



PHYSICS

FIM782 Entrepreneurship and Project Management, 7.5 higher education credits

Entreprenörskap och projektplanering, 7,5 högskolepoäng

Second Cycle

Confirmation

This course syllabus was confirmed by Department of Physics on 2013-10-11 and was last revised on 2017-05-22 to be valid from 2017-05-22, spring semester of 2017.

Field of education: Science 100%

Department: Physics

Position in the educational system

The course is given within the masters programmes in physics at the University of Gothenburg, and can also be given as a stand-alone course in physics.

The course can be part of the following programmes: 1) Complex Adaptive Systems, Master's Programme (N2CAS), 2) Physics of Materials and Biological Systems, Master's Programme (N2PMB) and 3) Physics, Master's Programme (N2PHY)

Main field of studies

Physics

Specialization

A1N, Second cycle, has only first-cycle course/s as entry requirements

Entry requirements

Bachelors degree in natural sciences or equivalent education.

Learning outcomes

- Understand and have knowledge about how to develop new commercial products and processes based on advanced research
- Find information in both patent and literature databases, analyze the content of patents and compare it with the content of related scientific articles, understand the

basics in patent writing and the requirement for getting a patent accepted.

- Understand the basics of project management, its challenges and the way to deal with them by using the theories of organizational learning.
- The course also strives for transferring knowledge about entrepreneurial activities and an understanding about various aspects of relevance for engineers when active in industry or academia.

Course content

The aim of the course is to present the entrepreneurship and project management as the knowledge of relevance in the development of commercial products and processes. The students will increase their understanding of the innovation transfer, in particular the patenting process, their ability to find information in patent databases and get knowledge about how patents are written and evaluated. The students will train in the art of transferring the potential value and impact of the innovation to the working business or how to present innovations for the society. The students will get familiarized with the concepts of project management in order to understand how professional project managers work. The course also aims to help students to understand the prevailing challenges of project management, and to deal with them, by means of the theories of organizational learning.

Module M1 (Idea to Innovation to Entrepreneurship) will give an insight into patent and literature databases, including the way patents are written and composed. This module consists of two projects, both performed in student project groups. The first project (SCOUT AND IDENTIFY) is to be summed up in a group written report (hand-in N2), while the second (EVALUATE AND PRESENT) is delivering a presentation by the whole group to all students of the course (presentation P1). Together, the two projects will let you understand in depth a scientific article containing an innovative component; understand how such an innovation can be patented and how a patent is written and composed. Finally, you will train yourself in the art of transferring the potential value and impact of the innovation to the working business or how to present innovations for the society.

Module M2a (Project Management Basics) is at Bachelor course level but delivered with crash course speed. During the first two weeks of the course, you are to study the concepts, methods and tools of project management. Central to this module is the course textbook, and the teaching is designed to support your reading of the book. The contents include: Project management past and present. Structures and frameworks.

Projects and organizations. Stakeholders, strategy and success. Initial planning. Time planning. Rethinking time planning: The critical chain approach. Cost and benefit planning. Stakeholders and quality. Risk and opportunities management. Project organization: structures and teams. Management and leadership in projects. Control. Supply chain issues. Problem-solving and decision-making. Project completion and review. Improving project performance. The aim of the theme is to familiarize you with the concepts of project management in order to understand how professional project managers work. A number of methods can be used during your projects of this course. The examination is a two-hour written test (offered twice during the course).

Module M2b (Mastering Project Management) aims to help you understand the prevailing challenges of project management, and to deal with them, by means of the theories of organizational learning. This theme consists of a number of lectures and a (mandatory) literature seminar. Examination is in form of a home exam.

Form of teaching

Deliverable - N1: Short Action plan: Pass or Fail

Deliverable - PM test: Project Management Basics test (A two-hour written test offered twice during this course): Graded

Deliverable - N2: Project SCOUT AND IDENTIFY (You write a report in groups.): Graded.

Deliverable - N3: Short Action plan: Pass or Fail

Deliverable - N4: The Literature Seminar preparatory work (Hand-in before the deadline.): Pass or Fail

Deliverable - LS: Participating in the Literature Seminar: It is important that you get there on time. Attendance required.

Deliverable - P1: Project EVALUATE AND PRESENT: It is important that you get there on time. Pass or Fail

Deliverable - N5: The Mastering Project Management Home Exam Individually or in pairs. Circa one week: Graded

Deliverable - 'Going for a VG' (not compulsory) Report individually or in groups: Graded

Language of instruction: English

Assessment

Grades

The grading scale comprises: Pass with Distinction (VG), Pass (G) and Fail (U).

Course evaluation

The evaluation of the course is done by the teacher and students together during and after the course.