The Sustainable Scientist (FAK3015) - Spring 2017

This course provides the PhD-student with some of the conceptual and practical tools that a researcher needs in order to - on a long and short term basis - interact with society and the research community (research ethics), business (innovation processes) and funding agencies (identifying research projects, research applications).

The course is given by the Philosophy Division at KTH in collaboration with KTH Research Office and KTH Innovation.

A fee of 1,500 SEK will be charged the student's home department after course completion. In the case of PhD students from the School of Electrical Engineering, the fee will be paid by the school.

Course code: FAK3015
Credits: 2hp
Level: PhD

Please note that attendance is mandatory for part 2 (Research Office) and part 3 (Innovation). For part 1 (Research Ethics) only seminar attendance (25/4) is mandatory. If you are unable to attend a mandatory seminar, please contact the responsible teacher.

We strongly recommend that the students have at least one year of graduate research experience before taking part 2 and 3 of the course.

Contact information:

To register, e-mail: courses.sustainable@abe.kth.se

In your registration, please state: name, personal number, name of supervisor, KTH school, division, and code for the person in charge of invoices at your department.

For questions about content and requirements, contact:

Karin Edvardsson Björnberg, karine@kth.se (Philosophy Division, part 1)
Jenny Almqvist, almqvist@kth.se (KTH Research Office, part 2)
Gustav Notander, notander@kth.se (KTH Innovation, part 3)

Examiner: Karin Edvardsson Björnberg (Philosophy Division)

More information about the course parts and updates to the schedule will be available at KTH Social. The course page will be open for access at the start of the course.

Part I – Research Ethics (Philosophy Division)

This module aims at providing the students with the tools and concepts necessary for discussing ethical aspects of research. After completing the module, the students should be able to: identify and describe common research ethical problems, analyse the problems taking relevant empirical factors into account, and suggest possible solutions to the problems.

The course covers major research ethical problems and concepts, such as scientific misconduct, publication ethics, authorship issues, autonomy and informed consent.

Date	Time	Topic	Readings
28/3 Room V22	10.15-12.00	**Lecture 1**: Introduction to research ethics, scientific misconduct (fabrication, falsification, plagiarism)	Swedish Research Council (2011), pp. 15-47, 105-117 IEEE Code of Ethics, KTH (2016), Biomedcentral (2016)
30/3 Room V22	10.15-12.00	**Lecture 2**: Publication ethics, authorship issues, research on humans	Swedish Research Council (2011), pp. 73-97, 48-51, 65-72 IEEE Code of Ethics, KTH (2016), ICMJE Guidelines, Albert and Wager (2003)
18/4	24.00	*Deadline for research ethical self-reflection*	See instruction
24/4	24.00	*Deadline for sending comments on other group members' essays to teacher*	See instruction
25/4 Room Q34	10.15-12.00	**Seminar Group A**: Presentation of research ethical self-reflection	Bring your ethical self-reflection + comments on the other group members' essays
25/4 Room V32	13.15-15.00	**Seminar Group B**: Presentation of research ethical self-reflection	See above

Required readings

- Albert, T. and Wager, E. 2003. How to handle authorship disputes: a guide for new researchers. The Cope Report 2003. Available online: http://publicationethics.org/files/u2/2003pdf12.pdf

- Biomedcentral. 2016. How to deal with text recycling. Available online: http://publicationethics.org/files/BioMed%20Central_text_recycling_editorial_guidelines.pdf

- International Committee of Medical Journal Editors (ICMJE) guidelines on authorship and contributorship. Available online: http://www.icmje.org/recommendations/browse/roles-and-responsibilities/defining-the-role-of-authors-and-contributors.html

- IEEE Code of Ethics. Available online: http://www.ieee.org/about/corporate/governance/p7-8.html

- KTH. 2016. Ethical policy for KTH. Available online: https://intra.kth.se/polopoly_fs/1.620461!/Etisk%20policy%202016%20eng%20US%202016-06-01.pdf

- Swedish Research Council. 2011. Good research practice. Available online: https://publikationer.vr.se/en/product/good-research-practice/

Part II – Preparing a Research Application (KTH Research Office)

This module aims to provide the students with a better understanding of the research application process, from the funding body, when writing the application and evaluation.

After completing this module the students should be able to understand the major driving forces behind different types of research financiers and important issues that are necessary to address when applying for research funding. They should also have taken the first step to present a research idea towards a suitable research financier by creating a so called "two page proposal".

Date	Time	Topic	Readings
27/4 Room V32	9.15 – 12.30	**Funding opportunities** An overview of the funding landscape and its different driving forces. Both national as well as international funding bodies. **What characterize a successful research application?** An overview of a generic research application (e.g. structure, content, financial issues) as well as specific issues (e.g. gender and impact). An experienced researcher will give his/her input on the application and evaluation process.	No reading required before this seminar.
		Home assignment. - Prepare a 2 minute oral presentation of your project. - Write a “2 page proposal”	Instructions will be provided on **April 27** for this home assignment.
9/5 Room Q21 (morning) Room V32 (afternoon)	10.15-12.00 *or* 13.15-15.00	**Presentation of home assignment** Group discussion (either in the morning or the afternoon) - Short oral presentation - Discussion and feedback on written assignment	

Part III – Innovation, IP, and Agreements (KTH Innovation)

This is a practical, hands-on module for PhD students on Intellectual Property (IP) and legal agreements in successful research and commercialization. The key take-away is an understanding of the role of IP and legal agreements in both research and commercialization.

After the module the students should have a practical knowledge of the different ways to create value out of their research results through the conscious use of IP and agreements, as well as having an understanding of the most important do's and don'ts in relation to IP and agreements. This will make the students more successful in their professional lives regardless of which career path they choose, be it working in a big company, a small company, starting their own company or working in academia.

Date	Time	Topic	Readings
11/5 Room V34	13.15-16.00	**Dealing with IP and Agreements** - An overview of the different forms of intellectual property protection and common agreements in the innovation process and how they work in practice	No reading required before workshop
17/5		**Spot the IP in your research** - Home assignment to make an inventory of the potential IP in your research project and how the IP could be protected and create value.	Guidelines and instructions will be provided for the assignment
		Voluntary individual follow up meeting – Voluntary meeting with KTH Innovation's IP experts and business coaches to follow up or clarify the home assignment and/or initiate a commercialization process	