

## Guidelines for the preparation of scientific papers

### General

- For the purposes of these guidelines, scientific papers include student research projects, diploma theses, bachelor's and master's theses that are to be written by students of process engineering courses in accordance with the study regulations.
- They are clearly distinguishable from simple reports on practical work, experiments or results and must contain a significant creative element (discussion, interpretation, evaluation, etc.).
- These are independent works. The adoption of texts, parts of texts or forms of presentation from other works, in particular from third-party works, is not permitted. Quotations are to be marked as such; facts and results are to be substantiated with sources (with the exception of established specialist knowledge).
- Unless otherwise specified, two copies must be submitted in bound form (for theses at the examination office).

### Layout

- The thesis consists of the following parts (in the following order):
  - TU Bergakademie Freiberg cover sheet (handed over by the 1<sup>st</sup> examiner)
  - Summary (max. 1 page)
  - Affidavit of authorship
  - Table of contents
  - Text part
  - Bibliography
  - Other lists (list of symbols and abbreviations, list of figures, list of tables, list of appendices)
  - Appendix with all information required for the review

The thesis must be accompanied by a data carrier with the Word file of the thesis, the primary data and any available literature sources.

- A4 format, single-sided, line spacing 1.3 to 1.5, clear font (Arial), font size 12 pt, margins (left 2.5 cm, right 2 cm, top and bottom 2 cm)
- The scope of the work depends largely on the type of work and the task. The following guidelines apply:
  - Student research projects: approx. 20 to 30 pages of text
  - Bachelor's theses: approx. 30 to 50 pages of text
  - Master's/Diploma theses: approx. 40 to 70 pages of text

Significant deviations from these guideline values can lead to a lower rating.

- Text part

General:

- Decimal structure (three levels)
- Standardized typography (DIN 5008, Duden) and notation for formulas, formula symbols and units (DIN 1338, DIN 1301)
- Use SI units, convert if necessary when adopting from Anglo-American literature
- Formulas must be numbered (numbering either consecutively or separated according to main chapters)

Structure:

- Concise introduction (background, technology, ...) and explanation of the task
- State of the art and research (literature), scientific basis if applicable
- Experimental aspects (experimental design, measurement and analysis methods, computational evaluation)
- Results and detailed interpretation and discussion including the literature **(please note that the discussion is essential for the evaluation of the work, as it forms the scientific core of the work!)**
- Error calculation/discussion
- Summary of the results and outlook

- Figures and tables

- Figures are provided with a concise caption and tables with a table heading and numbered.
- Captions do not replace a legend in the figure.
- Consecutive numbering in the text, possibly separate for main chapters; separate numbering possible in the appendix
- Figure captions must be sufficiently large and conform to standards (DIN 461)
- Figures and tables must be clear and self-explanatory; if necessary, indicate the test conditions, raw materials used, etc.
- Large figures and tables should be included in the appendix, as well as figures that show the same facts only for different series of measurements.

- References

- Identify the references by number, e.g. [3], numbering in the order in which they appear in the text
- If possible, avoid references to documents on the Internet; use mainly sources from journals and textbooks
- If documents from the internet must be cited, then also in electronic form (also snapshot from website) on data carrier. Citation with reference to date of access
- Introduced specialist knowledge does not have to be documented with references.

- Complete and consistent citation of sources (incl. title of the work), e.g.
- [34] A. Müller, B. Schulze, Anleitung zum wissenschaftlichen Arbeiten, Studentenjournal 56 (2008) 143-144
- [68] C. Mayer, Handbook of Scientific Work (2<sup>nd</sup> Edition), Academic Press, New York, 2016
- [87] D. Example student, Studies on the relationship between external form, structure and writing style of student papers and their evaluation, diploma thesis, Technical University of Freiberg, 2016
- Appendix
    - The appendix is used to include
      - large figures or tables that would make the text more difficult to read,
      - primary data, spectra, chromatograms, figures if these are not directly required for the discussion of results,
      - large calculation algorithms or auxiliary data, if applicable.
- It does not serve to remove chapters or parts of the text that are actually necessary for understanding the work and belong in the main body of the work.

## Writing style

- exact spelling, use passive voice if possible, no colloquial language or "company jargon", clear expression, no nested sentences
- not in the "I" or "we" form, no judgmental statements such as "good" and "bad" results
- no acronyms, sparing use of abbreviations in continuous text, if possible limited to established abbreviations (for example: The FTS is operated at high pressures. - Correct would be: Fischer-Tropsch synthesis or FT synthesis is carried out at high pressures).
- Presentation should be as concise as possible without omitting important explanations, no redundancies
- "red thread" must be recognizable, if necessary introductory sentence in individual sections or chapters
- The work must be able to be understood by readers with appropriate training. Special facts and contexts require explanation.

## Examples

- Table

Table 12: Example table

	Molar mass kg/kmol	Density kg/m <sup>3</sup>	Boiling temperature °C
Substance A			
Substance B			

- Figures

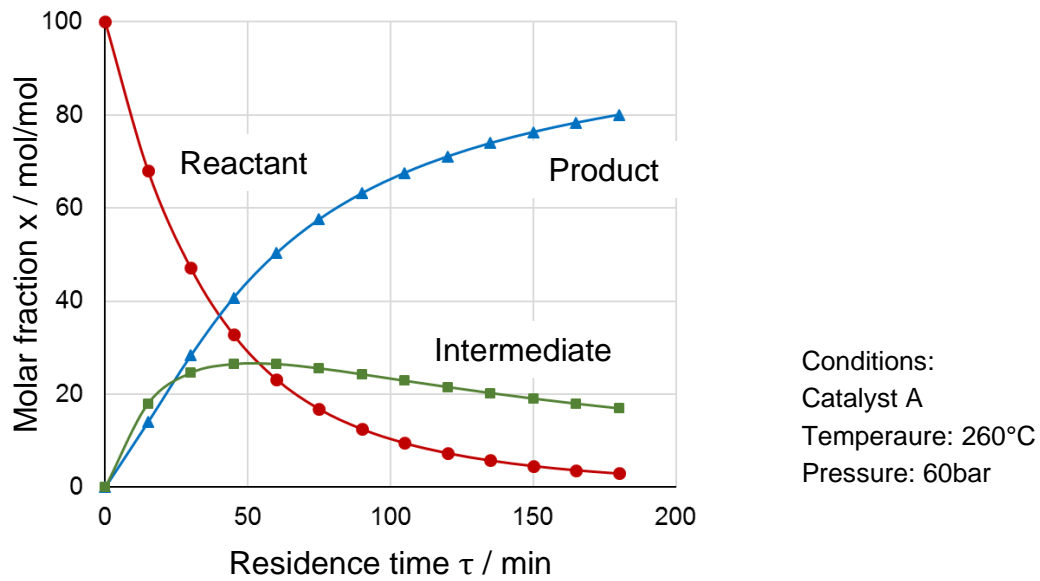


Figure 17: Product composition depending on the residence time