

# **ETHICAL RECOMMENDATIONS FOR THESIS WRITING AT UNIVERSITIES OF APPLIED SCIENCES**

The Rectors' Conference of Finnish Universities of  
Applied Sciences Arene



ARENE

# ETHICAL RECOMMENDATIONS FOR THESIS WRITING AT UNIVERSITIES OF APPLIED SCIENCES

## Contents

- INTRODUCTION ..... 3**
- GOALS ..... 4**
- APPLYING THE RECOMMENDATIONS ..... 4**
- RECOMMENDATIONS FOR UNIVERSITIES OF APPLIED SCIENCES ..... 4**
  - Training in research ethics for students and those supervising thesis work 4
  - Expert assistance 6
  - Thesis agreement 6
  - A student's right to high-quality guidance 6
  - Solving problems connected with supervision 7
  - Handling of personal data and data protection 7
  - Identifying plagiarism 8
- ETHICAL NORMS TO BE APPLIED TO A THESIS ..... 8**
  - RCR guideline 9
  - Ethical principles for research on people 9
  - Ethical norms specific to fields of science and professions 10
  - Open science and research / Open RDI activities 10
  - Responsible conduct of art 11
- LEGISLATION ..... 11**
  - EU General Data Protection Regulation 11
  - Data Protection Act 12
  - Medical Research Act 12
  - Copyright Act 13
  - Act on the Openness of Government Activities 13
  - Administrative Procedure Act 13
  - Right to protection of privacy 14
- STUDENT'S CHECKLIST..... 15**
- SUPERVISOR'S CHECKLIST ..... 16**
- MORE ABOUT CHECKLISTS ..... 17**
- DIAGRAM OF REQUIRED PERMITS AND STATEMENTS.....27**

## INTRODUCTION

This document gives recommendations for universities of applied sciences for a thesis process that is ethical and in accordance with responsible conduct of research. The recommendations are based on legislation and on international and national principles, policy lines, and recommendations of research ethics.

The RDI committee of the Rectors' Conference of Finnish Universities of Applied Sciences (Arene) published its first ethical recommendations for thesis work in May 2018. Following this, there have been changes to both legislation on protection of personal data and the ethical recommendations for research on people produced by the Finnish Advisory Board on Research Integrity (TENK). This new version of the ethical recommendations for thesis work has been updated to take into account the above changes.

The universities of applied sciences are also committed to the Ethical principles of research in the humanities and social and behavioural sciences drafted by TENK and to arrange research according to the recommendations of ethical advance evaluation (TENK 2009). The guidelines have now been updated. Entitled 'Ethical principles for research on people and preliminary ethical reviews in the human sciences in Finland', the new TENK guidelines came into force on 1 October 2019. If they so choose, the organisations belonging to the research community may commit to following the guidelines.

In addition to the instructions mentioned above, the preparations have involved the utilisation of recommendations for "Supervision of Doctoral Dissertations and their Review Process in Finland with a Special Emphasis on Research Integrity" (TENK 2016), drafted for universities by Universities Finland UNIFI and TENK, as well as ethical guidelines for the different universities of applied sciences.

The guidelines take the form of checklists for the student and the supervisor as well as explanatory text. In addition to the checklists, proposals have also been put to the university of applied sciences as an institution.

The recommendations were made by a working group that included Jyrki Kettunen (Arcada, TENK member), Anne Kärki (SAMK), Susanna Näreaho (Metropolia) and Seliina Päällysaho (SeAMK). The RDI committee of the Rectors' Conference of Finnish Universities of Applied Sciences (Arene) approved the recommendations at its meeting on 20 September 2017.

The original recommendations were drafted by a working group that included Jyrki Kettunen (Arcada, TENK member until 31 January 2019), Anne Kärki (SAMK), Susanna Näreaho (Metropolia, TENK member as of 1 February 2019) and Seliina Päällysaho (SeAMK). The same group also updated the recommendations.

The RDI committee of the Rectors' Conference of Finnish Universities of Applied Sciences (ARENE) approved the recommendations at its meeting on 12 September 2019.

The Finnish National Board on Research Integrity (TENK) has gained insight into the recommendations and stated at its meeting held on 19 December 2019 that the ethical guidelines for research included in the ethical recommendations for thesis writing at universities of applied sciences are in line with the guidelines laid down by TENK.

**Petri Raivo**

Rector, Chair, Arene RDI Committee

**Petri Lempinen**

Executive Director, Arene

## GOALS

The goal of the recommendations is to consolidate the thesis process of the universities of applied sciences, to promote responsible conduct of research, to prevent deceit in research, and for its own part, to enhance the quality of theses.

## APPLYING THE RECOMMENDATIONS

Each university of applied sciences decides on its own thesis process, but these recommendations serve as a checklist of the kinds of questions of research ethics can apply to theses. Universities of applied sciences can compare their own instructions with these recommendations and on the other hand, to focus and elaborate on the recommendations in their own instructions.

The recommendations deal with the rights, duties, and responsibilities of the thesis process from the point of view of research ethics.

The recommendations are intended primarily for research theses, but they can also be used, as applicable, for theses in the arts, and for theses using development methods, and with certain applications, to all (written) assignments connected with studies.

## RECOMMENDATIONS FOR UNIVERSITIES OF APPLIED SCIENCES

### Training in research ethics for students and those supervising thesis work

According to the RCR guidelines of TENK: "*Universities and universities of applied sciences should ensure that their students are well versed in the principles of the responsible conduct of*

*research and that the teaching of research integrity is integrated into their graduate and post-graduate programmes.... In order to guarantee the practice of the responsible conduct of research, universities and universities of applied sciences should offer continuing education in research integrity to their teachers, to supervisors of theses, researchers, heads of research programmes and to other experts."*

The training should include:

- principles of responsible conduct of research common to all branches of science
- general ethical principles of research and also those that apply to specific fields of science
- applicable legislation for research, development, and innovation (RDI) activities
- and the significance of the aforementioned principles for conducting research

The supervisor of a thesis must be familiar with:

- Responsible conduct of research
- The responsibilities of a researcher and supervisor in research practice
- The signs of violations of responsible conduct of research
- RCR process in Finland and possible consequences at a university of applied sciences
- Special ethical principles for research on people
- The premises of, need for, and advance evaluation procedure of ethical advance evaluation
- Where applicable, ethical norms and practices specific to fields of science and professions
- Applicable legislation for RDI activities

The writer of a thesis (UAS) must be familiar with:

- Responsible conduct of research in the thesis work process
- Responsibilities of research practice
- General ethical principles for research on people
- The premises of, need for, and advance evaluation procedure of ethical advance evaluation

The writer of a thesis (Master's degree) must be familiar with:

- Responsible conduct of research
- The responsibilities of a researcher and supervisor in research practice

- The signs of violations of responsible conduct of research
- RCR process in Finland and possible consequences at a university of applied sciences
- Special ethical principles for research on people
- The premises of, need for, and advance evaluation procedure of ethical advance evaluation
- Applicable legislation for RDI activities
- Where applicable, ethical norms and practices specific to fields of science and professions

## Expert assistance

The universities of applied sciences, on their own or if possible, together, offer expert assistance and instructions for the support of the supervisor of a thesis and the student, and for identifying and resolving ethical questions. Expert help and instructions are needed especially for thesis agreements, for handling personal information, and data protection (incl. materials, results, and the pseudonymisation and anonymisation of results).

Universities of applied sciences also utilise their support persons in research ethics and their data protection officers in promoting the quality of the thesis process.

## Thesis agreement

To mitigate the conflict between the wishes of the commissioner and rules of research that are binding on the student, a cooperation agreement is signed before the start of the thesis work, involving the commissioner of the thesis, the university of applied sciences, and the student, in which the key rules linked with the thesis are agreed on, such as:

- the topic and schedule
- supervision
- costs and reimbursement
- background material and the right to use it
- ownership and access rights for all research data and results generated through thesis work (incl. possible compensation and innovation reward)
- On confidential material vs. the public disclosure of a thesis
- on responsibility and limits to responsibility

## A student's right to high-quality guidance

Producing a thesis is primarily a learning experience for the student and it should promote the student's expertise, professional development, and skills for the workplace. In accordance with

pedagogical principles the key actor in the thesis process is the student. The teacher directing the effort supports and encourages the learning process and serves as a guarantor of quality. In addition, the commissioner names a mentor (workplace director) who gives the student support, as well as a workplace angle during the collaboration process.

The supervisors (also the workplace director) should have no conflicts of interest as stipulated in the Administrative Procedure Act (434/2004) Section 28 or on the basis of good responsible conduct of research.

In order to guarantee quality of the guidance, the university of applied sciences will need to make sure that the supervisor has:

- adequate prerequisites and possibilities to work in support of the learning process and the thesis process
- sufficient knowledge in the field of the thesis / relevant competence
- in research in an area covered by the Medical Research Act, the required professional and scientific competence

## Solving problems connected with supervision

Problems related to supervision should be resolved in such a way that in addition to the student and the supervisor, some other party, for instance an administrative person responsible for education, will participate in the handling of the problem.

## Handling of personal data and data protection

The basic principle of the GDPR and Data Protection Act is the safeguarding of the data subject's rights. This is sought through means such as an emphasis on the responsibility and obligations of the data controller and a tightening of the sanctions that result from neglecting these obligations. Universities of Applied Sciences must see to it that the above principle is adhered to also in thesis work.

In the thesis process of universities of applied sciences, more attention needs to be paid to the handling of personal information and the implementation of data protection for the individuals that are the target of the research.

- The grounds for handling personal information and their handling (incl. identifying the personal data essential for research, collection, recording, storage, destruction)
- informing the research subject and obtaining their consent (consent to participate in the research and 'consent' as the basis for handling personal data are two different things)
- the pseudonymisation and anonymisation of materials, results, and publications

## Identifying plagiarism

All theses should be checked through the plagiarism identification system before they are sent to checkers for evaluation. If the results of the thesis are published as articles, they also need to be checked in the plagiarism detection system before being sent to the publisher.

In addition to verification of originality, the system should be used as a tool in guiding students in the use of quotations and references in accordance with the responsible conduct of research and copyright legislation.

## Processing to suspected RCR violation

Violation of responsible conduct of research means unethical or dishonest activity that is harmful to research. Responsible conduct of research must be exercised in all theses.

If a suspicion of violations of responsible conduct of research should arise concerning a thesis, the student or supervisor must report the matter to the rector of the university of applied sciences. The rector will decide if a preliminary investigation in accordance with the RCR process should be launched in the matter.

Suspected RCR violations for lower degrees at universities of applied sciences will be handled in the processes of the university of applied sciences itself. Suspected RCR violations connected with higher university of applied sciences degrees are investigated in the processes of the university of applied sciences if the thesis has not yet been approved. If a master's thesis has already been approved, or if the suspected RCR violator demands it, the suspected violation will be handled in an RCR process that takes place in accordance with RCR guidelines.

The process for investigating suspected RCR violations, which is part of the self-regulation of the scientific community, does not involve investigation of copyright issues, protection of personal data, labour law, or other legal questions that might be linked with the suspected violation, and which should be handled in a court of law.

## ETHICAL NORMS TO BE APPLIED TO A THESIS

A researcher has ethical and moral obligations toward persons who are objects of the research, the research community, the professional field, the funder of the research, and society, among others.

Guidelines and recommendations for responsible conduct of research are self-regulation of the research community within limits set in law. In addition to going against responsible conduct of



research, research fraud and disregard for responsible conduct of research can also be violations of the law (TENK 2012). The personnel and students of a university of applied sciences must be familiar with the applicable parts of this set of norms for self-regulation such as:

- Responsible conduct of research and the handling of suspected violations in Finland. The guideline of the Finnish Advisory Board on Research Integrity 2012 (TENK 2012).
- Ethical principles for research on people and preliminary ethical reviews in the human sciences in Finland. The guideline of the Finnish Advisory Board on Research Integrity 2019 (TENK 2019)
- Ethical norms specific to fields of science and professions
- Open science and research operating model.

## RCR guideline

Finnish scientific community has agreed on a shared guideline for research ethics on Responsible Conduct of Research and the handling of suspected violations in the – the so-called RCR guideline (TENK 2012). The RCR guideline gives all those taking part in research a model for responsible conduct of research and it is applied in Finland in all fields of science. The aim of the guidelines is to promote responsible conduct of research and to prevent scientific deceit in organisations conducting research, such as universities, universities of applied sciences, and research institutions. They must also follow the guidelines, as applicable, in national and international research collaboration with companies and other parties.

Primary responsibility for observing responsible conduct of research is with the researchers themselves, but also with the supervisors and the management of the educational institution / research unit. When conducting research – including thesis writing – it is important to be honest, careful, open, and to respect the work of other researchers. Research is conducted in a planned manner. Possible sources of funding must be disclosed and good personnel and financial management is practice in the research. Further information; see e.g. RCR guideline (TENK 2012).

## Ethical principles for research on people

The ethical guidelines for humanities, social science and behavioural science research, published by TENK in 2009, has been adopted by nearly all universities of applied sciences. The guidelines have now been updated. Entitled 'Ethical principles for research on people and preliminary ethical reviews in the human sciences in Finland', the new TENK guidelines came into force on 1 October 2019. If they so choose, the organisations belonging to the research community may commit to following the guidelines.

In addition to the general ethical principles guiding the researcher, these ethical guidelines for research focusing particularly on people and human activity take a position on:

- the treatment and rights of the research subject, and particularly their informed consent regarding participation or nonparticipation in the research,
- situations where an underage or handicapped person is the research subject,
- the handling of personal data in research,
- the protection of privacy and research publications and
- the openness of research data

In cases where a required preliminary ethical review for research on people or human activities has not been carried out, this may constitute a violation of responsible research conduct. When needed, this may be investigated through a procedure for examining suspected violations of responsible research conduct such as the one described in the TENK HTK-2012 guidelines.

## Ethical norms specific to fields of science and professions

Some fields have their own ethical norms and bodies, such as the National Advisory Board on Social Welfare and Health Care Ethics (ETENE), the National Committee on Medical Research Ethics (TUKIJA), and the Advisory Board on Biotechnology (BTNK), which can give detailed instructions on professional ethics on questions such as the relationship between a researcher and the target of the research.

Medical research is regulated by the [Medical Research Act](#) (488/1999), which separately defines medical research on people, clinical pharmaceutical studies, etc. Requirements in the Research Act have been described in greater detail in the section on the framework set by legislation.

## Open science and research / Open RDI activities

Openness has always been part of responsible scientific conduct. However, societal expectations and new technology have widened the concept of what is meant by open science. In the words of Carlos Moedas, European Commissioner for Research, Science and Innovation, we are currently seeing “a systemic change in the modus operandi of science and research”.

The open science and research model is an internationally significant method for promoting science and increasing the impact of research on society. The OECD, Unesco, the European Commission, and numerous scientific organisations and RDI funders have set guidelines for the principles of the openness of information for solving problems that are global, abundant, and calamitous.

The Ministry of Education and Culture’s Open Science and Research project has created essential strategic policies (such as the Roadmap for Open Science) for promoting open science in Finland. With coordination from the Federation of Finnish Learning Societies, the science community is now working together to prepare new joint policies and action plans. More details: <https://avointiede.fi/fi> and <https://www.vastuullinentiede.fi/>

Arene has offered recommendations for the application of procedures of open science and research in the RDI activities of universities of applied sciences. Open RDI activities aim at offering, access to the methods, materials, results, and outcomes of projects to all who are interested, within limits set by research ethics and the law. The goal is to improve openness, quality, reliability, and visibility in RDI activities and to promote the societal effectiveness of the projects and the emergence of new innovations.

All universities of applied sciences are committed to the Open Access statement of ARENE, according to which theses produced at universities of applied sciences are recorded in the [Theus Open Repository](#), which is open to all.

## Responsible conduct of art

Responsible Conduct of Art contains the same elements as the Responsible Conduct of Science, including respect for copyrights and the difference between plagiarism and acceptable quotation. For instance, Laiho (2009 and 2014) has described artistic ethics and good artistic practice in his [filosofia.fi-portal](#).

## LEGISLATION

Legislation that guides RDI activities that is applicable to the thesis process in particular includes, among other things,

- EU General Data Protection Regulation
- Data Protection Act
- Medical Research Act
- Act on the Status and Rights of Patients
- Act on the Status and Rights of Customers of Social Welfare
- Copyright Act
- Act on the Openness of Government Activities
- Administrative Procedure Act
- Rights to protection of privacy (covered by multiple statutes)

## EU General Data Protection Regulation

The aim of the General Data Protection Regulation is to increase openness and transparency in the handling of personal information and to strengthen the rights of those registered to monitor the handling of their personal data. Compliance with GDPR obligations is supported through ef-

fective implementation: the regulation lays down more severe sanctions for illegal data processing. A supervisory authority can, for example, order measures to counter the incorrect handling of personal information, as well as imposing administrative fines.

## Data Protection Act

The Data Protection Act supplements and clarifies the EU General Data Protection Regulation and its application at the national level.

Processing of personal data always requires a basis for data processing that is in accordance with Article 6 of the GDPR. Section 4 of the Data Protection Act deals with the right to process personal data for purposes such as scientific research, historical research or statistics.

The processing of personal data for special personal data groups is generally not allowed. Special personal data groups are those which reveal:

- race or ethnic origin
- political opinion
- religious or philosophical conviction
- trade union membership
- health-related data
- sexual orientation or behaviour
- genetic or biometric data used for identifying the individual.

If it is essential for achieving the purpose of the scientific or historical research, the research data may also include special personal data groups. In such cases, the data controller and personal data processor must be very careful to respect the rights of the data subject. Section 6 of the Data Protection Act (1050/2018) lists a number of measures for protecting the data subjects' rights.

## Medical Research Act

Regulations on medical research are in the Medical Research Act (488/1999 with amendments) and in a decree issued on its basis (986/1999 with amendments).

In the act medical research is defined as research involving intervention in the integrity of a person, a human embryo or a human foetus for the purpose of increasing knowledge of health, the causes, symptoms, diagnosis, treatment and prevention of diseases or the nature of diseases in general. Before the commencement of research defined as medical research under the Medical Research Act, a favourable opinion from the regional medical ethics committee must be obtained for the plan.

Among other things, the Medical Research Act calls for

- always prioritising the interest and well-being of the person being studied over the interests of science and society
- preventing risks and harm to the person being studied
- ensuring that the implementation of the measures should always have greater benefits for health or science than the risks and harm imposed on the person being studied.
- obligations and requirements of the supervisor of the study
- the consent of the person being studied: written and knowledge-based
- a person being studied who is of diminished capacity, or under age
- Handling of personal data

Depending on the situation of the research, the Act on the Status and Rights of Patients and the Act on the Status and Rights of Customers of Social Welfare might apply.

## Copyright Act

Research material, results, and publications are subject to regulations contained in the Copyright Act. The use of material subject to copyright requires permission of the owner of the copyright, unless otherwise set by regulations on limitations. When materials, methods, or results owned by others are used as background information in a thesis, their origin, authors, and sources must be mentioned in accordance with good research practice and the law.

The rights to use research results under copyright belong to those producing the research unless there is a specific agreement to do otherwise, with a transfer of the rights. In connection with RDI projects, agreements are made among collaborative parties in which they agree on the ownership and use of research materials and results that are protected by the Copyright Act and other intellectual property rights.

## Act on the Openness of Government Activities

In all universities of applied sciences theses that have led to getting a degree are official documents under the Act on the Openness of Government Activities, which are public unless otherwise stipulated.

## Administrative Procedure Act

The bases for disqualification given in Section 28 of the Administrative Procedure Act are applied in all activities carried out by universities of applied sciences (Polytechnics Act section 21(1)).

For study tasks such as thesis work, the disqualification regulations primarily apply to the grader and inspectors, but also to the members of multi-member administrative bodies (e.g. academic appeals board, legal protection board).

In the assessment of students' work, this qualification is based on Paragraphs 1 and 7 of Section 28 of the Administrative Procedure Act, meaning that the teacher is either a party to the matter or confidence in their impartiality is endangered for some other reason.

## **Right to protection of privacy**

In Finland, provisions on protection of privacy are found in a number of laws, including the fundamental rights listed in the Constitution of Finland, Act on the Openness of Government Activities (621/1999), Act on the Protection of Privacy Working Life (759/2004), Data Protection Act (1.1.2019), EU General Data Protection Regulation, and Code for Information Society and Communications Services (917/2014).

When reporting on their work, the thesis writer must consider the implementation of privacy protection and whether other individuals could be indirectly identified through those participating in the research.

## Ethical guidelines for thesis work



### STUDENT'S CHECKLIST

- 1.** I have ascertained my possible conflicts of interest
- 2.** I have acquainted myself with the topic of my thesis
- 3.** I have, together with my supervisor, ascertained the resources required by my work
- 4.** I have acquainted myself with the guidelines of research ethics
- 5.** I have acquainted myself with the principles linked with the handling of personal information and data protection and the instructions from my university of applied sciences.
- 6.** I have ascertained together with my supervisor whether my thesis requires an preliminary ethical review and/or research permit, and if needed, I have taken care of these
- 7.** I have signed the required agreements together with my supervisor and my collaborative partners
- 8.** The authorship of my thesis and possible other publications connected with my thesis has been agreed upon
- 9.** Storage, ownership and usage rights of the materials for my thesis have been agreed upon in a manner accepted by all parties
- 10.** I have reported on the funding and other significant linkages connected with my thesis
- 11.** I am aware that my thesis will be examined in a plagiarism identification system
- 12.** I understand that my thesis is a public document
- 13.** I have a right to a high-quality thesis process

## Ethical guidelines for thesis work

### SUPERVISOR'S CHECKLIST

- 1.** I have ascertained my possible conflicts of interest
- 2.** I shall supervise the writing of the thesis in a competent manner
- 3.** There are adequate resources for producing the thesis
- 4.** Guidelines of research ethics shall be followed in the thesis work
- 5.** Legislation on the handling of personal data and data protection shall be followed in the thesis work
- 6.** Before starting on the thesis a favourable statement from the ethics committee and the appropriate permissions for research have been procured, if necessary
- 7.** Necessary agreements have been signed together with the student, a representative of the university of applied sciences, and possible collaborative partners.
- 8.** If necessary, an agreement has been signed with the student about the authorship of publications connected with the thesis
- 9.** Storage, ownership and usage rights of the materials for my thesis have been agreed upon in a manner accepted by all parties
- 10.** Funding and other significant linkages connected with the thesis have been declared
- 11.** The thesis shall be examined in a plagiarism identification system and the student is aware of this
- 12.** The thesis is a public document and the student and the collaborate partner are aware of this
- 13.** The student has a right to a high-quality thesis process



## MORE ABOUT CHECKLISTS

### 1. Do I have a conflict of interest?

A conflict of interest means that a person has a relationship with the matter being processed, people who are a party to it, or with persons who are within the sphere of influence in a solution to be reached on the matter, which might jeopardise the person's neutrality. For a conflict of interest to exist it is sufficient that neutrality may have been objectively compromised.

**The regulations on conflicts of interest in the Administrative Procedure Act** (Universities of Applied Sciences Act, *section 21, article 1*), are applied in all activities of a university of applied sciences. The regulations on conflicts of interest apply both to members of administrative bodies and the activities of individual employees in all decision-making and preparatory activities, and when functioning as an expert.

The **Responsible conduct of research and procedures for handling allegations of misconduct in Finland** guideline (*TENK, RCR guidelines 2012*) states that

*"Researchers refrain from all research-related evaluation and decision-making situations, when there is reason to suspect a conflict of interest. This applies to researchers also when they are working as teachers, supervisors, or experts".*

Some **fields have their own ethical norms** and bodies that can give more detailed instructions on professional ethics on the relationship between a researcher and the object of the research.

**More details:** [Act on Universities of Applied Sciences \(932/2014\)](#)

[Administrative Procedure Act \(434/2004\)](#)

[Responsible conduct of research and procedures for handling allegations of misconduct in Finland \(RCR guideline\) 2012](#)

### 2. Have you familiarised yourself sufficiently with the topic?

A UAS and a master's thesis are independent research, planning, or investigative work from an area of the student's own field of study with close ties to the world of work and practice. A thesis can be involved applied study, product, service, or other development project for work. Rectors' Conference of Finnish Universities of Applied Sciences Arene Ry 2015

Different fields of training have different guidelines and recommendations on which phase of studies a student has sufficient knowledge and skill to start writing a thesis. The curricula of research programmes also includes studies that support the thesis process.

Select your thesis from a field that your professional studies has focused on. The topic can also be multi-sectoral, crossing the different fields of education. Discuss a topic that you are interested in, its selection, and setting its limits with someone, such as your tutor teacher, education coordinator, education director, or principal lecturer.

Producing a thesis is primarily a learning experience for the student and it should promote the student's expertise, professional development, and skills for the workplace. The key actor in the thesis process is the student. The supervisor also offers support and encouragement, while ensuring quality.

The supervisor at the university of applied sciences guides the thesis process to ensure that the thesis corresponds to the criteria set for a UAS or master's thesis.

The collaborative partner should have a named mentor or similar person to direct the work on the thesis, who can offer the student support and a point of view related to life at work.

### 3. Are the resources adequate?

In limiting the subject matter and in the thesis plan the student and the supervisor should evaluate the resources required for carrying out the work (incl. human and equipment resources, costs) and the schedule, while making sure that the resources are available.

The scientific competence of a researcher responsible for research can be defined by law, as is done in law concerning medical research. Also the possible funder of the research will evaluate the scientific skills and knowledge of the research group when making a funding decision.

### 4. Am I familiar with research ethics?

The teachers supervising the thesis work is responsible for ensuring that the student familiarise themselves with the research ethics principles. The supervisor must instruct the student on the key ethical principles linked with the research process and on the permission procedure.

The thesis author is responsible for the ethical conformity of their work.

If the thesis is planned for implementation in a way that requires ethical advance evaluation, the student, together with the supervisor, shall apply for advance evaluation from the ethics committee.

The collaborative partner must accept that the principles of good research practice and guidelines of professional ethics as well as applicable legislation are followed in the writing of a thesis.

The supervisor of a thesis must have knowledge of

- Responsible conduct of research

- The responsibilities of a researcher and supervisor in connection with scientific practice
- The identifying features of violations of responsible conduct of research
- RCR processing in Finland and the possible consequences at a university of applied sciences
- Ethical principles for research on people
- The premises for ethical advance evaluation, the need for it, and the advance evaluation process
- Where applicable, ethical norms and practices specific to fields of science and professions

The student writing a thesis (UAS) must master:

- Responsible conduct of research in the thesis work process
- Responsibilities of scientific practice
- The premises for ethical advance evaluation, the need for it, and the advance evaluation process

The student writing a thesis (master's thesis) must master:

- Responsible conduct of research
- The responsibilities of a researcher and supervisor in connection with scientific practice
- The identifying features of violations of responsible conduct of research
- RCR processing in Finland and the possible consequences at a university of applied sciences
- Ethical principles for research on people
- The premises for ethical advance evaluation, the need for it, and the advance evaluation process
- Where applicable, ethical norms and practices specific to fields of science and professions

**More details:** [Responsible conduct of research and procedures for handling allegations of misconduct in Finland \(RCR guideline\) 2012](#)

[Ethical principles for research on people and preliminary ethical reviews in the human sciences in Finland](#)

The support person in research ethics of your university of applied sciences

The human sciences ethics board of your university of applied sciences

## 5. Do I handle personal data?

- Personal data refers to any information relating to an identified or identifiable person. This includes information through which the individual can be directly identified and also information through which the individual can be identified indirectly, taking into account the identification methods which are reasonably likely to be at the disposal of other people.
- Processing of personal data always requires a basis for data processing that is in accordance with the GDPR or the Data Protection Act. If there is no such basis, personal data may not be processed. Only the data necessary for the processing purpose may be processed.
- Special personal data groups are those which reveal race or ethnic origin, political opinion, religious or philosophical conviction, trade union membership, health-related data, sexual orientation or behaviour, or genetic and biometric data processed for identification of the individual. The processing of personal data for special personal data groups is generally not allowed.
- If it is essential for achieving the purpose of the scientific or historical research, the research data may also include special personal data groups. In such cases, the data controller and personal data processor must be very careful to respect the rights of the data subject. Section 6 of the Data Protection Act (1050/2018) lists a number of measures for protecting the data subjects' rights. One of these measures is a data protection-related impact assessment.
- Do not handle personal data unless you have a basis for doing so that is in accordance with the GDPR or Data Protection Act
- Think about which personal data groups the essential data processing applies to
- If the handling of personal data is necessary, ask the person being researched for consent.
- Plan the lifespan of data handling in advance and describe it in an understandable way in the privacy statement
- Together with your thesis supervisor, think through whether the data will be stored for later use after the completion of the thesis or whether it will be destroyed. If the data will be stored, request permission for this from the data subjects
- Pay heed to data protection and data security throughout the handling process
- Encode the material as early as possible using pseudonyms (pseudonymisation)
- When the thesis has been approved and the period for appeal has ended, destroy the research data that contains the personal data
- If the data could be useful for reuse later on, permanently remove the identifiers from it (anonymisation) and store it together with your supervisor and in accordance with your university's guidelines
- Make sure that the results and the publications have also been anonymised!

**More details:** [Data Protection Act \(1050/2018\)](#)

[Tietoarkiston aineistonhallinnan käsikirja](#)

Data privacy guidelines of your own university of applied sciences

## 6. Do I need an ethical advance evaluation or a research permit?

In the thesis plan the student and supervisor should consider the ethics of the work and whether or not an ethical advance evaluation and/or research permit are needed.

Preliminary ethical reviews help and support the person carrying out the work in the identification and avoidance of possible risks to the research subject, but they do not transfer to the ethics committee the responsibility for carrying out the work in an ethical fashion.

If the thesis is planned for implementation in a way that falls within the scope of ethical advance evaluation, or if a research permit is needed for it, the student, together with the supervisor, applies for the advance evaluation and/or research permit from the ethics committee.

The ethics committee is selected according to the research design and the researcher's location.

### Medical research

When research involves intervention in the integrity of a person for purposes of increasing knowledge on health, the causes, symptoms, diagnostics, treatment, or prevention of illness, or the nature of disease in general, including research into treatment or health science that intervenes in the integrity of a person, research into the study of physical education and nutrition, the research falls under the Medical Research Act. In such a case an application for an ethical advance evaluation needs to be made to the ethics committee of the hospital district. In such cases, an application for a preliminary ethical review needs to be made to the medical ethics committee.

**More details:** [Medical Research Act](#)

A regional ethical committee as mandated by the Medical Research Act

### Research on people

The Finnish Advisory Board on Research Integrity (TENK) has provided guidelines on ethical principles for research on people.

In addition to the general ethical principles guiding the researcher, these ethical guidelines for research focusing particularly on people and human activity take a position on:

- the treatment and rights of the research subject and particularly their informed consent to participate or not participate in the research
- situations where an underage or handicapped person is the data subject
- the handling of personal data in research

- the protection of privacy and research publications and
- the openness of research data

A preliminary ethical review serves to support the researcher in foreseeing and avoiding any possible harm to the research subjects. In the assessment, the ethics committee of the researcher's home organisation weighs up the possible harm to those participating in the research versus the possible value of the knowledge to be obtained from the research.

According to the TENK guidelines, the researcher must request a preliminary ethical review if:

- participation in the research deviates from the principle of informed consent
- the research impedes on the bodily integrity of the research subjects
- the researchers involves persons aged under 15 without requiring their guardian's consent
- the research exposes the subjects to exceptionally strong stimulants
- the research poses a risk of causing, either to the subjects or those close to them, a mental strain beyond that experienced in normal daily life.
- the implementation of the research may threaten the safety of the research subjects, the researcher, or persons close to them.

**Further information:**

[Ethical principles for research on people and preliminary ethical reviews in the human sciences in Finland](#)

The support person for research ethics at your university of applied sciences

The ethics committee for human sciences at one's own university of applied sciences

**Research permit**

If the target of research is an organisation, the activities of an organisation, or its representatives (for example, personnel or students), good research practice requires that a research permit be requested from the organisation. Permit practices and the prerequisites for granting a permit vary from one organisation to another, and it is good to agree on the required permits when the thesis agreement is made, at the latest. Even after the organisation that is the target of the research has granted a research permit, it is still up to each individual to decide personally whether or not to participate in the research, for example by being interviewed or filling in a questionnaire.

**7. Are your agreements in order?**

Theses that are written at a university of applied sciences are primarily research and development projects focusing on the world of work, and genuine cooperation with the world of work is

central to the entire thesis process. Before starting a thesis the sponsor, university of applied sciences, and the student sign a cooperation agreement establishing the key rules and principles linked with the thesis, such as:

- the topic and schedule
- guidance
- costs and covering them
- background material and rights to use it
- regarding ownership and access rights for all research data and results generated through thesis work (incl. possible compensation and innovation reward)
- secret and other confidential material vs. public access to the thesis
- liability and limits to liability
- regarding processing of personal data (where needed)

## 8. Results of the thesis and publications

The student drafts a work in accordance with the thesis work instructions of their university of applied science and the student holds the copyright for the work. The student may (if desired) surrender their financial copyrights to another person. Rights to access by the cooperative party are set in the cooperation agreement, When making the results public, the cooperative party nevertheless always mentions that they were the result of a thesis project, mentioning the names of the student or students who produced the thesis as well as the supervisors, as dictated by good practice (Copyright Act, Section 3, Article 1).

In addition to the text of the thesis itself, the writer of the thesis might produce materials during the process that are also protected by copyright. If the materials are produced together with others such as a supervisor, researchers, a collaborative party from the world of work, or other students, a written agreement regarding ownership and use should be made beforehand, for example as part of a cooperation agreement. The TENK guidelines on making agreement on authorship of scientific publications can be applied to agreements on data authorship.

Authorship, as stipulated in the Copyright Act, is clearly connected to the written text or, for instance, a computer programme or graph published as part of the study. However, *authorship that is linked with scientific research and responsible conduct of research* is a broader concept affected by participation in research work, such as brainstorming and planning the study, or analysing the material. Authorship brings recognition of participation in the research work and also carries with it the responsibility for the content of the work, such as the research content and results described in the publication.

If the results of a thesis are published in a form other than that of an actual thesis, questions of authorship shall be resolved beforehand, for example through compliance with the authorship criteria of the International Committee of Medical Journal Editors ([ICMJE](#)):

1. substantial participation in brainstorming and planning a study, collecting material, analysing and interpreting the material
2. writing a draft of an article or examining it critically in a way that has had a significant effect on its content
3. approving a final version for publication
4. taking responsibility for each phase of the work, making sure that responsible conduct of research has been exercised in all phases of the work.

According to the ICMJE recommendation all persons who meet the first item of the criteria must be given the opportunity for authorship. For example, in a situation in which a student has already graduated and an article is written on the basis of the thesis, the graduate must be asked if he or she wishes to participate in the writing of the article.

Possible *industrial property rights*, relinquishing them, rights of use, and possible compensations shall be agreed upon in the cooperation agreement. However, if a student is a participant in an invention that is patented, the student is always mentioned as one of the inventors.

**Further information:** [Agreeing on authorship of scientific publications. Recommendations of the Finnish Advisory Board on Research Integrity 2018](#)

## 9. Have you ensured that you have stored, opened or destroyed any materials?

A research-based thesis is planned and implemented and it is reported on, and the data material that comes about as a result are stored or destroyed in a manner dictated by requirements set for scientific information.

Follow the data security and data protection instructions, material possession instructions, and the rules of use of each service that are in force at your university of applied sciences.

## 10. Remember to report linkages

One of the key starting points of responsible conduct of research is that sources of funding and other linkages that are important for the completion of the research are disclosed to interested parties and those taking part in the research, and that they are reported when the results are published.

## 11. Do not quote without permission

Responsible conduct of research requires basic knowledge of scientific writing and reference practices.



Plagiarism, or unauthorised quoting, refers to the deceitful use of the production of another person without properly notifying the original source. Plagiarism is a violation of the Copyright Act. Plagiarism is the most common type of research fraud and to prevent and identify it, theses are also checked in a plagiarism identification system before they are approved. If a thesis raises suspicions of plagiarism, the supervisor is obligated to report the matter to the rector of the university of applied sciences. The rector decides if there is cause to launch a preliminary investigation in accordance with RCR procedure.

In addition to actual plagiarism, a more extensive concept is defined in responsible conduct of research – theft, which means the wrongful presentation or use of the results of another person's research result, idea, plan, observations, or materials in one's own name.

If suspicions of theft are aroused in the thesis process, the student or supervisor must report the matter to the rector of the university of applied sciences. The rector decides if there is cause to launch a preliminary investigation in accordance with RCR procedure.

The investigation of suspicions of a violation of RCR rules, which involves the self-regulation of the scientific community, does not investigate criminal, copyright, or other legal questions which might also be connected with the alleged violation and which are handled in a court of law.

## 12. A thesis is a public document

A thesis written at a university of applied sciences, which leads to the conferring of a diploma is an official document under the Act on the Openness of Government Activities, making it a public document, unless otherwise stipulated (*Finnish Constitution, section 12.2, Act on the Openness of Government Activities, section 1*).

Universities of applied science follow guidelines set by the Ministry of Education and Culture, under which material that must be kept confidential is not included in theses, and theses are public documents once they have been approved (*Ministry of Education letter to universities of applied science 28 January 2004, journal number 3/500/2004*),

In the first instance, a student publishes the work in the Theseus publication archive, which is open to all, or alternatively, the student will deliver a printed version of the work to the library of the university of applied sciences, and the library will list it in its collections.

The student must ensure that the thesis submitted for evaluation and publication, does not contain information that must be kept confidential under the law, such as personal information or business and professional secrets as set in the cooperation agreement.

Supervisor teachers are obligated to maintain confidentiality over information that must be kept secret under the law, as well as all business and professional secrets of a cooperative entity (*Act on the Openness of Government Activities, section 24*).

The presentation of a student's thesis in a thesis seminar or equivalent event for the presentation of a thesis, is always a public event. Working together, the supervising teacher, the cooperative party, and the student set the content of the presentation in such a way that the presentation does not violate privacy of personal data, or confidentiality conditions in the cooperative agreement

**More details:** [Act on the Openness of Government Activities \(621/1999\)](#)

### 13. Problems... ?

Producing a thesis is primarily a learning experience for the student and it should promote the student's expertise, professional development, and skills for the workplace. The key actor in the thesis process is the student. The supervisor also offers support and encouragement, while ensuring quality.

Also involved in the handling of problems related to supervision, in addition to the student and the supervisor, is some other entity, for example an administrative person responsible for education.

#### **Suspected violation of RCR**

If suspicion arises of a violation of responsible conduct of research, the student or supervisor must report the matter to the rector of the university of applied sciences. The rector decides if there is cause to launch a preliminary investigation in accordance with RCR procedure.

Suspicious of RCR violations for lower degrees shall be handled in the processes of the university of applied sciences. Suspected RCR violations connected with higher university of applied sciences degrees are investigated in a process of the university of applied sciences itself if the thesis has not yet been approved. If a master's thesis has already been approved, or if the suspected RCR violator demands it, the suspected violation will be handled in an RCR process that takes place in accordance with RCR guidelines.

The investigation process for suspected violations of RCR, which is part of the self-regulation of the scientific community, does not involve investigation of matters related to copyrights, protection of personal data, labour law, or other legal questions that might be connected to the suspected violation, and which must be handled in a court of law.

# WHAT PERMISSIONS AND OPINIONS DO YOU NEED IN ORDER TO CONDUCT RDI-ACTIVITIES FOCUSED ON HUMANS?

