

Faculty common course 2021

English course title: Writing and Reviewing in Life Science Engineering

Swedish course title: Att skriva och granska vetenskapliga artiklar inom teknik för livsvetenskaperna

Extent (credits): The course is given as 1.5 hp or 3 hp. The requirements for 1.5 hp and 3 hp are given in the "Assessment" section below.

Language of instruction: English

Recommended prerequisites:

The students should have enough results to start writing their own manuscript. Completion of the course "Scientific Writing" is strongly recommended as a complement to this course.

Learning outcomes of the course:

The aim of the course is to provide students with:

- hands-on practice in manuscript writing
- hands-on practice in manuscript reviewing
- familiarize students with the journal submission process.

The course is designed as a practical complement to other scientific writing courses offered by the faculty. The students will get a wider perspective on life science engineering in general as they contribute with their different experiences and approaches from their own research work.

Specify which learning outcomes of the doctoral degree that are address/covered (see appendix 1 of the call or the template of ISP). Describe how:

In the course, the following PhD examination goals and activities are covered:

A1. Demonstrate broad knowledge and systematic understanding of the research field as well as advanced and up-to-date specialised knowledge in a limited area of this field.

- The course brings together students with different backgrounds and expertise, and students will benefit from broadening their perspectives on research by reading and commenting on research from related research fields.

A2. Demonstrate familiarity with research methodology in general and the methods of the specific field of research in particular.

- The students will read about different methods in the field of life science engineering and thereby increase their knowledge on research methodology in general. In particular, the students will practise critical assessment the relevance of used methods by reviewing their peers' manuscripts.

B1. Demonstrate the capacity for scholarly analysis and synthesis as well as to review and assess new and complex phenomena, issues and situations autonomously and critically.

- By reviewing their peer' articles, students will learn independent and critical assessment of other people's work. This will be beneficial for the students when planning and conducting their own research projects.

B4. Demonstrate the ability in both national and international contexts to present and discuss research and research findings authoritatively in speech and writing and in dialogue with the academic community and society in general.

- The course will be a preparation for handling real reviewing processes after graduation. The students will learn how to phrase their comments using professional language with high scientific quality.

- By reading the peers' manuscripts and improving their own manuscripts the students will get practice in how to present their results in a comprehensive manner and fulfilling the standards set by the academic community.

B5. Demonstrate the ability to identify the need for further knowledge.

- During the course, the students will review articles about for them unfamiliar topics and methods. For the students to be able to judge on the scientific quality of these papers, they will have to practise their ability in identifying the need for new knowledge and how to obtain and analyse new information.

B6. Demonstrate the capacity to contribute to social development and support the learning of others both through research and education and in some other qualified professional capacity.

- By learning how to criticise fellow researchers' work in a constructive manner participants will contribute to the learning process of others.

Course contents:

The course covers the following aspects of writing and reviewing a manuscript: (i) general paper structure, (ii) journal submission process, (iii) peer review process, (iv) journal selection criteria, (v) writing a cover letter, (vi) general structure of scientific review, (vii) writing a rebuttal letter to reviewers comments with high scientific quality and professionalism.

Instruction (course structure):

The course lectures consist of one mandatory introductory lecture and several discussion sessions. The main focus lies on the writing of the students' own manuscript(s) and cover letter(s), reviewing the peers' manuscripts, and answering the peers' review comments in a professional manner.

Assessment (form of examination):

The form of examination and the specific requirements are: 1.5 hp (3 hp) course version:

- attend the introductory lecture
- attend and actively participate in at least 2 (3) discussion sessions
- submit 1 (2) own manuscript and cover letter for review, review peers' manuscripts, and respond to the peers' review comments
- review 2 (4) articles of fellow participants

Course examiner (name, e-mail): Maria Tenje, maria.tenje@angstrom.uu.se, Cecilia Persson, cecilia.persson@angstrom.uu.se

Department with main responsibility:
Department of Materials Science and Engineering

Contact person/s (course responsible teacher) (name, e-mail): Hannah Pohlit,
hannah.pohlit@angstrom.uu.se, Jens Schuster, jens.schuster@igp.uu.se

Course dates/period: The course starts both in the spring and autumn term with an introductory lecture. Each semester at least two individualised discussion sessions are given. The students do the article writing in their own pace, but the review process is limited to 2+2 weeks to avoid delay for the other students. The course is completed when the student have fulfilled all tasks.

Maximum number of participants: 24

Submit the application for admission to: Hannah Pohlit or Jens Schuster

Submit the application not later than: 15th of January and 15th of August for the introductory lecture in the spring and autumn, respectively.