



Faculty of Health, Science and Technology
Materials Engineering

Syllabus

Literature survey

Course Code: 7MTT103
Course Title: Literature survey
Litteraturstudie
Credits: 7,5 ECTS
Degree Level: Doctoral

Course Approval

The syllabus was approved by the Faculty of Health, Science and Technology, 23 March 2022 and is valid from the spring semester 2022.

Language of instruction

Teaching is in English.

Prerequisites

The qualification requirements are:

Admitted as PhD student at Karlstad University or another university and having a master's degree, or equivalent, with a profile in materials engineering, or a related field such as materials science, physics or chemistry. It is obligatory to have a course Information retrieval (HS2014/527) or equivalent already taken.

Learning Outcomes

The main outcome is a training in academic writing in English aiming to prepare student for the writing of the final Lic/PhD Thesis. Upon completion of the course, students should be able to:

- Show high skills in searching of research information of specific topic in different available resources, including on-line resources and data-bases;
- Demonstrate knowledge and systematic understanding of the defined research field;

- Be able to sort out and prioritize research information relevant to the provided research topic;
- Show well-developed writing skills in high-quality academic English;
- Show ability to write systematic and structured technical text, properly summarizing current status of the research in the specific area of knowledge;

Course Content

The course is provided on a personal basis. A student is given a personal task to write a literature survey on the topic of the student's research or a relevant topic. The topic is agreed with the main supervisor and the examiner of the PhD student in the beginning of the course. To perform the task the student has to carry out a literature search, critical analysis of the found information, check of relevance of references and writing of the final survey with formulated conclusions/problem statement/future work proposals.

During the course 3-4 tutoring sessions are provided. At the end, the student has to hand in the high-quality literature survey written in scientific English language. The literature survey should have high scientific quality and can be recommended for publishing as a research report in Karlstad University Studies.

Reading List

Relevant chapters (e.g. 4, 7, 15, 17) from - Scientific Writing = Thinking in Words by David Lindsay Ed.: Second edition. Clayton South, VIC : CSIRO PUBLISHING. 2020, eBook, available on EBSCO eBooks, access via KAU Library.

Examination

Examination is performed by the assessment and approving of the submitted literature survey.

Grades

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

Quality Assurance

The course convenor has a duty to encourage a continuous dialogue on learning processes and goal fulfilment. A written evaluation is carried out at the conclusion of the course combined with a joint student-teacher discussion of all aspects commented on. The result of the evaluation is collated and made available in accordance with *The Higher Education Ordinance*, Chapter 1, § 14.

Course Certificate

Course certificate is issued on request.

Goal matrix

Goals that, after completing the course, are fulfilled for the doctoral or licentiate degree are marked with an X.

	Doctoral			Licentiate	
	Knowledge and understanding			Knowledge and understanding	
1a	- demonstrate broad knowledge and systematic understanding of the research field and	x	1a	demonstrate knowledge and understanding in the field of research including	
1b	advanced and up-to-date specialised knowledge in a limited area of this field, and	x	1b	current specialist knowledge in a limited area of this field as well as	
1c	familiarity with research methodology in general and the methods of the specific field of research in particular.	x	1c	specialised knowledge of research methodology in general and the methods of the specific field of research in particular	
	Competence and skills			Competence and skills	
2a	- demonstrate capacity for scholarly analysis and synthesis as well as	x	2a	demonstrate the ability to identify and formulate issues with scholarly precision critically, autonomously and creatively and to	
2b	to review and assess new and complex phenomena, issues and situations autonomously and critically	x	2b	plan and use appropriate methods to undertake a limited piece of research and other qualified tasks within predetermined time frames in order to contribute to the formation of knowledge	
3a	- demonstrate the ability to identify and formulate issues with scholarly precision critically, autonomously and creatively, and to	x	2c	as well as to evaluate this work	
3b	plan and use appropriate methods to undertake research and other qualified tasks within predetermined time frames and to review and evaluate such work		3a	demonstrate the ability in both national and international contexts to present and discuss research and research findings in speech and writing and in dialogue with the academic community and	
4	- demonstrate through a dissertation the ability to make a significant contribution to the formation of knowledge through his or her own research		3b	society in general	

5a	- 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		4	demonstrate the skills required to participate autonomously in research and development work and to work autonomously in some other qualified capacity.	
5b	society in general				
6	- demonstrate the ability to identify the need for further knowledge and	x			
7	- 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.				
Judgement and approach				Judgement and approach	
8a	- demonstrate intellectual autonomy and disciplinary rectitude as well as		5	demonstrate the ability to make assessments of ethical aspects of his or her own research	
8b	the ability to make assessments of research ethics, and		6	demonstrate insight into the possibilities and limitations of research, its role in society and the responsibility of the individual for how it is used	
9	- demonstrate specialised insight into the possibilities and limitations of research, its role in society and the responsibility of the individual for how it is used.		7	demonstrate the ability to identify the personal need for further knowledge and take responsibility for his or her ongoing learning.	