TUM School of Management – Assessment procedure
Master in Management and Digital Technology
Valid for applications for the winter semester 2024-2025 or later

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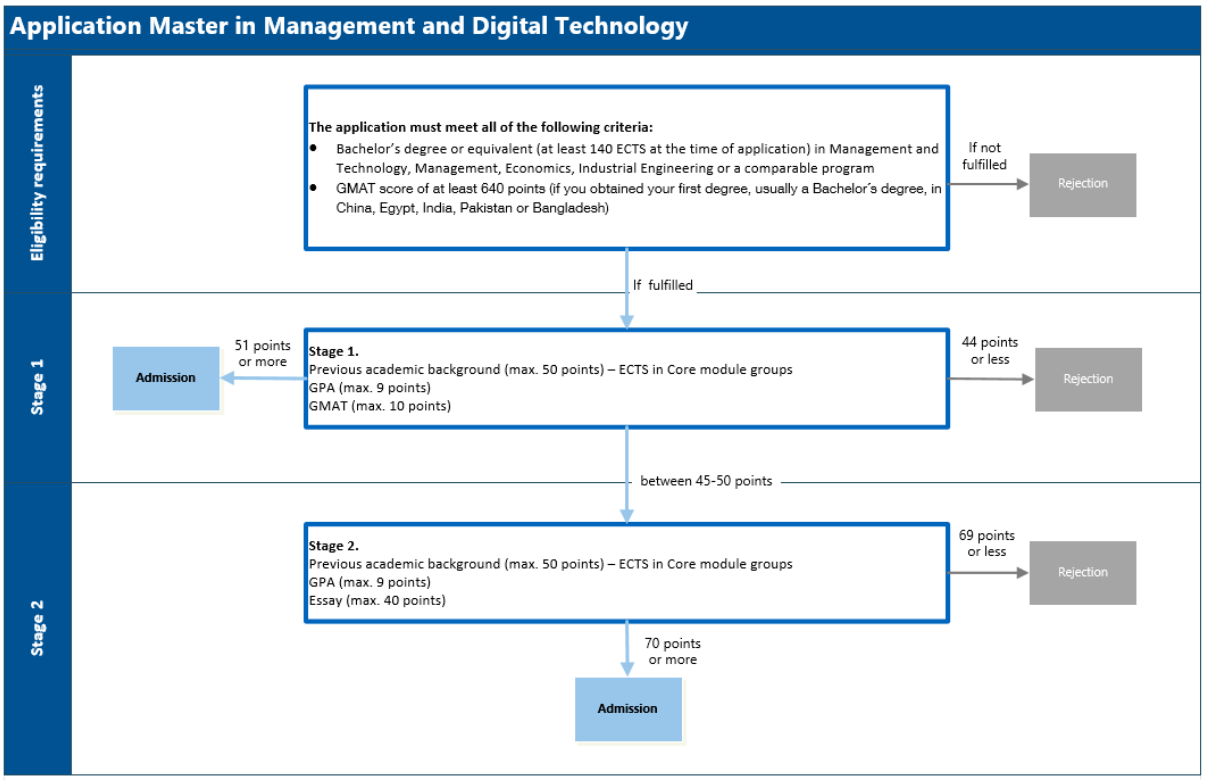
Application process chart Master in Management and Digital Technology



1. Assessment procedure Master in Management and Digital Technology

1.1. Entrance Requirements

To be eligible to apply for the Master in Management and Digital Technology program, applicants must:

(a) hold a **bachelor's degree or equivalent** (at least 140 ECTS at the time of application) in Management and Technology, Management, Economics, Industrial Engineering, or a comparable program.

(b) have successfully completed:
modules worth at least 25 ECTS in **Business (Management)**/"Betriebswirtschaftslehre" and/or
modules worth at least 10 ECTS in **Economics**/"Volkswirtschaftslehre" and/or
modules worth at least 5 ECTS in the field of **Empirical Research Methods** and/or
modules worth at least 5 ECTS in the area of quantitative decision making with methods of **Operations Research** and/or
modules worth at least 5 ECTS in **Programming**

(c) submit a **GMAT** (classic/focus) with at least 65% percentile ranking if you have obtained your first degree (usually a bachelor's degree) in China, Egypt, India, Pakistan, and Bangladesh.

(d) since the **essay is a mandatory document** for the application, all applicants must upload it on TUMonline, even if they are sure of obtaining admission in stage 1. We expect a high standard of scientific work from our applicants. Therefore, independently of the result in stage one, all essays will be checked to see if they comply with these standards. Applicants who do not meet them, as in cases of plagiarism or the use of AI (e.g., Chat GPT, DeepL, Grammarly, etc) evidenced in the essay, will be excluded from the process. Essays are evaluated on the applicant's original work and the use of manual skills. **We do not allow the use of AI technologies for idea creation, structuring, editing, or assignment completion**.

If your application fulfills all entrance criteria from 1.1., it will start with the first stage of the assessment procedure.

1.2. Stage 1: Previous academic background + GPA + GMAT (if equals or higher 650 points)

If an application fulfills the entrance requirements, 50 points will be granted for the credits in Business Management, Economics, Empirical Research Methods, Operations Research and Programming (additional information about these core modules can be found here).

As long as the course has been passed, they can be considered for the assessment. The respective grade is irrelevant for the evaluation of the core module groups. If the application does not have the minimum number of credits stipulated for each category, zero points will be given in that specific field.

Core module group	**Points**
Business Management Modules (at least 25 ECTS)	20
Courses in the field of **Empirical Research Methods** (at least 5 ECTS)	10
Courses in the area of quantitative decision making with methods of **Operations Research** (at least 5 ECTS)	5
Modules in **Economics** (at least 10 ECTS)	10
Courses in the field of **Programming** (at least 5 ECTS)	5
Total	**50**

Up to 9 points will be given for your overall final bachelor's degree grade. If you apply with a bachelor's degree from a foreign country and / or with a grade of grading system other than the German one, your grade will be converted into the German grading system using the Bavarian formula by TUM or Uni-Assist. Please refer here for more information:

German Grade	1	1,1 / 1,2	1,3 / 1,4	1,5 / 1,6	1,7 / 1,8	1,9 / 2,0	2,1 / 2,2	2,3 / 2,4	2,5 / 2,6	2,7 or below
Points	9	8	7	6	5	4	3	2	1	0

The points from the core modules and your final grade will be combined.

Extra points will be given for a GMAT score according to the table below:

Classic GMAT	≥ 640	650	660	670; 680	690	700	≥710
GMAT Certificate Percentile Ranking (%)	≤ 65 to 71	from 72 to 74	from 75 to 79	from 80 to 84	from 85 to 88	from 89 to 92	≥ 93
Points EV	0	1	2	4	6	8	10

Please note that if you have obtained your first degree (usually a bachelor's degree) in **China, Egypt, India, Pakistan, and Bangladesh you must submit a GMAT** (classic/focus) **with at least 65%** percentile ranking. Extra points will be granted only with a percentile ranking from 72% and above. If your Bachelor's degree has been obtained in any other country, submitting a GMAT is optional for you. If you decide to submit a GMAT, the extra points will be given according to the table above.

The extra points of the GMAT are considered only in the first stage of the assessment procedure. Please make sure you give the Technical University of Munich **the right to verify it online.**

The result of stage 1 either leads to:

- a rejection: if the application only reaches 44 points or less
- a direct admission: if the application reaches 51 points or more
- to the evaluation of the essay in stage 2 of the assessment procedure: if the application reaches between 45 and 50 points.

Please note that **conditional admission will be given**, in case an applicant does not meet the minimum ECTS Entrance Requirements in three of the core module groups (excluding Business Management Modules).

1.3. Stage 2: Points from Stage 1 (without GMAT) + Essay

In case the Essay is relevant for the final assessment, it will be evaluated based on the following criteria, the maximum point score for the essay is 40 points:

- Ability of scientific-logical reasoning (max. 20 points)
- Classification of economic-technical facts (max. 10 points)
- English-language expressiveness (max. 10 points)

The final result in stage 2 consists of the combined points from stage 1 (GMAT not being considered in stage 2) and the total points achieved in the evaluation of the Essay. If the combined total is 70 points or more, the application will be accepted (admission), if the total point score is 69 points or less, the application will be rejected.

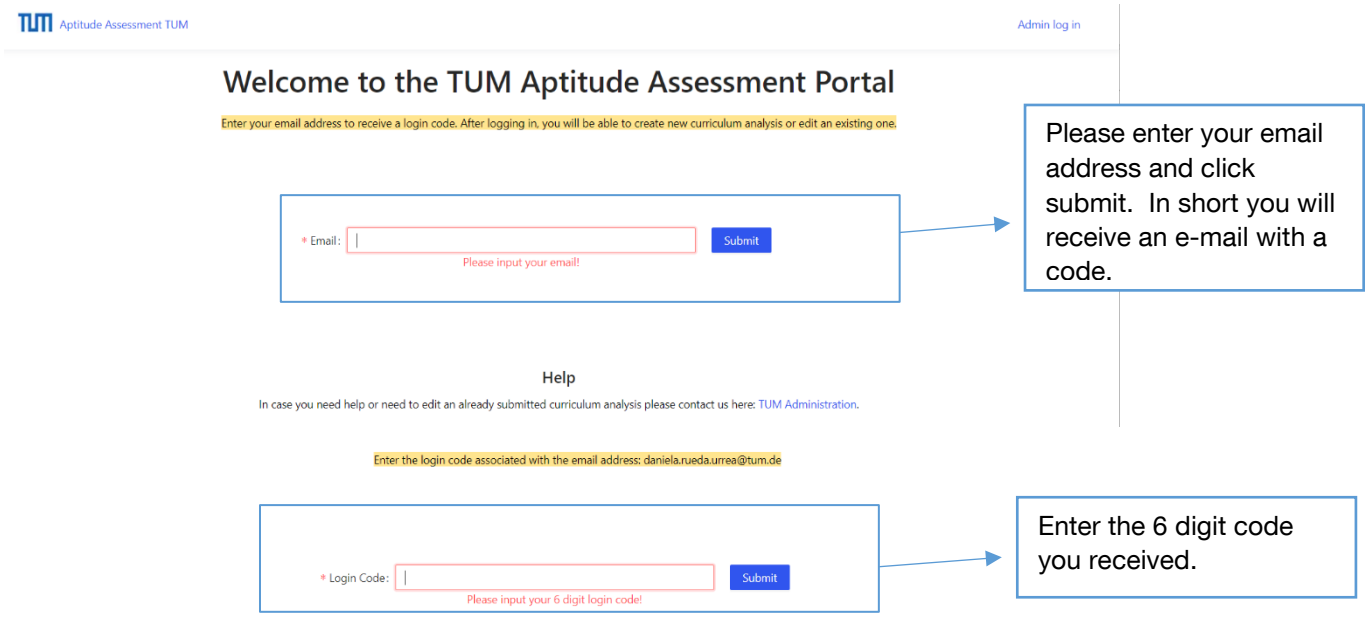
Please refer to the info sheet "How should I write the essay?" on our website for more information regarding the essay

2. How to fill out the Curricular Analysis?

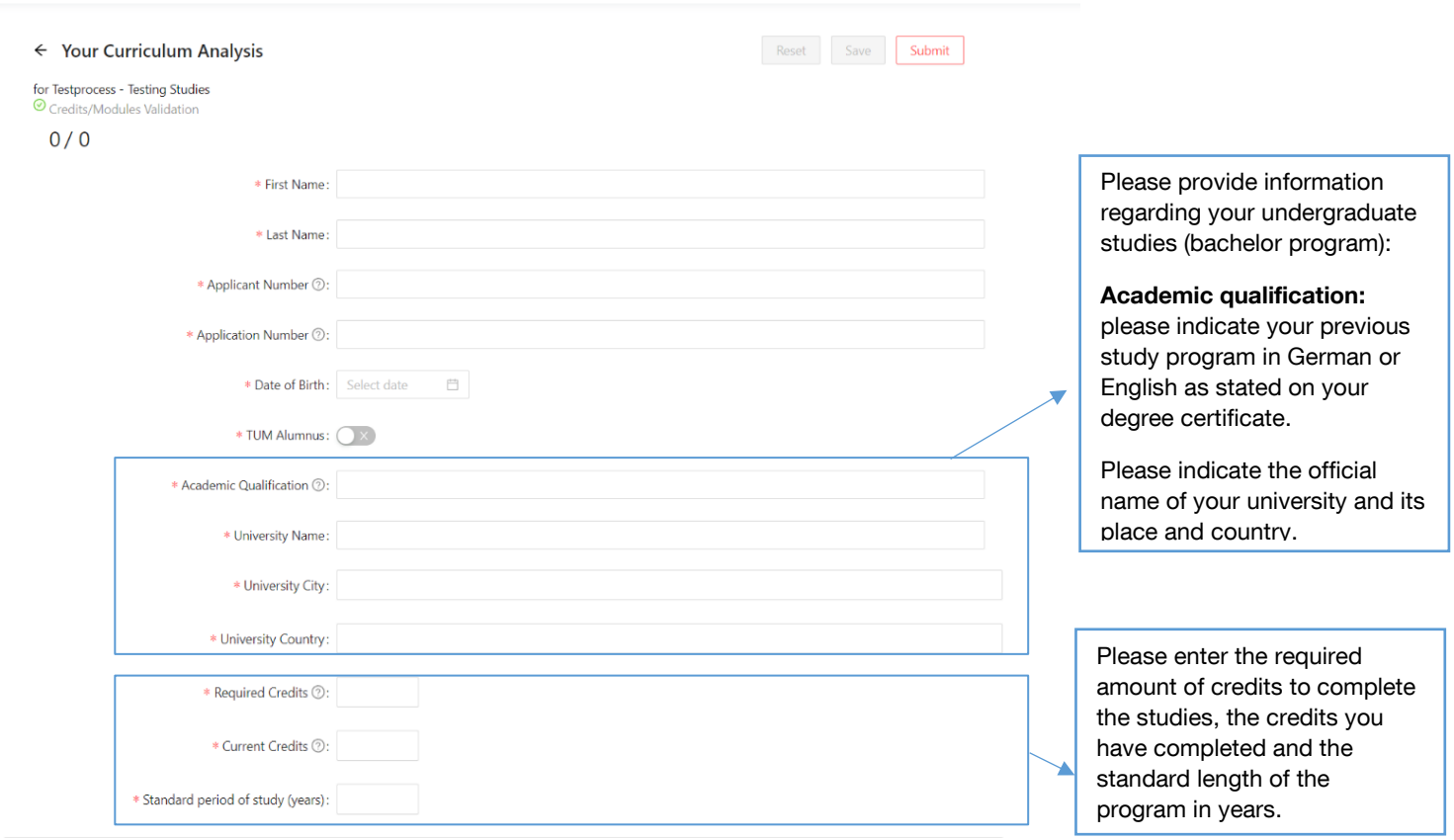
In accordance with Annexure 2 of the examination and study regulations of the Master's Program in Management and Digital Technology, the assessment commission uses a Curricular Analysis to assess your eligibility and aptitude. During your application in TUMonline, you will need to follow a link to fill out the Curricular Analysis.

2.1. Registration

Please fill out the registration form. The link to this form will be provided at the very end of your TUMonline application.



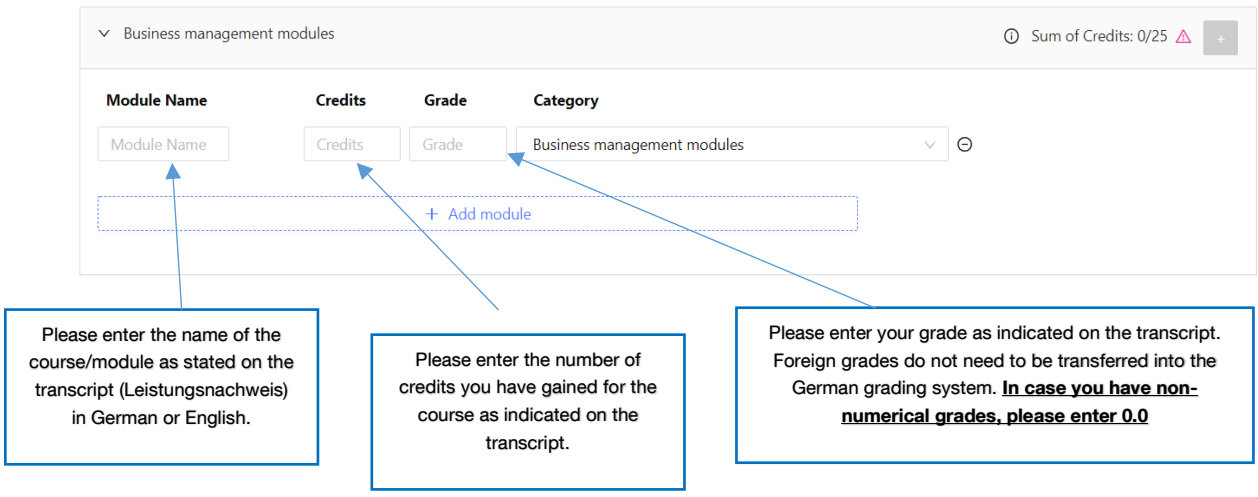
Enter your personal information.



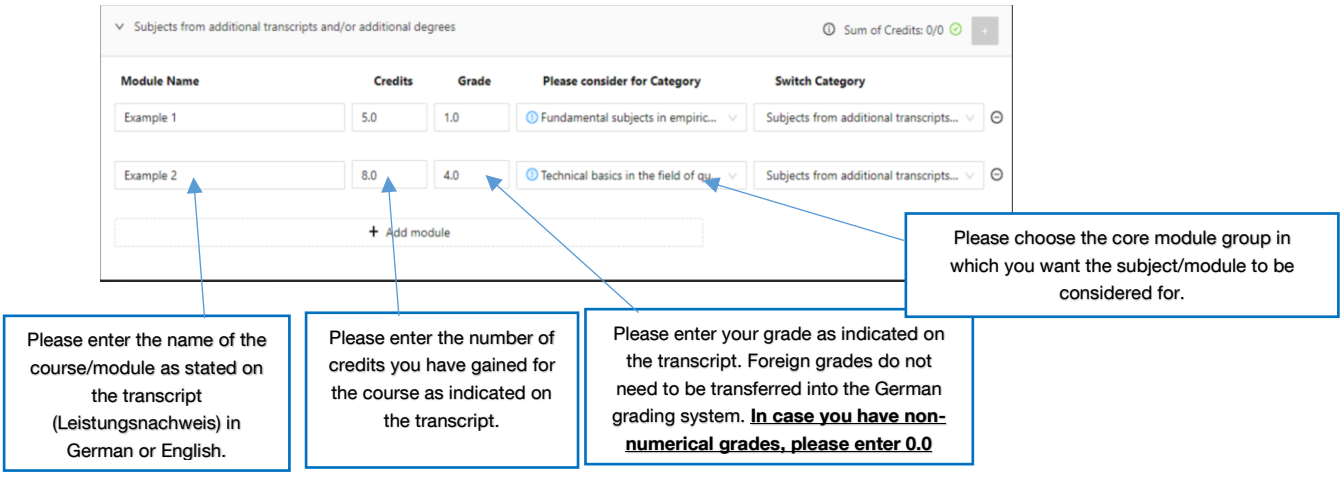
2.2. Entering courses

After registration, please enter all modules/courses, grades, and credits (ECTS) according to the Transcript of Records of your undergraduate studies (Bachelor Degree Program) in German or English. If you have completed additional classes that are not part of your main study program but were accomplished to gain missing credits necessary for a successful application or because you additionally studied at another university, please list them under the seventh category **Subjects from additional transcripts and/or additional degrees** and upload the transcript(s) in TUMonline.

List them according to the following subject groups as you see fit and please enter each subject only once!



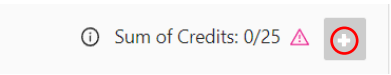
Subjects or modules from additional transcript that you would like to use to fulfill the ECTS requirements must be entered in the last category “Subjects from additional transcript and/or additional degree”.



1. Business management modules (at least 25 ECTS)

   Examples: Finance and accounting, management accounting, financial management, controlling, production management, supply chain management, strategic management, risk management, human resource management, information management, organization and project management, management games
   If the name of the course(s) is not clearly about management topics, it may be helpful to upload here the course description(s) for our reference.

   To upload the document click on the little white cross next to the name of the category.



2. Fundamental subjects in Empirical Research Methods (at least 5 ECTS; for details see here)

   Examples: Introduction to social research, applied econometrics, market research, Empirical Research in Management and Economics, Empirical research methods
   Please upload here the course description(s) for our reference.

3. Technical basics in the field of quantitative decision support with methods of Operations Research (at least 5 ECTS; for details see here)

   Examples:
   Operations research and decision analysis, management science, operations research, decision oriented modelling
   Please upload here the course description(s) for our reference.

4. Fundamental subjects in Economics (at least 10 ECTS)

   Examples: Microeconomics, macroeconomics, international economics, industrial economics, environmental economics, energy economics

   If the name of the course(s) is not clearly about economics topics, it may be helpful to upload here the course description(s) for our reference.

5. Fundamental subjects in Programming (at least 5 ECTS)

   Examples: Introduction to Informatics (Programming Lab Course), software engineering, object oriented programming and similar courses

   If the name of the course(s) is not clearly about programming topics, it may be helpful to upload here the course description(s) for our reference.

6. All other subjects

   Examples: Mathematics, statistics, law, communication skills, language training, sociology, psychology, scientific writing, thesis, internships, sports

7. Subjects from additional transcripts and/or additional degrees

   All completed additional classes that are not part of your main study program but were accomplished to gain missing credits necessary for a successful application.
   Please upload here the course description(s) for our reference.

Please assign all modules/courses that do not fit in one of the above-mentioned subject groups or that you are unsure of to the category no. 6: All other subjects. **Please make sure you enter each subject only once.**

2.3 Additional Information about core modules

In the following, you will find relevant content for the core module groups Empirical Research Methods and Operations Research (based on syllabi from classes taught at TUM School of Management). For a recognition of a course, a predominant agreement of a complete module with the reference contents must be given.

Please note that we are not able to check classes for eligibility before you apply. It may be helpful to include certain syllabi with your application for our reference.
Please note that a final thesis or class paper cannot be recognized for any of the core module groups.

Management science/operations research

Intended Learning Outcomes: After successful completion of the module students are capable of modelling mathematical optimization models for business problems, of solving small problems manually, of interpreting derived solutions and translating them into management actions.
Management Science is about:

-Modeling, solving and analyzing business administrations and management problems using mathematical concepts.
-Linear Programming
-Mixed-Integer Programming
-Graph Theory
-Network Flow
-Dynamic Programming
-Decision Theory

Empirical research methods

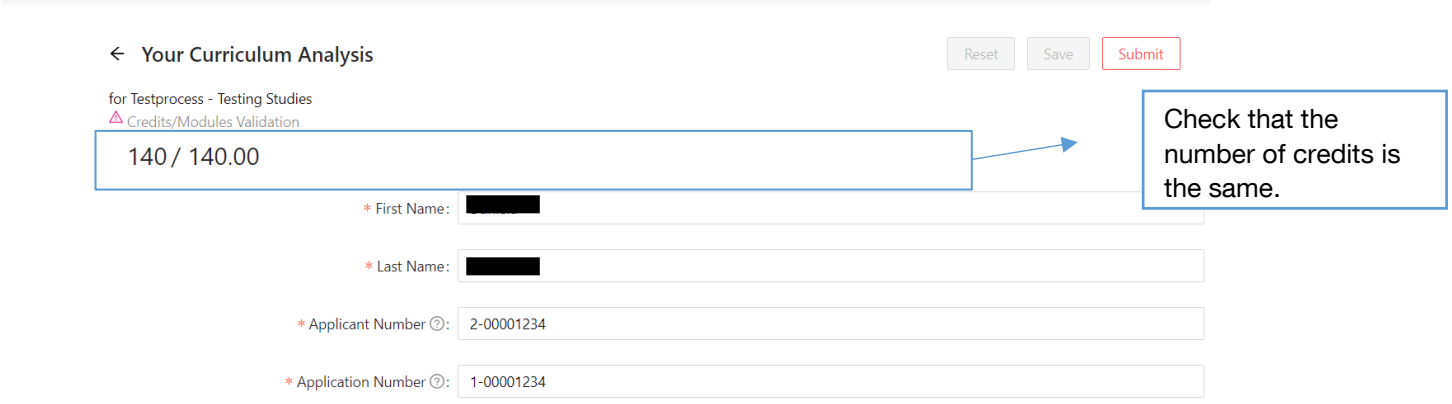
Content: This module will give you an introduction to empirical research methods, including the higher aims of empirical research, the standards it needs to meet, and a set of methods that you can directly apply. Topics:

-Research ethics
-Research question and their implications
-Paper reading, positioning, and contributions
-Correlation and causality
-Choosing a research design
-Qualitative research
-Quantitative analysis & quantitative research design
-Using existing scales and data

2.4. Submission

Before sending the form online, please verify if all your entries **are correct and complete.**

All compulsory and elective modules must be listed and correctly assigned! If on your transcript of records there are, for example, 25 courses with a total of 180 credits, your curricular analysis must have the 25 courses and 180 credits.



2.5. FAQs about the Curricular Analysis

Can I also list modules from my master studies or previous study programs? Additional modules that are not part of your main study program but are necessary for a successful application or if you additionally studied at another university should be listed in the Curricular Analysis under the sixth category Subjects from additional transcripts and/or additional degrees

Can I also list modules that I will finish after my application? No, you are only allowed to insert completed courses that are listed in your Transcript of Records.

I did not get a grade for the course, should I list it? Yes, please list all modules of your transcript of records. If you did not get a grade please enter 0.0.

I'm not sure which category my course fits into. What should I do? Please put it into the "all other subjects", if you are not sure.

Should I convert grades into the German grading system and credits into the ECTS system? No, please enter the classes exactly as they appear on your transcript of records. If any conversions are necessary, they will be done by TUM.

Which language should the courses listed be in? Please enter the classes exactly as they appear on your transcript of records (German or English). In case you are applying with a translated copy of a transcript of records, please use the translated title (German or English).

Can I enter non-numerical grades (such as A, B …)? No, the system cannot process non-numerical grades. In this case, please enter 0.0, we will use the information on your transcript for reference. In case your transcript of records contains the numerical equivalence of the letter grades, please enter the numerical grades.

I made a mistake. What should I do? If you have made a mistake, please contact: admission_hn@mgt.tum.de

How can I upload a module description? To upload your module descriptions in the Curricular Analysis click on the white cross next to each category.

Where can I find the Application and Applicant numbers? You find the numbers in TUMonline:

1. Click continue in the application until you will come to “preview” (it normally saves the draft)
2. Then go back
3. In “My applications” , you will see both numbers

If with these steps you still cannot find the application number, please enter the applicant number instead.

I’m having problems with the Curricular Analysis, what can I do? If you are facing problems with the Curricular Analysis, please try the following solutions:

• Have all the fields in Personal Information been filled in and saved? These are required fields and if any of them have not been filled in, nothing can be saved.

• Are you using the latest version of Google Chrome, Safari or Mozilla Firefox? The program works best in these browsers. Outdated browser versions may cause difficulties.

• Do you fill in all the information in the modules? It is necessary to fill in all fields here as well.

Please note that this information sheet is not legally binding nor do we guarantee for its correctness and completeness! The only legally binding document is the statute (“FPSO”) in its most current version.