



Guidelines on Safeguarding Good Scientific Practice

RL 92000 SGWP 050E-04

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Translator's notes:

1. This document is a translation from the German. Only the original version in German is binding.
2. In particular, wherever the text refers to Austrian law, an accurate understanding of the content may require some knowledge of the specific legal context, which it is not possible to provide here.
3. Special attention is drawn to the topic of intellectual property law, in which the Austrian law of 'Urheberrecht' follows a quite different logic than the copyright law in English-speaking countries. Among other differences, it recognizes an inalienable right of the author/inventor/originator of a work that is independent of any official registration.

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1. Purpose

The purpose of the guidelines set out in this document is to systematically safeguard good scientific practice and to prevent scientific misconduct at Graz University of Technology (TU Graz). Examples of specific behaviours that are to be considered as scientific misconduct are listed in the Appendix.

2. Scope and Applicability

The guidelines set out in this document are binding on all persons employed to do scientific work and on all students at TU Graz. These guidelines also apply to all persons employed to do scientific work at other companies and organizations in which TU Graz directly or indirectly holds 50% or more of the total shares. TU Graz recommends that companies in which TU Graz is a direct or indirect shareholder or partner should formally adopt the principles of these guidelines in their own name.

3. Distribution List

This document is to be distributed to all persons employed to do scientific work and to all students at TU Graz, and also to all persons employed to do scientific work at the companies in which TU Graz directly or indirectly holds 50% or more of the total shareholdings.

4. Reciprocal Relationships

The reciprocal relationships of the persons involved in the process described here are defined on the one hand by the responsibilities set out in the organisational structure of TU Graz and on the other by the definition of activities in the categories D, E, M, I, or A in the process description.

5. Related Documents

Austrian Federal Universities Act (Bundesgesetz über die Organisation der Universitäten und ihre Studien (Universitätsgesetz 2002, UG) Federal Law Gazette I 2002/120), as currently amended.
Statutes of TU Graz as currently amended.

6. Responsibility for the Process

Person responsible for the process: VR Univ.-Prof. Dr.-Ing Detlef Heck

7. Sources

- Recommendations of the Conference of Austrian University Rectors (ca. 2006); Resolution of the Plenary Assembly of Universities Austria of 24 February 2014
- Guidelines of the Vice-Rector for Teaching on Plagiarism, Ghostwriting and their Legal Consequences, Vienna University of Economics and Business (WU Wien), 2 April 2014
- Plagiarism in academic theses from the perspective of academic law, Vienna University of Technology (TU Wien) 2011
- Definition of plagiarism: Resolution of the Plenary Assembly of Universities Austria (in the version valid on 24 February 2014)

8. Guidelines

Preamble

Scientific honesty, integrity and the observance of the fundamental principles of good scientific practice are absolutely essential foundations of scientific work, both for the reputation of researchers and research institutions, and for the trust placed in them by the public and society in general.

In their everyday work, people doing scientific research experience pressures to deviate from correct standards of integrity and good scientific practice: these include the increase in information and the speed of communications, the intensification of competition and the trend towards quantitative evaluation of performance. To counteract these pressures and to safeguard the high scientific integrity and professionalism of its employees (both in scientific and other capacities) and of its students, TU Graz commits itself – in line with international standards – to the principles of good scientific practice specified below. The university has the duty to ensure that all of its employees and students who participate in scientific work know these principles and are aware of their responsibility to uphold them. In cases of proven scientific misconduct, TU Graz shall take effective measures to ensure that the infringements are adequately penalized.

The following guidelines are not intended in any way to replace existing legal regulations or ethical norms, but instead to provide a complementary statement of generally accepted principles of scientific ethics and to explicitly reaffirm that they are applicable to the entire university. In adopting these guidelines, TU Graz wishes to safeguard a high standard of research and of education of students and trainee researchers, and to protect against fraud and false representation in scientific work. As central requirements, these guidelines call for adequate supervision of trainee researchers and for transparency in handling data and publications.

§ 1 – General Principles of Good Scientific Practice

All members of TU Graz (scientists/researchers, students and employees) have the duty to observe the general principles of scientific work and the following fundamental rules:

- To work *lege artis*, i.e. to do their scientific work in accordance with the legal regulations, ethical standards and the state of the art in their subject or discipline;
- To document results in a clear and traceable manner (ensuring secure recording and storage of the primary data);
- To always subject results to critical review (principle of systematic scepticism: openness to doubt about their own personal results or those of their own group);
- To exercise strict honesty about what work was done by colleagues, partners or competitors and to refrain from obstructing the work of others (e.g. by delaying reviews or by passing on information about scientific results which they have received confidentially);
- To take preventative measures against scientific misconduct in their own work and in the work of close colleagues and team members, observing the principles and rules described below;
- To be open to criticism by colleagues; to review the work of colleagues with due care, fairly and impartially and to decline requests to act as a reviewer if they have a conflict of interest;
- To publish (as far as possible; and otherwise make publicly available) the results of work that is publicly funded (principle of the public nature of basic research).

§ 2 – Managerial Responsibility and Cooperation

(1) The leadership of an organisational unit for research (research group, department or institute) requires knowledge of the subject, attendance in person and awareness of what people in the group are doing, and can only be exercised responsibly with knowledge of all the relevant circumstances. If it is not possible for the head of the group to exercise adequate supervision directly, managerial tasks must be delegated appropriately.

(2) The head of an organisational unit for research (e.g. an institute) is fully responsible for adequate organisational measures which ensure that the tasks of leadership, oversight, conflict management and quality management (quality planning, quality control, quality improvement) are clearly assigned and are actually carried out.

(3) Within organizational units for research (research groups, departments, institutes), cooperative work practices must be structured so that individual researchers share the results they obtain in specialized work with other members of the group, ensuring that the results are open to discussion and criticism and the group maintains an up-to-date collective knowledge of work in progress. In doing this, it must be ensured that hierarchical relationships do not impede the mutual communication of results, but also that the attribution of individual pieces of work to the people who performed them is not obscured. Correct handling of these issues is of great importance in training research students and junior researchers to work independently. Each individual has the responsibility to support the mutual review of results by making their own results known to their colleagues.

§ 3 – Supervision of Students and Junior Researchers

(1) In all organizational units for research (research groups, departments, institutes) it must be ensured that students working on their seminar papers and Bachelor's theses, as well as researchers in training, in particular students for 'Diplom' degrees, doctoral students, research assistants, the more junior postdoctoral researchers, and candidates for habilitation are provided with adequate supervision and that they are assigned a primary supervisor who is sufficiently available for consultation.

(2) Every university teacher is called upon to integrate topics related to good scientific practice and the problems associated with scientific misconduct into their regular teaching curriculum and their supervisory activities, in such a way as to help the students develop an understanding of the issues and an attitude of professional responsibility.

§ 4 – Preservation and Archiving of Fundamental Data

Unless provided otherwise by law, data that form the basis of scientific publications must be preserved and archived securely on durable media in the institution in which they were generated, for at least 10 years, insofar as this is feasible and reasonable. As far as the applicable statutory regulations and the resources of the institution allow, the experimental materials used to obtain the primary data, the primary records of the work, and all other relevant documentation should be preserved for the same period of time.

§ 5 – Scientific Publications

(1) Published reports of new scientific results must, as the most important medium for communication of research results, describe the results and the methods used fully and in sufficient detail for the work to be reproduced. Prior work by the authors and by other researchers must be detailed in full and correctly referred to. The usual international rules for citation and identification of material reproduced from other works must be observed exactly (see Appendix).

Results already published should be repeated only to the extent necessary for readers to understand their connection to the work in question. Results that support the conclusions of the paper and results that contradict the conclusions should both be reported.

Results known to the author that contradict the conclusions of the paper must always be reported.

(2) If multiple researchers make significant original contributions to a work of research or to a publication of the results of a project (so that they qualify as originators, inventors or authors (Urheber) as defined in Austrian intellectual property law), they always bear collective responsibility for the content of the work or the publication. Only persons who individually make significant contributions to the design of the study or experiments, to the collection, analysis and interpretation of data or to the writing of the manuscript, and who consent to the publication may be named as coauthors. As far as it is feasible given the nature and scope of the research and the number of coauthors, it should be indicated which parts of the work were performed by which authors.

(3) So-called ‘honorary authorships’ are not allowable. Support by third parties should be recognized in the form of acknowledgements.

(4) Publications on the Internet and the use of Internet sources are subject to the same rules as other publications and sources.

§ 6 – Plagiarism and Ghostwriting

(1) An instance of plagiarism definitely exists in any case in which someone incorporates texts, content or ideas of other authors into their own work and represents them as their own work. This means, in particular, the appropriation and use of text passages, thoughts, hypotheses, results or data by direct copying, paraphrasing or translation without correctly identifying them as the work of other people and/or without citing the source and the name of the true author(s). (Definition of plagiarism: resolution of the plenary conference of Universities Austria, in the version valid on 24 February 2014)

(2) We differentiate between minor and major forms of plagiarism. Minor plagiarism exists when only a small infringement of scientific or academic standards has occurred, for example, if only a few isolated sentences are copied without correct attribution. Plagiarism is to be considered major if it means that the thesis or dissertation does not constitute a sufficiently independent piece of intellectual work done by the candidate.

Major plagiarism certainly exists when large sections of the thesis or dissertation are reproduced from other works and the source(s) are either not cited at all or are cited incorrectly. The borderline between minor and major plagiarism is not hard and fast. It is the responsibility of the persons examining the thesis or dissertation to judge whether a case of plagiarism is minor or major.

(3) The writing of a scientific or academic work wholly or partly by a person other than the named author (so-called ghostwriting) also constitutes misconduct.

§ 7 – Plagiarism Testing of Seminar Papers, Bachelor's Theses, Higher Degree Theses and Habilitation Theses

(1) For seminar papers and Bachelor's theses, it is recommended that plagiarism testing be carried out by the person responsible for grading and/or examining the work.

(2) Higher degree theses are defined for the purposes of these Guidelines as theses for the 'Diplom' degree, for research Master's and taught Master's degrees, and doctoral theses.

(3) Higher degree theses must be subjected without exception both to ongoing anti-plagiarism testing and a final anti-plagiarism test by the persons responsible for examining the theses. The mandatory testing of the final machine-readable version of the thesis or dissertation after it has been uploaded in electronic form, using such anti-plagiarism software as may be in regular use at TU Graz, is a supplementary measure to the substantive and formal evaluation of the work by the supervisor(s) and examiner(s). This software-based plagiarism test is mandatory regardless of whether an exclusion from use of the thesis pursuant to Section 86 subsection 2 of the Austrian Universities Act; § 86 Abs 2 UG) exists or the candidate intends to apply for such an exclusion (see Appendix).

The results of the plagiarism test must be signed by the persons who examine every thesis. The signed certificate (see Appendix) must be submitted with the thesis.

(4) In the case of 'Habilitation' theses, the software-based plagiarism test is performed by the Rectorate. The resulting plagiarism report is provided to the 'Habilitation' examination committee.

§ 8 – Commission for Scientific Integrity and Ethics for Cases of Suspected Scientific Misconduct

(1) TU Graz has set up a 'Commission for Scientific Integrity and Ethics for Cases of Suspected Scientific Misconduct' as a consultative body to deal with disputes related to good scientific practice (hereinafter referred to as 'the commission'). The commission has the task of being available to the members of TU Graz, in particular persons who are involved in cases of suspected misconduct and the Rectorate, to receive communications on such matters and give advice confidentially.

The commission will carry out the university's internal investigation of suspected scientific misconduct and will make a determination as to whether actual misconduct has occurred.

(2) Procedure: The commission shall initiate proceedings in a case in response to a request of a member of the Rectorate or a report by a current or former member of TU Graz, to the effect that a specific suspicion of misconduct on the part of a member of the university has come to their knowledge.

If necessary, the commission may consult with or may commission reviews from outside experts.

The commission shall ensure that the proceedings and investigations are carried out speedily.

An application to reopen proceedings in a case that has been concluded or discontinued may only be admitted if new facts or evidence are presented which would have been likely to lead to a different decision of the commission in the case.

(3) Composition of the commission: The commission consists of twelve members. The dean of each faculty shall nominate one or more potential members from their faculty. The Task Force for Equal Opportunities shall also nominate one or more researchers. From the nominees, the Rector shall appoint one member of academic staff from each faculty and one of the nominees of the Task Force for Equal Opportunities. Other members of the commission are the Vice-Rector for Research, the chairperson of the Senate, one member of the works council for academic staff, and the chairperson of the commission.

Only professors experienced in scientific research are eligible to be chairperson of the commission. The chairperson may not be a member of TU Graz and shall be appointed by the Rector. The chairperson of the commission is appointed by the Rector for the period of office of the Rectorate. The period of office the other members of the commission shall be

same as that of the chairperson. Members may be reappointed to serve for more than one period.

If the chairperson of the commission is unable to attend a meeting, the meeting shall be chaired by the TU Graz Vice-Rector for Research.

The members of the commission shall be appointed by the Rector and the names of the members shall be published in the Bulletin of TU Graz.

All members of the commission shall have equal voting rights. In the event of a tied vote, the chairperson shall exercise a casting vote to break the tie.

In the event that a member of the commission has a conflict of interest related to any item of business before the commission, they shall forfeit the right to vote on that business and shall also be excluded from the meeting for the deliberations on that business.

It shall be in the discretion of the chairperson or the deputy chairperson to determine whether any member has a conflict of interest with respect to an item of business.

Appointments of new members during a period of office, e.g. to replace members who have resigned, been removed from the commission for administrative reasons, been dismissed or become permanently unable to attend, shall be effective for the remaining part of the period of office and shall be made in accordance with the regular appointment procedure, the provisions of the Austrian Universities Act and the Statutes of TU Graz.

(4) Meetings: A legally qualified member of the university's legal department shall be invited to attend the meetings of the commission in an advisory capacity without voting rights. If necessary, other external experts may also be invited to participate in the meetings, without voting rights.

The quorum for the commission shall be half of the voting members; votes shall be decided by simple majority.

The meetings of the commission are not public. For the protection of all persons involved, strict confidentiality shall be observed. The same strict confidentiality shall apply to any experts and consultants invited by the commission to its meetings.

The results of the meetings shall be recorded in minutes.

For other procedural questions, the commission shall be guided by the Rules of Business of the Senate of TU Graz, with the exceptions that proxy voting and the nomination of proxies to attend meetings are not allowed.

(5) Duty to report: The commission shall notify the Rector of TU Graz without delay of every case of suspected misconduct and shall submit an annual report on its activities in writing to the Rector.

In the event that the commission finds a suspected case of misconduct to be proven, it shall make a report on the results of its investigations to the Rector in writing and shall propose possible consequences. After considering the commission's proposals, the Rector shall decide what further steps to take.

If the commission is of the opinion that the suspected misconduct is not proven, it shall notify the Rector that proceedings have been discontinued. In every case, all the people involved shall be notified of the commission's decision in a manner that ensures verifiable receipt of the information.

(6) In addition, the option exists to refer the case to the Arbitration Committee in accordance with Section 43 of the Austrian Universities Act (§ 43 UG). The Arbitration Committee should call the members of the commission as expert witnesses, as appropriate.

(7) These provisions are the basis for the university's internal evaluation, investigation, arbitration or prosecution of cases of scientific misconduct. They do not take the place of other officially instituted procedures (e.g. supervisory and disciplinary procedures, proceedings at labour, civil or criminal law) and shall have no effect on the powers and activities of the office-holders responsible or on the range of procedural options afforded to the persons affected under the terms of the Statutes of TU Graz or the law.

§ 9 – Procedures in Cases of Suspected Scientific Misconduct and Consequences in Case of Confirmed Misconduct

(1) If a suspicion arises that a breach of good scientific practice has occurred, this must be reported to the commission. The report must be made in writing and must include all the evidence of the suspected misconduct.

(2) If a suspicion of plagiarism or ghostwriting arises in the supervision phase (before the thesis or dissertation has been examined), the person examining the thesis can, depending on the seriousness of the case, either instruct the student to correct the work or resign as the supervisor of the thesis.

(3) If a suspicion of plagiarism or ghostwriting arises during the examination process, the following measures should be taken:

- If the instance of plagiarism is minor, the candidate should be given the opportunity to correct the work. If they do not do so satisfactorily, the thesis or dissertation must be graded as a fail.

- If the instance of plagiarism is major, the thesis or dissertation must be failed and it is in the discretion of the examining person to resign as the supervisor of the thesis.

(4) If it is discovered only after the examination of a thesis or dissertation that the work includes instances of plagiarism or was written partly or entirely by a different person than the candidate, the examination result shall be annulled by the Vice Rector for Teaching when the misconduct becomes evident, by issuing an official administrative order (Bescheid) to that effect (see Section 74 subsection 2 of the Austrian Universities Act, § 74 Abs 2 UG).

(5) If it only becomes evident after an academic degree has been awarded that the degree was obtained under false pretences by submitting work that included plagiarised content or was written partly or entirely by a different person than the candidate, the degree shall be revoked by the Vice Rector for Teaching (see Section 89 of the Austrian Universities Act, § 89 UG).

(6) If it only becomes evident after a Habilitation (venia docendi, licence to teach) has been awarded that the qualification was obtained under false pretences by submitting work that included instances of plagiarism or was written partly or entirely by a different person than the candidate, the Habilitation shall be revoked (withdrawal of the right to teach).

(7) In the event that scientific misconduct is committed by a person who is employed by TU Graz, it must also be considered whether to pursue proceedings and sanctions under general labour law and the university-specific employment regulations, up to and including disciplinary proceedings or dismissal. Possible civil actions should be considered, in particular to demand the return of unlawfully held materials, to demand that the person cease and desist from activities related to copyright¹, patent or competition law, to demand repayment (e.g. of grant payments or third-party research funding), or claims for damages by TU Graz or third parties.

(8) If it is discovered that an offence has been committed which falls within the jurisdiction of public law enforcement, the Rectorate shall report the matter to the police.

(9) Insofar as it is necessary to safeguard trust in the honesty of scientific work, in particular to protect the interests of third parties; to remedy damage to scientific reputations; to prevent consequential damage, or if it is in the public interest, third parties affected by the case and, if necessary, also the public news media shall be informed of the outcome of the formal investigative proceedings and of further measures being taken.

¹ Austrian Urheberrecht

Appendix

BEHAVIOURS CONSIDERED TO BE SCIENTIFIC MISCONDUCT

The types of misconduct listed below are not intended to be an exhaustive list, but rather a set of examples of the most important categories of misconduct.

False representation:

1. Invention of data;
2. Distortion of data, e.g. by
 - a) selection and exclusion of undesired results, without disclosing this procedure, or
 - b) manipulation of an image or figure;
3. Making false representations in an application for employment or for research funding (including false representations as to the medium in which work is published or about work allegedly accepted for publication);

Infringement of intellectual property rights:

1. In respect of works created by other persons and protected by copyright², or significant scientific discoveries, hypotheses, theories or research methodologies made or developed by other persons:
 - a) unauthorized use without disclosing, or in a manner that conceals, the true authorship by another person (incorrect or incomplete quotation, no citation of the source, plagiarism),
 - b) unfair exploitation of research methodologies and ideas, especially if the knowledge of these was obtained in the role of a reviewer or referee (theft of ideas, plagiarism of ideas),
 - c) claiming or accepting coauthorship without having made a significant personal contribution to the work;
 - d) misrepresentation of the content;
 - e) unauthorized publication and unauthorized dissemination to third parties of works, results, hypotheses, theories or research methodologies that have not yet been published
2. Naming a person as coauthor without their consent;

² Austrian Urheberrecht

Interference with the work of other researchers:

1. Sabotage of research work (including damage to or destruction of experimental systems, apparatus, instruments, documents, hardware, software chemicals or other things that another person needs in order to perform an experiment);
2. Deletion or destruction of primary data, to the extent that this contravenes statutory regulations, generally accepted subject-specific principles of scientific work or Section 4 of the Principles of TU Graz;
3. Delaying the provision of a requested review.

Complicity:

Complicity in scientific misconduct may result from the following factors, among others:

1. Active involvement in the misconduct of other persons;
2. Knowledge of false representation committed by other persons;
3. Coauthorship in publications that contain manipulated content;
4. Grossly negligent supervision. Neglect of duties of oversight or guidance (§ 3 of these Guidelines).

GUIDELINES FOR CORRECT CITATION

Different scientific disciplines use somewhat different sets of citation rules. All of these rules enable the type of quotation or the source to be indicated clearly. They make it easier to work with texts and help readers evaluate the quality of a text and its significance. Whether the sources are given in footnotes (in long or short form), in endnotes or in short form within the text is generally a matter of the prevailing conventions in the specific discipline. To prevent errors and misunderstandings, TU Graz recommends the following citation rules (short summary):

Basic rules for quotations in the text:

- Quotations must be put in double inverted commas/quotation marks
- Quotations within quotations are marked with single inverted commas
- Omitted words and sentences are marked with an ellipsis contained in square brackets [...]
- Quotations must be reproduced with the exact wording of the source and must not be presented in a way that distorts their meaning in the original context.
- Long quotations (three lines of text or more) must be indented from the left margin.
- The source of the quotation must be given correctly and in a uniform style in the list of references (see below).
- Every effort must be made to quote the original source. If it is necessary to use a quotation from a secondary source, the reference must be presented as “[original source/author] as quoted in [reference]”.
- Quotation of long passages of text should be avoided unless absolutely necessary.

In references, the sources must be identified by giving the last name of the author, the year of publication, and the page number, all enclosed in square brackets within the main text (Harvard citation style). Indirect references (reformulation of content from the original) should be recognizable as such, e.g. by using „see“ before the reference.**** The full bibliographic information is then given in the list of references or sources.

The bibliographic information includes:

- For books: The first and last names of the authors, title, edition number (except for first edition), place and year of publication, page number(s)
- Chapters in multi-author books: name of the chapter author, title of the chapter, the word “in” followed by a colon, editor of the book, the name of the book, edition number (except for first edition), place and year of publication, page number(s)
- Articles in journals: name of the author of the article, title of the article, the word „in“ followed by a colon, name of the journal, year, volume number or month, page number(s)
- Online sources: references to online sources in scientific texts should be used as rarely as possible, for reasons of long-term traceability. However, if they are used, they should be treated in the same way as conventional sources. In addition to the exact specification of the source (e.g. URL), the retrieval date should be stated.

The recommendations given here are **only a brief summary** of the most essential citation rules. For specific questions, please consult relevant literature on academic writing and your supervisor.

The forms

- [Affirmation for the plagiarism check](#) and
- [Application for an exclusion of use of my diploma thesis / master's thesis / doctoral thesis](#)

are published in TU4U.