

Schematic matrix for achievement of the outcomes for doctoral degree at KI

Outcomes for the Degree of Doctor according to the Qualifications ordinance, annex 2, Higher Education Ordinance	Activities contributing to the achievement of the intended learning outcomes and through which fulfillment of the outcomes can be shown							
	Research under supervision	Writing the thesis	Thesis defence	Doctoral courses (see their intended learning outcomes)	Research seminars, journal clubs among others	International conferences with own presentation	Teaching	Activities in co-operation with society in general
<p>Knowledge and understanding</p> <p>To obtain a doctoral degree, the student is required to</p>								
A1. demonstrate broad knowledge and systematic understanding of his/her research field as well as deep and current specialist knowledge in a particular aspect of this field; and	X	X	X	X	X	X	X	
A2. demonstrate familiarity with scientific methodology in general and with the methods of his/her specific field of research in particular.	X	X	X	X	X	X		

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<p>Proficiency and ability</p> <p>To obtain a doctoral degree, the student is required to</p>								
B1. demonstrate a capacity for scientific analysis and synthesis and the independent critical review and assessment of new and complex phenomena, issues and situations;	X	X	X	X	X	X		
B2. demonstrate an ability to identify and formulate research questions critically, independently, creatively and with scientific rigour, and to plan and conduct research and other advanced tasks using appropriate methods and within given time frames as well as to review and evaluate such work;	X	X	X	X				X
B3. demonstrate through the writing of a thesis the ability to make a significant contribution to the development of knowledge through his/her own research;		X	X					
B4. demonstrate an ability to present and discuss research and research results, orally and in writing and with authority, both in national and international contexts and in dialogue with the scientific community and society in general;		X	X	X	X	X		X
B5. demonstrate an ability to identify the need for further knowledge; and	X	X	X	X	X			
B6. demonstrate an ability to contribute to the development of society and to support the learning of others in research, education and other advanced professional contexts.		X		X	X	X	X	X

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	Research under supervision	Writing the thesis	Thesis defence	Doctoral courses (see their intended learning outcomes)	Research seminars, journal clubs among others	International conferences with own presentation	Teaching	Activities in co-operation with society in general
<p><i>Judgement and approach</i> To obtain a doctoral degree, the student is required to</p> <p>C1. demonstrate intellectual independence and scientific integrity as well as an ability to make ethical judgements in research; and</p>	X	X	X	X				
<p>C2. demonstrate deeper insight into the possibilities and limitations of science, its role in society and the responsibility of the individual in its application.</p>		X	X	X			X	X

Sections in the thesis summary chapter (*kappan* or *ramberättelsen* in Swedish) in which fulfillment of the outcomes for earning a doctoral degree from KI can be shown

Outcomes for the Degree of Doctor according to the Qualifications ordinance, annex 2, Higher Education Ordinance	Achievement of the outcomes can be shown in the
A. Knowledge and understanding	
A1. demonstrate broad knowledge and systematic understanding of his/her research field as well as deep and current specialist knowledge in a particular aspect of this field; and	<ul style="list-style-type: none"> • Introduction • Literature overview • Discussion • Conclusions
A2. demonstrate familiarity with scientific methodology in general and with the methods of his/her specific field of research in particular.	<ul style="list-style-type: none"> • Material and methods • Discussion • "Points of perspective" e.g. regarding future research with revised or new methodology
B. Proficiency and ability	
B1. demonstrate a capacity for scientific analysis and synthesis and the independent critical review and assessment of new and complex phenomena, issues and situations;	<ul style="list-style-type: none"> • Literature overview • Discussion • Conclusions
B2. demonstrate an ability to identify and formulate research questions critically, independently, creatively and with scientific rigour, and to plan and conduct research and other advanced tasks using appropriate methods and within given time frames as well as to review and evaluate such work;	<ul style="list-style-type: none"> • Literature overview • Research questions • Material and methods
B3. demonstrate through the writing of a thesis the ability to make a significant contribution to the development of knowledge through his/her own research;	<ul style="list-style-type: none"> • Results • Discussion • Conclusions
B4. demonstrate an ability to present and discuss research and research results, orally and in writing and with authority, both in national and international contexts and in dialogue with the scientific community and society in general;	<ul style="list-style-type: none"> • The thesis summary chapter in its entirety (the scientific community) • Popular science summary of the thesis (society in general)
B5. demonstrate an ability to identify the need for further knowledge; and	<ul style="list-style-type: none"> • Discussion (both regarding methods and results) • "Points of perspective" e.g. regarding future research and implementation of the research results
B6. demonstrate an ability to contribute to the development of society and to support the learning of others in research, education and other advanced professional contexts.	<ul style="list-style-type: none"> • "Points of perspective" e.g. by describing of (future) areas of application
C. Judgement and approach	
C1. demonstrate intellectual independence and scientific integrity as well as an ability to make ethical judgements in research; and	<ul style="list-style-type: none"> • <i>By having written the "kappa" as independent as possible and with minimal text overlap with papers one is co-author for and no plagiarism.</i> • Ethical considerations
C2. demonstrate deeper insight into the possibilities and limitations of science, its role in society and the responsibility of the individual in its application.	<ul style="list-style-type: none"> • Popular science summary of the thesis • Discussion • "Points of perspective" e.g. by reflecting on the researchers' responsibility to draw the right conclusions based on existing scientific evidence, on future interventions and their possible risks