

## How to write a scientific paper in the field of Turbomachinery



To provide you with an **initial guideline**, the Chair has summarized some general information for you in this paper.

If you have any question, please contact your supervisor. General advice on scientific work can be found in the relevant literature.

The chair recommends in particular:

- KIRCHNER, Jens; MEYER, Sebastian. *Wissenschaftliche Arbeitstechniken für die MINT-Fächer*. Springer Fachmedien Wiesbaden GmbH, 2021.  
(free access via VPN)

### 1. Basics of Formatting

In general, we give you a free hand with formatting – as long as it is consistent. Optionally, you can use the following guidelines for orientation.

#### 1.1 Font & Lines

<b>Font</b>	<b>Type</b>	serif (e.g. Times New Roman)
	<b>Size</b>	12 pt.
<b>Lines &amp; Spaces</b>	<b>Line Spacing</b>	1.5, justified styled
	<b>Page Margins</b>	left & right – 3cm, top & bottom – 2cm

Please only use the colour **black** – for the text and the headlines as well.

## 1.2 Figures

How to include figures properly:

- Create figures yourself, if possible.
- The font in the figures should be no more than 2 pt. smaller than the text.
- The figures can be **colored**.
- Pay attention to **clear** legends within the figures!

## 1.3 Citations

General guidelines:

- Use a numerical citation style, e.g. **ISO-690**, or **Harvard**.
- The **bibliography** should be arranged alphabetically.

Tip:

**Ask yourself: Is the evidence adequately researched?**

## 2. Cover

A **cover sheet** is also part of a thesis. It contains

1. the name of the university, the faculty and the chair
2. the title of the thesis incl. both examiners/supervisor and date of submission and
3. information about the examinee (name, e-mail address, subjects (+ focus), matriculation number, address).

Example:

<p>University of Duisburg-Essen Faculty for Engineering Chair of Turbomachinery</p> <p>1. examiner: 2. examiner: supervisor:</p> <p><b>Exciting topic in the field of Turbomachinery and Energy</b></p> <p>Submission Date: 01.01.2023</p> <p>Clever Student clever.student@stud.uni-due.de Matriculation No: 12345 Engineering (Focus: Turbomachinery)</p> <p>Your Street 1 12345 Duisburg</p>
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## 4. Structure

Numerical, literature-based, and experimental work are structured differently. Therefore, we can not establish a universal structure for scientific work here. In general, however, your paper should include an **introduction**, a **main section**, and a **conclusion**.

Within this main structure, you can vary the subchapters depending on the topic and argumentation of your paper.

### Remember:

**It is essential that there is a common thread in your scientific work.**

What should **definitely** be included in your work is

- a cover page, a table of contents, an abstract,
- an introduction to the subject,
  - showing the relation to energy
  - and the relation to turbomachinery,
- a main section
  - in which you justify your choice of methods
  - and present your research,
- and a conclusion reflecting on the approach and results.
- At the end of the work must be a bibliography and an affidavit („Eidesstattliche Erklärung“).

## Content

The following guidelines must be observed when designing the content:

- Have all essential **aspects of the task** been dealt with and is the **overarching context** clear?
- Have **thematic delineations** been made (distinction between important and less important aspects, justification for focusing on essential aspects)?
- Is sufficient **literature/material** considered and evaluated correctly?
- Is the **state of the art** correctly and adequately reflected?
- Is the choice of **method** sufficiently justified?
- Are the results clearly formulated and do they answer the research question?

Good luck and much success! ✿