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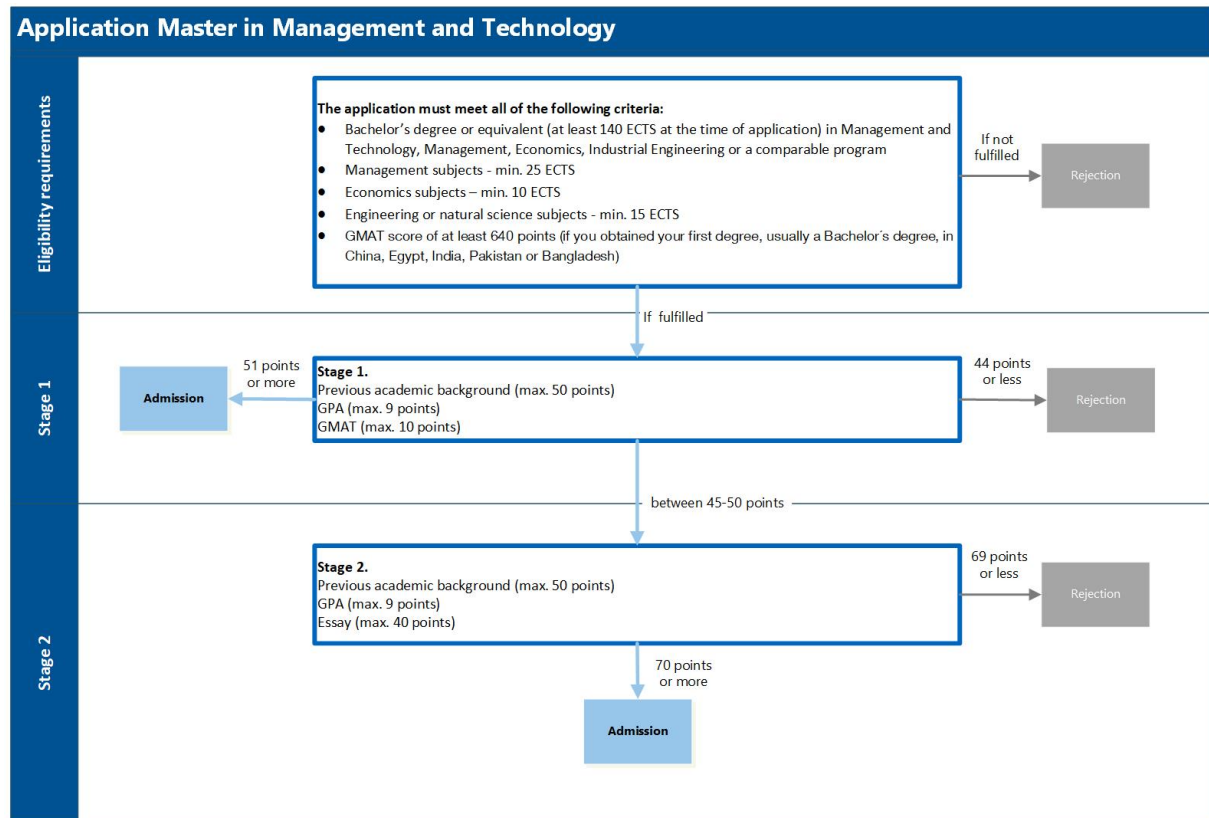
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### Application process chart Master in Management and Technology



## 1. Assessment procedure Master in Management and Technology

### 1.1. Entrance Requirements

To be eligible to apply for the Master in Management and 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"**
- (c) have successfully completed modules worth at least **10 ECTS in economics/"Volkswirtschaftslehre"**
- (d) have successfully completed modules worth at least **15 ECTS in engineering or natural science** (mathematics, statistics & informatics classes included)
- (e) 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.
- (f) 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.**

Please note that **under no circumstances conditional admission** will be given, in case an applicant does not meet the Entrance Requirements at the time of application.

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 an application fulfills the entrance requirements, 30 points will be immediately granted for the credits in business management and economics. No points will be given for the entrance requirement of at least 15 ECTS in natural sciences or engineering.

Additionally, 20 points will be granted for the experience gained in empirical research methods and operations research/management science (additional information about these 2 core modules can be found [here](#)). **Please note:** Having credits in these two areas is not an entrance requirement. However, it plays a crucial role in the success of the application.

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     | immediately granted when fulfilling the entrance requirements |
| Courses in the field of empirical research methods (at least 6 ECTS)                                      | 10     | could be granted  |
| Courses in the area of quantitative decision making with methods of operations research (at least 6 ECTS) | 10     | could be granted  |
| Modules in economics (at least 10 ECTS)   | 10     | immediately granted when fulfilling the entrance requirements |
| 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 a 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 below 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;<br>680         | 690                 | 700                 | ≥710 |
|---|---------------|---------------------|---------------------|---------------------|---------------------|---------------------|------|
| GMAT Certificate Percentile Ranking (%) | ≤ 65<br>to 71 | from<br>72 to<br>74 | from<br>75 to<br>79 | from<br>80 to<br>84 | from<br>85 to<br>88 | from<br>89 to<br>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.

### 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 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.

The screenshot shows the registration process on the TUM Aptitude Assessment Portal. At the top left is the TUM logo and 'Aptitude Assessment TUM'. At the top right is a link for 'Admin log in'. The main heading is 'Welcome to the TUM Aptitude Assessment Portal'. Below this is a yellow instruction: 'Enter your email address to receive a login code. After logging in, you will be able to create new curriculum analysis or edit an existing one.' The first step is a form with a red asterisk and the label '\* Email:'. It contains an empty text input field with a red border and a blue 'Submit' button. Below the input field is the text 'Please input your email!'. A blue arrow points from this form to a callout box on the right that says 'Please enter your email address and click submit. In short you will receive an e-mail with a code.' Below the first form is a 'Help' section with the text: 'In case you need help or need to edit an already submitted curriculum analysis please contact us here: [TUM Administration](#).' Below the help section is a yellow instruction: 'Enter the login code associated with the email address: daniela.rueda.unrea@tum.de'. The second step is a form with a red asterisk and the label '\* Login Code:'. It contains an empty text input field with a red border and a blue 'Submit' button. Below the input field is the text 'Please input your 6 digit login code!'. A blue arrow points from this form to a callout box on the right that says 'Enter the 6 digit code you received.'


## Enter your personal information.


← Your Curriculum Analysis Reset Save Submit


for Testprocess - Testing Studies  
 Credits/Modules Validation  
 0 / 0

\* First Name:


\* Last Name:

\* Applicant Number :

\* Application Number :

\* Date of Birth:  


\* TUM Alumnus:


\* Academic Qualification :

\* University Name:

\* University City:

\* University Country:

\* Required Credits :

\* Current Credits :

\* Standard period of study (years):

Please provide information regarding your undergraduate studies (bachelor program):

**Academic qualification:** please indicate your previous study program in German or English as stated on your degree certificate.



Please indicate the official name of your university and its place and country.

Please enter the **required amount** of credits to complete the studies, the **credits you have completed** and the **standard length** of the program in years.

## 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!

Business management modules Sum of Credits: 0/25  

| Module Name                              | Credits                              | Grade                              | Category   |
|--|--------------------------------------|------------------------------------|--|
| <input type="text" value="Module Name"/> | <input type="text" value="Credits"/> | <input type="text" value="Grade"/> | <input type="text" value="Business management modules"/> |
| <a href="#">+ Add module</a>             |                                      |                                    |  |

Please enter the name of the course/module as stated on the transcript (Leistungsnachweis) in German or English.

Please enter the number of credits you have gained for the course as indicated on the transcript.

Please enter your grade as indicated on the transcript. Foreign grades do not need to be transferred into the German grading system. **In case you have non-numerical grades, please enter 0.0**

Subjects or modules from additional transcripts 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”.

| Module Name  | Credits | Grade | Please consider for Category           | Switch Category                         |
|--------------|---------|-------|--|---|
| Example 1    | 5.0     | 1.0   | Fundamental subjects in empiric...     | Subjects from additional transcripts... |
| Example 2    | 8.0     | 4.0   | Technical basics in the field of qu... | Subjects from additional transcripts... |
| + Add module |         |       |  |   |

Sum of Credits: 0/0

Please enter the name of the course/module as stated on the transcript (Leistungsnachweis) in German or English.

Please enter the number of credits you have gained for the course as indicated on the transcript.

Please enter your grade as indicated on the transcript. Foreign grades do not need to be transferred into the German grading system. **In case you have non-numerical grades, please enter 0.0**

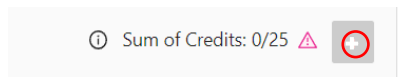
Please choose the core module group in which you want the subject/module to be considered for.

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 6 ECTS; for details see [here](#))

Examples: Introduction to Social Research (depending on the course content), Applied Econometrics, Market Research, Empirical Research in Management and Economics, Empirical Research Methods

**Please upload the course description(s) for our reference.**

3. Technical basics in the field of quantitative decision making with methods of operation research (at least 6 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 engineering or natural sciences (at least 15 ECTS)

Examples: Mathematics, Statistics (depending on the course content), Engineering, Informatics (for more details see [here](#)).

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

6. All other subjects

Examples: Law, Communication Skills, Language Training, Software 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

## Informatics courses for the field fundamental subjects in engineering or natural sciences

Modules with the following contents are not recognized:

- Application of software (e.g. SAP, image processing, accounting, etc.)
- Organizational issues of operational IT use (procurement, implementation of projects)
- Advantages and disadvantages of IT applications/uses

Modules with the following contents are more likely to be recognized:

- Computer architectures
- Structure of databases
- Programming of software

## 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.**

← Your Curriculum Analysis

Reset

Save

Submit

for Testprocess - Testing Studies  
Credits/Modules Validation

140 / 140.00

Check that the number of credits is the same.

\* First Name:

\* Last Name:

\* Applicant Number ☺: 2-00001234

\* Application Number ☺: 1-00001234



## 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@mgt.tum.de](mailto:admission@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.