Generic knowledge and skills
MEPO003 12 hp
Guide to your portfolio work
The PhD programme at the Faculty of Medicine

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Purposes of your portfolio for the course Generic knowledge and skills

The goals of this course are closely related to the learning outcomes for the PhD degree, but they are focused (on generic knowledge and skills), specific, and adapted to medical PhD students. The goals are taught and examined through a portfolio, which serves two distinct purposes:

1. The portfolio is a **personal learning tool** for documentation and reflection throughout the programme. It supports your progress toward the learning outcomes for the PhD degree, in particular those that are not achieved solely by your thesis work. You can approach the portfolio as a professional diary, in which your PhD work is divided into twelve pre-defined categories (see p. 4). Keeping a portfolio can improve the quality of your individual study plan (which is organized around the same twelve categories), your thesis, as well as your PhD education as a whole. It will also facilitate writing and updating CVs and job applications.

2. The portfolio is a **tool for feedback and examination**. Many goals for the PhD degree are not examined through the thesis or its defence. The portfolio provides you with a possibility to demonstrate that you have achieved the competences required for the degree. Earlier in the programme you will also use it in order to get feedback on your progress – for example at the half-time review.

In the Mahara web tool, the learning- and feedback/examination portfolios are generated in two different modes/menus respectively (see figure below): “Content/Journals” (one per category) are for personal documentation and reflection and cannot be viewed by anyone but yourself. “Portfolio/Pages” are used for feedback and examination, and can be shared.

Assessment and examination of the portfolio

There are three different occasions when your portfolio work will be assessed:

1. **You are encouraged to share and discuss your portfolio with your supervisor** in connection with your appraisals and the yearly revision of your study plan. Your documentation and reflective texts in the portfolio constitute an excellent basis for refinement and improvement of your study plan. Note, there is no requirement to show the learning portfolio in its entirety to your supervisor if you prefer not to, but make sure to discuss your insights and conclusions with him/her, for example by making a feedback version (a “Page” in Mahara) of your portfolio.

2. **At the half time review**, you are required to submit a feedback/examination version of your portfolio to the external opponents for assessment. The required format is a link to a web-based viewing page created in the Mahara web tool, which you send to them two weeks prior to the seminar, along with the rest of your documentation. If you are not using the web-based tool Mahara for your portfolio work, a pdf file is also acceptable. The opponents will assess your portfolio and discuss it with you during the meeting that follows your half-time seminar. They can also write the feedback comments directly in your submitted portfolio page. When you have made relevant changes in your portfolio, send the updated version to the assistant head of
the department with responsibility for PhD studies\(^1\). Give a frank and clear account of your activities and reflections within all the twelve categories. If you lack experience within one or several categories – report this as well. **The quality of your reflections is more important than the quantity; what matters is that it is clear whether you are on your way of reaching the intended learning outcomes, or not.**

3. **When you apply to defend** your thesis, you must have passed the Generic Knowledge and Skills course. Create an examination version of your portfolio (Mahara viewing page or a pdf document) that you think demonstrates that you have accomplished the goals of the course, and send this to your assistant head of the department with responsibility for PhD studies, no later than 4 months before your defence. He/she will assess your portfolio. You are required to present activities and reflective texts within all twelve categories. The quality and clarity of your reflections are more important than the quantity; **your documented experience and reflections connected to these, should together support that you have reached the goals of the course.**

**The principle for assessment** is that you, within in each category, **select** activities and reflective texts that you think demonstrate your progress or achievements. In the Mahara web-tool, this is performed by creating a viewing page, containing selected entries from your twelve journals (one per category).

**Personal and/or presentable reflections.**
To maximise the value of your portfolio work, allow yourself to write personal reflections; the portfolio is an effective tool for **self**-reflection. When the portfolio is going to be assessed, you may need to revise, modify or select your texts to make them readable, professional and presentable to someone else.

\(^1\) A list of who is the assistant head with responsibility for PhD studies in your department can be found here: [http://www.med.lu.se/intramed/forska_utbilda/doktorandHandledare/kontakt](http://www.med.lu.se/intramed/forska_utbilda/doktorandHandledare/kontakt)
Principle of portfolio work and assessment (in Mahara)

How to work with your portfolio
When?
To accomplish the learning purpose of the portfolio, you should get started immediately after admission to the PhD programme and aim for continued portfolio work throughout your studies. As a rough guideline, make portfolio entries at least once per month and/or document and reflect each time you have attended a course, seminar, journal club, presented a poster, or engaged in any other activity that can fit in to one or more of the portfolio categories.

How?
Mahara
The faculty offers the web-based tool Mahara, which can facilitate your portfolio work. Using the Mahara web-tool is not compulsory, but is strongly recommended since it has many advantages compared to simple and static text documents. Advantages include:

- access to your portfolio via Internet
- functions to attach files
- created pages consisting of your selection of activities and reflections, organized using layers, links and lists – for clarity and completeness
- created pages can be electronically shared and contain comment fields

Language
You can choose to write your portfolio in Swedish or in English.
Documentation and reflection within twelve categories.
You are required to document and reflect on your activities within all twelve categories. The categories are linked to the learning outcomes of the Generic knowledge and skills course, as well as the PhD programme as a whole. It is your accumulated experiences AND your ability to reflect on these and your own learning process that is assessed - ensure that you have a good balance between activities and reflection. It can be helpful to use a so called model for reflection, for example the simple one by Rolfe et al\(^2\) which is based on the three steps: What? (=description), So what? (=analysis), Now what? (=future action).

In the next section below you will find the following:
Each category is described in depth; the learning outcome(s) you are expected to accomplish (both for the course and for the PhD degree); examples of relevant activities to document and reflect upon; suggested questions/statements to help you get started to write reflections.

01. Research process

**Learning outcomes Degree of Doctor:**
- demonstrate the capacity for scholarly analysis and synthesis as well as to review and assess new and complex phenomena, issues and situations autonomously and critically.
- demonstrate the ability to identify and formulate issues with scholarly precision critically, autonomously and creatively, and to plan and use appropriate methods to undertake research and other qualified tasks within predetermined time frames and to review and evaluate such work.
- demonstrate the ability to identify the need for further knowledge.
- demonstrate intellectual autonomy and disciplinary rectitude as well as the ability to make assessments of research ethics.

**Learning outcomes Generic knowledge and skills course:**
On completion of the course, the third-cycle students shall be able to:
- identify and analyse challenges and issues in their own and others’ research, and propose ways to solve or manage these issues.
- independently formulate a project plan including research issue, method and time plan.

Here you are to reflect on the general process of research, as well as on the nature and progress of your PhD project. This area is important to consider at early start of your PhD studies and when you are to do the yearly revision of your individual study plan. The questions/statements listed below will most likely be asked by the opponents at your half-time seminar and defence.

**Activities to document and reflect upon:**
Research project plans that you have written/designed or contributed to.
Applications for research funding, travel funding or postdoc funding.

Planning/project meetings.

**Examples of documents to attach:**
- Project plans.
- Applications.
- Notes from planning meetings.

**Questions/statements to help you get started with reflective thinking and writing:**
1. Which is the overall aim of my thesis project?
2. Has it changed and in that case how? Is there a need to change it and why?
3. What is my research question? Does it need to be adjusted?
5. Will my result reach international impact?
6. What are the general principles for how a research project should be carried out?
7. What experiences do I have from writing research proposals?
8. What components are needed to execute a project? Are there any missing in mine?
9. Is my project progressing in line with what is described in my individual study plan?
10. How can I revise my project plan (as specified in the individual study plan) to improve the quality of my research?
11. Which challenges or problems have I encountered in my project? How did I solve them?
12. Am I developing towards autonomy as a scientist? In which ways? Can I give examples to demonstrate this?
13. Do I need to learn more about the research process? How could I do that?

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**02. Research methodology**

**Learning outcomes Degree of Doctor:**
- Demonstrate familiarity with research methodology in general and the methods of the specific field of research in particular.
- Demonstrate the ability to identify and formulate issues with scholarly precision critically, autonomously and creatively, and to **plan and use appropriate methods** to undertake research and other qualified tasks within predetermined time frames and to review and evaluate such work.
- Demonstrate the ability to **identify the need for further knowledge**.

**Learning outcomes Generic knowledge and skills course:**
On completion of the course, the third-cycle students shall be able to:
- Reflect on the choice of method, and on strengths and weaknesses of the methodology applied in in their own research project.
- Describe the strategies used to obtain the knowledge required within the general subject and its methodology.

Here you are to reflect in general terms on the research method adopted and describe the choice of method and approach to resolve an issue.

**Activities to document and reflect upon:**
- Methods courses, statistics training.
Research project plans that you have writtendesigned.

**Examples of documents to attach:**
Course certificates.
Protocols developed by you.
Project plans – methods descriptions.
Data management plan.
Interview template.

**Questions to help you get started with reflections:**
Is the methodological approach relevant for my research question(s) and the project? If not, how can it be improved?
Is the approach realistic (for example time-wise)?
Can I use new modern technology and equipment or establish contact with other research groups to improve the approach? Which ones? How?
Should the research material be expanded?
How will I secure my research data? Do I need a specific data management plan?
Which methods courses did I take? What did I learn? Have I reflected upon what I learned and did this change my strategies, and if so, how? Am I in need of further training?
In which way(s) could I achieve broad knowledge about methods?

**03. Subject expertise**

**Learning outcomes Degree of Doctor:**
- demonstrate broad knowledge and systematic understanding of the research field as well as advanced and up-to-date specialized knowledge in a limited area of this field, and
- demonstrate the ability to **identify the need for further knowledge**.

**Learning outcomes Generic knowledge and skills course:**
On completion of the course, the third-cycle students shall be able to:
- describe the strategies used to obtain the **knowledge required within the general subject** and its methodology.

Here you are to reflect on the extent to which you have achieved general and specialised expertise in your subject.

**Activities to document and reflect on:**
Relevant courses.
Journal clubs.
Papers and books read.
Other activities through which you have increased your subject knowledge, for example clinical- or undergraduate teaching.

**Examples of documents to attach:**
Course certificates.
Programmes for seminar series, journal clubs and conferences.
Articles on the subject.
Literature overviews made by you

Questions to help you get started with reflections:
Which (out of the five) subject am I admitted to PhD studies in?
Which different broad and more specific topics do I need expertise in?
How do I plan to get expertise in the different topics? (document in study plan)
What is the background and rationale for my project?
How would I put my project in a larger, for example clinical, context?
How can I achieve broad knowledge within this subject, vs specialized knowledge within a more limited part of the subject?
Have I studied the literature as specified in my individual study plan?
Do I need to use additional information channels? Which ones?
Which journals and research articles are most important/in focus for my research project?
Which courses and other components can increase my subject expertise?
What is my learning process like and how can I identify the ideal conditions/environment for my learning?

04. Publication

Learning outcomes Degree of Doctor:
- demonstrate the ability to identify and formulate issues with scholarly precision critically, autonomously and creatively, and to plan and use appropriate methods to undertake research and other qualified tasks within predetermined time frames and to review and evaluate such work.
- 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 society in general.

Learning outcomes Generic knowledge and skills course:
On completion of the course, the third-cycle students shall be able to:
- independently take responsibility for all the stages of the publication process.

Here you are to reflect on the publication process and strategies for publishing your results.

Activities to document and reflect on:
The publication aspect on your projects.
Review tasks.
Relevant courses (for example the PhD course Scientific communication).

Examples of documents to attach:
Course certificates.
Your published papers.
Cover letters, rebuttals.

Questions to help you get started with reflections:
Which parts of the publication process did I contribute to? How?
Who wrote the cover letter? Who suggested reviewers? Who submitted the paper? Who wrote the rebuttal letter?

What type of journal do/will I publish in (specialised/general, high/low impact)?

Who decides on the choice of journal? How can I contribute to this decision?

Did me and my co-authors/supervisors agree on a plan for publication of my results?

Is it clear from the individual study plan? Is it realistic?

How many, and what type of publications do I need for my thesis?

What is my contribution to and role in the execution of the article? What are the roles of my co-authors?

Authorship: what is required for authorship?

What are my experiences when it comes to reviewing the work of others?

Have I taken any courses that helped me understand the publication process and how have I implemented what I learned?

05. Teacher training and experience

**Learning outcomes Degree of Doctor:**
- demonstrate the ability to identify the need for further knowledge.
- 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.

**Learning outcomes Generic knowledge and skills course:**
On completion of the course, the third-cycle students shall be able to:
- reflect on their development of teaching skills and how they have used them to support the learning of others and adapted their teaching to different target groups, for example the wider society.

Here you are to reflect on your role, education, development, activity and impact as a teacher.

**Activities to document and reflect on:**
Teacher training courses.
Teaching experience, including supervision of undergraduate students in the laboratory and other teaching situations.
A “teaching situation” can be interpreted as any situation, within or outside the classroom, in which your role is support the learning of others, for example students, patients, new staff or research colleagues.

**Examples of documents to attach:**
Course certificates.
Course evaluations and assessments.
Teaching material that you developed (lectures, cases etc).
Master- or bachelor theses that you supervised.

**Questions to help you get started with reflections:**
How could I investigate (and thus show) if my teaching supports student learning?
Does my individual study plan include teaching or teacher training? Why? Why not?
What type of teaching would be suitable and valuable for me (subject, level etc)?
Have I taken any teacher training course and which are required and/or relevant?
What was the most important knowledge gained from my teaching courses?
Have I used this knowledge in my teaching and did it lead to improvements? How did I document and/or notice that?
How have I developed as a teacher?
What is my teaching philosophy?
Have I taken part in teaching- or course/syllabus development? How did I go about?
How did I document the results of the development?

06. Conferences and seminars.

Learning outcomes Degree of Doctor:
- 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 society in general.
- demonstrate the ability to identify the need for further knowledge.
- 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.

Learning outcomes Generic knowledge and skills course:
On completion of the course, the third-cycle students shall be able to:
- **present** and discuss research and research findings with collaborators and at **conferences and seminars**, and reflect on the **quality and authority** of the delivery.
- reflect on the significance of collaboration, **conferences** and other research interactions for the quality of research and their own development of expertise.

Here you are to reflect on your participation in conferences and seminars.

Activities to document and reflect on:
Conferences that you have attended as well as presentation of abstracts/posters.
Seminars that you have attended and/or presented at.
Relevant courses (for example oral communication and scientific communication).

Examples of documents to attach:
Course certificates.
Posters or talks that you presented.
Conference- and seminar programmes.

Questions to help you get started with reflections:
What type of conferences would be suitable for me? Which one would I specifically like to go to?
Is attendance of conferences and seminars specified in my individual study plan?
Which were the main take-home messages of the last conference I attended?
How was the quality of the presented research?
Have I implemented/used any of the knowledge I gained? How?
Who did I connect with and did this expand my network?
What are my plans/goals for the next conference (e.g. ask more question, talk to more people)?
How can I improve my presentations?
Have I improved my posters and presentations as a result of courses I took? How?
What do I need to do to be invited as a speaker?
What have I learnt from a particular seminar? Who did I meet? How have I used the knowledge gained from it?

07. National and international cooperation with the research community.

**Learning outcomes Degree of Doctor:**
- demonstrate the ability to identify and formulate issues with scholarly precision critically, autonomously and creatively, and to plan and use appropriate methods to undertake research and other qualified tasks within predetermined time frames and to review and evaluate such work.
- 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 society in general.

**Learning outcomes Generic knowledge and skills course:**
On completion of the course, the third-cycle students shall be able to:
- present and **discuss research** and research findings with **collaborators** and at conferences and seminars, and reflect on the quality and authority of the delivery.
- reflect on the **significance of collaboration**, conferences and other research interactions for the quality of research and their own development of expertise.

Here you are to reflect on your interaction with the research community, in particular national and international research collaborations.

**Activities to document and reflect on:**
Who do you interact and/or collaborate with locally?
Who do you interact and/or collaborate with nationally?
Who do you interact and/or collaborate with abroad?

**Examples of documents to attach:**
Grant applications for spending time abroad.
Reports from visits to other groups/laboratories.

**Questions to help you get started with reflections:**
Do I have enough (or too many) collaborations?
What are the advantages and potential disadvantages of collaborative projects?
When does an interaction become a collaboration?
Who initiates and manages collaborations (me, my supervisor?)?
What is my role in the collaborations that my project involves?
Are collaborations described in my study plan?
Am I planning to spend time in a foreign laboratory during my PhD? Which one?
Why? How could I go about if I wanted to do this?
What have I gained and learnt from my collaborations?

08. Cooperation with wider society

Learning outcomes Degree of Doctor:
- 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 society in general.
- 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.
- 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.

Learning outcomes Generic knowledge and skills course:
On completion of the course, the third-cycle students shall be able to:
- reflect of the possible uses and routes for implementation of their own research results in wider society, and identify opportunities and risks associated with such use.
- reflect on their development of teaching skills and how they have used them to support the learning of others and adapted their teaching to different target groups, for example the wider society.

Here you are to reflect on your interaction with society at large and the potential use of your research.

Activities to document and reflect on:
Relevant courses.
Popular science summaries and other descriptions of your research.
Contact with patients’ associations
Popular science publications.
Visits to upper secondary schools.
Public visits/displays at the university.
Press releases.
Participation in various media.
Patents/innovations.

Examples of documents to attach:
Course certificates.
Popular science summaries and other texts.
Press releases.
Written material developed to inform patients/study participants.
Links to media where you have appeared.

Questions to help you get started with reflections:
How can my research benefit individuals and/or society as a whole?
How would I describe/explain my research to different target groups?
Have I participated in any media? What was my experience? What would I do differently next time?
How do I go about if I would like to share my research results with the public?
Is there a commercial potential in my research? In which way?
How would I go about if I wanted to commercialize my research?
What do I know about patenting?

09. Ethical issues

Learning outcomes Degree of Doctor:
- demonstrate the ability to identify the need for further knowledge.
- demonstrate intellectual autonomy and disciplinary rectitude as well as the ability to make assessments of research ethics.
- demonstrate specialized insight into the possibilities and limitations of research, its role in society and the responsibility of the individual for how it is used.

Learning outcomes Generic knowledge and skills course:
On completion of the course, the third-cycle students shall be able to:
- reflect of the possible uses and routes for implementation of their own research results in wider society, and identify opportunities and risks associated with such use.
- make research ethics assessments, assess the need for ethical review, and reflect on the meaning of academic integrity, providing examples from their own thesis project.

Reflect on ethical judgements and issues that relate to your work.

Activities to document and reflect on:
Relevant courses or seminars that you have attended (e.g. research ethics course)
Ethical permit applications that you have written or contributed to.

Examples of documents to attach:
Course certificates.
Ethical applications and permits.
Data management plans (that describe ethical aspects).

Questions to help you get started with reflections:
Is there an ethical permit for my projects? What does it cover? When is it up for renewal?
How are applications for ethical review drawn up (when, who does it, who decides etc)? Would I be able to write one?
Could the results of my research be misused? How?
What defines research fraud or misconduct?
Have I ever encountered or suspected research fraud? Where would I turn if I did?
What is ethically correct when it comes to co-authorship?
Have I ever participated in an ethical debate (formal or ad-hoc)? What was it like?
What can I do to prepare?
10. Career development

Learning outcomes Degree of Doctor:
- demonstrate the ability to identify the need for further knowledge.

Learning outcomes Generic knowledge and skills course:
On completion of the course, the third-cycle students shall be able to:
- identify their own strengths and weaknesses, and reflect on different career paths and the knowledge and skills required for them.

Reflect on what you need for your career development and prospects for reaching the goals you have set.

Activities to document and reflect on:
Career development seminars.
Job fairs.
Participation in mentor programmes.

Examples of documents to attach:
Materials, exercises etc. from career seminars and fairs.

Questions to help you get started with reflections:
What skills and competences do I possess?
Which are my main strengths?
What do I enjoy doing?
What are my career goals and how can I prepare for these?
What is required to pursue an academic career?
Are there opportunities for support, such as seminars or mentor programs, to assist me?

11. Supervision/supervisor(s)

Learning outcomes Degree of Doctor:
- 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.

Learning outcomes Generic knowledge and skills course:
On completion of the course, the third-cycle students shall be able to:
- reflect on their own development towards independence, particularly vis-à-vis their supervisors.

Reflect on the supervision you receive and your own role as a supervisor.

Activities to document and reflect on:
Meetings with your supervisor(s) – time and main outcomes.
Your own supervision tasks.
Examples of documents to attach:
Notes from supervision meetings.
Documentation of decisions and agreements made.

Questions to help you get started with reflections:
What type of input do I get from my supervisor? Is the amount of input appropriate?
Have I development my independence towards my supervisor? How?
How would I describe my own role in the relation between me and my supervisor?
What is the role of my co-supervisor?
Do I have or need a mentor? Which mentorship programs are available?
How would I like to develop the relationship with my supervisor(s)? How could I do this?
How would I describe myself as a supervisor? How could I improve?

12. Administration, organisation and leadership.

Learning outcomes Degree of Doctor:
- 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.
- demonstrate the ability to identify the need for further knowledge.

Learning outcomes Generic knowledge and skills course:
On completion of the course, the third-cycle students shall be able to:
- demonstrate understanding of and participation in administration, organisation and management of research and education.

Reflect on your activities in different working groups, boards and committees, or any other organisational work that you have engaged in.

Activities to document and reflect on:
Membership of boards and/or committees.
PhD student council work.
Seminars/conferences that you have organized/lead.
Other types of administrative or organisational work, for example responsibility for schedules, meetings, equipment or other materials in a section, clinic or laboratory.

Examples of documents to attach:
Seminar/conference programmes that you developed.
Schedules or routines that you developed/was responsible for.
Minutes from meetings you attended.

Questions to help you get started with reflections:
In which way could administrative work be valuable for me?
What have I contributed with in my administrative work? How could I increase my contributions?
What is my future plan with regard to engagements on boards and committees? Is it
defined in my individual study plan?