

## GOOD SCIENTIFIC PRACTICE IN STUDIES AT ARCADA

### 1. General

While studying at Arcada the progress of the student will be assessed on many occasions and in many different ways. The student will write reports of work done, participate in various sorts of examinations and finally write a scientific report, the degree thesis.

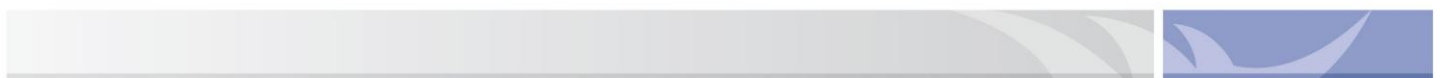
All student performances - examinations, degree thesis work, and other written reports produced by the student while studying - shall conform to good scientific practice. Arcada has committed itself to observe the Guidelines for Good Scientific Practice (1) that the National Advisory Board on Research Ethics in Finland has issued in 2002.

Good scientific practice entails, among other things, that:

- integrity, meticulousness and accuracy in conducting research, in recording and reporting results are observed,
- ethically sustainable data-collection, research and evaluation methods that conform to scientific criteria are applied,
- the work and results of other researchers (and students) are given due account so that their work is respected and their achievements are given appropriate credit and weight,
- research or projects are planned, conducted, and reported in detail and according to the standards set for scientific knowledge,
- before the research or project begins the allocation of work, the obligations and liabilities of members of the research team as well as the right to research results and the preservation of material are determined and recorded,
- sources of financing and other associations relevant to the conduct of research are reported when the findings are published,
- the ethical codes of one's own professional discipline are observed (2),
- the degree thesis proposal is allowed to be preliminarily checked in ethical terms by submitting it to Arcada's board on ethics ( hereafter called the "Ethics Board" )(3) if it involves an empirical study that concerns people, a hospital, confidential information, copyright or protected material and other matters that can be ethically sensitive or problematic,
- the assessor of your degree thesis does not serve as a source of information for your study.

Ethically sustainable data-collection, research and evaluation methods entail, among other things, that:

- the integrity and right to privacy of the person/object of the research study are maintained,
- the person/object of research is protected against injury or damage,
- the object of the research or the one providing information is informed of the purpose of the research and that participation is voluntary,
- the informed consent of those one interviews (or of their possible guardian) is sought and the signed documents are kept as confidential information,
- permission for the conduct of the research is gained from concerned parties and Arcada as well as from the organisation in whose premises the information gathering takes place,
- research material is kept in a previously agreed secure place so that outsiders do not have access to it,
- permission is sought of the copyright holder if one uses published questionnaire forms or parts of them, interview questions, observation schemes, and similar research instruments that someone else has prepared,



- sensitive themes are avoided,
- when the writers of the research work or publication are named, one should also give the names of the person or persons (including students) who had a role in producing the research or publication.

## 2. Violations of good scientific practice in studies

When the student does not observe the above named principles he/she violates good scientific practice and sanctions can be imposed as a result. Violations of good scientific practice can be divided into three categories (4):

**(i) ethical carelessness,**

**(ii) the neglect to observe (indifference to) good scientific practice and**

**(iii) dishonesty in scientific endeavours (cheating)**

There can be ethical carelessness, negligence and dishonesty both when the work is undertaken and when it is reported.

### **Ethical Carelessness**

Ethical carelessness is the mildest form of the violation of good scientific practice. Ethical carelessness can indicate incompetence and lack of care, e.g. when a student does not observe relevant instructions and guidelines or the provisions and requirements for appropriate behaviour concerning studies and research.

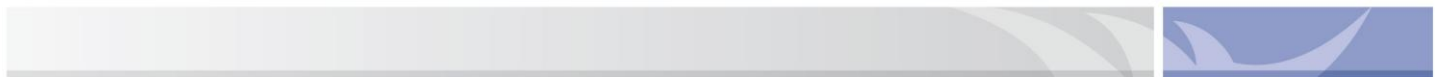
### **Negligence**

By negligence is meant such violations of good scientific practice or research practice that indicate gross carelessness in the performance of the work. Another form of negligence is to belittle other people's contributions to the work and to provide insufficient reference to previous research results, to give inexact and thus misleading accounts of research results and applied methodology, and to note and preserve results inadequately.

Negligence also includes the failure to submit a research proposal to the working committee of the Ethics Board (5) for an appraisal of ethical implications in those cases where the proposal concerns an empirical thesis project or research work that involves people as sources of information, confidential information, issues with copyright implications and other matters that can be ethically sensitive or problematic.

### **Dishonesty (cheating)**

By dishonesty (cheating) is meant the deliberate misleading of Arcada and the whole scientific community. It involves tendering false information or results. Dishonesty (cheating) can be divided into five categories: fabrication, falsification or misrepresentation, plagiarism, misappropriation or theft, and the unauthorised use of helping aids.



## **Fabrication**

Fabrication is to present fabricated data, i.e. observations that have never been made and consequently could not have been obtained in the manner or by the methods described in the report.

## **Falsification**

Falsification of observations means intentionally altering or presenting original findings in a way which distorts the result. The falsification of results means the scientifically unjustified alteration or selection of results as well as the omission of results or data pertinent to conclusions.

## **Plagiarism**

Plagiarism is to present someone else's research, manuscript, article or text, or parts thereof, as one's own.

## **Misappropriation (theft)**

Misappropriation means illicitly using or presenting an original research idea, plan or finding as one's own. It also means the illicit use of another's literary or artistic work that is protected, for example, by copyright law (e.g. the copying of pictures and other material from the internet without the permission of the copyright holder or without at least acknowledging the source when permission is not required).

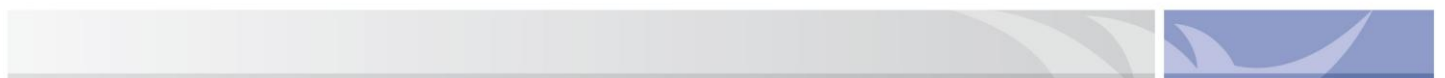
## **Use of unauthorised helping aids**

At an examination it can be permitted to use literature, calculators, lecture notes and other aids. In such cases the supervisor/teacher will advise which aids are permitted. It can be regarded as cheating when a student makes use of some form of helping aid which has not been authorised and in such a case the student can be penalised by the imposition of the sanctions enumerated below.

### **3. Consequences of violations**

A student who has rendered himself guilty of carelessness in ethical terms, negligence or dishonesty (cheating) or who has in some other way infringed Arcada's regulations can be penalised with a warning or a suspension from the polytechnic for a specified period, at most one year, or with the sanctions described below. Before the matter is decided the student shall be granted the possibility of being heard in the matter. The rector of Arcada decides in the case of a warning and the board of the polytechnic in the case of a suspension.

The responsibility and consequences of violations (e.g. financial compensation, penalties and so on) are borne by the individual himself. When the violating actions cannot be regarded as negligence or dishonesty there are grounds for a part of the responsibility to



lie also with the supervisor, superior or commissioning party who therefore also should bear the consequences. The student can be freed from the suspicions of negligence and dishonesty.

#### **Possible sanctions (6) in the case of**

- **Ethical Carelessness** such as:
  - insufficient or incorrect referencing of sources in written work,
  - incorrect interpretation of results,
  - the use of language expressions that could cause harm or suffering to a person or party subject of the research.

Sanction: **performance to be improved or redone and a warning can be issued.**

- **Dishonesty (cheating)** such as:
  - deliberate cheating at an examination
  - consistently careless referencing methods in written work,
  - plagiarised texts, pictures, music pieces, films,
  - inadequate ethical research procedures in the empirical part of the thesis work,
  - plagiarising separate sources in their entirety,
  - omission to inform concerned parties of an empirical research,
  - consciously omitting to allow the degree thesis proposal to undergo an ethical research appraisal,
  - violation of good scientific practice in an empirical study.

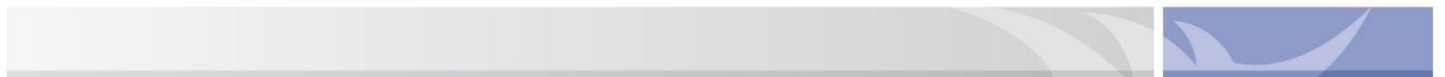
Sanction: **Rejection of the performance and a written warning.**

- **Gross dishonesty (gross cheating)** such as:
  - deliberately plagiarising a degree thesis in its entirety,
  - giving misleading information about the ethical status of the research,
  - fabricating, misappropriating, falsifying text in the degree thesis.

Sanction: **Rejection of the performance and suspension from studies for a specified period (max. 1 yr.) with no pursuant right to an extension of studies.**

#### **4. Notification and handling of alleged violations of good scientific practice**

The academic staff of Arcada are obliged to intervene in the case where a student can be suspected of violating good scientific practice. The suspicion of ethical carelessness is communicated to the head of the department where the student is principally enrolled. The departmental head looks into the case without delay and forwards the matter to the rector. The suspicion of dishonesty or gross dishonesty is communicated to the rector and the departmental head. The rector determines what sanctions are to be imposed (7).



### **Notification of a violation**

- The suspicion of a violation shall always be communicated immediately in writing when suspicion is aroused.
- The suspicion cannot be communicated anonymously.
- The party who receives the notification of a suspected violation shall immediately initiate an enquiry into the case.

### **Handling of alleged violations**

- The departmental head/rector investigates the case
- The investigation shall always include the hearing of the suspect and providing the opportunity for a written explanation.
- The investigation cannot be interrupted. The rector of Arcada shall always make a formal decision when an allegation of misconduct has been made. The rector can consult the Ethics Board of Arcada.
- Handling of the case must occur within 3 weeks of the receipt of the allegation.

### **Matters of detail**

- A student shall not be granted an extension of studies in order to compensate for a failing performance resulting from violation of good scientific practice.
- When the suspicion of misconduct arises during an examination, the student has the right to finish the examination although without unauthorised helping aids.

## **5. How can violations of good scientific practice be prevented?**

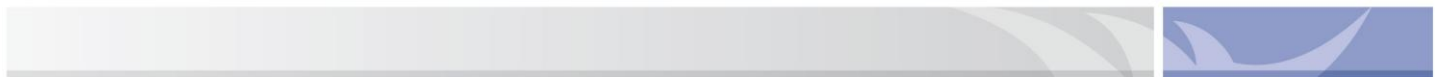
Violations of good scientific practice can be prevented in different ways, for instance by education, ethical research appraisal and checks on plagiarism.

### **Education**

Education in matters of ethics is provided as part of the education provided for specific subject disciplines, courses that concern scientific writing and research methodology as well as on special education days arranged during the academic year.

### **Ethical research appraisal of the degree thesis proposal**

All proposals for empirical degree theses that concern people, confidential information, questions of copyright and other matters that can be ethically sensitive or problematic, are preliminarily appraised by the Ethics Board (its working committee) at Arcada. The purpose of the ethical research appraisal is to support the student before the conduct of the empirical research and to strengthen the student's awareness of good ethical research practice.



The ethical research appraisal of the proposal takes place when the supervisor has approved the proposal for the degree thesis, before the possible application for research permission by the responsible party at the organisation where the research shall be conducted. An abbreviated proposal ("Short Plan for Thesis") is submitted by the supervisor to the secretary of the Ethics Board by e-mail at least one week prior to the Ethical committee's meeting. The working committee either approves the proposal or returns it for revision. The student and the supervisor are advised of the decision the week after the meeting.

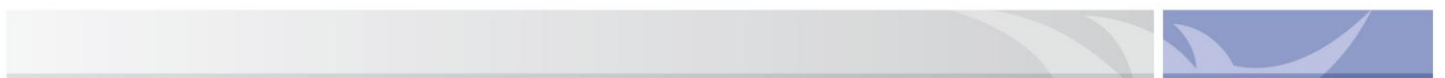
## Urkund – plagiarism check

To prevent incorrect and careless referencing and to identify cheating the final degree thesis is scrutinised by the plagiarism checking system Urkund. The system checks the text against three central source areas; the internet, published material and submitted student material (e.g. degree theses).

The student submits the degree thesis in electronic form by sending it as an attached file to the supervising teacher's Urkund e-mail address. The supervisor gets the text after it has been scrutinised and, if needed, can subsequently give advice on how the referencing of sources could be done in a better way. Other written work produced while at college can also be scrutinised by Urkund, if the student or teacher so wishes. A piece of work can be sent to Urkund only once.

Information on the plagiarism check and what plagiarism can involve can be found at Urkund's website (8).

- 1 The National Advisory Board on Research Ethics in Finland 2002. Good scientific practice and procedures for handling misconduct and fraud in science.  
<http://www.tenk.fi/ENG/HTK/htkeng.pdf>
- 2 Ibid: 12-13
- 3 Arcada has its own Ethics Board from 1. 1. 2008 ( established by the rector 12. 12. 2007)
- 4 The National Advisory Board on Research Ethics: 14
- 5 Arcada's Ethics Board has a working committee that in the first instance appraises the students' proposals for empirical degree theses.
- 6 Polytechnics Act (351/2003) and Polytechnics Decree (352/2003); see Arcada's Degree Statutes section 17.
- 7 Cp. Ibid: 15-16.
- 8 [www.orkund.fi](http://www.orkund.fi)



The undersigned has read and understood the guidelines for **Good Scientific Practice in Studies at Arcada.**

Date \_\_\_\_\_ Degree Programme \_\_\_\_\_

Signature \_\_\_\_\_

Clarification of signature \_\_\_\_\_

