



The collaborating researcher

Basic information

Number of academic credits:	15 credits
Programme level:	Doctoral student course (third-cycle course)
Grading scale:	Pass (G), Fail (U)
Other provisions:	The student must be admitted as a doctoral student at the Industrial Doctoral School for Research and Innovation (IDS) at Umeå University

Ratification

Date of Ratification:	Faculty Board of the Faculty of Arts and Humanities, date:
Date of Ratification:	Faculty Board of the Faculty of Social Science, date:
Date of Ratification:	Faculty Board of the Faculty of Medicine, date:
Date of Ratification:	Faculty Board of the Faculty of Science and Technology, date:

Intended learning outcomes for the Course

The intention of the course is to provide doctoral students with the requisite skills for collaboration between the academic community and commercial enterprises/governmental entities. The doctoral student will be given the requisite skill, knowledge, and tools to be able to apply the contents of the modules included in the course in their particular scientific/scholarly specialisation so as to be well-prepared for future demands in professional research and development.

Course contents

The course is composed of seven obligatory course modules and extends over a period of four years. The doctoral students are expected to be present at all course sessions. The schedule with dates for the course sessions will be presented in connection with the commencement of the course.

The course is characterised by a reflective and consultative approach, with a focus on one's own learning and application within the doctoral student's particular research project/case.

It is the intention of the course to provide skills and abilities for future use by means of teaching methods and approaches to research in collaboration with external parties.

The course establishes an understanding of how results can be utilised for the doctoral student, the external party and the society in general.

The course provides both generic and specific knowledge concerning collaboration and its creation of value, with a specific focus on norms, gender and sustainability.

Overview of the course modules:

1. Workshop Series, 3 credits
2. Presentation Skills, 2 credits
3. Group Dynamics – working with and in groups, 2 credits
4. Research-generated Innovation and Practical Utilisation, 2 credits
5. Law for Collaboration and Practical Utilisation, 2 credits
6. Funding for Research, Innovation and Practical Utilisation, 2 credits
7. Collaboration, Intersectionality and Sustainable Development, 2 credits



Examination

The form of the examination is determined by those responsible for each course module. The determination of grades for the entire course as a whole occurs according to a two-point grading scale: Pass (G) or Fail (U). To pass the entire course, a passing grade must be received on all obligatory course modules and the assessment/ exam of all course modules. To obtain the grade “Pass,” the student must submit individual written assignments within the specified time period and that the work is presented in accordance with the prescribed framework. Furthermore, active participation in presentations and discussions is required. What is meant by “active participation” is that the student contributes with their own views, perspectives, reflections and questions, and that the student makes attempts to answer questions that have been posed to the student or the group.

Course literature

The literature for the course is determined by those responsible for each course module.

Modules included in the course

1. Workshop Series, 3 credits

The workshop sessions are focused on the doctoral students’ own research and their work in collaboration with an external party. They are conducted once per term, sometimes as an overnight facility. Workshop 4 – 7 involves visits to the external cooperative partner. Together with the Industrial Doctoral School for Research and Innovation’s coordinator, the doctoral student plans and is responsible for the implementation of these visits.

Workshops:

1. The academic supervisors and external parties present their projects to the doctoral students.
2. The doctoral students present and discuss their research project to a composite group, for the purpose of developing their communicative ability. The doctoral students also further develop their ability to post relevant questions and discuss approaches and research methodology in other research fields.
3. During this workshop, the doctoral students’ ability to present their research in an interesting and effective way is developed. This is done via applying the NABC method, as developed at Stanford University. NABC stands for Need – Approach – Benefit – Competition.
4. - 7. These occasions consist of visits to each student’s external party. Each student has the responsibility to plan and prepare for the visits. A special planning instruction has been developed, with a focus on the visit providing the other doctoral students an insight into the project, the party’s activities, the benefits of the research, and how the results are intended to be implemented. All doctoral students must actively participate, with questions and reflections, in the visits.
8. Education. The doctoral students speak with each other about their research from a broader perspective, with the aim of understanding the concept of education.

Intended learning outcomes for module 1

Knowledge and understanding:

The doctoral student shows understanding of their own and other disciplines’ research, research environments and research collaborations, the needs of external parties and various aspects of practical utilisation.

Skills and capabilities



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The doctoral student is able to identify and show understanding of other disciplines' research issues.

Evaluation ability and approach

The doctoral student is able to evaluate their own and other disciplines' research and its significance from a useful perspective in the scientific community and society in general.

Examination for course module 1

The doctoral students are examined continuously with their active participation in the eight workshop sessions and after completed tasks that are presented in connection with the meetings.

2. Presentation Skills, 2 credits

In this module, various aspects of effective communication are illuminated. The doctoral students receive training in planning and making oral presentations and producing written presentations, plus how to act as an opponent with the work of others.

Intended learning outcomes for module 2

Knowledge and understanding

The doctoral student obtains insight into the importance of being able to communicate in speech and writing and have basic knowledge in rhetoric.

Skills and capabilities

The doctoral student is able to put together and present a material adapted to a particular target audience, within given frameworks, time and format.

The doctoral student shows skill in being able to act as an "opponent" and give feedback to other speakers.

Evaluation ability and approach

The doctoral student has the ability to engage in reflection and have a critical approach to their role as a speaker.

Examination for course module 2

The doctoral students are examined by means of active participation in lectures and exercises.

3. Group Dynamics – working with and in groups, 2 credits

This module provides an overview of research and theory formation related to leadership and group dynamics with the aim of providing knowledge that contributes to an increased understanding of leading or being part of a group working together. One special focus is work in groups, where research is included as part of the activities. This may apply to companies that conduct research and development activities, research institutes, or research environments within universities, where work in groups is often a central form of the work.



This module also aims to illuminate and provide increased knowledge about different forms types of group and the dynamics and the different patterns that can arise in groups. Factors that promote or inhibit a group's efficiency and performance are also dealt with. As is the role and importance of leadership in influencing a working group to achieve good results. A special focus is placed on the importance of the working climate and what benefits the development of a creative working climate.

Obtaining an increased understanding of the interplay between one's own actions and group dynamics and leadership is also included in the module. How aspects of personality also affect the taking of roles in groups and how leadership is shaped.

Intended learning outcomes for module 3

Knowledge and understanding

The doctoral student shows knowledge about basic theory about group development and leadership, shows knowledge about which factors promote and inhibit group effectiveness and shows an increased knowledge about how aspects of personality affect leadership and the taking of roles in groups.

Skills and capabilities

The doctoral student has the ability to analyse and show understanding of group processes, to identify and analyse different forms of leadership and shows an increased ability for self-reflection

Evaluation ability and approach

The doctoral student has the ability to analyse work groups and leadership, and an approach that involves increased self-awareness of personality, the taking of roles and leadership.

Examination for course module 3

The doctoral students are examined continuously with their active participation in lectures and exercises and by means of a final individual written take-home assignment.

4. Research-generated Innovation and Practical Utilisation, 2 credits

This module focuses on how research-based knowledge can be used and create benefits outside the academic world, and deals with various forms and strategies for this. Various forms of practical utilisation, such as commercialisation, self-employment/freelancing, social entrepreneurship, forms of assignment as an expert, exhibitions, and participation in the public debate are described. The practical application is juxtaposed with phenomena such as Innovation processes, entrepreneurial processes and development projects. By means of this course, the doctoral students obtains an overview of various different strategies for making research-based knowledge have practical application and deepens their knowledge via an applied project work linked to their own research focus.

The teaching consists of short introductory lectures, guest lectures, seminars, a project work, academic supervision and a final seminar. Prior to the seminars, the students are expected to have read the assigned course literature, and depending upon the choice of project work, it is additionally required that the students have sought our additional specialised literature in the relevant field.

Intended learning outcomes for module 4



Knowledge and understanding

The doctoral student is able to describe different strategies for facilitating making research-based knowledge to have practical application, and analyse the applicability via various different strategies depending upon what research has been conducted.

Skills and capabilities

The doctoral student shows the ability to establish an action plan for how their own research can have practical application in the scientific community and the society at large.

Evaluation ability and approach

The doctoral student is able to evaluate the practical application and possibilities of scientific and/or artistic research in the society, with a special focus on their own research.

Examination for course module 4

The examination takes place by means of active participation in the seminars and a written project work along with an oral presentation of this project work. For the project work, a date is set when the report must be submitted by, and when the oral presentation is to be done. Any additions must be made no later than two weeks after the concluding date of the module.

5. Law for Innovation and Practical Utilisation, 2 credits

This module provides an overview of intellectual property law, with the focus on patents, trademarks, design and copyright, plus some matters related to contracts related to this field. A review is made of the protection of the origin, contents and usage of intellectual property. It also deals with how intellectual property rights can contribute to increasing competitiveness and generating revenue for companies via appropriate business strategies along with how intellectual property rights can be defended. Special emphasis is placed on illustrating this with practical examples and cases/situations, partly of a commercial character. The focus will be on Swedish and European law, however international perspectives, from for example the United States, will also be discussed.

The teaching is conducted at course sessions where lectures alternated with group exercises and individual exercises with reflective elements including opportunities for exchanging experiences.

Intended learning outcomes for module 5

Knowledge and understanding

The doctoral student shows knowledge about basic concepts in the field of intellectual property law plus shows an understanding of the types of intellectual property rights that may be relevant within their own field of research. The doctoral student shows knowledge about certain common concepts and clauses relating to licensing agreements, and exhibits an understanding of the importance of intellectual property rights in a societal context.

Skills and capabilities

The doctoral student exhibits skill and capability to be able to distinguish between the different types of intellectual property rights and is able to assess and present resolutions to certain intellectual property situations, both alone as well as in a group.

Evaluation ability and approach



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The doctoral student is able to discuss and evaluate the importance of intellectual property rights as a strategic tool for business and evaluate the importance of intellectual property agreements and the consequences of certain clauses.

Examination for course module 5

The doctoral students are examined continuously with their active participation in lectures and exercises, and at a concluding presentation seminar. In the latter case, each doctoral student must present answers and solutions to both assignments given in advance and to assignments that are not presented until the time of the examination.

6. Funding for Research, Innovation and Practical Utilisation, 2 credits

This course module provides knowledge about how researchers can finance their research by applying for external funding. This is an important and recurring part of an academic career, which requires a strategic approach that contributes to the researcher building a CV and network that strengthens their possibilities to be granted external funding. Writing successful applications requires the researcher to be able to identify appropriate sources of funding, understand the demands and requirements of funders for the research, and how the review process works. Thus, the researcher can formulate their applications so that they are communicative and reviewer-friendly, at the right level of detail and respond appropriately to the text in the call for applications. This course module also aims to increase awareness of the importance of being able to give and receive feedback throughout the application process.

Intended learning outcomes for module 6

Knowledge and understanding

After completing this module, the doctoral student will be able to identify suitable sources of funding and show an understanding of the different requirements and conditions that are linked to different funds and funders, respectively. The doctoral student exhibits insight into the basics of applying for applications and the preparation process with the funders, and shows an understanding of what characterises a good application for funding.

Skills and capabilities

The doctoral student exhibits the capability to formulate a research funding application based on the instructions of national and international funders and can provide constructive feedback on the applications of others.

Evaluation ability and approach

The doctoral student shows an understanding of the importance of a strategic mind-set in building an academic career. The doctoral student is able to evaluate how the choice of sources of funding resource depends on or is affected by the doctoral student's CV and career plans (e.g. collaborations, publication, network, conference). The doctoral student shows an understanding of the importance of constructive feedback throughout the entire application process.

Examination for course module 6

The examination consists of the doctoral student producing a completed application for obtaining funding to a prospective funder, with their CV (for example, in accordance with PRISMA), application text, and budget, plus has reviewed and provided feedback to the applications of others.



7. Collaboration, Intersectionality and Sustainable Development, 2 credits

This module focuses on how various dimensions of power such as gender, class, ethnicity, etc. affect the development and utilisation of research in collaboration between the academic community, commercial enterprise and the society, and how insights into these can be used to achieve socially, ecologically and financially sustainable development.

In the module, the power perspective will be linked to the course's other areas of focus, such as innovation, practical utilisation and financing. This module provides course participants with the prerequisites and tools to apply their insights into different dimensions of power in their specific focus areas, so as to be able to design norm-conscious and socially changing initiatives in professional research and development.

Intended learning outcomes for module 7

Knowledge and understanding

The doctoral student shows knowledge about and understanding of how different dimensions of power affect the organisation and the results of collaborative research processes, and how such processes can be designed to achieve social, ecological and financial sustainability.

Skills and capabilities

The doctoral student shows the capability to identify different dimensions of power in their collaborative research processes, analyse these from a norm-critical perspective, and design and implement initiatives to increase the social, ecological and financial sustainability of the processes.

Evaluation ability and approach

The doctoral student is able to critically reflect on their own and other actors' role in the impact of power dimensions on organisation and results in collaborative research processes.

Examination for course module 7

The examination takes place by means of active participation in the lectures and seminars, a written assignment plus oral presentation part-way through and then a final presentation.

