculties of Lund University or at another university. However, the optional courses should be of advanced level and of relevance for the programme and the student has to meet the prerequisites for each such course. Guidance for the choice of optional courses are provided in consultation with the Programme coordinator.

For students completing the two years programme there is an option to choose between two tracks:

**Track 1.** Single degree 2-year Master Programme in Innovation and Global Sustainable Development, to be taken at Lund University. During the third semester, students will enrol in the specialised courses that will be offered in the programme at Lund University.

**Track 2.** Double degree 2-year Master Programme in Innovation and Development, to be taken at Lund University and Aalborg University. During the third semester, students will attend specialised courses at Aalborg University.

The table gives an overview of the structure of the programme. All courses encompass 7.5 ECTS credits, and are taught at part-time during half a semester. Normally the student thus studies two courses in parallel.

### First year

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<tr>
<th></th>
<th>Semester 1 (Autumn), year 1</th>
<th>Semester 2 (Spring), year 1</th>
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<tbody>
<tr>
<td>Economics of innovation</td>
<td>7.5 ECTS</td>
<td>Research design</td>
</tr>
<tr>
<td>7.5 ECTS</td>
<td></td>
<td>7.5 ECTS</td>
</tr>
<tr>
<td>Econometrics I or II</td>
<td>7.5 ECTS</td>
<td>Innovation for sustainable development 7.5 ECTS</td>
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<td>7.5 ECTS</td>
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*ECTS: European Credit Transfer System
Second year – Track 1: Single Degree, Specialisation in Global Sustainable Development

<table>
<thead>
<tr>
<th>Semester 3 (Autumn), year 2</th>
<th>Semester 4 (Spring), year 2</th>
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</thead>
<tbody>
<tr>
<td><strong>Period 1</strong>&lt;br&gt;Sept-Oct</td>
<td><strong>Period 2</strong>&lt;br&gt;Nov-Dec</td>
</tr>
<tr>
<td>Development of Emerging Economies 7.5 ECTS</td>
<td>Globalization of innovation 7.5 ECTS</td>
</tr>
<tr>
<td>Elective course 7.5 ECTS</td>
<td>Elective course 7.5 ECTS</td>
</tr>
<tr>
<td><strong>Period 3</strong>&lt;br&gt;Jan-March</td>
<td><strong>Period 4</strong>&lt;br&gt;April-May</td>
</tr>
<tr>
<td>Fieldwork 15 ECTS or Internship 15 ECTS or Innovative practice 15 ECTS</td>
<td>Degree project 15 ECTS</td>
</tr>
<tr>
<td>2 Elective courses</td>
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Second year – Track 2: Double degree Master in Innovation and Development

<table>
<thead>
<tr>
<th>Semester 1 (Autumn), year 2</th>
<th>Semester 2 (Spring), year 2</th>
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<tbody>
<tr>
<td><strong>Period 1</strong>&lt;br&gt;Sept-Oct</td>
<td><strong>Period 2</strong>&lt;br&gt;Nov-Dec</td>
</tr>
<tr>
<td>Coursework at Aalborg University, Denmark equivalent to 30 ECTS</td>
<td>Fieldwork 15 ECTS or Internship 15 ECTS or Innovative practice 15 ECTS</td>
</tr>
<tr>
<td>2 Elective courses</td>
<td>Degree project 30 ECTS</td>
</tr>
<tr>
<td><strong>Period 3</strong>&lt;br&gt;Jan-March</td>
<td><strong>Period 4</strong>&lt;br&gt;April-May</td>
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* Students that are accepted for the double degree option may opt for working on a thesis/degree project of 30ECTS credits that is to be presented at the second year of studies. However, students will have to enrol in the thesis course during the first year, and start working on the Degree project/thesis.

**Mandatory courses**

**Econometrics I (7.5 ECTS)**
The course is mandatory for students who have not previously studied econometrics at the corresponding level. This course provides the student with a fundamental understanding of the theoretical and methodological problems associated with quantitative approaches to economic history. The first part consists of basic theory and methods relating to multivariate linear regression, limited dependent variable regression and time series analysis. It also considers how to apply these methods through examples of how such methods are used in economic history. This part also introduces computer software (e.g. Stata) for quantitative analysis. In the second part of the course, students analyze a quantitative problem using actual data from economic history, and report results in individual papers.

**Econometrics II (7.5 ECTS)**
The course is mandatory for students who have previously studied econometrics at a level corresponding to Econometrics I. This course provides the student with more advanced theory and methods relating to causal approaches surpassing the multivariate linear regression, limited dependent variable regression and time series analysis covered by Econometrics I. It also considers how to apply these methods through examples of how such methods are used in economic history. It discusses issues like selection bias, the bad control problem, and unobserved heterogeneity and the pitfalls associated with them as well as the possibilities to deal with these issues. This part advances the knowledge of empirical analysis making use of computer software (e.g. Stata). In the second part of the course, students independently analyse a more advanced quantitative problem using actual data.
from economic history, and report results in individual papers, showing awareness of the pros and cons of various causal approaches in econometrics.

**Research design (7.5 ECTS)**
The general issue of the course concerns what distinguish scientific research and writing from journalism or everyday reporting. The course presents students with examples of how researchers engage in influential academic debates, within the social sciences in general and economic history and innovation studies specifically. The students are trained in identifying research aims, testable hypotheses, and research questions that are relevant in relation to existing research. They are also trained in understanding the role and use of theory in conceptualizing and problematizing fundamentals when designing and conducting research. Transparency and the possibility for readers to repeat the analysis is further emphasized. The course will present a variety of potential sources and data collection techniques as well as carefully deal with the importance of source criticism. Teachers will guide students in discussions on different methodological approaches and potential methods, including their suitability in relation to research questions and data.

**Economics of innovation (7.5 ECTS)**
This course covers several areas of innovation economics, such as their characteristics, their driving forces of innovation and how innovation affects economic growth and development. Some of the specific topics covered in the course are the following: (1) Market structures and innovation. This part of the course describes how competitive structures and imperfect competition may induce innovation in different industries. (2) Diffusion. This theme discusses the implications of why innovation spreads and how it spreads into the economic environment form different perspectives. Concepts discussed include adoption, imitation and spillovers. We consider the relatively new field of network economics as well. (3) The role of innovation in economic growth. In this theme we will examine the role of innovation in economic growth through processes related to radical innovations, general purpose technologies, competence blocks and development blocks. (4) Institutions and innovation. Drawing on the systems of innovation literature, this theme addresses how the institutional framework affects innovation. Some of these aspects are related to national innovation systems (NIS), a concept for comparative analysis of innovative performance. Innovation processes and interdependencies within a more local or regional context are further analysed focusing on regional innovation systems (RIS). This course serves as an introduction to some of the themes that will be discussed in the advanced course on Innovation for Sustainable Development.

**Innovation for sustainable development (7.5 ECTS)**
This is a highly multidisciplinary course based on economics of innovation, sustainability studies and development studies. This is an advanced course which builds on notions introduced in the “Economics of Innovation” and the “Energy transitions, Innovation and Trade” courses. The students will be introduced to the hard and soft notions of sustainability and discuss how economic growth relates to socially inclusive and environmentally sustainable development and the role of innovations in achieving sustainable development. Topics covered throughout the course include inclusive, social and sustainable innovations and innovation systems. Theoretical insights will be complemented with practical cases of innovations for sustainable development around the world. Examples of the so-called Nordic model will be combined with cases of innovation from developed and developing countries.

**Energy transitions, Innovation and Trade (7.5 ECTS)**
Modern economic growth has been sustained over two centuries but will it remain sustainable? Environmental problems, in particular climate change, may cause backlash with severe consequences for human civilization. With the widening of modern economic growth to low-income countries, such as China and India, this dismal outlook seems substantiated. However, according to one theory, transformations of industrial economies to service economies reduce the exploitation of natural
resources and environmental damage. Other theories have confidence in technological change that, for example, will develop renewable and sustainable energy sources. This course puts these and related theories into the perspective of the long-term global evidence. Particular emphasis is laid on the present state of the art as regards the economics of energy technology as well as the institutional incentives and constraints for innovation in this field. Specific attention is paid to global linkages as we explored energy embodied in European and global trade using specific decomposition techniques, which will be explained in class.

Development of Emerging Economies (7.5 ECTS)
This course examines growth dynamics of the developing world during the last decades, explored in a comparative and historical perspective. The question of why some developing economies have been able to set in motion catching-up processes, while others remain stagnant, will be discussed aided by historical-theoretical perspectives with the main focus on countries in Pacific Asia, Africa South of the Sahara and Latin America. It will be theoretically and empirically assessed to what extent the growth of the so-called global South might be sustained. The course is divided into two parts. The first puts heavy emphasis on readings and lectures on analytical perspectives of development and catching up from the viewpoint of classical, although current, questions such as: the role of agricultural transformation, growth-inequality, market integration, possibilities for and experiences of industrial policy, technology transfer, social capabilities, market-state relationship, governance and domestic resource mobilization, poverty/human development. The second part of the course is more student-driven and is devoted to seminar assignments where highly topical themes are discussed on the basis of available empirical data. This course is compulsory only for students staying in Lund for the third semester.

Globalization of innovation (7.5 ECTS)
This is a seminar-based course offered only to a limited number of second year students enrolled in the Master program in Innovation and Global Sustainable Development. The course provides a basic understanding of how different innovation strategies are formed for firms to compete globally. It will concentrate primarily on outlining the changing patterns of global organisation of innovation, global resourcing for innovation, and global creation and dissemination of knowledge. It will introduce theories and tools for students to acquire understanding of globalisation of innovation and to develop firm’s global innovation strategy. The course is organized around seven topical sessions. For each topical session the students will have compulsory readings that will be discussed in class. Additionally, the students will be required to prepare a practical case.

Fieldwork (15 ECTS)
The course is an opportunity for students who are interested in conducting field work for the upcoming degree project/master thesis. It is intended for fieldwork in developing countries, which require lengthier time for preparation and execution but other destinations for fieldwork might be considered if duly justified. It also serves for gathering material for the forthcoming degree project/master thesis. The course will be divided into two parts, each of them assessed separately.

- Part 1: Qualitative methods of data collection and analysis (3 ECTS)
- Part 2: Innovative practice (12 ECTS)

Students will stay abroad for a minimum of 8 weeks full-time. The assessment is based on a portfolio assessment that consists of four parts: 1) a fieldwork research proposal which the student is encouraged to prepare throughout the autumn semester, 2) a methodological section of a qualitative research proposal after the qualitative methodology course, 3) a fieldwork diary during the fieldwork and 4) a fieldwork report after the fieldwork. The course will be offered only during the spring semester for second year students. The destination of the fieldwork needs to be approved by the programme director. All fieldwork arrangements need to be conducted by the student. The financing of trips, insurance, living conditions etc. is the sole responsibility of the student (standard insurance is to be obtained for fieldwork abroad). The department and the programme will strive to assist the student in finding suitable counterparts in the host countries when possible.
**Innovative practice (15 ECTS)**

This course aims at giving the students experience in the practice of developing innovative solutions to address global sustainable development challenges and to form competences and skills working in a development context. It also serves for gathering material for the forthcoming degree project/master thesis. This course will take place in collaboration with a partner university of a developing country with a similar program, in order to provide a twinning structure where students of both universities collaborate to help solve a practical, real-life innovation challenge. The two participating universities will jointly make a decision on a chosen innovation challenge each time well before the course will begin. The course will be divided into two parts, each of them assessed separately:

- **Part 1: Qualitative methods of data collection and analysis (3 ECTS)**
- **Part 2: Innovative practice (12 ECTS):**

Students will stay abroad for a minimum of 8 weeks full-time. The assessment is based on a portfolio assessment that consists of two individual assessments and two group assessments: 1) a group project plan for a feasibility study of a practical innovation project; 2) a methodological section of an individual qualitative research proposal after the qualitative methodology course; 3) a group report on the innovative practice and 4) an individual fieldwork diary.

The availability of this course will depend on existing formal agreements with partner universities and may not be available every year. The location might also change from year to year depending on the agreements between universities. The students are responsible to make all travel arrangements and make sure that they are in the destination country on the requested day of the start of the practice. The financing of trips, insurance, living conditions etc. is the sole responsibility of the student (standard insurance is to be obtained for fieldwork abroad). The department and programme will strive to assist the student in finding suitable accommodations close to the university and the fieldwork area in collaboration with the local university. The course will be offered during the spring semester to second year students.

**Internship (15 ECTS)**

The course provides the student the opportunity of undertaking work experience that is relevant to the ongoing studies within the program as well as to provide an opportunity to gather material for the forthcoming degree project/master thesis. With the support of on-site supervision at the internship facility, the student will gain experience in sophisticated work assignments with continuous collaboration. The course will be divided into two parts:

- **Part 1: Qualitative methods of data collection and analysis (3 ECTS)**
- **Part 2: Internship (12 ECTS).**

The internship will have a minimum duration of 12 weeks full-time. Assessment is based on a portfolio assessment that consists of four parts: 1) an internship proposal which the student is encouraged to prepare throughout the autumn semester, 2) a methodological section of a qualitative research proposal that follows directly after the qualitative methodology course, 3) an internship diary and 4) an internship report, to be completed after the internship has been carried out. The course will be offered only during the spring semester for second year students. Sourcing suitable internships as well as the financing of trips, insurance, living conditions etc. is the sole responsibility of the student (standard insurance is to be obtained for internships abroad). Internships need to be approved by the programme director in advance.

**Optional courses**

Below are listed those optional courses that primarily can be included in the degree from this programme. The timing of the optional courses differs somewhat from year to year and the details are laid out at the introductory week of the programme. Some of the courses may, due to timing, be less compatible with the programme schedule. However, solutions can be found and the student is therefore recommended to discuss the choice of optional courses with the programme director. There are also other courses that can be accepted as optional courses on request by the student.
Optional courses provided by the Department of Economic History:

**Economic Growth over Time and Space (7.5 ECTS)**
Innovation and technical change is central to long-term economic growth but it is treated very differently in economic theories. In a comparative manner this course presents technical change within major theoretical approaches: neoclassical growth models, endogenous growth models and evolutionary structural models. Particular attention is given to an *economic historical model* combined with a *spatial theoretical framework* of regional trajectories of growth. Thus, the interplay between innovations, economic transformation and economic growth is studied with an emphasis on major carrier branches both historically and in contemporary times. Furthermore, factors governing the diffusion of innovations - including the interplay between economic and institutional change - are studied. In this context the economics of spatial clustering and localised externalities is central. A related aspect is how clusters and regions contribute to the characteristics of national technological shifts and economic growth.

**Institutions, economic growth, and equity (7.5 ECTS)**
This course studies the relations between institutions, modern economic growth, and equality. Problems in the world of today are taken as a point of departure for a historical analysis that covers countries and regions in different parts of the world. Four themes are focussed. One is about the emergence of institutions such as property rights and markets, and their role for economic growth. The second is about the importance of the distribution of resources for institutional development. The third is about the importance of the growth of knowledge and education for the creation of equality of opportunity. The fourth is about the emergence of the modern welfare state as well as current challenges to its future. The course is usually given during Period 3 and is recommended for first or second-year students of this Master program.

**China and Asia Pacific (7.5 ECTS)**
This course explores and explains the processes of rapid industrialisation and socio-economic modernisation in China and the Asia Pacific drawing on a historically-comparative institutional approach. Fundamental factors and forces behind the economic transformation are analysed against the background of leading theories of economic development and social change. The course is divided into two parts. The first part uses institutional theory to analyse the emergence of the so called East Asian model and its relevance for China. The institutional underpinnings of China's transformation to market economy are analysed in comparison with previous and contemporary development experiences in the Asia Pacific, from Japan to the ASEAN countries. Themes dealt with include agricultural modernisation and industrial policy and concepts such as developmental state, export-led growth, and growth with equity are applied and critically analysed. The second part deals with current trends and forces of globalisation in the Asia Pacific region and China's role as a leading regional economy. Trade policies, the impact of foreign investments and patterns of regional integration are explored and analysed. This course is taught during Period 2 and it is recommended for first or second year students of this Master programme.

**The global economy and long-term economic growth (7.5 ECTS)**
This course in anchored in economic history and studies historical processes of growth, convergence and divergence in the global economy over the past two centuries. Two different approaches are applied. One considers theories of economic growth, about how production is generated by capital and labour and the level of technology. The other takes the perspective of the international economy and studies international trade, migration, and movements of capital. This course is normally taught in Period 1.

**Population and living standards (7.5 ECTS)**
This course deals with the interplay between population and living standards in a long-term perspective. It focuses on three broader themes. In the first, different models of the preindustrial
economic demographic system are studied, and the legacy of these models (e.g. Malthusianism) and their relevance today is assessed. Different demographic indicators of living standards, such as life expectancy, infant mortality and demographic responses to economic fluctuations, are discussed and compared with other well-being indicators in an assessment of the long-term global development of standard of living. The second theme deals with the importance of population dynamics, especially fluctuations in fertility, and thus cohort size, on living standards in industrial society. The third theme focuses on the role of families and households in providing welfare and security of its members. Both the development over time and global comparisons are central in this theme. The course is given during Period 2.

Econometrics II (7.5 ECTS)
This course provides the student with more advanced theory and methods relating to causal approaches surpassing the multivariate linear regression, limited dependent variable regression and time series analysis covered by Econometrics I. It also considers how to apply these methods through examples of how such methods are used in economic history. It discusses issues like selection bias, the bad control problem, and unobserved heterogeneity and the pitfalls associated with them as well as the possibilities to deal with these issues. This part advances the knowledge of empirical analysis making use of computer software (e.g. Stata). In the second part of the course, students independently analyse a more advanced quantitative problem using actual data from economic history, and report results in individual papers, showing awareness of the pros and cons of various causal approaches in econometrics. The course is usually taught during Period 1.

Advanced time series analysis (7.5 ECTS)
The course gives an introduction to basic concepts within time series analysis. The univariate analysis of time series in this course is based upon ARMA/ARIMA models. Multivariate time series analysis is based on VAR models. Non-stationary time series are analysed using unit root tests, co-integration methods and VEC models. Students have the choice of specialising in the analysis of volatility models or non-stationary panel data models. Theoretical studies are interwoven with practical applications in financial economics and macroeconomics. This course is normally taught in Period 3 and requires Econometrics.

Optional courses provided by the Department of Human Geography:
Geographies of Economies: Transforming Places, People and Production, 7.5 credits
This advanced level course in economic geography focuses on some of the most important socio-economic challenges that today’s cities, regions and nations face. How does globalisation affect lives and livelihoods in particular places? Why do some regions continue to grow and prosper, whereas other regions struggle with industrial restructuring? What are the drivers of such changes and how can firms and regions cope with them? These themes are analysed from different theoretical perspectives to examine the underlying forces that shape the trajectories and transformations of economic spaces. This course is normally taught in Period 2 and is available to second year students.

Geographical Information Systems for the Social Sciences, 7.5 credits
The course provides an introduction to the rapidly growing field of GIS for students interested in applying GIS in their research or work. The course is interdisciplinary in scope and appropriate for students from a diversity of backgrounds. This would include students from the social sciences, the humanities, economics, sustainability and development studies as well as students from a range of other disciplinary and professional backgrounds. The course introduces students to some key conceptual debates and developments in GIS, and it provides an introduction to the most important theories and practises of GIS. During the course, the students will learn about the potential applications of GIS within various fields of study. This course is usually taught in March-April (overlaps Period 3 and 4) and is available to second year students.
**Geographies of Economies: Urban and Regional Planning 7.5 credits**
This course focuses on some of the most important socio-economic challenges that urban and regional planning has to meet, and how these are addressed and dealt with in different planning contexts. With the background in contemporary economic geography theory, these challenges are analysed, aiming at a deeper understanding of the underlying economic forces that impact the scope and directions in urban and regional planning. Meetings with practitioners in the field of planning, through visits, guest seminars and excursions, are important elements to relate theory and practices. This course is usually taught in Period 3 and is available to second year students.

**5. Degree**
Upon completion of the programme a Master of Science (120 credits) major Innovation and Global Sustainable Development (*filosofie masterexamen, huvudområde global hållbar utveckling*) will be awarded in compliance with the National Higher Education Ordinance (SFS 2006:1053).

Students can also decide to finish after the first year with a Master of Science (60 credits) with a major in Innovation and Global Sustainable Development (*filosofie magisterexamen, huvudområde global hållbar utveckling*).

**6. Admission requirements and selection criteria**
An undergraduate degree (BA/BSc) with at least 60 ECTS credits in business administration, economics, economic history, history, social and economic geography or statistics or the equivalent. English 6.

*Selection criteria*
Selection will be based on academic merits from university studies and a Statement of Purpose in which applicants should state their reasons for applying to the programme.

**7. Other information**
Courses at the School of Economics and Management are graded according to the criterion-referenced principal grades A-F:

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<tr>
<th>GRADE</th>
<th>POINTS</th>
<th>CHARACTERISTIC</th>
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<tbody>
<tr>
<td>A</td>
<td>100-85</td>
<td>Excellent (A)</td>
</tr>
<tr>
<td>B</td>
<td>84-75</td>
<td>Very good (B)</td>
</tr>
<tr>
<td>C</td>
<td>74-65</td>
<td>Good (C)</td>
</tr>
<tr>
<td>D</td>
<td>64-55</td>
<td>Satisfactory (D)</td>
</tr>
<tr>
<td>E</td>
<td>55-50</td>
<td>Sufficient (E)</td>
</tr>
<tr>
<td>F</td>
<td>49-0</td>
<td>Fail (F)</td>
</tr>
</tbody>
</table>

A distinguished result that is excellent with regard to the following aspects – theoretical depth, practical relevance, analytical ability and independent thought.
A very good result with regard to the above mentioned aspects.
The result is of a good standard with regard to the above mentioned aspects and lives up to expectations.
The result is of a satisfactory standard with regard to the above mentioned aspects and lives up to expectations.
The result satisfies the minimum requirements with regard to the above mentioned aspects, but not more.
The result does not meet the minimum requirements with regard to the above mentioned aspects.
It is up to the teaching professor to decide whether the credits of a course should be converted into a total of 100 points for each course, or if the scale above should be used as percentage points of any chosen scale instead.

**Academic Integrity**

The University views plagiarism very seriously, and will take disciplinary actions against students for any kind of attempted malpractice in examinations and assessments. The penalty that may be imposed for this, and other unfair practice in examinations or assessments, includes suspension from the University.