

| Outcomes for the Degree of Licentiate <i>Knowledge and understanding</i> | Examples of what a doctoral student can do to achieve these outcomes (if possible, state when: e.g. in year 1, every other week, or continuously) |
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| <p>(1) For the Degree of Licentiate the doctoral student shall demonstrate knowledge and understanding in the field of research including current specialist knowledge in a limited area of this field as well as specialised knowledge of research methodology in general and the methods of the specific field of research in particular.</p> | <ul style="list-style-type: none"> • Read relevant books in research field X (e.g. the latest edition of “The Principles of Neuroscience”, “Epidemiology: An Introduction”, “The Biology of Cancer”), if such exist. • Keep abreast of the scientific literature in research field X, specifically within X. • Gain greater knowledge of X by doing X. • Take active part in laboratory meetings and research seminars arranged by X (e.g. the research group, division, department, doctoral programme X and/or graduate school X). • Take active part in journal clubs (name the organiser). • Take active part in scientific conferences and symposia (give examples). • Demonstrate knowledge and an understanding of the research field X including current specialist knowledge in a limited area of this field when writing the licentiate thesis. • Become familiar with the relevant methodology for analysis of X through discussions with his/her supervisor, research group members, senior researchers and statisticians, and by taking part in seminars and journal clubs. • Learn statistics by taking course(s) in statistics and applying the skills learned to his/her research project in consultation with his/her supervisor(s) and co-authors, and with statisticians. • Learn a particular method by taking the relevant course, and applying the skills learned to his/her own research project. • Learn methods X, Y and Z by taking part in courses and doctoral activities held under doctoral programme X or research school X and by ... • Learn method X through the instruction of postdoc/ supervisor/collaborator X and then applying and developing this method. • Learn method X on a study visit to X (name of lab, place, time plan). • Discuss the methodology of his/her thesis in connection with its composition. |

| <p>Outcomes for the Degree of Licentiate</p> <p><i>Competence and skills</i></p> | <p>Examples of what a doctoral student can do to achieve these outcomes (if possible, state when: e.g. in year 1, every other week, or continuously)</p> |
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| <p>(2) For the Degree of Licentiate the doctoral student shall demonstrate the ability to identify and formulate issues with scholarly precision critically, autonomously and creatively, and to 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 as well as to evaluate this work</p> | <ul style="list-style-type: none"> • Contribute well-considered proposals for new points of inquiry, hypotheses, methodological choices and/or research projects through personal reflection and discussion with his/her supervisor(s) and other collaborators on the basis of his/her own research experience/results, other's research and by keeping abreast of the scientific literature. • Take part in as many research project phases as possible: planning, execution, analysis, writing and journal correspondence. • Learn peer-review under supervision. • Participate as a doctoral student representative in work groups, committees and boards at the university and the department, work groups and/or steering committees for doctoral programmes. • Critically review earlier studies in the field when writing his/her own scholarly articles and licentiate thesis. • Take active part in the publication process by, for example, maintaining a dialogue with journals (including after article revisions). |
| <p>(3) For the Degree of Licentiate the doctoral student shall 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 society in general</p> | <ul style="list-style-type: none"> • Learn oral communication skills by attending courses on presentation techniques, communicating (popular) science, presenting his/her own research and results to his/her group, at seminars, national/international conferences, and teaching or presenting research and research results to undergraduate students, patient associations and other public arenas. • Learn written communication skills by attending courses on scientific writing/popular scientific writing, writing academic articles and popular science articles or press releases under supervision, taking part in a thesis-writing seminar, learning peer-review under supervision, and producing conference posters. • Write a popular-science summary of his/her thesis. |
| <p>(4) For the Degree of Licentiate the doctoral student shall demonstrate the skills required to participate autonomously in research and development work and to work autonomously in some other qualified capacity.</p> | <ul style="list-style-type: none"> • Skills required to participate autonomously in research and development such as time management, project management, communication skills, perseverance, curiosity, ability to collaborate, critical reading skills, problem solving skills can be learned by "learning-by-doing", participating in specific workshops, seminars and courses, reading and networking with and learning from peers, senior researchers, mentor(s) and role models. • Take part in courses on teaching and learning and teach. • Interact with the society in general (e.g. by holding classes for school students or the general public). • Take part on courses on innovation and entrepreneurship (e.g. as arranged by the UBE) or in career planning activities (e.g. as arranged by KI's Career Service). • Discuss his/her future career with a mentor. |

| Outcomes for the degree of doctor <i>Judgement and approach</i> | Examples of what a doctoral student can do to achieve these outcomes (if possible, state when: e.g. in year 1, every other week, or continuously) |
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| (5) For the Degree of Licentiate the doctoral student shall demonstrate the ability to make assessments of ethical aspects of his or her own research | <ul style="list-style-type: none"> • Read “Good research practice” by the Swedish Research Council and discuss its implications with supervisors and others within and outside his/her research group. • Take the online course “Avoiding plagiarism”. • Attend the research ethics course (at least 1.5 credits) and, if necessary, the courses on laboratory animal science and “Good clinical practice” (GCP), quality assurance of clinical research etc. • Help to write the ethical application for study X. |
| (6) For the Degree of Licentiate the doctoral student shall demonstrate insight into the possibilities and limitations of research, its role in society and the responsibility of the individual for how it is used | <ul style="list-style-type: none"> • Take part in courses on research ethics and scientific theory. • Take active part in research seminars. • Take part in discussions and follow debates at his/her department and in larger contexts (e.g. in dialogue with the society in general). • Discuss and reflect on how research findings as well as their interpretation can be used. Discuss and reflect on what consequences the research can get in different contexts, for example concerning local and global societal challenges (see e.g. UN Agenda 2030 and its 17 sustainable development goals), within health care, in relation to different groups of individuals. • Discuss and reflect on the responsibility of researchers and others regarding research findings and the interpretation and dissemination of those. |
| (7) For the Degree of Licentiate the doctoral student shall demonstrate the ability to identify the personal need for further knowledge and take responsibility for his or her ongoing learning. | Identify the need of further knowledge in connection with: <ul style="list-style-type: none"> • his/her dialogue with supervisor(s) and other collaborators, • annual follow-ups and revisions of his/her individual study plan, • the writing of research grant applications, • the writing of his/her licentiate thesis (e.g. proposals for continuation studies), and • the licentiate seminar. |

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