



# LUND UNIVERSITY

Joint Faculties of Humanities and Theology

## Course syllabus for PhD studies

1. Course details		
1.	Course code	<i>HUUV002</i>
2.	Course title	<i>Introduction to the Field of Science Education and the Didactics of Science and Technology</i>
3.	Credits	<i>5</i>
4.	Details of approval	<i>Approved in accordance with the rules of procedure and delegation at the Faculties of Humanities and Theology 13 October 2015.</i>
5.	Details of revision	

2. General information		
1.	Type of course and its place in the educational system	<i>The course is compulsory in the graduate school in the didactics of science and technology focusing on research communication, CSiS (Communicate Science in School).</i>
2.	Language of instruction	<i>Swedish including some components in English.</i>

3. Learning outcomes		
		On completion of the course, the student shall be able to
1.	Knowledge and understanding	<ul style="list-style-type: none"> <li>• <i>provide an account of different specialisations and research fields within the didactics of science and technology</i></li> <li>• <i>explain how research questions posed in texts affect the choice of method</i></li> <li>• <i>account for different theories of learning and communication in relation to the research field</i></li> </ul>
2.	Competence and skills	<ul style="list-style-type: none"> <li>• <i>review, summarise and discuss research publications and texts in writing</i></li> <li>• <i>orally present and assess the written texts of other students</i></li> </ul>
3.	Judgement and approach	<ul style="list-style-type: none"> <li>• <i>relate his or her own research project to international research within the didactics of science and technology</i></li> </ul>

4. Course content		
1.	Brief description of the course and its	<i>The course introduces the field of science and technology teaching through studies and discussions of current</i>

	content including details of any sub-divisions	<i>research. Focus will be placed on issues of methodology, research design and analysis. Students will be able to develop their skills and abilities in relating their own research issues to current research. The course includes components in which the students are expected to independently seek, review and discuss texts of relevance to their own research projects.</i>
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<b>5. Teaching and assessment</b>		
1.	Teaching methods employed including details of any compulsory components	<i>The teaching consists of lectures, seminars, group exercises, written assignments and independent study.</i>
2.	Examination details	<i>The assessment is based on</i> <ul style="list-style-type: none"> <li>• <i>active participation in seminars addressing the required reading</i></li> <li>• <i>written assignments in which the student demonstrates the ability to relate their own research projects to relevant theories of learning and communication and to current research in the area</i></li> <li>• <i>individual presentation and review of one or more texts produced by fellow students</i></li> </ul>

<b>6. Grades</b>		
1.	Grades	<i>Students are awarded one of the following grades: Fail or Pass</i>
2.	Grading of the complete course	
3.	Modules and variations in grading (if applicable)	

<b>7. Required reading</b>		
1.	Reading list	<p>A selection of approximately 1000 pages from the following texts:</p> <p>Andersson, B. (2008). Att förstå skolans naturvetenskap: forskningsresultat och nya idéer. Lund: Studentlitteratur. ISBN: 9789144052335 (392 pages/selections).</p> <p>Bjurulf, V. (2013). Teknikdidaktik i förskolan. Stockholm: Norstedts. ISBN: 9789144095837.</p>

	<p>Davidsson, E. (2012). Investigating visitors' learning related to science centre exhibits – A progress report of recent research literature and possible research foci. <i>Learning and Education</i> 2012 (2), 28–47.</p> <p>Gilbert, J. &amp; Stocklmayer, S. Eds. (2013). <i>Communication and Engagement with Science and Technology. Issues and Dilemmas. A Reader in Science Education.</i> Routledge. (352 pages/selections)</p> <p>Jakobsson, A. (2013). Att undersöka kunskaps-trender med hjälp av PISA – Likvärdighet, förståelse och kunskaps-syn. <i>Utbildning och demokrati</i>, (3) pp 13–36.</p> <p>Lederman, N. G. (2007). Nature of science: past, present, and future. In S. K. Abell och N. G. Lederman. (Eds) <i>Handbook of Research on Science Education.</i> Mahwah, NJ: Lawrence Erlbaum Associates.</p> <p>Mortimer, E.F. &amp; Scott P.H. (2003). <i>Meaning-Making in Secondary Science Classrooms.</i> Open University Press. ISBN 0335212077. (136 pages/selections)</p> <p>Settlage, J &amp; Southerland, S.A. (2012). <i>Teaching Science to Every Child. Using Culture as a Starting Point.</i> Routledge. NY. ISBN 978-0-415-89258-2 (383 pages/selections).</p> <p>Sjöberg, S. (2000). <i>Naturvetenskap som allmänbildning.</i> Lund: Studentlitteratur. ISBN: 9144053495 (428 pages/selections).</p> <p>Skolverket (2012). <i>Att se helheter i undervisningen – Naturvetenskapligt perspektiv.</i> Stockholm: Elanders.</p> <p>Strömdahl, H. &amp; Tibell, L. (eds) (2012). <i>Skola och naturvetenskap: politik, praktik, problematik i belysning av ämnesdidaktisk forskning.</i> (1st ed.) Lund: Studentlitteratur. ISBN: 9789144081656</p>
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