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Faculty of Health, Science and Technology  
Cross-faculty Course

## Syllabus

### Research Design and Research Methodology in Subject Education

**Course Code:** OUNI012  
**Course Title:** Research Design and Research Methodology in Subject Education  
*Forskningsdesign och forskningsmetodologi inom ämnesdidaktisk forskning*  
**Credits:** 7,5 ECTS  
**Degree Level:** Doctoral

#### Course Approval

The syllabus was approved by the Faculty of Health, Science and Technology, 5 June 2018 and is valid from the autumn semester 2018.

#### Language of instruction

English if there are international participants, otherwise Swedish

#### Prerequisites

Admission to a doctoral programme.

#### Learning Outcomes

Upon completion of the course, students should be able to:

- give an oral and written account of foundational, systematic knowledge in research methodology, as applied in the area of subject education
- motivate and justify, on scientific grounds, the choice of research design and research methodology in relation to a given research question
- choose research design and method on the basis of good research practice and ethical rules

#### Course Content

The course introduces research methodology and research design, as applied in the area of subject education. Different theoretical perspectives on qualitative and quantitative methods are studied and discussed in seminar form. In addition, the course contains in-depth study of data-collection methods, data analysis, establishment of trustworthiness and quality in method and results, and research ethics.

**Reading List**

See separate document.

**Examination**

Assessment is based on individual written and oral presentations at the literature seminars, and an individual, written assignment discussed and peer reviewed in a seminar.

**Grades**

One of the grades Fail (U) or Pass (G) is awarded in the examination of the course.

**Quality Assurance**

Follow-up relating to learning conditions and goal-fulfilment takes place both during and upon completion of the course and is considered in the development of the course.

**Course Certificate**

Course certificate is issued on request.



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## Reading List

### Research Design and Research Methodology in Subject Education

Valid from autumn 2018

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**Degree Level:** Doctoral

#### Textbook

Robson, C., & McCartan, K. (2016). *Real world research*. Chichester: John Wiley & Sons.

#### Complementary literature

Derry, S. J., Pea, R. D., Barron, B., Engle, R. A., Erickson, F., Goldman, R., . . . Sherin, B. L. (2010). Conducting video research in the learning sciences: Guidance on selection, analysis, technology, and ethics. *Journal of the Learning Sciences, 19*(1), 3-53.

Hammer, D., & Berland, L. K. (2014). Confusing claims for data: A critique of common practices for presenting qualitative research on learning. *Journal of the Learning Sciences, 23*(1), 37-46.

ICMJE. (2016). Recommendations for the conduct, reporting, editing, and publication of scholarly work in medical journals, "the Vancouver protocol". Nedladdat från <http://www.icmje.org/recommendations/>

Prediger, S., Gravemeijer, K., & Confrey, J. (2015). Design research with a focus on learning processes: an overview on achievements and challenges. *ZDM, 47*(6), 877-891.

Schoenfeld, A. H. (2007). Method. In F. K. Lester (Ed.), *Second handbook of research on mathematics teaching and learning*. (Vol. 1, pp. 69-107). Charlotte, NC: Information Age Publishing.

Schultz, J., Säljö, R., & Wyndhamn, J. (2001). Heavenly talk: Discourse, artifacts, and children's understanding of elementary astronomy. *Human Development*, 44(2-3), 103-118.

Vetenskapsrådet. (2017). *God forskningssed*. Nedladdat från <https://publikationer.vr.se/produkt/god-forskningssed/>

In addition, the student chooses literature with relevance for the individual research project.

### **Approval**

Approved by the Faculty of Health, Science and Technology, 5 June 2018.