

Master Wood Technology Curriculum

Winter Term 2023/2024

Offered Jointly by

**Rosenheim Technical University of Applied Sciences
Rosenheim Germany**

and

**Bern University of Applied Sciences,
Biel Switzerland**

With reference to the Study and Examination Regulations
of Technical University of Applied Sciences Rosenheim
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1 Introductory Remarks

1.1 Foreword

This document is meant to give the reader an overview of the contents and the structure of the Master's Programme Wood Technology. This curriculum of the Master Programme in Wood Technology assists students and professors in navigating the programme and its requirements, as well as establishes the official foundation for a successful completion of the programme.

The purpose of this curriculum is to communicate information regarding:

- Requirements to achieve the Master of Science in Wood Technology
- The modules offered in the programme, their location and availability
- Whether they are compulsory, the teaching method and language
- General information regarding grading, part-time and work/study
- The legal framework for the Master Thesis
- References to more in-depth information or regulations

1.2 Source and Documents

This curriculum is based upon §6 of the Study and Examination Regulations TH Ro as well as Art.5 of the Study and Examination Regulations of BFH. The Faculty Council (TH Ro) and the Programme Council Master Wood Technology (BFH) are the authorities for this curriculum.

This curriculum references the following documents:

- Study and Examination Regulations Master Wood Technology (TH Ro)
- Allgemeine Prüfungsordnung (General Examination Regulations) of TH Ro

1.3 Guarantees and Exclusions

THR and BFH are committed to provide adequate offerings of modules, so that the programme can be completed in the advised timeframe. There is also no entitlement to the corresponding courses being offered in the event that the number of participants is insufficient, except for the compulsory modules.

Note:

For the examination of each module the regulations of the university offering the module (TH Ro / BFH) are binding!

2 Cooperation TH Ro and BFH

The Master Wood Technology is offered jointly by Rosenheim Technical University of Applied Sciences (THRO) and Bern University of Applied Sciences (BFH).

The cooperation is specifically expressed in the following areas:

1. Students graduating from the Master Wood Technology at either university receive a shared Diploma from both universities.
2. Students can choose to study a semester at the partner university and receive credits for the successfully passed modules. This requires approval of head of the programme and the other university needs to be informed by 15 May or 15 November for attendance in the following semester. The first semester cannot be spend at the partner university.
3. TH Ro and BFH offer several modules jointly; for instance “Advanced Wood Processing” and the Excursion.

More detailed information regarding the programme of the partner university can be found under the following link: www.ahb.bfh.ch/master-wood

3 Structure of the Programme

3.1 Required Credits

The aim is to acquire an average of 30 credit points (CP) per semester for full-time students or an average of 15 credit points per semester for part-time students. During the entire course of study, 90 credit points (CP) must be achieved.

A Bachelor degree with at least 210 ECTS credits is required for beginning the Master programme. Students who have a primary academic degree qualifying for professional employment with less than 210 credits but at least 180 credits have the possibility of acquiring the missing credits during the Master programme. Details for these regulations can be found in the Study and Examination Regulations of both universities.

The program has a modular structure and comprises three semesters for fulltime students, and four to six semesters if completed part time.

Curriculum



Fig. 1: Schematic representation of Programme structure

3.2 Full-Time Study and Schedule

The following is a representation of the modular course structure for full-time study.

Module Group	Modules	Credits/ Semester 1-3		
		Winter	Summer	Winter
Mathematics and Sciences	Advanced Mathematics	3		
	Scientific Working	2		
	Statistics & Data Science	5		
	Programming for Data Science	5		
Skills for Management	Business Process Management	2		
	Mass Customization	2		
	Leadership	2		
	Scientific Methods		3	
	Economical aspects		6	
Technical Compulsory modules	Electives	4	16	
General Compulsory modules	Advanced wood-based materials	5		
	Energy, Wood Supply, Logistics		5	
Thesis	Master Thesis			30
Minimum Required Total: 90 CP	Suggested number of CP per Semester	30	30	30

3.3 Part-Time Study and Schedule

Part-time study is possible with normal study duration of 6 semesters with an average of 15 credit points each. Part-time study while working differs from full-time study only in the length of one's studies. The course contents, degree, lectures, and examination regulations, prerequisites etc. are the same whether studying full time or part time.

The recommended course load allows for work-study.

In most time the weekly courses take part on 2 to 3 days a week. In the other half of the week the blocked courses are arranged.

The following table shows a representation of the modular course structure for part-time study.

Module Group	Select specific Modules from the following Sections	Credits/ Semester 1-6					
		Winter 2023/24	Summer 2024	Winter 2024/25	Summer 2025	Winter 2025/26	Summer 2026
Mathematics and Sciences	Advanced Mathematics	3					
	Scientific Working			2			
	Statistics & Data Science			5			
	Programming for Data Science			5			
Skills for Management	Business Process Management	2					
	Mass Customization	2					
	Leadership	2					
	Scientific Methods		3				
	Economical aspects		6				
Technical Compulsory modules	Electives		6	4	10		
General Compulsory modules	Advanced wood-based materials	5					
	Energy, Wood Supply, Logistics				5		
Thesis	Master Thesis						30
Minimum Required Total: 90 CP	Suggested number of CP per Semester	14	15	16	15		30

4 List of Modules by Module Group

The detailed description of the individual modules and part modules can be found in the module book. The modules listed in the following are compulsory for all students. Only in the module group Technical Compulsory Modules (Electives) choices can be made.

4.1 Mathematics and Sciences

Mathematics and Sciences						
Module N°	Location	Module Title	Type	Semester Offered	CP	Language
MG 04	Ro	Advanced Mathematics	lecture	winter	3	English
MG 05	Ro	Scientific Working	lecture, seminar	winter	2	English
MG 06	Ro	Statistics & Data Science	lecture	winter	5	English
MG 07	Ro	Programming for Data Science	lecture	winter	5	English

4.2 Skills for Management

Skills for Management						
Module N°	Location	Module Title	Type	Semester Offered	CP	Language
MM 06	Ro	Business Process Management	lecture	winter	2	English
MM 07	Ro	Mass Customization	seminar	winter	2	English
MM 08	Ro	Leadership > Teambuilding & Leadership > Leadership & Personality	seminar, workshop	winter	2	English
MM 09	Ro	Scientific Methods	lecture	summer	3	English
MM 03 / 04 / 05	Ro	Economical aspects > Financing > Investment > Sustainable company management	seminar, lecture	summer	6	English

4.3 Technical Compulsory Modules

Technical Compulsory Modules (Electives – 20 CP required)						
Module N°	Location	Module Title	Type	Semester Offered	CP	Language
MF 02	Firms	Excursion	seminar	summer	2	English
MF 03	Ro	Project Seminar: Systems Engineering	seminar	summer	4	English
MF 04	Ro	Furniture – Product Safety and Testing	seminar	summer	4	English
MF 05	Ro	Special Aspects of Wood Processing	lecture	summer	2	English
MF 06	Ro	Change Management	seminar	summer	2	English
MF 08	Homag	Advanced Wood Processing – Homag	seminar	summer	2	English
MF 12	Ro	Supply Chain Management	seminar	summer	2	English
MF 13	Ro	Quality Management	seminar	summer	2	English
MF15	Ro	Sustainability & Circular Economy	seminar	summer	3	English
MF 21	Ro	Innovation Management and New Product Development	seminar	winter / summer	4	English
MF 22	Ro	Simulation	seminar	winter	2	English
MF 23	Ro	Circular Renovation – Case study	seminar	winter	4	English
ANG	Ro	German language course (different levels offered)	lecture	winter / summer	up to 5	German

4.4 General Compulsory Modules

General Compulsory Modules						
Module N°	Location	Module Title	Type	Semester Offered	CP	Language
MW 01 Energy, Wood Supply and Logistics						
MW 01.1	Ro	Energy	lecture	summer	2	English
MW 01.2	Ro	Wood Supply	lecture	summer	1	English
MW 01.3	Ro	Logistics	lecture	summer	2	English
MW 03	Ro	Advanced wood-based materials	lecture	winter	5	English

4.5 Master´s Thesis

The Master´s Thesis (30 CP) represents the conclusion of the programme. Further information regarding master´s thesis is available in section 5.

Master´s Thesis						
Module N°	Location	Module Title	Type	Semester Offered	CP	Language
MA 01	Ro	Master´s Thesis	report, presentation	winter summer	30	English or German

4.6 Additional Modules

Modules taken in addition to the modules indicated in groups 4.1 to 0 can be entered as supplementary modules in the transcript of records and do not count toward the 90CP required to complete the master. These additional modules belong to one of the following categories:

- Requirements for students who have a prior Bachelor degree with less than 210 credit points: these credit points need to be completed according to the Study and Examination Regulations
- Voluntary courses

Additional Modules						
Module N°	Location	Module Title	Type	Semester Offered	CP	Language
PS 01	Firms	Practical Study Semester / Traineeship		winter summer	Max 30	German or English

4.7 Deviating selection of Modules

Students planning to attend lectures at external universities or an entire semester abroad may apply for a different selection of modules. These students have to contact the programme coordinator and/or the head of the programme to get the selection approved in advance.

5 Master´s Thesis

5.1 Assignment of topic

5.1.1 Supervisor

The Master's thesis is assessed and graded by two examiners. At least one of these two examiners should be a full-time professor at Rosenheim Technical University of Applied Sciences. The candidate has to suggest a topic to the examiners.

5.1.2 Group Project

The Master´s Thesis can also be completed as a group project, if the individual student's contribution that is to be evaluated for CPs can be clearly distinguished from other contributions by indicating the paragraphs, page numbers or other objective criteria allowing for a clear separation, and can thus be evaluated individually.

5.1.3 External Project

The implementation of a project in collaboration with companies as well as government agencies has been a long-standing practice at the Faculty of Wood Technology and Construction. It is appreciated and encouraged for mutual benefits. The company should admit the two examiners onto its premises, so they can gather information on site concerning the status and progress of the project.

5.1.4 Master´s Thesis

In the Master´s Thesis, the students should prove their ability to implement the knowledge and skills acquired during their studies by writing an independent practice-oriented scientific paper dealing with complex problems. The topic should be assigned at the latest at the beginning of the third semester, at the earliest when the student has acquired at least 30 CP during the Master Programme.

5.2 Approval and application

To enrol for the Master´s Thesis, the web application form has to be filled out. The web forms get processed by the central document- and workflow management system of the TH Ro. The completed form will be signed digital by the examiners and thereafter the topic will be approved by the chair of the Board of Examination. The term for completion starts on the date of signature by the chair of the Board of Examination. The topic, scope of work and volume are to be limited so that the deadline can be met. After receiving the approval for submission of your thesis' topic, you can find all application forms of special purpose (filing extension, changing the topic, ...) in your „student's cockpit for thesis' application“.

In case of an external project first the generated application form has to be signed by the company. This original has to be handed in to the examination´s office – personally or via mail. Afterwards the process will continue as explained above.

The topic can only be rejected once for a serious reason, with the approval of the chair of the Board of Examination. A student repeating the Master´s Thesis and who has already rejected a topic while doing the Master´s Thesis the first time is not authorized to reject the topic again. The deadline starts anew with the assignment of the second topic.

5.3 Duration and timing

The following deadlines apply for the Master´s Thesis:

Duration	Type of study	
	Full-time	Part-time
For students starting in winter semester 2023/24	6 months	12 months
For students who started before winter semester 2023/24	9 months	12 months

It is possible to request an extension of the deadline from the Board of Examination, which can grant a suitable extension if the initial deadline cannot be met due to illness or other justifiable reasons. In case of illness, a medical certificate must be presented under all circumstances.

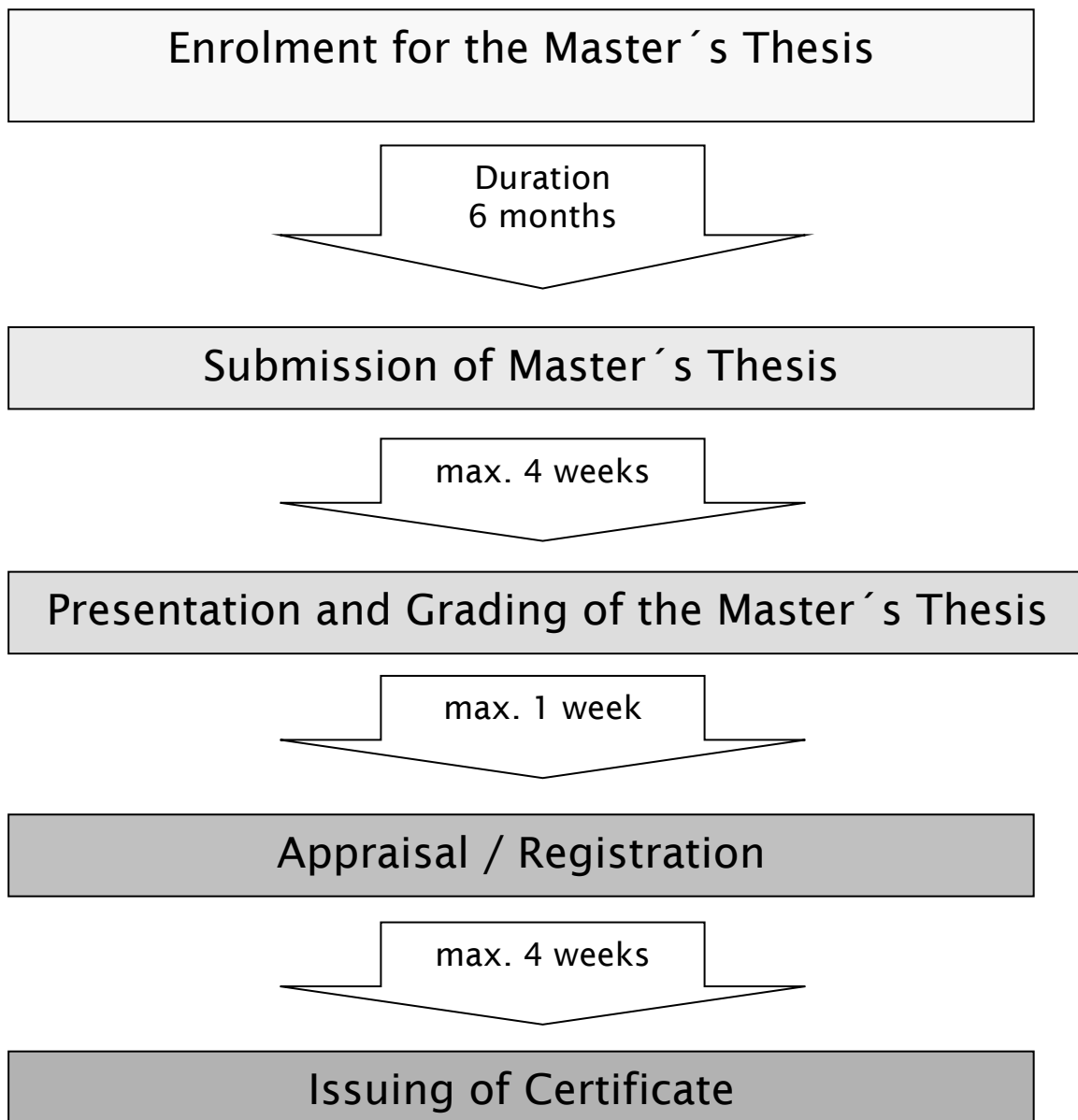


Fig. 3: Progress Master´s Thesis – example

5.4 Structure

The Master´s Thesis must have the following structure as regards its contents:

- Title page (name and matriculation number of the student, name of the first examiner and of the second examiner, name of the University, date)
- Half-page abstract of the thesis in German and in English as well as 3-5 key phrases pertaining to the contents of the paper
- Table of contents (max. up to the third level of outline)
- List of abbreviations (abbreviations relating to sources are not listed, e.g. “ed.” etc.)
- List of figures, tables and appendices
- Numbered pages of text, figures, tables and bibliography. Attached drawings and tables are to be folded in standard fashion and inserted in a glued-in pocket as attachment to the thesis.
- Bibliography, list of references, and
- Declaration under oath (final page)

5.5 Submission

The submission of your completed thesis as a file upload gets also processed in the student´s cockpit. If the examiners of your thesis want to receive additionally a **printed** version for the purpose of thesis´ marking, you get notified by email to your student´s email address including your topic´s issue approval, latest submission date and more essential information. It is in your **own responsibility** to get the requested print version/s of your thesis delivered on time to your examiners.

The Master´s Thesis is to be written in German or English and submitted timely, the deadline for submission is to be recorded on file. Other languages for the Master´s Thesis may be accepted upon agreement with the supervisors. If the deadline is not met, Master´s Thesis is “failed” (ECTS grade F) unless the candidate bears no responsibility for failing to meet the deadline.

When handing in the thesis, the candidate must state in writing that he/she has independently written the thesis or his/her clearly marked part of the thesis, in the case of a co-authored work, and has not used any other sources or resources than those indicated, and that all quotes have been properly designated as such. This statement also extends to graphical representations and to software attached or used.

5.6 Presentation

During the presentation, the results of the Master´s Thesis are presented and defended in a discussion with the examiners. The presentation should show that the candidate is able to debate scientific questions and present results clearly.

As a rule, the presentation is to take place within 4 weeks after submission of the Master´s Thesis. Arrangements are made with the examiners.

The presentation lasts 45 minutes. The talk, which should cover all of the most important results of the Master´s Thesis, takes no more than 20 minutes.

Students of the university can attend the presentations, space permitting. For important reasons, or at the candidate´s request, the public may be excluded.

If the written part of the Master´s Thesis (without presentation and defence) is “failed” (ECTS-Grade F), the Master´s Thesis as a whole is deemed failed. In this case, the presentation and the oral exam are dropped.

5.7 Grading

The examiners determine the grade following the presentation. The Master´s Thesis is assessed by two examiners each. The grade is calculated as the arithmetic average of the grades rounded down to the first decimal point. The grades are published in the „student’s cockpit for thesis‘ application” and in the online service center as soon as it has been determined.

The thesis is considered passed if a grade of at least “sufficient” (ECTS grade E) is awarded. The examination procedure should not exceed four weeks.

A Master´s Thesis that receives the grade “fail” (ECTS grade F) can be repeated once with a new topic. In case of repetition, within the deadline of six month from the date on which the results of the first exam attempt are known, the application for the new topic has to be done in the „student’s cockpit for thesis‘ application”. The duration for the second attempt is the same as for the first attempt.

6 Evaluation and assessment of examination results

6.1 Master Certificate and academic title

If the application for graduation is accepted, the student will receive within 4 weeks after the presentation a certificate that includes all learning achievements with indication of the respective points. Grades are listed for those results achieved through exams taken in the programme.

Furthermore, the certificate will contain the topic and grade of the Master´s Thesis as well as the total grade. The certificate is signed by the chair of the Board of Examination.

Additionally, the student will receive an attestation of equivalence of the certificate in English.

By delivering a diploma and certificate, Rosenheim Technical University of Applied Sciences and Bern University of Applied Sciences confer the title of “Master of Science” (M.Sc.).

6.2 Assessment of examination results

The European Transfer Credit System (ECTS) applies. Consequently, the examination results are to be assessed by awarding differentiating grades. An examination is successfully passed if all course certificates have been given at least the grade “sufficient” (ECTS grade E).

6.2.1 Grade conversion table

Grades (Germany)	ECTS Grade		ECTS Definition	Grades (Switzerland)
1,0 - 1,5	A		excellent	6,0 - 5,8
1,6 - 2,0	B		very good	5,7 - 5,3
2,1 - 3,0	C		good	5,2 - 4,8
3,1 - 3,5	D		satisfactory	4,7 - 4,3
3,6 - 4,0	E		sufficient	4,2 - 4,0
4,1 - 5,0	F		fail	< 4,0

Exam grades are rounded down to the first decimal point.

6.3 Recognition of examination results

The European Transfer Credit System (ECTS) applies. Consequently, the examination results are to be assessed by awarding differentiating grades.

6.3.1 Examination results from a diploma programme or an equivalent programme

Generally, the accrediting of examination results of a diploma programme or another equivalent programme in the Master Programme in Wood Technology can be requested from the Board of Examination after consultation with the advisor. The requested credits need to be assigned to a module.

6.3.2 Examination results from external academic institutions during the Master Programme

During the Master Programme, examinations can be taken at other academic institutions. This is subject to consultation with the advisor and must be included in the curriculum. The details on how the points will be credited are decided by the Board of Examination on a case-by-case basis, upon consultation with the relevant professor or lecturer.

6.4 Enrolment for the examinations

Enrolment for the examinations of all complementary modules is carried out online via the Online Service Center (OSC). Registration dates are listed in the currently valid university calendar. Announcements are also made in the Dashboard. All additional modules have to be registered separately. The Examination office is responsible for the binding announcement of examinations. The type of examination indicated in the module book corresponds to the information status at the time the curriculum is approved by the Faculty Council.

7 Exchange Semester at BFH

Students can choose to study a semester at the partner university and receive credits for the successfully passed modules. This requires approval of the advisor and the other university needs to be informed by 15 May or 15 November for attendance in the following semester. The first semester cannot be spent at the partner university. For the specialisation Complex Timber Structures a first academic degree in the field of Timber Construction and Redevelopment or Civil Engineering is required.