



UNIVERSITY OF GOTHENBURG
SCHOOL OF BUSINESS, ECONOMICS AND LAW

**Programme Syllabus
for
Master of Science in
Innovation and Industrial Management**

120 higher education credits

Second Cycle

Established by the Faculty Board of the School of Business, Economics and Law, University of Gothenburg, on January 28, 2008, last revised on September 18, 2015 (G 2015/487).

Graduate School
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1. Decision and Guidelines

The study programme for the Master of Science in Innovation and Industrial Management, 120 higher education credits, hec, (equals 120 ECTS credits), was established by the Faculty Board of the School of Business, Economics and Law on January 28, 2008 and last revised on September 18, 2015 (G 2015/487). The programme syllabus applies as from autumn term of 2016.

2. General Objectives

Second cycle education shall according to the Swedish Higher Education Act (HEA) build on knowledge that students acquire in first cycle education or corresponding knowledge (HEA, ch. 1:9) The general objectives for a Master (120 credits) are stated in the Higher Education Ordinance.

3. Programme Specific Objectives (learning outcomes)

The Innovation and Industrial Management (IIM) programme is concerned with analyzing problems and designing solutions for organizations operating in changing markets and business models, with evolving technologies and organization. The overall objective is to provide theories, methods and tools to students as potential managers in organizations operating under uncertainty in complex and rapidly changing environments.

After successfully completing the programme the student shall be able to:

Knowledge and understanding

1. demonstrate knowledge and understanding in the field of Innovation and Industrial Management, including specialized knowledge in a subfield.
2. have insight into research in Innovation and Industrial Management, both in theory and methodology.

Competence and skills

3. demonstrate the ability to identify and formulate issues critically, autonomously and creatively.
4. demonstrate the ability to critically and systematically integrate knowledge and analyze, assess and deal with complex phenomena, issues and situations, even with limited information.
5. demonstrate project management skills – the ability to plan and undertake advanced tasks within predetermined time frames. This includes both team-working abilities and intercultural skills.
6. demonstrate communication skills – the ability to effectively communicate both orally and in writing with different audiences and in different situations.

Judgment and approach

7. demonstrate awareness of ethical issues related to Innovation and Industrial Management, and how their choices affect economic, social and environmental sustainability.

Hence, by attending this Master programme, the student will learn relevant concepts and tools to achieve the overall objectives of analyzing problems and designing solutions for organizations operating in changing markets and with evolving technologies.

The student will also learn principles (concepts and criteria) and procedures (methods and techniques/tools) for balancing between long-term strategic and short-term operational objectives.

4. Organisation

All Graduate School programmes are managed by the Graduate School and governed by the Graduate School Board. Each Graduate School programme has a programme coordinator and a programme advisory committee.

5. Programme Disposition and Content

The disposition applies to students admitted 2014 and onwards.

Year 1

Autumn Term		Spring Term	
Period 1	Period 2	Period 3	Period 4
GM0401 Innovation Management 7.5 hec core	GM0518 Operations management 7.5 hec core	GM0408 New concepts in operations management and services 7.5 hec core	GM0413 Personal and Professional Development for Innovators 7.5 hec core
GM0409 Strategic Management in knowledge-based organizations 7.5 hec core	GM0414 Global Technology Management 7.5 hec core	GM0404 Risk Management and Finance 7.5 hec core	Elective 7.5 hec

Year 2

Autumn Term		Spring Term	
Period 1	Period 2	Period 3	Period 4
Elective 7.5 hec	GM0410 Innovations and Structural Transformation, 7.5 hec core	Master Degree Project (thesis) 30 hec	
Elective 7.5 hec	GM0412 Research Methods in Innovation and Entrepreneurship 7.5 hec core		

The programme covers four academic terms of full-time study (120 hec) including three terms of courses, core and elective, 90 hec, and one term of Master Degree Project (thesis writing - 30 hec). Each term is divided into four periods, and each course is 7,5 hec, except where noted.

Overview of MSc in Innovation and Industrial Management

Modern companies face complex industrial and financial challenges of doing business domestically as well as internationally. Companies face particular demands in adapting to these technological, financial, consumer and other changes, in ways which positively affect their future profitability and competitiveness. Global competition requires organizations to develop internal and external analysis of industrial processes and market conditions with particular emphasis on innovation, industrial dynamics and investments.

The IIM programme therefore focuses upon management within the frameworks of short-term and long-term investment in relation to industrial dynamics and innovation. The rationale for combining these frameworks is that organizations make trade-offs between 'efficiency' and 'innovation'. The modern manager must learn to utilize and mobilize existing resources for current activities, at the same time as s/he must develop existing and new resources to develop new businesses, services, and the like, through internal and external processes.

In order to successfully implement a new strategic, tactical or operative business plan resources must be available in the right amounts, at the right time, and to the right capital costs in order to increase efficiency and effectiveness of the organization. The timing of financial funding is as important as the timing of purchasing, production and sales activities. In terms of an industrial dynamics and innovation framework, modern managers are involved in the longer-term development of the services and products. They therefore need to make decisions about innovation processes, business

development and intrapreneurship (entrepreneurship inside the organization). Different types of ideas and knowledge are becoming increasingly valuable to the organization – but using them to renew the business requires analysis and planning to identify, implement, and test those ideas. Ignoring renewal and innovation poses long-term threats to the survival of, in particular, the large organization.

Special emphasis is put on those concepts, principles and procedures that are central for analyzing problems and designing solutions involving long, medium and short-term time horizons.

Core Courses

Innovation Management, 7.5 hec
 Strategic Management in knowledge-based organizations, 7.5 hec
 Operations management, 7.5 hec
 Global Technology Management, 7.5 hec
 New concepts in operations management and services, 7.5 hec
 Risk Management and Finance, 7.5 hec
 Personal and Professional Development for Innovators, 7.5 hec
 Innovation and structural transformation, 7.5 hec
 Research Methods in Innovation and Entrepreneurship, 7.5 hec

Elective courses

The Graduate School offers a number of electives within economics, business administration, law, economic history and economic geography. Examples of elective courses within the master's programme in innovation and industrial management include 'Entrepreneurship and New Business Development' and 'Social Innovation & Entrepreneurship'. The elective courses offered may vary yearly depending upon faculty changes and number of registered students.

Study Abroad

Possibility to study at one of our international partner universities is assessed individually based on:

- Prior study results at Graduate School.
- English language proficiency based on the VOC/MCT-test results.
- Correspondence between available exchange courses, the purpose of the exchange and the programme specific objectives (learning outcomes – see Paragraph 3).

A few students may be eligible to write their MSc thesis at a partner university.

6. Tuition and examination

The language of instruction is English. Courses will include lectures, seminars and case studies. The students will also work together in small groups, according to educational principles such as problem-based learning, experiential learning and action learning.

The courses will be examined separately. Group reports will be assessed and graded individually, as will individual term papers and individually written exams.

The Graduate School is obliged to offer the exam at least five times during the course of each two year period. Students who have made five unsuccessful attempts to pass an exam have lost the possibility of obtaining the Master of Science Degree.

7. Entrance Requirements

General Entrance Requirements

To meet the entry requirements for master's level (second cycle or graduate) studies, students must:

- have been awarded a Bachelor's degree (equivalent to a Swedish Kandidatexamen) from an internationally recognized university
- be able to demonstrate proficiency in English equivalent to English studies at upper secondary school (high school) in Sweden, called English 6/English Course B.

For more information about General Entrance Requirements see www.universityadmissions.se (English) and www.antagning.se (Swedish).

Programme Specific Entrance Requirements – Master of Science in Innovation and Industrial Management

The applicant's university education must include at least a Bachelor's Degree (i.e. the equivalent of 180 hec) and also a minimum of 15 hec of courses in subject areas related to business, economics, industrial management, innovation and/or entrepreneurship. In addition the education must include a minimum of 15 hec in statistics, or 7.5 hec in statistics and 7.5 hec in quantitative methods and/or mathematics.

The admission requirements listed above apply for admission to the programme. For continued studies within the programme individual courses have specific requirements, as provided in each course outline.

8. Degree Certificate and Degree Title

Upon completion (receiving a minimum grade of Pass) of all the courses and the Master Degree Project, and fulfilment of the requirements given above, students will receive a Degree of Master of Science (120 credits) with a Major in Innovation and Industrial Management.

9. Programme Evaluation

All courses in the programme will be anonymously evaluated by the students upon completion. The results of the evaluations will be communicated to the students and will function as a guide for the development of the courses and of the programme.