TUM School of Management
Technische Universität München

Module Catalog

M.Sc. Management & Innovation (Munich)
TUM School of Management
Technische Universität München

www.tum.de/
www.wi.tum.de

Module Catalog: General Information and Notes to the Reader

What is the module catalog?
One of the central components of the Bologna Process consists in the modularization of university curricula, that is, the transition of universities away from earlier seminar/lecture systems to a modular system in which thematically-related courses are bundled together into blocks, or modules.
This module catalog contains descriptions of all modules offered in the course of study.
Serving the goal of transparency in higher education, it provides students, potential students and other internal and external parties with information on the content of individual modules, the goals of academic qualification targeted in each module, as well as their qualitative and quantitative requirements.

Notes to the reader:

Updated Information
An updated module catalog reflecting the current status of module contents and requirements is published every semester. The date on which the module catalog was generated in TUMonline is printed in the footer.

Non-binding Information
Module descriptions serve to increase transparency and improve student orientation with respect to course offerings. They are not legally-binding. Individual modifications of described contents may occur in praxis.
Legally-binding information on all questions concerning the study program and examinations can be found in the subject-specific academic and examination regulations (FPSO) of individual programs, as well as in the general academic and examination regulations of TUM (APSO).

Elective modules
Please note that generally not all elective modules offered within the study program are listed in the module catalog.

Index of module handbook descriptions (SPO tree)

Alphabetical index can be found on page 18

Double Degree Program HEC Paris | Double Degree Program HEC Paris

Module Description

WI700006: Modules from HEC Paris | Modules from HEC Paris

Version of module description: Gültig ab summerterm 2019

Module Level: Master	**Language:** Language taught	**Duration:**	**Frequency:** winter/summer semester
Credits:* 60	**Total Hours:**	**Self-study Hours:**	**Contact Hours:**

Number of credits may vary according to degree program. Please see Transcript of Records.

Description of Examination Method:
Within this module courses of the double degree program with Grand École des Hautes Études Commerciales (HEC) can be recognized. If you are interested in the program, you can find more information here: https://www.wi.tum.de/student-life/joint-international-programs/.

Repeat Examination:

(Recommended) Prerequisites:

Content:

Intended Learning Outcomes:

Teaching and Learning Methods:

Media:

Reading List:

Responsible for Module:

Courses (Type of course, Weekly hours per semester), Instructor:

For further information in this module, please click campus.tum.de or here.

Required modules | Required modules

Module Description

WI201079: Innovation Prototyping | Innovation Prototyping

Version of module description: Gültig ab winterterm 2019/20

Module Level: Master	**Language:** English	**Duration:** one semester	**Frequency:** winter semester
Credits:* 6	**Total Hours:** 180	**Self-study Hours:** 120	**Contact Hours:** 60

Number of credits may vary according to degree program. Please see Transcript of Records.

Description of Examination Method:
Written project work in groups (30%), group presentation (40%) and Prototype Iteration (30%). The examination consists of an in-class presentation of contents and results of the group task, a presentation of the group prototype iteration containing a discussion of the project and future challenges, and a written paper containing the results and their evaluation. The paper is a means to assess students' theoretical understanding of the market opportunity identification and evaluation concepts, their ability to apply these concepts to practical application scenarios, their ability to theorize from the practical experiences made, and their ability to communicate the results obtained in a written form. The in-class presentation as well as the presentation of the prototype iteration is a means to measure students' ability to structure and present their findings comprehensibly and present them in an appropriate manner within a limited time frame to a target audience. Students' reactions to questions and notations from the audience are part of the presentation and reflect their ability to defend the results obtained.

Repeat Examination:
End of Semester

(Recommended) Prerequisites:
none

Content:
In the course Innovation Prototyping, students will learn how do generate and assess new business ideas, and to transform these ideas into actual products or business models. They will use prototyping as a means to communicate, test, and constantly update their assumptions, producing prototypes that range from ‘quick and dirty paper models’ to elaborate functional mockups. Students will experience how to develop ideas in more focused manner, understand

problems and ideas better, and advance their ideas faster when tackling new business challenges. In addition to introducing students to current prototyping techniques, the course will advance their team-working and presentation skills in a collaborative project.

Intended Learning Outcomes:
Upon successful completion of this module, students are able to understand the topic of prototyping in a technological context and their implications for products and markets. They are able to understand how innovations can be developed within an organization and how to create prototypes for innovative ideas. They are able to analyze customer feedback and to evaluate its implications for innovation development.

Teaching and Learning Methods:
In interactive lectures, instructors illustrate how to identify customer problems, iteratively develop prototypes to solve these problems, and develop and validate a business model for the commercialization of the solution to a problem. In group works, students creatively identify real world customer problems and develop possible solutions. Feedback sessions with experts and lecturers support this process. In presentations, students exercise the illustration of the identified problem and its solution. Students are likewise encouraged to use the interactive learning platform for virtual teamwork and group discussions beyond contact hours.

Media:
media mix

Reading List:
changing on the basis of the latest research results, will be announced in class

Responsible for Module:
Prof. Dr. Dr. Holger Patzelt

Courses (Type of course, Weekly hours per semester), Instructor:

For further information in this module, please click campus.tum.de or here.

Module Description

WI201080: Technological Trends | Technological Trends

Version of module description: Gültig ab winterterm 2019/20

Module Level: Master	**Language:** English	**Duration:** one semester	**Frequency:** winter semester
Credits:* 6	**Total Hours:** 180	**Self-study Hours:** 120	**Contact Hours:** 60

Number of credits may vary according to degree program. Please see Transcript of Records.

Description of Examination Method:
Individual or group written assignment and presentation - Students will have to develop an opportunity identification plan model and present it in front of the group. They will have to present how they would assess the specific potential of a technological trend they have been identified during the course. They will have to show that they learnt about different upcoming trends and technologies and are able to evaluate their implications for organizations. For the creation of the model they may use different media, like sculptures, lego modelling, computer simulations, etc.

Repeat Examination:
End of Semester

(Recommended) Prerequisites:
none

Content:
Students will get to know new and upcoming technological trends from various research areas of different TUM departments. The focus of the lectures changes according to the offering chairs. They will get an overview about four different fields, e.g. robotics, automotive, sustainability, digital transformation. If applicable, they will visit labs to get an insight impression as well as a feeling for the current state of research. Students will learn how to analyze the trends as well as their implications for organizations or society as a whole as well as political dimensions.

Intended Learning Outcomes:
After participating in this module students will be able to name current technological trends which are part of research activities at TUM. Students will have been encouraged to consider upcoming trends with an open mindset. They will be able to identify and analyze technological developments and to consider potential areas of application for those novelties. Students will understand the need for interaction between new technological developments and other management functions in

the organization. They will be enabled to transfer their learnings from the technological site into an organizational context.

Teaching and Learning Methods:
The content will be conveyed to the students by means of a verbal presentation in a lecture style and discussed with the students. Lab visits will accompany each lecture if procurable. In group work, participants analyze the trends as well as their implications for organizations or society as a whole. Individual and group work will be used to reflect on future implications for organizations and society.

Media:
media mix

Reading List:
changing on the basis of the latest research results

Responsible for Module:
Prof. Dr. Hana Milanov

Courses (Type of course, Weekly hours per semester), Instructor:

For further information in this module, please click campus.tum.de or here.

Module Description

WI201081: Growth Strategies & Business Models | Growth Strategies & Business Models

Version of module description: Gültig ab winterterm 2019/20

Module Level: Master	**Language:** English	**Duration:** one semester	**Frequency:** winter semester
Credits:* 6	**Total Hours:** 180	**Self-study Hours:** 120	**Contact Hours:** 60

Number of credits may vary according to degree program. Please see Transcript of Records.

Description of Examination Method:
Written project work in groups/individually (50%), group presentation and discussion (50%) - The examination consists of a presentation of contents and results of the group task, including a written paper containing the results and their evaluation and an in-class presentation containing a discussion of the project and future challenges. The paper is a means to assess students' theoretical understanding of the market opportunity identification and evaluation concepts, their ability to apply these concepts to practical application scenarios, their ability to theorize from the practical experiences made, and their ability to communicate the results obtained in a written form. The in-class presentation is a means to measure students' ability to structure and present their findings comprehensibly and present them in an appropriate manner within a limited time frame to a target audience. Students' reactions to questions and notations from the audience are part of the presentation and reflect their ability to defend the results obtained.

Repeat Examination:
End of Semester

(Recommended) Prerequisites:
none

Content:
The identification of market opportunities for a new technology is one of the most challenging tasks technology managers are faced with, and one that is particularly prone to be influenced by cognitive biases and unfavorable decision heuristics. However, if it is done right it can also be highly rewarding task – not only for the individual inventor and her or his team, but also for stakeholders such as future employees, the school, the region and the country.
Students will work hands-on on questions of how to grow. Supported by insights into academic work and theories, students will work as a team to solve one specific growth challenge of one

Munich-based start-up. In so doing, they will not only see the many challenges and opportunities growth brings with it, but they will also see the inner workings of technology-oriented companies aspiring to make growth a reality.

Intended Learning Outcomes:
Students will be able to
- Understand the process of market opportunity identification and evaluation in the context of new technologies.
- Practically apply this understanding by developing commercialization scenarios and strategies for early stage technologies.
- Create theoretical conceptualizations from the practically experienced underlying opportunity identification and evaluation process at the end of the class and communicate the results of these processes effectively in written and oral form.

Teaching and Learning Methods:
In the seminar, students will get to know the core theoretical concepts underlying the market opportunity identification phenomenon. Students will work in groups on a proposal paper, i.e. generate ideas for market applications, identify problems, analyze and evaluate alternatives, and develop plans and strategies. Thereby they can apply theoretical knowledge and will be able to experience the early stages of technology application first hand. The students will not only see the progress the project is making, but in parallel will be able to observe the other projects. In teams the students will be coached by experts during a coaching session and will reflect on the prior theory and acquired practical knowledge in class.

Media:
media mix

Reading List:
changing on the basis of the latest research results

Responsible for Module:
Prof. Dr. Hana Milanov

Courses (Type of course, Weekly hours per semester), Instructor:

For further information in this module, please click campus.tum.de or here.

Module Description

WI201082: Project Work | Project Work

Version of module description: Gültig ab winterterm 2019/20

Module Level: Master	**Language:** English	**Duration:** one semester	**Frequency:** winter semester
Credits:* 6	**Total Hours:** 180	**Self-study Hours:** 160	**Contact Hours:** 20

Number of credits may vary according to degree program. Please see Transcript of Records.

Description of Examination Method:
Written project work in groups (50%) and group presentation (50%) - The project work is a practical project where a student team works on a specific task of a company. Here the students frame the state of research and evolve their own specific solution. Based on scientific knowledge and methodical skills, the students develop the task. Student teams present the results of the project work in a term paper and as a group presentation.

Repeat Examination:
End of Semester

(Recommended) Prerequisites:
none

Content:
In the project work, students acquire hands-on experience by working in student teams within companies on a particular assignment. They define the structure of the project and employ state-of-the-art methods and theories to develop results of practical value for the company.

Intended Learning Outcomes:
At the end of this module students are able to handle and develop a real-world project in an (international) team in a systematic way. They learn how to cope in a team with new and complex projects and develop solutions jointly.

Teaching and Learning Methods:
The creation of the project solution in a team encourages the students to deal soundly with a practical subject. They are able to communicate the evolvment of the project within the team and to present the solution to the supervisors from the company and the university.

Media:
media mix

Reading List:
specific literature based on the topic, to be defined with project supervisor and partner corporation

Responsible for Module:
Prof. Dr. Dr. Holger Patzelt

Courses (Type of course, Weekly hours per semester), Instructor:

For further information in this module, please click campus.tum.de or here.

Module Description

WI201083: Personal & Leadership Development | Personal & Leadership Development

Version of module description: Gültig ab winterterm 2019/20

Module Level: Master	**Language:** English	**Duration:** one semester	**Frequency:** winter semester
Credits:* 6	**Total Hours:** 180	**Self-study Hours:** 120	**Contact Hours:** 60

Number of credits may vary according to degree program. Please see Transcript of Records.

Description of Examination Method:
Active participation within the module (pass/fail/"Studienleistung") - Students will have to discuss actively to show that they are able to reflect on themselves, their behavior within a group as well as a lateral leader. Students will reflect their own experiences in business relationships, especially within project teams. Furthermore, students will have to demonstrate their developed communication skills in presentations to the group.

Repeat Examination:
End of Semester

(Recommended) Prerequisites:
none

Content:
Students will learn the relevant theories and models of lateral leadership. They will reflect on their current behavior, define development goals and further discuss and reflect them during the module. They will also be taught how to give and receive feedback in an appropriate way within a business context. Presentation skills, considering different audiences, will be an important part of the module. Tools for career planning as well as for networking will be explained to the students. In addition, they will get to know project management tools. Advice on their personal career as well as continuous feedback will accompany the whole module.

Intended Learning Outcomes:
After participating in this module, the students are able to reflect on their own habits and behavior and develop their demeanor as well as their personal style to structure and lead projects with non-hierarchical power. Students will also be able to give and receive feedback regarding working style and leadership behavior, especially addressing lateral leadership.

Teaching and Learning Methods:
Workshops will be used to familiarize students with theories and research results. Lateral leadership skills and communication will be practiced in small groups performing physical exercises. In 1-on-1 sessions, the personal development of the participants will be discussed. Students will define development goals and further discuss them with a learning partner. In between, they will try to work on their lateral leadership style and give and receive feedback on their attempts.

Media:
media mix

Reading List:
changing on the basis of the latest research results

Responsible for Module:
Prof. Dr. Claudia Peus

Courses (Type of course, Weekly hours per semester), Instructor:

For further information in this module, please click campus.tum.de or here.

Master's Thesis | Master's Thesis

Module Description

WI900262: Master's Thesis | Master's Thesis

Version of module description: Gültig ab summerterm 2018

Module Level: Master	**Language:** English	**Duration:** one semester	**Frequency:** winter/summer semester
Credits:* 30	**Total Hours:** 900	**Self-study Hours:** 880	**Contact Hours:** 20

Number of credits may vary according to degree program. Please see Transcript of Records.

Description of Examination Method:
Individual thesis - Students will have to hand in a written thesis in which they work on a self chosen real-life project. The students are also free to write their master's thesis at a Chair of the TUM School of Management to support a research project at TUM. They have to analyze the key issues of their subject and apply the learnings of a detailed module or different modules of the Master in Management & Innovation into their thesis. The thesis should be done full-time.

Repeat Examination:

(Recommended) Prerequisites:
Successfully passing of minimum 45 out of 60 credits in the range of the the required modules and minimum 6 credits in the range of the electives

Content:
free of choice

Intended Learning Outcomes:
Students will learn to summarize, to compare, to synthezise, to analyze and to extend methodologically demanding economic literature and research questions. They will be able to write a scientific text in a consize form and identify research gaps, adress these gaps with distinctive research questions, try to answer these questions with the appropriate research methods and critically discuss their findings

Teaching and Learning Methods:
The students discuss their first and pre-final results with their individual advisor to get further feedback within the process.

Media:

Reading List:

Responsible for Module:

Courses (Type of course, Weekly hours per semester), Instructor:

For further information in this module, please click campus.tum.de or here.

Alphabetical Index

D

G

I

M

P

R

T

[WI201080] Technological Trends | Technological Trends 8 - 9