



UNIVERSITY OF
HOHENHEIM



As of Summer Semester 2024

Curriculum

Food Systems

Master of Science

natur.uni-hohenheim.de

Dear students,

This curriculum provides you with comprehensive information on the Master's program in Food Systems. It contains information on the course structure and summarizes the most important examination regulations.

Please keep in mind that all information in this guide is subject to change. For the latest information, please visit the website of the University of Hohenheim at www.uni-hohenheim.de.

Should you have further questions regarding your studies please visit our guide to advising at www.uni-hohenheim.de/en/guidance-counselling or contact Ms. Sri Dhanya Adusumilli at foodsystems@uni-hohenheim.de.

We hope you enjoy your stay at the University of Hohenheim and wish you all the best for your studies!

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Contents

Program design.....	1
Contents and aims of the degree program.....	1
Structure of the program	2
Examination Regulations	4
Modules.....	4
Compulsory modules.....	5
Elective modules	6
Internship	6
Master's thesis	6
Examinations.....	12
Registration.....	12
Examination resits.....	13
Grading system.....	13
Grade conversions for semi-electives	14
Overall grade	14
Cheating and plagiarism.....	15
Language courses.....	15
Career prospects.....	15
Semester dates	16

Program design

Final degree	Master of Science (M.Sc.)
Standard period of study	4 semesters (120 ECTS credits)
Type of program	Full-time, on site
Language of instruction	English

Contents and aims of the degree program

The Master's program in Food Systems aims to prepare you to drive a future transformation of the food system. With personalised study plans, it allows for a unique integration of different aspects of the food system. Within the program, you will have different possibilities for creating your personal journey from the joint offering of the EIT Food Consortium partners, which covers all aspects of a food system. In addition, pan-European activities will ensure bonding of the international cohort and facilitate the creation of an international alumni network, with alumni activities offered by EIT Food. By means of a strong integration of entrepreneurial elements and mentored project work with industry partners from the EIT Food consortium and beyond, you will also build up practical skills that optimally match the employability criteria of businesses spanning from start-ups to large multinationals.

As a graduate of this program, you can identify short and long term future consequences of plans and decisions involving different components of the food system from an integrated scientific, ethical and intergenerational perspective, and merge this into a solution-focused approach, moving towards a sustainable society.

Learning outcomes

Upon completion of your studies you will ...

- be able to translate innovations into feasible business solutions for the food sector,
- be able to think beyond boundaries and systematically explore and generate new ideas, responding to current and future challenges within the food system,
- be able to use knowledge, ideas and technology to create new or significantly improved products, services, processes, policies, new business models or jobs in the food sector,

- be able to use cutting-edge research methods, processes and techniques towards new venture creation and growth, and apply these in cross-disciplinary teams and contexts,
- be able to transform practical experiences in different areas of the food sector into research problems and challenges,
- possess decision-making and leadership competencies, based on a holistic understanding of the contributions of Higher Education, research and business to value creation, in limited sized teams and contexts.

Structure of the program

During the course of the two-year study program in Food Systems, modules in the amount of a minimum of 120 credits, including the Master’s thesis, have to be completed successfully. That includes

- **compulsory modules** in the amount of a minimum of **30 credits**,
- **elective modules** in the amount of a minimum of **15 credits**,
- **semi-elective modules** in the amount of a minimum of **45 credits**,
- **Master’s thesis** which awards **30 credits**.

The table below shows the structure of this Master’s program and represents the ideal course of studies:

	1st semester <i>Home institution</i>	2nd semester <i>1st Host institution</i>	3rd semester <i>2nd Host institution</i>	4th semester <i>Home institution</i>
7.5 credits	Introduction to Food Systems (7.5 ECTS)	Entrepreneurship and Innovation in the Food System (7.5 ECTS)	Emerging Technologies Business Case Study (7.5 ECTS)	Master's Thesis (30 ECTS)
7.5 credits	AgFoodTech (7.5 ECTS)	Track at 1st Host institution semi-elective modules (22.5 ECTS)	Track at 2nd Host Institution semi-elective modules (22.5 ECTS)	
7.5 credits	Elective Module (7.5 ECTS)			
7.5 credits	Elective Module (7.5 ECTS)			

The **first semester** takes place at the University of Hohenheim with a focus on *Agri-Food Science and Engineering*. Here, you will acquire a combination of knowledge and skill from the fields of agrarian technology and food processing. You will take part in the obligatory modules “AgFoodTech” and “Introduction to Food Systems”. The module “Introduction to Food Systems”, referred to as an Overarching Module, is a mandatory course held online and attended by the entire cohort of MFS of the EIT Food Consortium. In addition to the obligatory module, two elective modules should complement the semester.

The **second and third semesters** consist of one overarching module each semester (“Entrepreneurship and Innovation in the Food System” during the 2nd semester and “Emerging Technologies Business Case Study” during the 3rd semester). You will spend these semesters at two different partner universities, referred to as first host university and second host university. At the Host Universities you have to complete respective modules recommended for the MFS students. Your Host Universities and subject areas covered is given in your letter of admission. The paths offered by the University of Hohenheim in collaboration with the EIT Food Consortium are displayed below:

Mobility paths offered in winter semester 2023/24

Mobility path	1 st semester <i>Home institution</i>	2 nd semester <i>1st Host institution</i>	3 rd semester <i>2nd Host institution</i>	4 th semester <i>Home institution</i>
Option 1	University of Hohenheim	University of Turin	University of Reading	University of Hohenheim
Option 2	University of Hohenheim	University of Warsaw	Universidad Autonoma de Turin	University of Hohenheim
Option 3	University of Hohenheim	Queen's University of Turin	Universidad Autonoma de Aarhus	University of Hohenheim

For enquiries and support with planning your travel to the host universities and finding accommodation, please contact the program coordinator at the University of Hohenheim.

The module “Project Work” serves to introduce you to working on a scientific project independently and prepares you for your Master’s thesis. It is therefore usually completed at the department at which you plan to write your Master’s thesis. This way you are able to familiarize yourself with the laboratories, methodologies and the staff

before starting your thesis work. You are free to choose when you want to complete your "Project Work", but you must complete it before starting to write your Master's thesis at the latest. The "Project Work" is done in consultation with a supervisor (post-graduate scientific staff member) assigned by the department. Industrial internships may be integrated in the course of your studies on an individual basis. Depending on the duration and contents of the internship, you may be awarded credits. In order to be awarded credits you need to discuss your plan to do an internship as an elective module with a supervising professor before the internship begins to establish a timeframe and academic requirements. For detailed information on internships please read the corresponding chapter.

Your **Fourth Semester** is dedicated to conducting and completing of your Master's thesis at your Home University. By completing your Master's thesis at the end of the fourth semester, you demonstrate your ability to carry out scientific work independently within a given time frame. Due to the strong integration of entrepreneurial elements and supervised project work with the industrial partners of the EIT Food Consortium and others, you have the opportunity to carry out the practical part of the Master's thesis with an industrial partner. If you would like to complete your Master's thesis at a facility outside the University of Hohenheim, please read the chapter "Master's thesis" for further information.

Examination Regulations



Important regulations and deadlines concerning your studies can be found in the ***examination regulations for the Master's program in Food Systems***. Please read them carefully at the beginning of your studies.

← <https://www.uni-hohenheim.de/en/examination-regulations-fs>

Modules

The Master's program in Food Systems consists of compulsory, semi-elective and elective modules. You will earn credits for each completed module. In order to complete a module, you need to pass the module examination (see chapter "Examinations").

Modules offered at the University of Hohenheim can be either blocked or unblocked. Blocked modules represent compact courses which are taught intensively within a

period of four weeks. You can check the block times at www.uni-hohenheim.de/en/semester-dates. Hint: In general, it's not possible to attend more than one blocked module at the same time. In contrast, the unblocked modules are running the entire duration of the lecture period. **Please note that unblocked modules in particular often consist of more than one course!**

Detailed information on individual modules, their corresponding courses, current state on offer as well as information about the registration for a module may be obtained at www.uni-hohenheim.de/en/module-catalogue/studiengang/fs.

A tool for creating individual timetables is available in HohCampus. Further information can be found at <https://hohcampus.uni-hohenheim.de/en/hohcampus-help-schedule>.

Each module has a specific module code. The first four digits of the module code designate the institute and the department of the module responsible. The following three digits designate the type of module and the relevant study section as well as the associated courses:

1100-000 = number of the Institute (11 - 19 for Faculty of Natural Sciences)

0001-000 = department of an Institute (01 - 99 possible)

0000-010 = module designation:

000 - 300 modules for Bachelor students

400 - 600 modules for Master students

900 modules for doctoral candidates

0000-011 = course 1 of a module (1 - 9 courses possible)

Compulsory modules

The compulsory modules have to be completed by all students in order to obtain their degree. The compulsory modules of the Master's program in Food Systems are:

Semester	Module code	Module title	Duration*	Credits	Professor
1	1507-440	Introduction to Food Systems	1 semester	7.5	J. Weiss
1	1507-450	AgFoodTech	WS block 2	7.5	J. Weiss
2	1507-470	Entrepreneurship and Innovation in the Food System	to be announced	7.5	J. Weiss
3	1507-460	Emerging Technologies Business Case Study	to be announced	7.5	J. Weiss

* WS: winter semester; SS: summer semester

Block 1: 16.10.-10.11.2023 | 02.04.-26.04.2024

Block 2: 13.11.-08.12.2023 | 29.04.-31.05.2024

Block 3: 11.12.23-19.01.24 | 03.06.-28.06.2024

Block 4: 22.01.-16.02.2024 | 01.07.-26.07.2024

Elective modules

Elective modules provide you with the opportunity to specialize in an area that corresponds to your personal and professional interests.

You may choose elective modules recommended for the Master's program in Food Systems, or from other natural science Master's programs or from any other Master's program offered at the University of Hohenheim. If you would like to take modules at other German or foreign universities, you need to make a petition to the Examinations Board. Please contact the Examinations Office of Hohenheim for further information. For detailed information about available elective modules in winter and summer semesters as well as information about the registration for a module, please visit www.uni-hohenheim.de/en/module-catalogue.

Internship

As part of the curriculum you have the opportunity to complete an optional internship and to gain additional credits. An internship may be carried out at a national or international research center or at a Research and Development Department of a company in Germany or abroad that is related to food and/or agricultural sciences (the food sector and its supporting industries, the sector of plant design and engineering as well as processing technology).

You are expected to find an internship placement by yourself; however, the Internship Office (www.uni-hohenheim.de/en/internship) and the CareerCenter (www.uni-hohenheim.de/en/cch) can offer assistance. **Prior to beginning your internship, you also need to find a supervisor** (Professor from the University of Hohenheim) related to the subject-area of your placement (see module catalogue). The supervisor decides whether the internship placement is appropriate and also assesses the mandatory internship report. Please be aware that, while internships may last longer than six or twelve weeks, respectively, no additional credits can be awarded. Nevertheless, we encourage you to complete a prolonged internship in order to gain experience.

Master's thesis

The Master's thesis shows that you are able to work independently on a topic in the field of food systems within a period of six months by applying scientific research

methods. It is usually written during the fourth semester. Thesis work includes a literature review, compilation of new and original data derived from laboratory or field work or a systems analysis and modelling as well as a period of write-up. You need to find a thesis supervisor – a professor or a *Privatdozent/in* (associate professor) on your own.

The Master's examination consists of a written part (thesis) as described above and a defence in which you have to defend the main arguments, methods and results of your thesis.

A report referred to as KIC Added Value Component must be included as an Appendix or Annex to your Master Thesis, which is a specification for the Master's program in Food Systems. This report should describe the entrepreneurial projections of your Master thesis and contributes for 25% of the total credits awarded to your Master Thesis.

The Master's thesis has to be registered at the Examinations Office immediately once the thesis supervisor has assigned the topic. Please use the form available online at **www.uni-hohenheim.de/en/examination**. The registration of the Master's thesis has to be done six months after the last passed examination at the latest. Please note that you can register for the Masters Thesis only upon acquiring 60 ECTS. Further information can be found here: **www.uni-hohenheim.de/en/examinations-office-final-thesis**.

Recommendations for writing a Master's thesis¹

Length The Master's thesis should not be less than 60 pages long, excluding the bibliography and addendum. Further requirements may be specified by your supervisor.

Layout **Format**

- Language: English
- Passive voice ("The experiment was designed to show...")
- Continual paging
- Page margins: top: 2.5 cm; bottom: 2 cm; left: 3 cm, right: 2 cm

¹ Deviations are possible in consultation with your supervisor.

- Distance of header from top 1.25 cm; distance of footer from bottom: 1.25 cm
- Paper format DIN A4 (portrait format)

Font

Choose a font that is large enough and easily legible, e.g. Arial, Times New Roman or Helvetica 12pt, (variables in equations and Latin names or names of microorganisms: in italics). Grouped style and a 1.5-line spacing are recommended.

Citing journals, books or the internet

The citation has to be consistent – once a citation format has been chosen, you have to adhere to it throughout the text. The use of citation managing programs, such as Mendeley, RefWorks, Citavi or Endnote, is recommended.

An example for a journal citation:

Author A, author B, Title of the text, (acronym of the) journal volume, pages xx-yy (year)

An example for a book citation:

Author A, author B; in Title of the book; editor A; Publishing house, publishing place (year); pages xx-yy.

If you are using internet-based sources, the following information have to be included in the citation:

Name, First name of the author, title of the publication, publishing organization if applicable, url, date of retrieval

Outline

Every Master's thesis should have the following outline:

1. Cover
2. Declaration
3. Table of contents
4. Introduction
5. Materials and methods
6. Results
7. Discussion
8. Conclusion
9. Summary in English
10. Bibliography
11. KIC Added Value Component report
12. Addendum (if applicable)

Bibliography Material not authored by you, such as citations, research results, charts, photos, illustrations, etc., have to be clearly indicated.

The bibliography includes all citations in alphabetical or numerical order. We expect our students to engage with primary literature and reviews. Cited literature should always be up to date.

The use of any online encyclopedia, such as Wikipedia, or other commercial information material (company flyers, advertisement brochures, internet platforms) are not to be used.

Addendum Additional material, such as tables, extensive derivations, computer codes etc., which would interrupt the text flow, are added here. Acknowledgments, dedications etc. may be added to the Master's thesis. These are, however, not required and not given page numbers or included in the table of contents as they are not part of the scientific text.

Declaration At the beginning of the Master's thesis every student has to declare to be the sole author of the text. The text of this declaration is as follows (according to German law this text has to be in German, please find a translation below):

„Hiermit versichere ich, dass ich die vorliegende Arbeit selbstständig verfasst habe. Dabei wurden keine anderen als die angegebenen Quellen und Hilfsmittel verwendet. Wörtlich oder inhaltlich übernommene Stellen wurden als solche kenntlich gemacht.

Place, date

Signature

(“I hereby declare to be the sole author of this text. I have used no other than the cited sources and aides. Citations, direct or indirect, are marked as such.”)

In addition, if relevant, an overview of the AI Tools used must be submitted.

Cover The layout for the cover page is on the following page.

UNIVERSITY OF HOHENHEIM
Name of the institute

Title of the Master's thesis

Master's Thesis

Degree program:

Handed in by
(Name)

Head of Department:

1. Supervisor :

2. Supervisor :

Topic issued on :

Date of submission :

Writing your Master's thesis outside the University of Hohenheim

If you are unable to find a suitable Master's thesis topic at the University of Hohenheim, you can write your Master's thesis at an external institution, provided that a professor in Hohenheim agrees to supervise your topic. The external institution must provide suitable conditions for conducting research at university level. The topic for a Master's thesis may be issued and the thesis work supervised by a person who is not a full-time member of scientific staff at the Faculty of Natural Sciences, as long as the supervisor possesses qualifications equivalent to those of a professor at Hohenheim. This means that you can write the Master's thesis, e.g. at a research and development department of a company meeting the required scientific and academic standards and that a qualified person at that company may issue the thesis topic and supervise the work.

If you want to write your Master's thesis at an institution outside the University of Hohenheim, **please follow these steps before you start with your thesis:**

1. Contact the head of the department corresponding to the desired thesis topic, discuss thesis and institution, where the research will be done, and ask for permission to write the thesis outside the University of Hohenheim. If the supervisor at the external institution is not a full-time scientific staff member at the Faculty of Natural Sciences, ask the head of the department for being a second supervisor. Furthermore, the professor at Hohenheim has to agree to the thesis topic proposed by the external supervisor.
2. If the professor agrees to the proposed thesis work, you need to request approval from the examinations board in a formal letter. The request has to include the following information:
 - **Title** of the proposed thesis and an **exposé**
 - The **reason** for conducting the thesis work at an external facility
 - Name of the **external supervisor**
 - Name of the second **supervisor at Hohenheim**.
3. Once the examinations board has approved the request, the supervisor may assign the topic and the student must register the thesis immediately with the Examinations Office. Please use the form available online at **www.uni-hohenheim.de/en/examination**.

Submitting your Master's thesis

The Master's thesis must be submitted in electronic form (in .pdf file format) to the Examinations Office by the deadline. In addition to the digital version, the submission of printed copies may be requested by the supervisor. Along with these documents, you have to submit a written declaration of originality, declaring to be the sole author of the submitted work and that all sources and aids have been indicated as such. Additional information can be found at: **www.uni-hohenheim.de/en/examinations-office-final-thesis**.

Examinations

Every module of the Master's program in Food Systems is completed with an examination. Types of examinations offered at the University of Hohenheim include written and oral examinations, protocols of practical courses, reports, preparation and presentation of contributions to seminars as well as colloquia. Information on examinations for specific modules may be found in the module catalog at **www.uni-hohenheim.de/en/module-catalogue**.

Examinations of unblocked modules are scheduled during two examination periods that follow the lecture period. The examinations of blocked modules take place at the end of the respective block. Please note: The last block period of each semester overlaps with the first examination period of unblocked modules!

Detailed information on examination regulations, deadlines, examination dates etc. may be obtained at the Examinations Office or online at **www.uni-hohenheim.de/en/examination**.

Registration

You have to register online for every examination you would like to take on *HohCampus* at **<https://hohcampus.verw.uni-hohenheim.de>**.

For Information on the current registration period for exams, please visit **www.uni-hohenheim.de/semesterdates**.

For unblocked modules you may choose to take the examination in the first or second examination period and register for the examinations accordingly. For blocked modules registration must be completed at the latest seven days before the examination takes place.

You have the option of withdrawing from an examination online at the latest seven calendar days before the date of the examination. In case of withdrawal, you are not automatically registered for the upcoming examination date. Please register for the next date during the registration periods.

Examination resits

It is possible to resit an examination once. It is not possible to resit an examination which has already been passed. A *second* resit is only permitted for a *single* module (compulsory, semi-elective or elective).

If an examination was not passed, the Examinations Office sends you a written notification which includes the resit date for which you are automatically signed up. If the resit date has not been set at the time of notification, please check the resit dates with the respective professor or the Examinations Office.

Examination resits for unblock modules are usually scheduled for the following examination period. Examination resits for blocked modules take place either in the upcoming examination period or are scheduled by the responsible professor. In some cases, the resit date has not been set at the time of notification. If this is the case, please check the resit dates with the respective professor or the Examinations Office.

Grading system

The examination result is expressed in grades according to the grading table below. A minimum grade score of 4.0 (D) is required to pass an examination and complete a module. Some modules are not graded but are assessed as either "pass" or "fail".

Grades		German	English
1.0	A	<i>sehr gut</i>	very good
1.3	A-		
1.7	B+	<i>gut</i>	good
2.0	B		
2.3	B-		
2.7	C+	<i>befriedigend</i>	satisfactory
3.0	C		
3.3	C-		
3.7	D+	<i>ausreichend</i>	sufficient
4.0	D		
5.0	F	<i>nicht ausreichend</i>	fail

Grade conversions for semi-electives

UniTO	UoR	AU	LU	UHOH	UW
30 cum laude	70-100	12	5	1 sehr gut	4.91 - 5.00 bdb! (excellent)
29				1,3	4.61 - 4.90 bdb (very good)
28	65-69	10	4	1,7	4.41 - 4.60 db+ (better than good)
				2	4.21 - 4.40 db+ (better than good)
27	60-64	7		2,3	4.00 - 4.20 db (good)
26				2,7	3.81 - 4.00 db (good)
25	55-59	4	3	3.0	3.61 - 3.80 dst+ (satisfactory plus)
24				3,3	3.41 - 3.60 dst+ (satisfactory plus)
22-23	50-54	2		3,7	3.21 - 3.40 dst (satisfactory)
18-21				4 ausreichend	3.00 - 3.20 dst (satisfactory)
0-17	0-49	0	fail	>4.0 nicht ausreichend	<3.0 ndst (fail)
		-3			

Overall grade

The overall grade for the Master's program in Food Systems is calculated as the weighted average of all grade scores achieved in all modules, including the Master's thesis. The module grades and the grade of the Master's thesis are weighted on the

basis of the credits awarded for each completed module. The result is rounded mathematically to one decimal digit. Results above 4.0 (D) are always rounded up to 5.0 (F).

Cheating and plagiarism

If you attempt to influence the result of an examination by cheating or using forbidden aids, the respective examination is assessed with "fail" (5.0). This expressly includes plagiarism, i.e. the use of content taken from the internet or other sources without properly quoting or indicating the source.

Teaching staff may require you to attach a declaration of originality to written examinations or assignments and demand them to be handed in in digital form. Please ask the respective supervisor before submitting the work.

Language courses

The Language Center of the University of Hohenheim offers courses in more than ten languages, including German.

For more information on German language and all other language courses please visit <https://www.uni-hohenheim.de/en/language-center-courses>.

Career prospects

Apart from the engagement in an entrepreneurial venture, a degree in Food Systems allows for further academic qualification at universities or research centers. Another focus lies in development, research or consultancy work for companies in the food sector, as well as public institutions. Corresponding jobs are offered by state or federal government agencies and offices, insurance companies and private consulting firms. Further, employment at international, bilateral and non-governmental organisations involved in development cooperation as well as environmental and food security is possible.

If you want to enter the job market outside academia, we would like to advise you to contact the CareerCenter for guidance. The CareerCenter Hohenheim is a service center and the first contact point for students and graduates for guidance when creating

the own profile as well as assistance with the career entry and career planning. For more information please visit www.uni-hohenheim.de/en/career-entry.

Semester dates

For detailed information on the semester dates please visit www.uni-hohenheim.de/en/semester-dates.

University of Hohenheim
Faculty of Natural Sciences

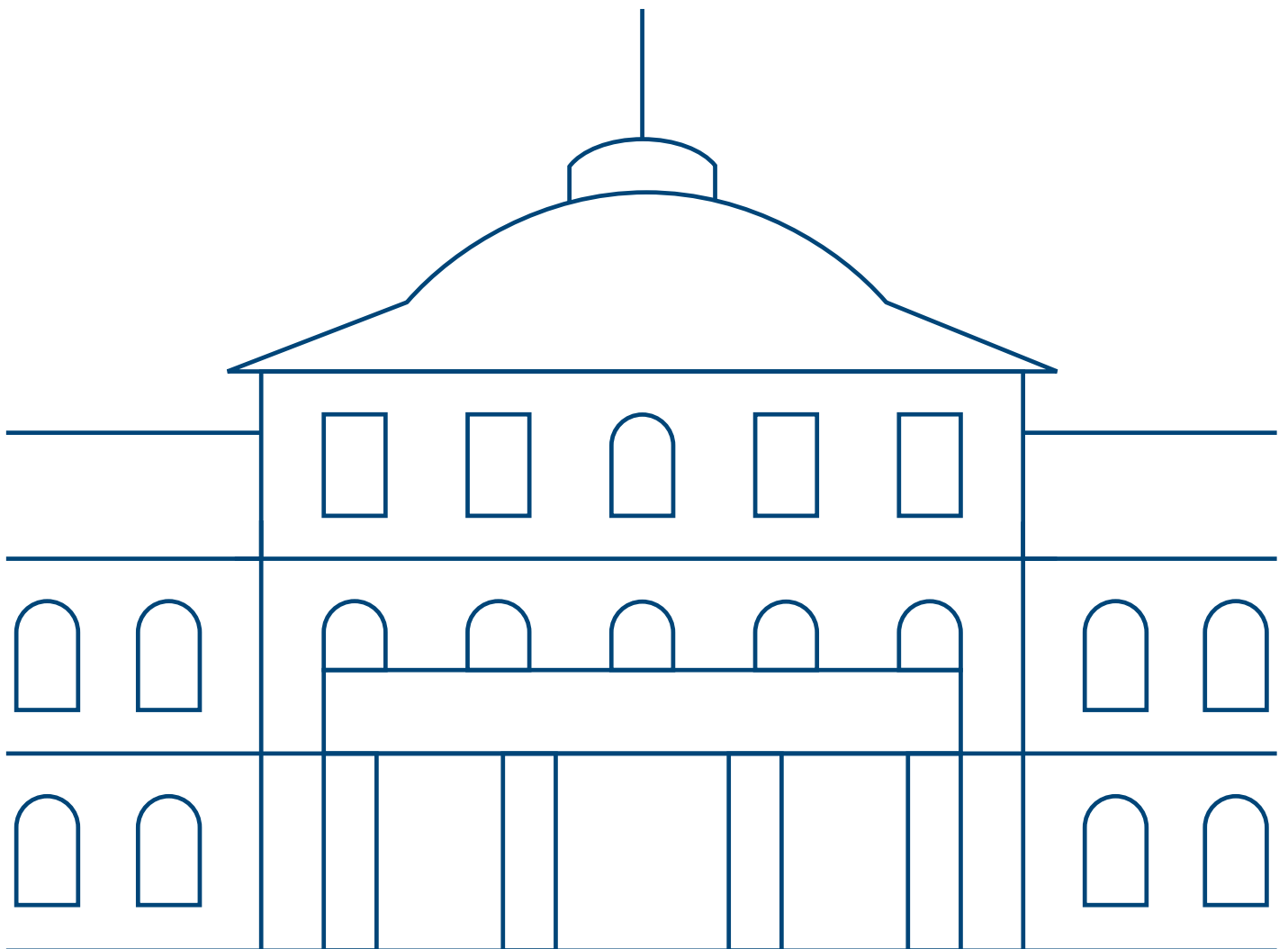
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