Module Catalog

M.Sc. Consumer Science

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

### [20181] Consumer Science

<table>
<thead>
<tr>
<th>Required Modules</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>[WI000739] Consumer Behavior [none]</td>
<td>6 - 7</td>
</tr>
<tr>
<td>[WI001174] Qualitative and Quantitative Methods in Consumer Research</td>
<td>8 - 10</td>
</tr>
<tr>
<td>[WI001175] Consumer Behavior Research Methods</td>
<td>11 - 12</td>
</tr>
<tr>
<td>[WI001178] Consumer Analytics &amp; Big Data [CABIDA]</td>
<td>13 - 14</td>
</tr>
</tbody>
</table>

### Electives in Economics

<p>| |</p>
<table>
<thead>
<tr>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>[WI000740] Consumer Economics and Policy</td>
</tr>
<tr>
<td>[WI001056_1] Principles of Economics</td>
</tr>
</tbody>
</table>

### Specialization in Management

#### Specialization in Management: Innovation and Entrepreneurship

<p>| |</p>
<table>
<thead>
<tr>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Advanced Seminar Innovation and Entrepreneurship</td>
</tr>
</tbody>
</table>

#### Elective Modules Innovation and Entrepreneurship

<p>| |</p>
<table>
<thead>
<tr>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>[WI000116] Lead User Project [LUP]</td>
</tr>
<tr>
<td>[WI001136] Innovation, Society, and Public Policy</td>
</tr>
<tr>
<td>[WI001147] Exploring society through future technologies</td>
</tr>
<tr>
<td>[WI001150] Sustainable Entrepreneurship - Theoretical Foundations</td>
</tr>
<tr>
<td>[WI001165] Sustainable Entrepreneurship - Getting Started</td>
</tr>
<tr>
<td>[WI001166] Advanced Topics in Innovation &amp; Entrepreneurship: Entrepreneurial Prototyping</td>
</tr>
</tbody>
</table>

#### Specialization in Management: Marketing, Strategy and Leadership

<p>| |</p>
<table>
<thead>
<tr>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Advanced Seminar Marketing, Strategy and Leadership</td>
</tr>
<tr>
<td>[WIB17003] Advanced Seminar Marketing, Strategy &amp; Leadership: Judgement and Strategic Decision Making</td>
</tr>
</tbody>
</table>

#### Elective Modules Marketing, Strategy and Leadership

<p>| |</p>
<table>
<thead>
<tr>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>[WI000994] Negotiation Strategies</td>
</tr>
<tr>
<td>[WI001128] Strategies in MNEs</td>
</tr>
<tr>
<td>[WI001140] Luxury Marketing</td>
</tr>
</tbody>
</table>

#### Specialization in Management: Consumers, Technology and Sustainability

<p>| |</p>
<table>
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<tr>
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</thead>
<tbody>
<tr>
<td>Advanced Seminar Consumers, Technology and Sustainability</td>
</tr>
<tr>
<td>[WI001179] Advanced Seminar Consumers, Technology &amp; Sustainability</td>
</tr>
</tbody>
</table>

#### Elective Modules Consumers, Technology and Sustainability

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<table>
<thead>
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</thead>
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<tr>
<td>[ED0027] History of Consumption Goods</td>
</tr>
<tr>
<td>[POL00011] Politics for Rocket Scientists: An Introduction to Political Science for Non-Political Scientists</td>
</tr>
<tr>
<td>[POL40100] Introductory Lecture: Politics and Technology</td>
</tr>
</tbody>
</table>

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Module Catalog of the course of studies M.Sc. Consumer Science

Generated on 22.07.2019

Page 3 of 89
[POL70070] Ethics of Technology 64 - 65
[WI000286] Environmental and Natural Resource Economics 68 - 69
[WI001147] Exploring society through future technologies 70 - 71
Advanced International Experience 72
[WI001181] Advanced International Experience 73 - 74
Electives in Consumer Science and Technology 75
  Innovation and Entrepreneurship 76
  Marketing, Strategy and Leadership 77
  Consumers, Technology and Sustainability 78
Other Electives 79
Project Studies 80
  [WI900686] Project Studies (Master in Consumer Science) 81 - 82
Master's Thesis 83
  [WI900766] Master's Thesis (Master in Consumer Science) 84 - 85
Auflagen 86
  Requirement Proof of Proficiency in German 87
Required Modules
Module Description

WI000739: Consumer Behavior  [none]

TUM School of Management

<table>
<thead>
<tr>
<th>Module Level:</th>
<th>Language:</th>
<th>Duration:</th>
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<tbody>
<tr>
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Number of credits may vary according to degree program. Please see Transcript of Records.

Description of Examination Method:
The written examination (120 min) contains a question part and a case study part. The objective of the questions is to test if the students remember and understand the relevant aspects of consumer behavior. Students are asked to explain theoretical approaches to consumer behavior, affective and cognitive processes influencing consumer behavior, consumer decision-making and marketing aspects of consumer behavior. In addition, the case study part of the exam is to assess if learned concepts can be applied to a specific socio-economic context.

Repeat Examination:
Next semester

(Recommended) Prerequisites:

Content:
The objective of this module is to provide students with an understanding of consumer behavior and scientific approaches to consumer behavior research. The students get to know the main models of consumer behavior and the main determinants of consumer behavior in the cultural and socio-demographic background. The module also provides an understanding of how consumers make choices and which factors influence the process of decision-making.

Intended Learning Outcomes:
At the end of the module the students will be able to understand types and trends in consumer behavior. They will be able to apply different theoretical approaches to consumer behavior and to analyze consumer behavior in different socio-economic contexts. Students will also be able to analyze the implications of market developments for consumer behavior.

Teaching and Learning Methods:
The module consists of a lecture and an exercise. During the lecture the contents are delivered via presentation and talks. Exercises involve group discussions, case studies and discussion of scientific articles.

Media:
slides, case studies, exercises

Reading List:
4th Edition. Financial Times Prentice Hall. Additional references are provided in the course.

**Responsible for Module:**
Jutta Roosen, Prof. Dr. (jroosen@tum.de)

**Courses (Type of course, Weekly hours per semester), Instructor:**
Consumer Behavior (WI000739) (lecture, 2 SWS)
Dolgopolova I

Consumer Behavior - Exercise (WI000739) (exercise, 2 SWS)
Dolgopolova I, Groß S

For further information in this module, please click [campus.tum.de](http://campus.tum.de) or [here](http://here).
Module Description

**WI001174: Qualitative and Quantitative Methods in Consumer Research**

TUM School of Management

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

**Description of Examination Method:**

The learning outcomes of this module will be evaluated by means of an exam (120 minutes) at the end of the semester. The exam consists of two parts each representing one part of empirical research methods.

In the first part students show that they know and that they can apply the basic descriptive and inductive methods of quantitative research. In a computer-based exam (60 minutes) students show their ability to differentiate between the different methods and to apply them to an unknown data set using the software SPSS. Students proof that they are able to conduct basic data analyses with SPSS and that they are able to evaluate and interpret the outcomes. Moreover they proof that they can draw significant conclusions from their data analysis based on their statistical knowledge. By answering additional questions, students reproduce basic statistical methods and formulas and rewrite their purpose in their own words. Finally, they need to be able to explain the advantages of quantitative methods for certain research questions as compared to qualitative methods.

In the second part of the exam (60 minutes) students proof that they can reproduce the basic theoretical concepts of qualitative research methods. By answering standardized questions students show, that they remember and understand and are able to compare case study and ethnographic research and the different means of data collection (verbal, written, visual). In addition, they must be able to explain for what kind of research questions, qualitative designs are better suited than quantitative designs. By answering open questions students have to transfer their acquired knowledge to answer practical problems by providing own examples. Students show that they are able to evaluate research designs, data collection and analysis methods. They need to show that they are able to apply systematic analysis of qualitative data for theory development.

**Repeat Examination:**

Next semester

(Recommended) **Prerequisites:**

Introduction to statistics

**Content:**

**Quantitative RM:**

- Explorative data analysis (Process of a statistical analysis, Identifying appropriate sample sizes, Scales of measurement, Organisation of data sets, descriptive statistics);
- Confirmatory data analysis (non-parametric and parametric hypothesis testing);
- Multivariate data analysis (Correlation analysis, Anova, Regression analysis)

**Qualitative RM:**

At the beginning of the 21st century, qualitative research has become an established method of inquiry in human
and social sciences, including management, marketing and consumer research. In this course the students will learn about the nature, designs, and methods of qualitative research. Apart from the collection of qualitative data in different forms (verbal, written, visual), a special emphasis is put on the systematic analysis of qualitative data for theory development. Furthermore, a brief introduction into Maxqda is given, a leading software programme for the documentation and analysis of qualitative data.

**Intended Learning Outcomes:**
Upon successful completion of this module, students will have achieved a basic knowledge of quantitative and qualitative research methods and will be able to apply these for future research. Moreover students are able to weigh and to decide if quantitative or qualitative methods are appropriate to solve related research questions. They can recommend which way of data collection (quantitative, qualitative, a combination) will be the best for a present study or research question.

Distinguished between the two main ways of empirical research methods, students will have the following competencies:

Quantitative Methods ¿ students will be able to:
1. Name the theoretical background of statistical analyses;
2. Summarize and apply basic descriptive methods;
3. Study and describe data (e.g. graphically and by means of statistical parameters);
4. Discuss and apply inductive methods to draw significant conclusions from sample data, e.g. hypothesis testing, and multivariate methods up to regression analysis;
5. Apply the descriptive and inductive methods in the software package SPSS.

Qualitative methods ¿ students will be able to:
1. Define, understand and appreciate qualitative research;
2. Understand case studies and ethnography as two approaches of qualitative research;
3. Apply qualitative research methods for data collection and analysis;
4. Understand how to use software (Maxqda) for data analysis.

**Teaching and Learning Methods:**
Quantitative methods will be taught as lectures and computer exercises. In the lecture, students get to know the statistical procedures and models. In the exercises student learn to apply the knowledge using data and the software package SPSS. In addition to lectures, qualitative methods are approached in group work and discussions, as well as cases. Lectures will provide the students with the relevant theoretical concepts and the required basic knowledge, which will then be consolidated and tested in practical group work tasks.

**Media:**
slides, blackboard, computer exercises

**Reading List:**
Additional references are provided in the course.

**Responsible for Module:**
Belz, Frank-Martin; Prof. Dr. oec.

**Courses (Type of course, Weekly hours per semester), Instructor:**
Qualitative Research Methods (WI000376, WI000727, WI001174) (lecture with integrated exercises, 2 SWS)
Belz F

Quantitative Research Methods (WI000727, WI001174) (lecture with integrated exercises, 2 SWS)
Roosen J, Roosen J
For further information in this module, please click campus.tum.de or here.
Module Description

**WI001175: Consumer Behavior Research Methods**

TUM School of Management

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<thead>
<tr>
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<th>Duration:</th>
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Number of credits may vary according to degree program. Please see Transcript of Records.

**Description of Examination Method:**
The grading is based on a 120-minute written exam. To test whether the students acquired sufficient knowledge and the ability to conduct a consumer behavior research project, in the exam, they are asked to explain important concepts, perform key calculation, and compare alternative designs given a specific condition. The students are also given the estimation results from an actual consumer behavior research project, and asked to evaluate the design and interpret the results. Through these tasks, the students are tested whether they developed the ability to correctly analyze the data and assess the validity of real-world consumer behavior research projects.

**Repeat Examination:**
Next semester

**(Recommended) Prerequisites:**
Introductory statistics, principle of consumer behavior

**Content:**
The module aims to provide the students with the necessary skills to correctly conduct a consumer behavior research study, and evaluate the findings from the corresponding study. As most consumer behavior research projects require the appropriate use of quantitate data, emphasis is given to the quantitative aspect of consumer behavior research, practical data analysis, and the interpretation of research results. The topic covered in the course includes survey design, questionnaire design, attitude measurement, sampling schemes, factor analysis, cluster analysis, and conjoint analysis.

**Intended Learning Outcomes:**
At the end of the module, students will be able to (1) properly define a consumer behavior research problem and hypothesis, (2) develop a questionnaire that efficiently gathers necessary information, (3) choose the right sampling procedure, (4) analyze the data using the state-of-the-art methods such as factor analysis, cluster analysis or conjoint analysis, and (5) evaluate the research outcome correctly, which helps them to make smart and fact-based decision making.

**Teaching and Learning Methods:**
The module consists of a lecture and an exercise. The lecture explains the underlying concepts and theories used in the consumer behavior research project. The exercise, on the other hand, provides the students the opportunity to apply the theory covered in the lecture part to the real-world consumer behavior research problem, which includes hypothesis development, questionnaire design, data collection, data entry and data analysis.

**Media:**
Slides, textbooks, blackboard, exercise on data analysis
Reading List:
Additional references are provided in the course.

Responsible for Module:
Fuchs, Christoph; Prof. Dr.

Courses (Type of course, Weekly hours per semester), Instructor:
Consumer Behavior Research Methods - Exercise (WI000939, WI001175) (exercise, 2 SWS)
Granulo A

Consumer Behavior Research Methods (WI000939, WI001175) (lecture, 2 SWS)
Granulo A

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

WI001178: Consumer Analytics & Big Data  [CABIDA]

TUM School of Management

Module Level: Master  
Language: English  
Duration: one semester  
Frequency: summer 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:
The examination will be a 60-minute written exam consisting of multiple-choice-questions designed to assess the students' understanding of the basic concepts of marketing strategy, consumer analytics and the R programming language. Some questions will require basic calculations or the ability to produce several lines of programming code for students to show their ability to implement fundamental data analytics techniques using the R statistical programming language. Participants will also be required to demonstrate their capacity for abstraction using the marketing strategy framework. By identifying appropriate analytical techniques and drawing correct statistical inferences based on obtained analytical results or graphical visualizations they show their ability to interpret findings in order to facilitate effective data-driven decision-making.

Repeat Examination: 
Next semester

(Recommended) Prerequisites: 
Research Methods (quantitative) and foundations in Statistics

Content: 
The module will cover the following topics: 
- Marketing Strategy  
- Managing Customer Heterogeneity  
- Managing Customer Dynamics  
- Managing Sustainable Competitive Advantage  
- Managing Resource Trade-offs  
- Implementing Marketing Principles and Data Analytics  
- Analytics Infrastructure  
- Fundamentals of Data Analysis in R  
- Data Visualization  
- Consumer Analytics in R  
- Marketing Research Projects

Intended Learning Outcomes: 
Upon successful completion of the module, students will be able to: 
1. apply marketing strategies to deal with a variety of common marketing problems. 
2. analyze marketing strategies by means of various analytical procedures 
3. implement fundamental data analytics techniques using the R statistical programming language 
4. interpret findings in order to facilitate effective data-driven decision-making
The module will consist of a lecture and an exercise course. The lecture will provide the students with a foundational marketing strategy framework, an overview of resulting challenges for businesses and analytical methods to manage them. This will be supplemented by in-class discussions. As part of the exercise sessions students will learn how to apply the framework and implement analytical techniques using the R programming language. In addition, the exercise sessions will provide an interactive learning environment where students can work in small groups on analytics projects.

**Teaching and Learning Methods:**
The module will consist of a lecture and an exercise course. The lecture will provide the students with a foundational marketing strategy framework, an overview of resulting challenges for businesses and analytical methods to manage them. This will be supplemented by in-class discussions. As part of the exercise sessions students will learn how to apply the framework and implement analytical techniques using the R programming language. In addition, the exercise sessions will provide an interactive learning environment where students can work in small groups on analytics projects.

**Media:**
Slides, handout, textbooks, research articles, exercise sheets, programming exercises

**Reading List:**

**Responsible for Module:**
Ungemach, Christoph; Prof. Dr.

**Courses (Type of course, Weekly hours per semester), Instructor:**
Consumer Analytics & Big Data (WI001178) - Exercise (exercise, 2 SWS)
Kaliappan B, Ungemach C

Consumer Analytics & Big Data (WI001178) (lecture, 2 SWS)
Ungemach C

For further information in this module, please click [campus.tum.de](http://campus.tum.de) or here.
Electives in Economics
Module Description

WI000740: Consumer Economics and Policy

TUM School of Management

**Module Level:** Master
**Language:** English
**Duration:** one semester
**Frequency:** winter semester

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<th>Credits:*</th>
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**Description of Examination Method:**
The module entails a written exam at the end of the term (120 minutes). The objective of the questions is to test if the students understand the relevant aspects of microeconomic theory. To test whether students remember aspects of consumer policy knowledge questions are asked. Using mathematical exam questions the students show the ability to understand modelling of consumer economics and welfare implications. Moreover students show their ability to analyze economic decisions of consumers using economic methods. They assess the welfare impacts of consumer policy instruments.

**Repeat Examination:**
Next semester

**(Recommended) Prerequisites:**
Principles of economics, principles of calculus

**Content:**
The module provides an introduction to microeconomic approaches used to explain and analyse consumer decisions based on rational choice theory. The module covers principles of utility theory as well as the impacts of policy measures on consumer choice and welfare. Against this background the module discusses the economic rationale of consumer policy, such as information asymmetries, competition policy, information policy, quality and safety assurance, liability and contract law. The students are introduced to a selection of consumer policy institutions and organisations. Special topics such as household production theory and financial decision making are covered.

**Intended Learning Outcomes:**
At the end of the module students are able (1) to describe and (2) explain microeconomic models of consumer and household decision making. They are able (3) to analyze economic decisions of consumers in an economic context and (4) can argue economic justifications for consumer policy. Furthermore, students (5) can express the principal institutions involved in the formulation of consumer policy and (6) assess the welfare impacts of consumer policy instruments.

**Teaching and Learning Methods:**
The module consists of a lecture and an exercise. During the lecture the contents are delivered via presentations and talks. Theoretical concepts are illustrated via examples from the consumer world. In the exercise students apply the discussed theories by conducting case studies to improve understanding.
Media:
slides, references and blackboard, exercises, group discussions

Reading List:

Responsible for Module:
Roosen, Jutta; Prof. Dr. Ph.D.

Courses (Type of course, Weekly hours per semester), Instructor:
Consumer Economics and Policy (WI000740) (lecture with integrated exercises, 4 SWS) Staudigel M

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

WI001056_1: Principles of Economics

TUM School of Management

<table>
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<tr>
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Description of Examination Method:
Students receive credit for the module by passing a multiple choice exam (written, 120 minutes). The exam is a means to measure the participants' understanding of fundamental micro- and macroeconomic concepts and methods. Moreover, the exam assesses the students' ability to apply economic theory to concrete problems. Hereby, participants demonstrate their capacity for abstraction (thinking in economic models) and concretization (interpreting and applying the results of the model).

Repeat Examination:
Next semester

(Recommended) Prerequisites:
None

Content:
This module provides an introduction to the basic concepts of economics. It is divided into two parts: micro- and macroeconomics. Microeconomics deals with the behavior of individual agents, such as households, firms, and public institutions and with their interaction on markets. How can market demand be derived from the consumption choices of households? How can market supply be derived from the production decisions of firms? Which mechanisms give rise to an equalization of demand and supply? What are the consequences of market failure, and what can the state do about it? Macroeconomics takes an aggregated perspective; it analyzes the economy as a whole. How can economic activity, inflation, and unemployment be measured? What are the factors that determine economic growth? Which mechanisms give rise to economic fluctuations, and how can these fluctuations be mitigated through fiscal and monetary policy?

Intended Learning Outcomes:
At the end of the module the students will be able to understand and explain the basic principles of economics. On the micro level, this includes consumer behavior as well as firms' production decisions. The students will be able to analyze basic mechanisms that give rise to the equalization of supply and demand in competitive markets. Having attended the module, the students will be able to understand the interrelation between market power and social welfare and will be able to explain market failures. On the macro level, students will be able to identify and explain the main sources of growth, unemployment, and inflation. Moreover, they will be able to analyze the basic tools of monetary and fiscal policy.

Teaching and Learning Methods:
The module consists of a lecture as well as an integrated exercise. The lecture content will be conveyed to the
students by means of a verbal presentation. In the exercise participants apply the acquired knowledge by solving exercises and implementing case studies. The course aims at encouraging students to independently deliberate the economic problems, which are discussed in the lecture and in the relevant literature.

**Media:**
text books, script

**Reading List:**

**Responsible for Module:**
Freiherr von Weizsäcker, Robert; Prof. Dr.

**Courses (Type of course, Weekly hours per semester), Instructor:**
Principles of Economics (WI001056_1) (lecture with integrated exercises, 4 SWS)
Feilcke C

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

At least one of the three specializations must be selected.
Specialization in Management: Innovation and Entrepreneurship

One of the management specializations in the following three tables must be selected. In the chosen specialization, one seminar must be successfully completed from the seminars offered in the framework of the Advanced Seminar for at least 6 credits. In addition, within chosen specialization, additional electives of a total of 12 credits must be earned from a supplementary elective catalog. The following is an example of such a catalog.
Advanced Seminar Innovation and Entrepreneurship
Module Description

WIB18812_1: Advanced Seminar Innovation & Entrepreneurship: Ideation & Venture Creation

TUM School of Management

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

Description of Examination Method:
The grading is based on a research paper (10-15 pages, 75% of grade) and a presentation (15 min + 15 min interaction with the audience, 25% of grade). The research paper and the presentation will be conducted in groups formed in the introductory session. An assessment sheet filled in by the students and handed in with the research paper clarifies students' individual contribution to the research paper. As every student will present in the final presentation, every students' contribution is clearly identifiable and appraisable, thus, students can be graded individually. Based on the research paper it is examined to which extent students are able to elaborate complex topics in the field of entrepreneurship research. The research paper is a means to measure how students were able to understand previous academic literature in the field of entrepreneurship, how they achieved to define their own research question, collect and analyze data, and provide a relevant, novel, and interesting contribution to entrepreneurship research. A final presentation measures students' communicative competencies and proves if students are able to present their findings in a comprehensible, precise and demonstrative way as well as whether they are able to perform powerfully and professionally.

Repeat Examination:
Next semester / End of Semester

(Recommended) Prerequisites:
none

Content:
The module deals with different topics within entrepreneurship research such as
- discovering entrepreneurial role models,
- psychology of entrepreneurship,
- entrepreneurial leadership,
- ideation and venture creation,
- venture growth and
- internationalization and strategic entrepreneurship.

The module prepares students for the scientific work in their master theses and provides them with deepening insights into scientific literature on entrepreneurship. Besides writing a seminar paper, this involves presenting their final results.
Intended Learning Outcomes:
Upon successful completion of this module, students will be able (1) to read and (2) understand scientific literature on the topic of entrepreneurship. Furthermore, students are able (3) to create their own research paper, i.e., identifying a relevant, interesting, and new research topic in the field of entrepreneurship, crafting a strong title, writing a compelling and strong introduction (and abstract), execute an extensive literature review and applying theory, structure the research paper meaningful, writing a strong discussion and conclusion, and complying with the ethics of writing. Additionally, they will be able (4) to present their research paper and (5) summarize their findings. Moreover, students learn how (6) to lead a scientific discussion. Finally, they (7) understand the process of scientific publication. Moreover, working in groups will provide students with communication and cooperation skills.

Teaching and Learning Methods:
The module consists of an introduction to scientific writing where the topics for each student's research paper will be decided. Topics vary and cover entrepreneurship on an individual (e.g., entrepreneurial decision making, entrepreneurial intentions), team (e.g., entrepreneurial team formation, entrepreneurial exits), or organizational level (e.g., interplay of form, structure, and embeddedness in corporate entrepreneurship). Based on their topic students prepare their research paper which they will present at the end of the module. Upon prior discussion on different research methods and how to use them, the students will identify and apply a research methodology that best addresses their identified research question, i.e., they can apply empirical research methods (qualitative or quantitative), a literature review, or conduct a conceptual paper. Furthermore, the module involves (group and/or) individual feedback sessions, where students can share their progress and receive feedback. The students are supervised by the instructors of the module who are members the chair. Within the module the topics will be discussed after the final presentations.

Media:
MS Office, PowerPoint, Whiteboard, Flipchart

Reading List:
Further readings will be announced at the course introduction.

Responsible for Module:
Patzelt, Holger; Prof. Dr. rer. pol.

Courses (Type of course, Weekly hours per semester), Instructor:
Advanced Seminar Innovation & Entrepreneurship (WIB18812_1): Ideation & Venture Creation (seminar, 4 SWS)
Patzelt H [L], Mittermaier A

For further information in this module, please click
[Campus.TUM.de](campus.tum.de) or [here](#).
Elective Modules Innovation and Entrepreneurship
Module Description

WI000116: Lead User Project [LUP]

TUM School of Management

Description of Examination Method:
The progress of the project is verified several times during the different project phases.
- Midterm presentation (voluntary): Students have to show that they developed critical knowledge and competencies with the industry of the project partner and that they identified trends and needs in the respective industry.
- Final presentation (30 minutes): Students propose different workshop combinations of lead users and assess constellations of expert panels based on their industry insights they developed over the course of the project.
- Project report (25 pages): Students document their key learnings along the entire project process as well as how the project contributes to their personal development into a successful career in management.
Students learn to present results in front of our cooperation partner. Furthermore, they document the results in a project report including the scientific theory of the lead user method.
Consistently, grading of the module is based on a project work (project report 25 pages and presentation 30 minutes). The progress of the project is verified several times during the different project phases.
Students have the possibility of a midterm presentation in which they have to show that they dealt with the industry of the project partner. They show their ability to identify and consider trends and needs in the respective industry. This midterm presentation is highly recommended because students can gain further knowledge for their final presentation. With this presentation the final grade can be improved by 0,3/0,4.
With the final presentation students show on the one hand the project progress and propose different workshop combinations of lead users. On the other hand they show their ability to conduct interviews with experts and to communicate and present on a high business level. They are able to judge the branch-specific challenges and identify experts who complete each other perfectly in workshops.
In the project report the students show their ability to document their project process and their findings in a clear and comprehensible manner. Furthermore they show their ability to analyze and evaluate the challenges in this industry.
With this project work students show that they can present results in front of our cooperation partner. Furthermore they show that they can compose a project report in which they formulate their practical results and combine them with the scientific theory of the lead user method.
The project work is conducted by teams of 4 students. Students demonstrate their ability within a team to manage resources, and deadlines through timely submission of the enumerated tasks. The project work is set up in a way which enables the identification and evaluation of each student's individual contribution to the project's success.

Repeat Examination:
Next semester

(Recommended) Prerequisites:
Fundamentals of Technology and Innovation Management
Content:
The lead user project is a practical module. Participants in teams of 4 perform a lead user project in cooperation with an industry partner.
- We apply the lead user method developed by Eric von Hippel at MIT
- Starting point is the industry of our cooperation partner

The participants learn to understand the target industry:
- Search for trends and needs in the industry
- Identification of lead users

Students get to know the cooperation partner as well as its industry. The students are working independently and are coached regularly. In addition two professional presentation coachings are offered. Dr. Christian Hackl from TUMtech gives Feedback how to improve presentation content and style.

A successful participation encourages students to be creative, proactive, and work in teams.

Intended Learning Outcomes:
After successful completion of this module students will be able to describe the lead user method and understand its advantages. Students will know different methods to identify trends and needs. They will be able to deal intensively with a targeted industry and can evaluate the challenges in this industry. They will be able to identify experts and to develop a workshop for these experts. The students will be able to present their results in front of company representatives. Furthermore, they will be able to document their results in a clear and comprehensible manner.

Students can contribute an own part to a team’s work output. Students are able to exchange in a professional and academic manner within a team. They show that they are able to integrate involved persons into the various tasks considering the group situation. Furthermore the students conduct solution processes through their constructive and conceptual acting in a team.

Teaching and Learning Methods:
During a real life innovation project students learn the theory of the lead user method and apply it during the module. The module is a practical project and the students get to know the different stages of a lead user project and work together with our industry partner. The students deal intensively with the target industry.
- During the kick-off the lead user method is explained
- The students work independently and are coached regularly during the project
- Students present their results after the first phase (need identification) and at the end of the project (lead user identified)
- Before the presentations a professional presentation coaching with Dr. Christian Hackl (TUMtech) will take place

Media:
Participants receive all presented slides and research papers about the lead user method.

Reading List:
**Responsible for Module:**
Henkel, Joachim; Prof. Dr. rer. pol.

**Courses (Type of course, Weekly hours per semester), Instructor:**
Lead-User Project (WI000116) (seminar, 4 SWS)
Henkel J, Fischer M, Obermeier D

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

WI001136: Innovation, Society, and Public Policy

TUM School of Management

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<tr>
<td>Master</td>
<td>English</td>
<td>one semester</td>
<td>summer semester</td>
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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:
The grading will be based on one final research paper ("Seminararbeit") (approx. 15 pages) due approximately 6 weeks after the term ends. The paper will allow assessing comprehensively student capabilities to (1) understand and structure complex problems at the intersection of innovation, society, and public policy; (2) apply and combine various concepts and analytic tools acquired in class; (3) take normative and critical stances towards current policy developments; (4) argue convincingly in English, using policy jargon. Students will be allowed to use all course materials, online, and other resources to complete their papers. However, they are not allowed to accept help from someone else or to work in groups. The final paper will account for 100% of the course grade.

Repeat Examination:
End of Semester

(Recommended) Prerequisites:

Content:
This course provides a graduate-level introduction to the key questions and issues facing policy-makers and societies when trying to understand, govern, and live with innovation. Students will explore how innovation enters the policy-process (and vice versa); how emerging technologies and scientific progress pose questions that require political and public attention; and how innovation is (or isn't) being governed through political institutions.

Over the course of the semester, students will acquire a range of concepts and analytic lenses from the fields of Science and Technology Studies (STS) and Public Policy that will help them to deal with complex questions surrounding the policy and politics of innovation. They will learn to identify fundamental patterns and recurring tensions in innovation policy -- including technocratic vs. deliberative-democratic governance of innovation(s), deterministic vs. constructivist explanations of innovation success and failure, universal innovation models vs. irreducible socio-political contingency etc. -- and learn how to speak about them with confidence in the context of their own research. In particular, students will be encouraged to take and defend a normative position on the questions and cases they encounter during the class. For example, should the state intervene in innovation? Should life forms be patentable? How should we asses the benefits, costs and risks of innovation? What should count as innovative activity? Case studies will draw upon a range of innovative fields and domains, including biotechnology, information technology, manufacturing, and various nation-level policy strategies.

Among the range of topics covered are:

- What is innovation? What do engineers, executives, and policy makers refer to when they talk about innovation?
  How have the social sciences conceptualized innovation in theoretical terms?
- How is innovation organized? What is the (right) role of science, businesses, government, and other members of
society?
- How do innovations shape societies? Who benefits from innovation, and who loses? Can we separate technical and social innovations - and if so, how? What is the relationship between innovation and the state? How do states and regions go about innovation? How do national systems and cultures of innovations differ?
- How do innovations relate to democracy and inequality?
- How do innovations (e.g. emerging technologies) turn into contested issues? Do all innovations have political properties?
- Can/should innovation be governed? If so, how and by whom?
- What is the role of intellectual property rights and monopolies for innovation? What are their pitfalls?
- How do we know about and measure innovation? Can there be hidden or unrecognized innovations?
- Why are some technologies considered to be successful innovations, while other (perhaps better ones) disappear in the annals of history?

**Intended Learning Outcomes:**

Students will understand and apply a range of key concepts, theoretical frameworks, and analytic tools from the domains of Science and Technology Studies (STS) and Innovation Policy (e.g. various 'models' of innovation (linear, systems, chain link, triple helix, diffusion), innovation strategies, co-production, responsible research and innovation, technology determinism, regulatory cultures, law lag, see below course description). They will be able to systematically analyze the complex interactions between innovation, society, and public policy (e.g. the governance of innovation, inequality and innovation, open innovation, the relationship between science and innovation). Moreover, students will have knowledge of a range of canonical case studies from STS and innovation policy, and learn how to draw parallels to current events and discussions (e.g. biotech, robotics, IT). They will acquire basic knowledge of current research topics and methods in STS and public policy concerned with questions of innovation.

**Teaching and Learning Methods:**

This course follows a hybrid seminar-lecture format where students will both receive lecture-style input to obtain a systematic overview of specific topics and issues, and engage in extensive in-class discussions with their peers to learn how to reflect and position themselves with regard to these issues. Lectures and discussions will be based on a weekly assigned readings, which will be provided to students in the syllabus at the beginning of the term. A key part of the instruction is hence based on the close reading of weekly assigned texts and reflection/interpretation of the arguments contained therein. Moreover, the course will use regular exercises to assess learning progress and practice the application of course content to real-life cases.

**Media:**

Reader (literature provided in course moodle); power point presentations; flipcharts; video clips; newspaper articles and blogs

**Reading List:**


Joseph Schumpeter, Capitalism, Socialism and Democracy, New York: Harper and Row, 1942, Ch. 7 (Creative Destruction), pp. pp. 81-86


Thomas P. Hughes, and Trevor Pinch, 135-58. MIT Press, 1987


Donald E. Stokes, Pasteurs Quadrant: Basic Science and Technological Innovation (Washington, D.C: Brookings Inst Pr, 1997) pp 58-89 (Chapter 3: Transforming the paradigm)


**Responsible for Module:**
Pfotenhauer, Sebastian; Prof. Dr.

**Courses (Type of course, Weekly hours per semester), Instructor:**
Innovation, Society, and Public Policy (seminar, 4 SWS)
Pfotenhauer S [L], Pfotenhauer S

For further information in this module, please click [campus.tum.de](http://campus.tum.de) or here.
Module Description

WI001147: Exploring society through future technologies

TUM School of Management

Module Level: Master
Language: English
Duration: one semester
Frequency: winter/summer semester

Credits:* 6
Total Hours: 180
Self-study Hours: 150
Contact Hours: 30

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

Description of Examination Method:
The assessment consists of the following parts: a final research paper (4000-6000 words) due at the end of the term and two optional reaction papers (500-1000 words each) due prior to two classes the students can pick from the course schedule, respectively. The assessment of the final research paper determines the final grade in this module.

The research paper is an assignment that covers most of the material given in the module. The instructor uses it to estimate how well a student has understood, researched, and incorporated the material and activities associated with the module. Furthermore, students demonstrate their ability to apply the acquired concepts and knowledge to a current issue related to the innovation and society. The research paper is an original piece of writing that may involve empirical research on a specific case.

The reaction papers reflect the content of the classes and enhance the discussion in the classroom. In the papers, students evaluate the assigned text's strengths and weaknesses, which encourages a close reading of the text that goes beyond the surface meaning. In their writing, students respond to implied ideas, elaborate, evaluate, and analyze the author's purpose and main points. Students submit their papers prior to the class to the instructor and make them available to the other participants, who can comment on the contributions of their peers both online and during class. In the reaction papers, students demonstrate their ability to engage critically with the ideas and theories introduced in the course readings.

Repeat Examination:
Next semester

(Recommended) Prerequisites:
The module is part of the curriculum on Science and Technology Studies (STS) offered at MCTS and the TUM School of Management Master's Programs. We have designed the module for advanced students who are interested in the relationship between technology and society. Even though it is open to participants from all kinds of backgrounds, the courses offered in this module is firmly rooted in the social sciences and humanities. While this is not mandatory, participants should have a basic academic understanding of social, political, and cultural issues. Ideally, they have previously taken a course in sociology, political science, history, philosophy, anthropology or related disciplines.

Content:
This module introduces the participants to key questions and issues facing policy-makers, engineers, and society writ large when trying to understand, anticipate, and organize the future of technology in society. In order to comprehend current developments and technoscientific futures, students engage with past and present predictions about how innovation might change the world we live in. Changes in science and technology have often influenced
economic and cultural developments - and vice-versa. Over the course of the semester, students tackle innovation not in terms of isolated cases but as a constitutive part of modern technologized societies and their visions of the future.

**Intended Learning Outcomes:**
Upon successful completion of the module, students will be able to understand and analyze potentially disruptive changes in various fields of technological innovation. Additionally, participants will be able to apply a range of concepts and analytical lenses to evaluate complex sociotechnical dynamics in a systematic, reflexive, and critical way. They will be capable to create empirical case studies that identify patterns and recurring tensions in a world shaped by technology, and speak about them with confidence in the context of their own academic and professional interests.

The objective of the module is neither to offer predictions of what the most likely or most desirable sociotechnical developments will look like. Nor will it provide 'how-to' recipes for policy-making and management. The goal is to put these instrumental ways of thinking about innovation into a broader perspective and take a reflexive (and at times critical) look at the relationship between the technology, business, and culture.

**Teaching and Learning Methods:**
The module is a case study seminar focused on particular area of contemporary science and technology. In class, the students discuss interactively different approaches to the particular innovation field under consideration to develop their analytical and reflexive capabilities as well as acquire knowledge on the innovation field. Guided by the course instructors, the participants learn to apply a number of conceptual frameworks and tools through self-study of the literature from a number of fields, including sociology, political science, economics, science and technology studies, innovation studies, and cultural anthropology. The classes are predominantly interactive and include group as well as individual exercises.

**Media:**
not specified

**Reading List:**
doi:10.1080/09537320600777002.

**Responsible for Module:**
Pfitenhauer, Sebastian; Prof. Dr.

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

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

WI001150: Sustainable Entrepreneurship - Theoretical Foundations

TUM School of Management

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<td>Master</td>
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Number of credits may vary according to degree program. Please see Transcript of Records.

**Description of Examination Method:**
The module assessment consists of a term paper. By writing the term paper students demonstrate that they understand and are able to interpret the literature on sustainable entrepreneurship. Moreover they show their ability to evaluate and discuss sustainable entrepreneurship as a means for addressing the grand societal challenges. Students show that they are able to write a structured term paper with theoretical foundations and a critical discussion within a limited amount of time, using their ability to identify problems and find solution strategies.

**Repeat Examination:**
Next semester

**(Recommended) Prerequisites:**
Modules in entrepreneurship, corporate sustainability and/or sustainability marketing are recommended.

**Content:**
Entrepreneurship plays a key role in the transformation towards sustainable development. This is also reflected in a growing scholarly interest in the topic. In this module, we will investigate the theory and empirical evidence of sustainable entrepreneurship. The module will cover the following topics:

1) Grand societal challenges of the 21st century and Sustainable Development Goals
2) The nexus of sustainable development and entrepreneurship
3) Sustainable entrepreneurship: What it is and what it is not
4) Entrepreneurship as a process and process theory
5) The process of sustainable entrepreneurship
6) Sustainable opportunity recognition
7) Sustainable opportunity development
8) Sustainable opportunity exploitation
9) Entrepreneurial teams in sustainable entrepreneurship
10) Community entrepreneurship
11) Hybrid organizing

**Intended Learning Outcomes:**
Upon successful completion of this module, students will be able to (1) discuss the socio-economic challenges of the 21st century and (2) understand how entrepreneurship and sustainability are interrelated. In addition, they will be able to (3) evaluate the concept of sustainable entrepreneurship as a means for addressing these complex sustainability issues and to (4) understand sustainable entrepreneurship as a dynamic process. More specifically, students will be able to (4) perceive socio-ecological problems as opportunities for sustainable entrepreneurship,
to (5) compare different pathways of opportunity development and to (6) differentiate between different opportunity exploitation strategies. Finally, they will be able to (7) transfer the theoretical skills just described to specific contexts such as community entrepreneurship.

Teaching and Learning Methods:
The module is a seminar which intends to familiarize the student with the evidence and theory of sustainable entrepreneurship. Since the main goal of the module is to provide students with the knowledge and skills to understand, discuss and evaluate entrepreneurial solutions for sustainable development, an interactive module format with discussions and guest lectures is the appropriate format for the module. This format guarantees that the students will get a sound theoretical understanding that will be corroborated with practical insights.

Media:
Presentations, slides, cases, links and further literature will be provided via www.moodle.tum.de

Reading List:
The module is based on key scientific papers (required readings), which form the basis for the reflection essay in the end of the semester. All materials are provided as pdf files in TUM Moodle (https://www.moodle.tum.de). The most recent literature review on sustainable entrepreneurship by Munoz & Cohen (2017) provides a holistic overview of the relevant literature:

Responsible for Module:
Belz, Frank-Martin; Prof. Dr. oec.

Courses (Type of course, Weekly hours per semester), Instructor:
Sustainable Entrepreneurship - Theoretical Foundations (WI001150) (lecture, 4 SWS)
Gimenez Jimenez D [L], Gimenez Jimenez D, Salvi E

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

WI001165: Sustainable Entrepreneurship - Getting Started

TUM School of Management

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<td>Master</td>
<td>English</td>
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Number of credits may vary according to degree program. Please see Transcript of Records.

Description of Examination Method:
The module assessment consists of a project work. Students will be divided into teams of three students. Each team of students has to develop an own sustainable business model. They prove that they are able to propose their own ideas for sustainable enterprises. Each group has to present in the form of a pitch (20 minutes pitch per team, 25%) in the last session of the term. By presenting their sustainable business plan, students demonstrate that they are capable of preparing a certain topic within a given time frame in such a way as to present it in a clear and comprehensible manner to an audience. By presenting in a team students demonstrate their ability within a team to manage resources, and deadlines through timely submission of the enumerated tasks. Students demonstrate that they are able to complete the tasks of their project in a team environment.

In addition, each team member will hand in a written project report, describing and analyzing the sustainable business plan of the team. The written paper is due two weeks after the oral presentation (max. 10,000 words, 75%). By writing the project report students demonstrate that they are able to generate their own ideas for a sustainable venture. They show their ability to transfer the provided theory and examples to their own idea and design their own business model.

Repeat Examination:
Next semester

(Recommended) Prerequisites:
Modules in entrepreneurship, corporate sustainability and/or sustainability marketing are recommended.

Content:
Whether it is tackling climate change, resource degradation or social inequalities - responding to sustainability issues constitutes the biggest challenge for businesses in the 21st century. Embracing a great range of industries including food, energy or textiles, the field of life sciences is a key area for sustainability. Since the production of these goods accounts for an extensive use of resources, there is great potential for effecting real improvements on a way towards more sustainable production and lifestyles. In this module we want to invite and inspire students to make a difference. We introduce them to the theory and practice of sustainable entrepreneurship, pursuing the triple bottom line of economic, ecological and social goals. We present the sustainable business model canvas as a tool for the students to explore their own ideas and to develop a sustainable business in the area of life sciences. Adopting a step-by-step approach, the following topic will be covered (all topics will be explained in general and then discussed in the context of life sciences):

1) The nexus of entrepreneurship and sustainable development
2) An overview of the theory and practice of sustainable entrepreneurship
3) Social and ecological problems as opportunities for sustainable entrepreneurship
4) Developing a sustainable customer value proposition
5) Describing key activities, resources and partners
6) Identifying revenues and costs
7) Consolidating all parts in a lean and feasible business model
8) Pitching and presenting a business model

**Intended Learning Outcomes:**
Upon successful completion of this module, students will be able to (1) discuss and (2) evaluate the socio-economic challenges of the 21st century. They will be able to (3) evaluate the concept of sustainable entrepreneurship as a means for addressing these complex sustainability issues. More specifically, students will be able to (4) perceive socio-ecological problems as opportunities for sustainable entrepreneurship and to (5) generate their own ideas for a sustainable venture. In addition, participants will be able to (6) transfer the provided theory and examples to their own idea and (7) design their own business model. Students will (8) have gained experience and new skills in presenting in front of a large audience. Finally students are able to exchange in a professional and academic manner within a team. They show that they are able to integrate involved persons into the various tasks considering the group situation. Furthermore the students conduct solution processes through their constructive and conceptual acting in a team. They can make this contribution in a time limited environment.

**Teaching and Learning Methods:**
The module is a seminar which intends to familiarize the student with the theory and practice of sustainable entrepreneurship. Since the main goal of the module is to ignite entrepreneurial thinking and passion, as well as to provide the students with the required know-how to get started, the module has an interactive format with excursions and a project work in small groups. A special feature of the module is the co-teaching by an academic and a practitioner with a mutual interest in the theory and practice of sustainable entrepreneurship.

**Media:**
Presentations, slides, cases, links and further literature will be provided via www.moodle.tum.de

**Reading List:**
The module is based on a few key scientific papers and practical tools such as the business model canvas. These form the basis for classroom discussions and are to be used for developing an own business model. All materials are provided as pdf files in TUM Moodle (https://www.moodle.tum.de).

Students should be familiar with the United Nations' Sustainable Development Goals (SDGs) and the basics of the business model canvas:
Business Model Canvas:

**Responsible for Module:**
Belz, Frank-Martin; Prof. Dr. oec.

**Courses (Type of course, Weekly hours per semester), Instructor:**
Sustainable Entrepreneurship - Getting Started (Life Sciences) (seminar, 4 SWS)
Belz F [L], Belz F, Gimenez Jimenez D

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

WI001166: Advanced Topics in Innovation & Entrepreneurship: Entrepreneurial Prototyping

TUM School of Management

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<td>Master</td>
<td>English</td>
<td>one semester</td>
<td>winter/summer semester</td>
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Number of credits may vary according to degree program. Please see Transcript of Records.

Description of Examination Method:
The grading is based on a research paper (10-15 pages, 75% of grade) and a presentation (15 min + 15 min interaction with the audience, 25% of grade). The research paper and the presentation will be conducted in groups formed in the introductory session. An assessment sheet filled in by the students and handed in with the research paper clarifies students' individual contribution to the research paper. As every student will present in the final presentation, every students' contribution is clearly identifiable and appraisable, thus, students can be graded individually. Based on the research paper it is examined to which extent students are able to elaborate complex topics in the field of entrepreneurship research. The research paper is a means to measure how students were able to understand previous academic literature in the field of entrepreneurship, how they achieved to define their own research question, collect and analyze data, and provide a relevant, novel, and interesting contribution to entrepreneurship research. A final presentation measures students' communicative competencies proves if students are able to present their findings in a comprehensible, precise and demonstrative way as well as whether they are able to perform powerfully and professionally.

Repeat Examination:
Next semester

(Recommended) Prerequisites:
none

Content:
The module deals with different topics within entrepreneurship research such as

- discovering entrepreneurial role models, this might include to explore
  o links between role models and entrepreneurial intentions
  o reasons for the choice of the entrepreneurial career
- psychology of entrepreneurship, this might include to explore
  o personality dimensions of entrepreneurs
  o entrepreneurial cognition
- entrepreneurial leadership, this might include to explore
  o behavioral forms of leadership
  o creating and managing innovative organizations
- ideation and venture creation, this might include to explore
  o the process of obtaining creative ideas
  o the process model of entrepreneurial venture creation
- venture growth, this might include to explore
  o how new ventures grow and where growth occurs
  o different impact factors on new venture growth
- internationalization and strategic entrepreneurship, this might include to explore
  o the speed of entrepreneurial internationalization
  o enabling forces of technology, competition, perceptions, knowledge and networks
The module provides students with deepening insights into entrepreneurship literature. Besides writing a seminar paper, this involves presenting their final results.

Intended Learning Outcomes:
Upon successful completion of this module, students will be able to read and understand related literature on the topic of entrepreneurship. Furthermore, students are able to create their own research paper. Additionally, they will be able to present their paper and summarize their findings. Moreover, students learn how to lead a discussion on their topic. Finally, they understand entrepreneurial processes.

At the end of the module, students will be able to:
- explain entrepreneurship concepts related to a specific topic.
- discuss current topics within the field of entrepreneurship.
- apply previously discussed approaches to topic specific issues within the field of entrepreneurship.
- evaluate these approaches and their outcomes.
- develop suitable approaches for specific entrepreneurship issues.

Teaching and Learning Methods:
The module consists of an introduction to scientific writing where the topics for each student's research paper will be decided. Topics vary and cover entrepreneurship on an individual (e.g., entrepreneurial decision making, entrepreneurial intentions), team (e.g., entrepreneurial team formation, entrepreneurial exits), or organizational level (e.g., interplay of form, structure, and embeddedness in corporate entrepreneurship). Based on their topic students prepare their research paper which they will present at the end of the module. Upon prior discussion on different research methods and how to use them, the students will identify and apply a research methodology that best addresses their identified research question, i.e., they can apply empirical research methods (qualitative or quantitative), a literature review, or conduct a conceptual paper. Furthermore, the module involves (group and/or) individual feedback sessions, where students can share their progress and receive feedback. The students are supervised by the instructors of the module who are members the chair. Within the module the topics will be discussed after the final presentations.

Media:
MS Office, PowerPoint, Whiteboard, Flipchart

Reading List:
Obligatory readings will be announced at the course introduction.

 Responsible for Module:
Breugst, Nicola; Prof. Dr. rer. pol.

Courses (Type of course, Weekly hours per semester), Instructor:
Advanced Topics in Innovation & Entrepreneurship (WI001166): Entrepreneurial Prototyping (seminar, 4 SWS)
Breugst N [L], Federl S, Weissenböck E

For further information in this module, please click campus.tum.de or here.
Specialization in Management: Marketing, Strategy and Leadership
Advanced Seminar Marketing, Strategy and Leadership
Module Description

WIB17003: Advanced Seminar Marketing, Strategy & Leadership: Judgement and Strategic Decision Making

Judgement and Strategic Decision Making

TUM School of Management

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

Description of Examination Method:
The examination comprises a research paper (seminar paper (10 pages excl. literature & attachments) with presentation (30 minutes incl. discussion)), which demonstrates that students
- are able to understand and interpret the scientific literature on a specific topic in the field of strategic decision-making, and are able to draw upon scientific literature in a results-oriented and structured manner.
- are able to apply scientific methods to provide answers to questions in the field of strategy and organization that are relevant to business practice.
- possess presentation and communication skills that enable them to present, in a clear and structured manner, their findings on scientific challenging topics they have worked on independently, and to discuss the applicability of their findings to business practice.
The final grade is an averaged grade from the seminar paper (75%) and the presentation (25%).

Repeat Examination:
Next semester

(Recommended) Prerequisites:
None

Content:
How are decisions actually made in theory and practice?
This module enriches students' knowledge of judgment and strategic decision making (JSDM) on a theoretical and a practical level. JSDM has been regarded as the core of an organization's operation and a core competence of any top-level executive. In this course, we will introduce different perspectives on JSDM. More specifically, we will discuss three different perspectives, First, what are the drivers of individual, group and organizational decisions from a psychological perspective including common biases and errors present in strategic decision? Second, how can decisions nowadays be based on data science approaches including AIs and machine learning algorithms? Third, how are decisions actually made in practice and what are key questions managers face when making strategic decisions?

Intended Learning Outcomes:
Theory:
Students know and understand the most important theories about behavioral decision making from various perspectives in how to make better strategic decisions and be able to apply a framework for how society and management could improve their decision making.

Practice:
Students understand how decision making occurs from a practitioner's point of view and will be able to integrate these viewpoints with scientific theory.
Method:
Students will gain insights into research methods in the applied setting of decision making, data-driven decisions and strategic management research.
They are able to analyze different streams of theory, conduct efficient decision making studies and apply results in practice.
They are able to research, analyze, and evaluate scientific literature.

Teaching and Learning Methods:
Over the course of the semester, students work on a scientific and application-orientated topic. They work both on their own (in particular while working on their seminar paper) and in small groups together with other seminar participants. The lecturers give presentations on the most important theories as well as current research findings on a specific topic in the field of strategy, organization, and leadership (depending on the concrete subject of the seminar). By reading scientific literature (self-study), students deepen their knowledge of theories and methods in the field and get used to working with scientific literature. Guest lectures by regularly changing speakers from the business sector (often high-level decision-makers) as well as case study work enable students to establish a connection between questions from business practice and scientific theories and research findings.

Media:
Slides, case studies, scientific literature

Reading List:

Responsible for Module:
Welpe, Isabell M.; Prof. Dr. rer. pol.

Courses (Type of course, Weekly hours per semester), Instructor:
Advanced Seminar Marketing, Strategy & Leadership (WIB17003): Judgment and Strategic Decision Making (seminar, 4 SWS)
Folger N, Pabst von Ohain B, Rüll H

For further information in this module, please click campus.tum.de or here.
Elective Modules Marketing, Strategy and Leadership
Module Description

WI000994: Negotiation Strategies

TUM School of Management

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

Description of Examination Method:
Grading consists of a research paper (50%), written in teams of 3-4 students (written, 15 pages +/- 1 page) including a presentation (50%) (oral 20 minutes + discussion).
For the research paper a selected subtopic has to be worked on with the help of up-to-date literature. By writing the research paper students demonstrate their ability to analyze the theories of negotiation management. Furthermore students show that they are able to assess and apply the concepts of negotiation management. By writing the research paper in a team, students demonstrate their ability to complete tasks in a team environment. The research paper consists of different sections, whereas every student needs to write a stand-alone part. That enables the identification and evaluation of each student's individual contribution to the research paper. With the presentation students demonstrate that they are capable of preparing a certain topic and summarize specific issues or results down to their essential core. Especially they show their negotiation and communication skills and that they are able to apply the strategies.

Repeat Examination:
Next semester

(Recommended) Prerequisites:

Content:
This interactive module is designed to provide students with the essential knowledge about negotiation strategies and enable them to apply the methods learnt as well as strategies in negotiations by means of role play. The main focus of this module is the analysis of negotiation processes, whereby difficulties, especially regarding the issue of power and influence, will be identified and possible solutions evaluated. In order to prepare the students for international negotiations, this module also deals with difficulties arising in international negotiation situations. Complex situations and multi-person negotiations, which frequently occur in a firm/management context and where advanced knowledge in negotiations is necessary, build the core of this module.

Intended Learning Outcomes:
After participating in the module, students can analyze the theories of negotiation management, international peculiarities in negotiation situations and discuss and partially apply their acquired skills in role play. This way, they are able to assess, classify and actively apply the concepts of negotiation management. In particularly by learning the methods taught during role play combined with feedback, students have improved negotiation and communication skills and are able to apply the new strategies in future management positions in companies. Students can, for example, assess cultural differences in international negotiation situations and adapt their own behavior accordingly. This way students can derive arguments and strategies for better negotiation leadership.
Students are capable of preparing a certain topic and summarize specific issues or results down to their essential core and present it to an audience. They are able to work and exchange in teams. They are able to integrate involved persons into the various tasks considering the group situation.

**Teaching and Learning Methods:**
In the theoretical part of the module students acquire knowledge of important issues in negotiation strategies especially in an international context, by assessing case studies through group work and group discussions and presenting them to the class. The practical part gives students the opportunity to practice negotiations by means of role play and optimize their own negotiation strategies by obtaining constructive feedback. Consultation hours will be offered while students prepare their research papers. As the negotiation sessions progress, students are encouraged to prepare interactive presentations to show how theoretical basics can be applied to real situations, how negotiation errors can be avoided and how a negotiation is successfully completed. The "negotiation days" promote students to successfully learn individually and to gain new competences. In negotiation cases the participants need to take various positions and "negotiate". It is important that the participants provide feedback on each other's negotiation management as well as feedback from lecturers (interactive teaching and learning phase).

In order to be well prepared for the module students are encouraged to read certain chapters of the mentioned textbook beforehand. A preparation meeting is offered where a simple negotiation case is played through and analyzed so that students can get a feel for the subject matter. Different topics of the module are then split up in different subtopics.

**Media:**
Presentations, role play, case studies

**Reading List:**

**Responsible for Module:**
Mohnen, Alwine; Prof. Dr.

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

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

WI001090: Behavioral Pricing: Insights, Methods, and Strategy

TUM School of Management

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

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

Description of Examination Method:
The grading is to equal parts based on a research paper (15 pages, 50%) and a presentation (40 minutes, 50%). By writing a research paper students show their ability to understand and explain the differences between classical pricing tools and behavioral pricing. They show their ability to conduct an in depth literature research and apply their understanding of the peculiarities of behavioral pricing. Additionally they show that they are able to analyze and interpret pricing decisions in the light of behavioral pricing decisions. Furthermore, students have to present their topic in class to show that they are able to explain their gained knowledge to others. They have to prioritize within their material to create a talk that enables the other students to understand the most important parts of the topic.

Repeat Examination:
Next semester

(Recommended) Prerequisites:
None

Content:
In this module, classical pricing tools (e.g. conjoint analysis) and approaches will be presented and discussed. In contrast to these, pricing based on insights from Behavioral Economics will be introduced.

On the basis of numerous case studies from different sectors (FMCG, client services, capital investments) and markets (B2C versus B2B) methodological implications and strategic options will be developed to examine how Behavioral Pricing can be effectively leveraged in practice. Presented topics are among others:
- Non-linear Pricing
- Price Differentiation
- Price Discrimination
- Test Markets
- Price Experiments

Intended Learning Outcomes:
After successful completion of the module Behavioral Pricing, students will be able to understand and explain the differences between classical pricing tools and behavioral pricing. Students will be able to conduct an in depth literature research and apply their understanding of the peculiarities of behavioral pricing in a 15-page term paper. In the module students will learn to analyze and interpret pricing decisions in the light of behavioral pricing decisions.
Teaching and Learning Methods:
The seminar is designed as a block-seminar, with an extensive introduction to be given at its beginning and several break-out case studies throughout. Furthermore, participants will individually focus on a specific topic which they research, elaborate and present in the course of the seminar. Students are expected to research and study the literature and to intensively deal with the subjects discussed. During the module students are coached and supervised by the lecturer.

Media:
PowerPoint

Reading List:
Basic literature (in addition, further literature about individual topics will be discussed in the seminar):

Responsible for Module:
Henkel, Joachim; Prof. Dr. rer. pol.

Courses (Type of course, Weekly hours per semester), Instructor:
Behavioral Pricing: Insights, Methods and Strategy (WI001090) (seminar, 4 SWS)
Bauer F

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

WI001128: Strategies in MNEs

TUM School of Management

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

Description of Examination Method:
Grading is based on the performance in a 60min written examination. The examination consists of single-choice-questions, which aim at testing knowledge on different levels: Knowledge questions aim at the recall of the learned concepts, e.g. by reproducing different strategic management models; decision items aim at classifying or interpreting the course contents, e.g. by contrasting and comparative analysis of different strategies of multinational enterprises; application and scenario questions aim at testing the ability to transfer the learned concepts (e.g. Strategy context, financial success, and strategy levels, Strategic redirection, Portfolio management and product diversification, Growth programs and internationalization, Corporate growth modes and acquisitions, Corporate transformation) to real-life settings, e.g. by identifying solutions to short practical cases in strategic management. It is allowed to bring one hard-copy dictionary (English - first language or English thesaurus). Furthermore, no aids such as lecture slides, personal notes, etc. are allowed.

Repeat Examination:
Next semester

(Recommended) Prerequisites:
Basics of business administration

Content:
Students gain in-depth knowledge about important elements of strategy as well as major concepts and instruments needed for the successful management of multinational enterprises (MNEs).

Intended Learning Outcomes:
Upon successful completion of this module, students are able to recall, understand and explain key concepts of corporate strategies in multinational enterprises (MNEs). Moreover, they can apply their knowledge to practical problems and challenges. Participants are able to analyze company portfolios and to set up growth programs in order to develop a sound strategy for MNEs. Finally, students are able to analyze and solve case studies as well as to create case solutions.

Teaching and Learning Methods:
In the online video-based and interactive lecture, the most important concepts, approaches, theories, and empirical studies in the field of strategic management are introduced and discussed. Practical examples and case studies serve to illustrate the relevant theories and methods. If applicable, (a) guest lecture(s) will demonstrate the practical relevance of the theoretically discussed issues. In corresponding case study exercises students are encouraged to engage in individual exercises and small group exercises in order to look deeper into the lecture
contents and to support transfer of the acquired theories and methods. Finally, the self-study of literature is part of the whole module.

**Media:**
- Slides (download)
- Online video (download)
- International scientific literature (English)
- Case studies
- if applicable, guest lecture

**Reading List:**

**Responsible for Module:**
Hutzschenreuter, Thomas; Prof. Dr. rer. oec.

**Courses (Type of course, Weekly hours per semester), Instructor:**
- Strategies in MNEs (WI001128) (lecture, 2 SWS)
  Hutzschenreuter T [L], Hutzschenreuter T

- Strategies in MNEs (WI001128) - Case Seminar Group F (exercise, 2 SWS)
  Hutzschenreuter T [L], Hutzschenreuter T, Sarkar Sengupta A

For further information in this module, please click
[campus.tum.de](http://campus.tum.de) or here.
Module Description
WI001140: Luxury Marketing

TUM School of Management

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

Description of Examination Method:
The final grade is based on group presentations. During the module two presentations have to be held. One short presentation (25% of grade, presenting an article - 20 min) aims to prove if students are able to connect the theoretical material on luxury marketing with empirical results of the contemporary research, if they are able to analyze and present an academic article in a clear and organized way, and if their able to provide a personal interpretation of the article. The second presentation (75% of grade, 45 min) assesses if the students understand the main elements of a luxury strategy with a focus on the 4Ps, and if they are able to apply the theoretical learning to a real case by conducting an audit of a luxury brand and by giving recommendations of how to improve the luxury marketing strategy of the assigned brand. They can use the theoretical material (lecturer’s slides) as a support and they have to collect secondary data. This presentation is combined with a written composition that illustrates the results of the audit. The presentations are done by groups of four students. The students will receive an individual grade: the individual contribution will be identified by evaluating a personal recommendation to the luxury brand that each students has to provide as a result of the audit, and by evaluating the individual communication skills. Both presentations are followed by a discussion in which all the students can voluntarily participate.

Repeat Examination:
End of Semester

(Recommended) Prerequisites:

Content:
* First, the module starts with a discussion about how the meaning of luxury evolved from the past until now. It will elaborate how luxury differs from other related concepts.
* Second, it will focus on understanding consumer behavior association with luxury products and brands. In particular, it will identify the underlying drivers of conspicuous consumption (e.g. self-reward, social elevation) and what consumers want to signal through the purchase of luxury products (e.g. status, wealth, power).
* Third, the module will discuss best practices, do's and don'ts, when it comes to building, managing, and extending luxury brands. Especially, the symbolic power and the identity of luxury brands will be discussed.
* Last but not least, it will discuss the 4Ps of luxury marketing and how to leverage them to develop an effective marketing strategy.

Intended Learning Outcomes:
Upon successful completion of this module, students are able (1) to understand the basic elements and the specific challenges of marketing luxury products and (2) to give examples from empirical evidence of the theoretical concepts. They are also able (3) to analyze, (4) review and (5) present academic papers related to the topic of luxury of the contemporary research. Finally, they are able (6) to conduct an audit of a luxury brand (7) by making
recommendations to improve the luxury marketing strategy of the assigned brand and (8) to improve their communication skills.

Teaching and Learning Methods:
The module uses various teaching methods that should help facilitate students' learning. The students are provided during the lectures with theoretical material to acquire the basic knowledge of luxury marketing. The students have to present academic papers in class and discuss them with peers, in order to explore empirical results related to theoretical concepts. They also have to prepare an audit of a luxury brand focused on the 4Ps (product, price, promotion, and place), which they have to present in class, in order to apply in practice the theoretical learning. The audit can be performed using the theoretical material presented in class as a support.

Media:

Reading List:

Responsible for Module:
Fuchs, Christoph; Prof. Dr.

Courses (Type of course, Weekly hours per semester), Instructor:
Luxury Marketing (WI001140) (lecture, 4 SWS)
Fuchs C [L], Caprioli S

For further information in this module, please click campus.tum.de or here.
Specialization in Management: Consumers, Technology and Sustainability
Advanced Seminar Consumers, Technology and Sustainability
Module Description

WI001179: Advanced Seminar Consumers, Technology & Sustainability

TUM School of Management

Module Level: Master
Language: English
Duration: one semester
Frequency: summer 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:
Grading is based on a written seminar paper (~15 pages, 50 % of the grade), whereas the results and conclusions of the seminar paper need to be presented (20 min, 50 % of the grade) in front of the class. The seminar paper as well as the presentation in front of the class demonstrate that students are able to reproduce and summarize their acquired knowledge about the respective research topic. Furthermore, the seminar paper and the related presentation show that the students are able to critically analyze the key aspects regarding their research question. By presenting their findings in front of the class, students prove that they are able to present the key aspects in a concise manner and that they are able to answer further questions on their presented findings.

Repeat Examination:
Next semester

(Recommended) Prerequisites:
Knowledge in microeconomics/consumer economics and/or consumer behavior theories. Knowledge in empirical research methods.

Content:
Key topics of the seminar may include:
- Current issues in sustainable consumption
- Current issues in consumers and digitalization
- Current issues in consumer research

Intended Learning Outcomes:
After successful participation in the module students will have in-depth knowledge on the tackled focus of the module. Students will be able to (1) write a scientific research paper, (2) procure relevant literature and (3) structure a topic. Additionally, students will be able to (4) present their research findings in front of seminar participants, (5) answer their questions and (6) moderate a following discussion.

Teaching and Learning Methods:
The module is a seminar, in which the students will be assigned state-of-the-art research papers from the recent literature. They are expected to prepare high-quality presentations and write-ups, reflecting their analyses, understanding and insights from reading the papers and related literature. The lecturer will provide guidance and advice all along, from the choice of the initial topic, to tips on reading original literature, on scientific writing, and on giving successful presentations.
Media:
Slides, books, scientific papers

Reading List:
Relevant literature will be selected and communicated specifically.

Responsible for Module:
Roosen, Jutta; Prof. Dr. Ph.D.

Courses (Type of course, Weekly hours per semester), Instructor:
Advanced Seminar Consumers, Technology & Sustainability (WI001179) (seminar, 4 SWS)
Roosen J [L], Neubig C, Roosen J

For further information in this module, please click campus.tum.de or here.
Elective Modules Consumers, Technology and Sustainability
Module Description

ED0027: History of Consumption Goods

TUM School of Management

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

Description of Examination Method:
The examination consists of an individually written essay (2000 - 3000 words, 60 h) whereby the student has to prove his/her ability to develop a case study on the appropriation of technical products as consumption goods that work as cultural signs in his/her home country. Here the student has to apply theoretical and historical knowledge on semioticisation as cultural charging of technical products in the various stages of a product’s life cycle. The essay will be prepared by a 20 minute case study presentation in class with subsequent discussion (30 minutes). By the delivery of the presentation the ability is tested to find and to analyze adequate sources on a chosen subject, to develop a meaningful hypothesis and to prove it via a concise argumentation and visualization. The presentation has to be completed by a short abstract (150 words) as well as a one page Executive Summary. Thus, the students’ ability is tested, to clearly state the key ideas of the presentation.

Repeat Examination:
Next semester

(Recommended) Prerequisites:
none

Content:
This module deals with the production, appropriation, and marketing of industrially produced consumer goods in the 19th and 20th centuries. Using a variety of specific artefacts and goods, we will explore the cultural shaping and diversity of mass consumption, as well as its social function. How does material consumption become transformed into individually experienced pleasure and social meaning? The starting point of this seminar is the understanding of consumption as culturally specific communication and experience that differs in different parts of our world. We want to make use of the culturally diverse background of our seminar participants in order to analyze the material and the symbolic dimension of consumer goods.

Intended Learning Outcomes:
After completion of the module, the students are able (1) to analyse consumption behaviour from a sociological perspective and (2) to name the factors determining differences in consumption behaviour. The students can also (3) apply these theories in different fields. Furthermore, the students can (4) indicate consumption goods as technical products that work as cultural signs. The students will also be able to (5) describe of the process by which the material and cultural appropriation of new technology by consumers becomes part and parcel of the innovation process and of the development of technology. They can summarize semioticisation as cultural charging of technical goods in the various stages of the production, mediation, and use of these goods. Finally, they can (7) analyze the influence of users on innovations.
Teaching and Learning Methods:
A series of introductory weekly seminars provides basic knowledge on consumption in history as well as historical methods and knowledge on how to find sources and how to write an essay. Then, the students will have to study theoretical and historical texts on consumption. A group of students will be asked to present the text to the group followed by another group that will comment on the presentation. Practical exercises (media analysis on advertisements from different countries; analysis of user scripts in specific consumer products) and an excursion to the Deutsches Museum (in order to find exhibited consumer goods from different historical epochs and areas) will introduce in the broad variety of discourses on consumption. In a specific block seminar part the students will present case studies on consumption and discuss context dependent cultures of consumption, followed by a comparison of and generalization of the case studies.

Media:
scripts, PowerPoint

Reading List:

Responsible for Module:
Zachmann, Karin; Prof. Dr. rer. oec.

Courses (Type of course, Weekly hours per semester), Instructor:
Consumer History (seminar, 4 SWS)
Mauch F

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

POL00011: Politics for Rocket Scientists: An Introduction to Political Science for Non-Political Scientists

TUM School of Management

Module Level:
Bachelor/Master

Language:
English

Duration:
one semester

Frequency:
winter/summer 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:
Form of examination ("Prüfungsleistung"): Closed book final exam ("Klausur", 90 minutes), predominantly in multiple choice format ("Multiple Choice mit Einfachauswahlauflgaben"), which will provide students with an opportunity to demonstrate their mastery of the course material and the learning objectives by answering a series of questions addressing the full range of topics covered in the course. Students will thus, for instance, be able to demonstrate their familiarity with different ways of thinking systematically about politics and public policy.

Repeat Examination:
End of Semester

(Recommended) Prerequisites:
Open to TUM students in any field of study; no prerequisites. This is an introductory course geared toward students without prior university-level training in political science or any other social science, who seek an understanding of the systematic, scientific study of politics and public policy.

Content:
This course provides a broad introduction to the systematic study of politics from the local to the global level. We will study the sources of political preferences, as well as various forms of articulating those preferences (from public opinion polls and voting to political violence). We compare how legislative institutions translate public preferences into law and policy in democratic and non-democratic regimes—and we will examine the role of executives and courts in the political process. Addressing these issues requires empirical analysis but also raises fundamental questions of political philosophy, such as: What is the nature of power and how is it related to expertise, authority, legitimacy, and ethics? And what does democracy mean in international politics or global governance? We will also examine the relationship between politics, economics, law, and technological innovation, asking questions such as: Why is government intervention in the development of new technologies or elsewhere in the economy sometimes considered essential and other times the source of severe problems? What are the political consequences of various kinds of inequality in a democracy? Why are technically or scientifically optimal policies often passed up for sub-optimal policies that are no more than "second-best"? Are there ways to improve upon those second-best outcomes? And why is the realization that war makes everyone worse off no guarantee against the military escalation of interstate disputes? About 2/3 of each week's class will be devoted to the conceptual, theoretical and empirical-methodological tools of political analysis; during the remaining 1/3 of each class, we will explore the application of those tools to contemporary issues at the intersection of science, technology, economy and society.

Intended Learning Outcomes:
The course is designed to expose students from across the TUM (especially those in the natural sciences and engineering but also students at the TUM School of Management) to different ways of thinking systematically about politics and public policy. Students will gain an understanding of the foundational questions of Political Science,
acquire knowledge of key theories and core methods of political analysis, and learn how to apply some of the conceptual, theoretical and methodological tools of the social sciences to some of the big contemporary policy questions affecting science, technology, economics and society.

**Teaching and Learning Methods:**
The module consists of a single 3 hours/week highly interactive lecture, accompanied by weekly reading assignments. Close advance reading of the assigned texts for each week’s lecture will be expected.

**Media:**
Various (readings, slides, etc.)

**Reading List:**
Required readings are taken from various books (including Aristotle’s The Politics; The Oxford Handbook of Political Economy; International Political Economy: Perspectives on Global Power and Wealth (Frieden, Lake & Broz, eds.); and The New Global Rulers: The Privatization of Regulation in the World Economy (Büthe and Mattli), as well as academic journals (such as the American Political Science Review, Antitrust Bulletin, International Organization, and West European Politics) and occasionally from popular magazines and online publications.

**Responsible for Module:**
Büthe, Tim; Prof. Dr.

**Courses (Type of course, Weekly hours per semester), Instructor:**
Politics for Rocket Scientists (POL00011) (Exercise - optional) (exercise, 1 SWS)
Büthe T ( Buckley Y )

Politics for Rocket Scientists (An Introduction to Political Science for Non-Political Scientists) (lecture, 3 SWS)
Büthe T, Buckley Y

For further information in this module, please click [campus.tum.de](http://campus.tum.de) or [here.](http://here.)
Module Description

POL40100: Introductory Lecture: Politics and Technology

TUM School of Management

Module Level: Master
Language: English
Duration: one semester
Frequency: winter/summer 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:
For this module, evaluations will be based on a final written in-class examination in which students will demonstrate that they have gained insights into the major questions that drive the study of politics and research methods and theories which are used to address those questions. The examination will be between 90 and 120 minutes in length.

Repeat Examination:
Next semester

(Recommended) Prerequisites:
None

Content:
The module is intended as an introduction to the questions and research being addressed in the main thematic areas of the master's program: big transformations and their environmental, technological, and social dimensions; democracy in a digital age; and global governance, ethics and technology. The links between these areas and research areas found in the TUM, such as economics and policy, digital technologies, social responsibility and corporate governance, and urbanization, mobility, and energy will be explained.

Intended Learning Outcomes:
After participating in the module, students will have a strong overview of the kinds of research questions being addressed by faculty in the HfP. They will be knowledgeable about some of the big questions driving the study of politics and research methods and theories which are used to address those questions: What role does the state play in technological innovation? How well do different political systems address major challenges like climate change, biodiversity loss, and ocean acidification? How is support for democracy impacted by growing economic inequalities? How might new technologies alter forms of societal participation in governance processes?

Teaching and Learning Methods:
The module is offered in the form of two seminars, each dealing with different, but complementary thematic areas. One will focus on big questions for politics in a world of rapidly changing technologies, globalization, migration, and challenges to democracy. The other will look at major policy problems (the Energiewende, Resource depletion, urbanization) and how they are being addressed by governments, industrial actors, and civil society.

Media:
Online-Reader, PowerPoint
A reader of seminar texts with up-to-date and cutting edge scientific literature will be made available at the start of the semester.

**Reading List:**
A reader of seminar texts with up-to-date and cutting edge scientific literature will be made available at the start of the semester.

**Responsible for Module:**
Schreurs, Miranda; Prof. Dr.

**Courses (Type of course, Weekly hours per semester), Instructor:**
(POL40100) Introduction to Politics, Technology & Sustainability (lecture, 4 SWS)
Schreurs M (Janßen S), Ohlhorst D (Bondarenko E)

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

POL70070: Ethics of Technology

TUM School of Management

Module Level: Master
Language: English
Duration: one semester
Frequency: summer 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:
The examination will be held in form of a presentation (60 minutes). In this presentation, a relevant techno-ethical topic will be condensed and effectively communicated in limited time with the help of an adequate visualisation to a willing audience. With the presentation, students will also prove their ability to lead a critical discourse and show that they are able to react to questions and impulses.

Repeat Examination:
Next semester

(Recommended) Prerequisites:
Knowledge about foundations of ethics/business ethics

Content:

Intended Learning Outcomes:
1. Students are able to deal critically with the ethical implications of technological developments; 2. Students learn to argue consistently against the background of an ethical theory; 3. Students are able to apply basic ethical concepts on problems of evaluating technologies; 4. Students acquire the ability to hold a scientific presentation; 5. Students practice their ability to write down scientific arguments

Teaching and Learning Methods:
Seminar 1:
Seminar units by the instructors to transport theoretical foundations; group discussions to train students’ argumentation; online quizzes to regularly monitor students' learning progress;

Seminar 2:
presentations by students to train their ability to hold scientific talks; moderation of scientific discussions evolving around the presentations; preparation of case studies to practice the application of basic ethical concepts to concrete examples

Media:
Moodle, whiteboard, exercise sheets, flipchart, PowerPoint, films
Reading List:

Responsible for Module:
Lütge, Christoph; Prof. Dr. phil.

Courses (Type of course, Weekly hours per semester), Instructor:
Masterseminar Business Ethics (Ethics of Technology) (seminar, 2 SWS)
Lütge C

Ethics of Technology - lecture (seminar, 2 SWS)
Uhl M

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

WIV05001: Advanced Seminar Economics & Policy: Economics of Innovation

Economics of Innovation
TUM School of Management

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<td>English</td>
<td>one semester</td>
<td>winter semester</td>
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<td>180</td>
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Number of credits may vary according to degree program. Please see Transcript of Records.

Description of Examination Method:
The students will work in small groups on one of five topics: Creation of knowledge, diffusion of knowledge, industry and macroeconomic aspects, intellectual property rights, innovation policy. The group work aims at 1) understanding the topic in depth and 2) presenting the most important insights from their topic to classmates. Moreover, the students will derive research gaps in the literature related to their topic and summarize both main insights and research gaps in a presentation (20-30 min. per person) to the class. By presenting in a team, students demonstrate their ability within a team to manage resources, and deadlines through timely submission of the enumerated tasks. Finally, they will submit an extended version of the presentation topic as a written research paper (8.000 to 10.000 words). By writing the research paper, students show their ability to work independently on solving complex scholarly problems related to the Economics of Innovation. The final grade will be based on the written research paper with a weight of 80% and the presentation with a weight of 20%.

Repeat Examination:
Next semester

(Recommended) Prerequisites:
Familiarity with microeconomics

Content:
This module will provide students in-depth insights into the field of the Economics of Innovation. The module will discuss some of the prevailing models in the field of Industrial Organization dedicated to the analysis of the incentives and constraints to innovative activities (R&D activities) as well their relation with imitation, spillovers, firm size and market structure. The module also comprises a dynamic and knowledge-based view, introducing models involving the direct generation of new knowledge, the catching-up/falling behind dynamics of competition and the role played by market selection between innovative firms. The objective of is also to apply the acquired knowledge to selected topics in the field of innovation research. The students will be asked to write a research paper and to present their work in class.

Intended Learning Outcomes:
This module introduces the students to the main issues in the economics of innovation and advances their understanding of the core concepts and principles in the field. The ultimate objective to enhance both theoretical as well as an applied view on the topic enabling students to understand academic as well as public debate on questions related to the economics behind innovation and technological progress. Upon successful completion of this module, students will be therefore able (1) to identify and (2) conceptualize different important issues related to the Economics of Innovation. They (3) are able to identify gaps in the understanding of the focal topic and (4) developed suggestions for improving the understanding of the field. In addition, by presenting their topic to the
class, they will (5) enhance their presentation skills and by writing the research paper (6) their scientific writing skills. Through working in groups, the (6) students will work on their teamwork skills.

**Teaching and Learning Methods:**
The module is a seminar, in which the students will gain in-depth insights in the Economics of Innovation. The seminar will start with an introductory lecture, which will provide the bases for deeper study of the most relevant topics. The first phase will then concentrate on problem-based learning by reading relevant scientific literature and by discussing these articles in the group. In the second phase, students will individually elaborate a written paper as well as presentations in which they need to show their understanding of their focal topic as well as show their capability to identify research gaps in the discussed literature.

**Media:**

**Reading List:**
in general:
- Hall, B. H. and Rosenberg, N. (2010), Handbook of the Economics of Innovation, Oxford: Elsevier,
specific topics:

**Responsible for Module:**
Hottenrott, Hanna; Prof. Dr.

**Courses (Type of course, Weekly hours per semester), Instructor:**
Advanced Seminar in Economics & Policy (WIV05001): Economics of Innovation (seminar, 4 SWS)
Hottenrott H ( Becker A )

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

WI000286: Environmental and Natural Resource Economics

TUM School of Management

Module Level: Master
Language: English
Duration: one semester
Frequency: summer semester
Credits:* 5
Total Hours: 150
Self-study Hours: 90
Contact Hours: 60

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

Description of Examination Method:
The learning success will be assessed by a written exam (120 minutes).
By answering the questions students show that they are able to understand the economic view of environmental and resource problems. Furthermore students show that they are able to compare and evaluate alternative economic instruments (e.g. taxes, emission permits, payments for environmental services). They show their ability to apply environmental policy instruments and valuation methods to specific problems. Finally students demonstrate that they are able to conduct and interpret economic cost-benefit analyses.

Repeat Examination:
Next semester

(Recommended) Prerequisites:
A basic knowledge in Microeconomic theory is recommended

Content:
a) Economic growth and the environment
b) Economic analysis of environmental problems
c) Role of institutions and liability rules
d) Analysis of environmental economic instruments
   - Command and control measures
   - Pollution taxes
   - Emission trading
   - Payments for environmental services
e) Valuation methods for environmental goods
f) Cost-benefit analysis.

Intended Learning Outcomes:
At the end of the module the students are able to understand the economic view of environmental and resource problems. They know alternative economic instruments, e.g. taxes, emission permits, payments for environmental services and how they work and are able to compare them regarding their economic efficiency. They know and can apply specific valuation methods to attach a monetary value to environmental effects and conduct and interpret economic cost-benefit analyses.
**Teaching and Learning Methods:**
The module will be held in the form of lectures which are partially combined with group discussions and exercises. The main learning objective is here to understand the economics of environmental policy. Lectures are a format suitable to convey theoretical knowledge about the welfare implications of policy interventions. Integrated exercises will help students to apply acquired knowledge to concrete problems and derive economically sound answers.

**Media:**
PowerPoint

**Reading List:**
A digital reader consisting of various textbook chapters and journal articles will be put on Moodle for each chapter of the course.


**Responsible for Module:**
Glebe, Thilo; PD Dr. habil.

**Courses (Type of course, Weekly hours per semester), Instructor:**
Environmental and Natural Resource Economics (WI000286) (lecture with integrated exercises, 4 SWS)
Glebe T

For further information in this module, please click campus.tum.de or here.
Module Description
WI001147: Exploring society through future technologies

TUM School of Management

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<td>Master</td>
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Number of credits may vary according to degree program. Please see Transcript of Records.

Description of Examination Method:
The assessment consists of the following parts: a final research paper (4000-6000 words) due at the end of the term and two optional reaction papers (500-1000 words each) due prior to two classes the students can pick from the course schedule, respectively. The assessment of the final research paper determines the final grade in this module.

The research paper is an assignment that covers most of the material given in the module. The instructor uses it to estimate how well a student has understood, researched, and incorporated the material and activities associated with the module. Furthermore, students demonstrate their ability to apply the acquired concepts and knowledge to a current issue related to the innovation and society. The research paper is an original piece of writing that may involve empirical research on a specific case.

The reaction papers reflect the content of the classes and enhance the discussion in the classroom. In the papers, students evaluate the assigned text's strengths and weaknesses, which encourages a close reading of the text that goes beyond the surface meaning. In their writing, students respond to implied ideas, and elaborate, evaluate, and analyze the author's purpose and main points. Students submit their papers prior to the class to the instructor and make them available to the other participants, who can comment on the contributions of their peers both online and during class. In the reaction papers, students demonstrate their ability to engage critically with the ideas and theories introduced in the course readings.

Repeat Examination:
Next semester

(Recommended) Prerequisites:
The module is part of the curriculum on Science and Technology Studies (STS) offered at MCTCS and the TUM School of Management Master's Programs. We have designed the module for advanced students who are interested in the relationship between technology and society. Even though it is open to participants from all kinds of backgrounds, the courses offered in this module is firmly rooted in the social sciences and humanities. While this is not mandatory, participants should have a basic academic understanding of social, political, and cultural issues. Ideally, they have previously taken a course in sociology, political science, history, philosophy, anthropology or related disciplines.

Content:
This module introduces the participants to key questions and issues facing policy-makers, engineers, and society writ large when trying to understand, anticipate, and organize the future of technology in society. In order to comprehend current developments and technoscientific futures, students engage with past and present predictions about how innovation might change the world we live in. Changes in science and technology have often influenced
economic and cultural developments - and vice-versa. Over the course of the semester, students tackle innovation not in terms of isolated cases but as a constitutive part of modern technologized societies and their visions of the future.

**Intended Learning Outcomes:**
Upon successful completion of the module, students will be able to understand and analyze potentially disruptive changes in various fields of technological innovation. Additionally, participants will be able to apply a range of concepts and analytical lenses to evaluate complex sociotechnical dynamics in a systematic, reflexive, and critical way. They will be capable to create empirical case studies that identify patterns and recurring tensions in a world shaped by technology, and speak about them with confidence in the context of their own academic and professional interests.

The objective of the module is neither to offer predictions of what the most likely or most desirable sociotechnical developments will look like. Nor will it provide "how-to" recipes for policy-making and management. The goal is to put these instrumental ways of thinking about innovation into a broader perspective and take a reflexive (and at times critical) look at the relationship between the technology, business, and culture.

**Teaching and Learning Methods:**
The module is a case study seminar focused on particular area of contemporary science and technology. In class, the students discuss interactively different approaches to the particular innovation field under consideration to develop their analytical and reflexive capabilities as well as acquire knowledge on the innovation field. Guided by the course instructors, the participants learn to apply a number of conceptual frameworks and tools through self-study of the literature from a number of fields, including sociology, political science, economics, science and technology studies, innovation studies, and cultural anthropology. The classes are predominantly interactive and include group as well as individual exercises.

**Media:**
not specified

**Reading List:**
doi:10.1080/09537320600777002.

**Responsible for Module:**
Pfotenhauer, Sebastian; Prof. Dr.

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

For further information in this module, please click campus.tum.de or here.
Advanced International Experience
Module Description

WI001181: Advanced International Experience

TUM School of Management

Module Level: Master
Language: English
Duration: one semester
Frequency: winter/summer semester
Credits:* 6
Total Hours: 180
Self-study Hours: 180
Contact Hours: 0

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

Description of Examination Method:

Students have to pass a written single-choice exam. The module examination consists of a written 90-minute single-choice exam. The test examine deeper knowledge of the meaning of culture, cultural differences and resulting difficulties. Tasks which refer to scientific cultural concepts verify that students are able to distinguish between different cultural dimensions and standards, for example the cultural dimensions of Geert Hofstede's concept. Tasks which refer to different management styles and working cultures examine that students are able to analyse how different cultural backgrounds influence working in an international business context, for example a Western Management style. Tasks which refer to country-specific cultural differences proof that students are able to interpret critical intercultural situations correctly and offer adequate behavioral patterns. Tasks which refer to intercultural communication check that students are able to distinguish between different communication styles influenced by culture and know how to communicate adequately with members of different cultures, for example cultures with a direct communication style.

Repeat Examination:
Next semester

(Recommended) Prerequisites:

Students have to complete a stay abroad relevant to their subject of studies before they can be admitted to the module. In general, for this purpose international study experience, practical training abroad as well as the completion of a project study or master's thesis is accepted.

(Details see:
https://www.wi.tum.de/programs/master-in-management/downloads/
https://www.wi.tum.de/programs/master-consumer-affairs/downloads/
https://www.wi.tum.de/programs/master-mt/downloads/)

Content:

This module gives an introduction to basic theoretical knowledge in scientific conceptualisation of culture, cultural differences and difficulties as well as their overcoming. During the module various scientific definitions of culture and different scientific approaches of cultural dimensions are outlined. By means of selected cultural characteristics and practical examples it is explained how to deal with different matters occurring when people with different cultural background interact. Additionally, different management styles in view of different cultures are declared. During the module explanatory approaches to difficulties which result from different cultural backgrounds in an international business environment are elaborated on. Further approaches how to overcome these difficulties are outlined by means of practical examples in a global working environment and in international teams. In addition, basic theoretical knowledge in communication and different models of communication are provided. Furthermore, it is defined how to deal with different communication styles of different cultures and how to communicate adequately in an international context. For this purpose, selected cultural characteristics and practical examples are used.
Within the framework of the course students are asked to reflect, analyse and evaluate already experienced situations in view of the discussed theoretical models. Additionally, ethically relevant problem areas in international/intercultural businesses are outlined.

**Intended Learning Outcomes:**
After attending this module students are able to apply basic scientific approaches to culture and cultural differences. On basis of appropriate knowledge about cultural theories, particular cultures, as well as general knowledge about the issues occurring when people with different cultural backgrounds interact the students are able to analyse cultural differences and difficulties in an intercultural business context, as well as to interpret and overcome them. Additionally, students are aware of different communication styles in different cultures and know to apply this knowledge in intercultural communication situations. Furthermore, students will bear integrity, ethics and responsibility in mind when making management decisions in a multicultural business environment. Students are also able to reflect their experience abroad with scientific intercultural knowledge and develop an open-mindedness and sensitivity with respect to cultural differences.

**Teaching and Learning Methods:**
The module is created as an online-course. It is divided in various thematic areas which contain basic theoretical knowledge. In addition, practical examples, case studies and videos illustrate relevant concepts and their application in an international (business-) environment. Further exercises are provided at the end of each thematic area in order to encourage students to tackle with specific intercultural subjects and to develop kind of intercultural sensitivity. Additionally, a bibliography is prepared for students’ self-study. Practice questions for exam preparation are also offered.

**Media:**
Digital Scripts (PowerPoint Slides, PDF files), videos, scientific literature, exercises

**Reading List:**
Standard references (amongst others):

**Responsible for Module:**
Moog, Martin; Prof. Dr.

**Courses (Type of course, Weekly hours per semester), Instructor:**
Advanced International Experience (WI001181) (lecture, 2 SWS)
Moog M [L], Heinze S, Moog M, Oesingmann K

For further information in this module, please click campus.tum.de or here.
Electives in Consumer Science and Technology

In the Elective Modules, at least 24 credits have to be taken from a supplementary catalogue of electives. The supplementary catalogue of electives will be announced promptly before the start of classes in an appropriate way by TUM School of Management. As an alternative, up to 24 credits can be provided as General Knowledge Modules from the overall offer of the Technical University of Munich at the Master's level. Instead of providing the Electives in Consumer Science & Technology (elective modules) at the TUM, subject-related examinations at a foreign university can be provided as part of a stay abroad.
Innovation and Entrepreneurship
Marketing, Strategy and Leadership
Consumers, Technology and Sustainability
Other Electives
Module Description

WI900686: Project Studies (Master in Consumer Science)

Project Studies in Consumer Science & Technology
TUM School of Management

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<td>360</td>
<td>330</td>
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Number of credits may vary according to degree program. Please see Transcript of Records.

Description of Examination Method:
Grading is based on a project work. The project work consists of a written project report (~15 pages, 50% of the grade) and a presentation (30 minutes, 50% of the grade). A student team of 2-5 students works on a specific consumer-research problem within a company or any other similar institution. The topic should be positioned in the interaction of consumers and technology. The team runs through several project stages: problem definition, division of work/tasks, decision making processes, and realization. In that the students show that they can develop appropriate strategies to cope the set of problems. They show that they are able to compose the state of research. In addition they demonstrate their ability to develop their own specific approach for a solution based on scientific knowledge as well as methodical skills. With the presentation students demonstrate that they are capable of preparing a certain topic and summarize specific issues or results down to their essential core. They show that they are able to respond competently to any questions, suggestions or discussions brought up by the audience. Students demonstrate their ability to work within a team, to manage resources and deadlines through timely submission of the enumerated tasks. Students demonstrate that they are able to complete the tasks of their project in a team environment. Grading will especially take into account the overall working outcome of the project with respect to the initial problem set, the selection and application of the chosen methodology as well as the analyses and discussion of the main findings. The project work is set up in a way which enables the identification and evaluation of each student¿s individual contribution to the project¿s success.

Repeat Examination:
Next semester

(Recommended) Prerequisites:
Consumer Behavior, Consumer Economics, Research Methods

Content:
The project study consists of a specific problem statement or challenge which a company or any other similar institution is confronted with. This challenge may have a research related or practical character. Analyzing potential sales volumina of new markets, developing a marketing strategy for a new product or the adoption of new technologies by consumers are just a few examples of what may be subject of the project study. The project study and its findings regarding the outlined problem set are based on students¿ academic knowledge gained through their study programs.

Intended Learning Outcomes:
At the end of the module students are able to successfully work and finalize real-life consumer-related problems in a systematic and academic manner. Students will be able to do so since they acquired the necessary skills to articulate and identify problem sets, develop an analytical solution finding process, deduce and adapt the appropriate methodologies and evaluate the results with regard to the initial problem. Additionally, students will be able to contribute significantly to a team's final work output and to make this contribution in a time limited
environment. Students are able to exchange in a professional and academic manner within a team. They show that they are able to integrate involved persons into the various tasks considering the group situation. Furthermore the students are able to prepare a certain topic within a given time frame in such a way as to present it in clear and comprehensible manner to an audience. Based on this, they are able to work out analytical solution identification processes.

**Teaching and Learning Methods:**
The team-based development (2-5 students) of the project solution encourages the students to deal soundly with an academic or practical subject based on their previously acquired academic knowledge. Team work is particularly suitable for tackling problem sets and writing a report for developing constructive critique to others and for implementing appropriate solutions to these critiques. The project may happen at the premises of the respective partner institution or from a remote location. They are able to communicate the evolvement of the project by composing a project report and preparing a presentation of their solutions to the supervisors from the company as well as the university. The project is supervised jointly by mentors from the respective company/institution and the professor of the TUM School of Management. With regards to content the project study takes an approximate time of three month.

**Media:**
literatur, presentations

**Reading List:**
General literature to project management:

**Responsible for Module:**
Roosen, Jutta; Prof. Dr. Ph.D.

**Courses (Type of course, Weekly hours per semester), Instructor:**
2 SWS Supervising

For further information in this module, please click [campus.tum.de](http://campus.tum.de) or [here](http://).
Module Description

WI900766: Master's Thesis (Master in Consumer Science)

TUM School of Management

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<td>Master</td>
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<td>winter/summer semester</td>
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Credits:*  
Total Hours: 900  
Self-study Hours: 890  
Contact Hours: 10

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

Description of Examination Method:
The Master's Thesis is the student's final project prepared within 6 months. During this time, the student concentrates on a specific topic in economics and management. In a written form, the student discusses the state of research and discourse regarding chosen topic, and develops a specific research question. Based on scientific knowledge and methodological skills, student independently answers the research question. Master Thesis can be supervised by a professor from the TUM School of Management or a professor from any other department of TUM if the professor is teaching in the program.

Repeat Examination:
Next semester

(Recommended) Prerequisites:
The registration for Master thesis is possible after the successful completion of 60 Credits.

Content:
The Master's Thesis focuses on a research topic in economics or management. It is also possible to research a topic related to consumer science from an interdisciplinary perspective. Usually, the student works with an empirical question. The thesis is always supervised by a professor and might be done in co-operation with an external business or research organization. The research is planned in a way that allows finishing the Thesis in six months.

Intended Learning Outcomes:
At the end of the module Master's Thesis students are able to work on a problem from economics, management and/or consumer sciences in an independent, systematic and scientific way. Students independently apply scientific concepts, theories and methods, acquired during their studies, to their specific topic. They present the facts and findings based on scientific analysis, evaluate them and summarize the obtained results within the scientific and/or applied discussion. They are able to develop a research design, choose appropriate methods, derive results, and interpret them. Hence, students are able to independently work on topics and develop own solutions.

Teaching and Learning Methods:
Work on Master Thesis requires from the student well-founded scientific examination of the research topic. Therefore, student applies the theoretical and methodological skills acquired during the studies, creates a research design and an elaborated scientific documentation within the required period. The work on the project is done independently, supported by discussions with the supervisor.
Media:
Literature, presentations

Reading List:
specific literature based on the topic

Responsible for Module:
Roosen, Jutta; Prof. Dr. Ph.D.

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

For further information in this module, please click campus.tum.de or here.
Auflagen
Requirement Proof of Proficiency in German
## Index

<table>
<thead>
<tr>
<th>Module Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advanced International Experience</td>
<td>72</td>
</tr>
<tr>
<td>[WI001181] Advanced International Experience</td>
<td>73-74</td>
</tr>
<tr>
<td>[WI001179] Advanced Seminar Consumers, Technology &amp; Sustainability</td>
<td>55-56</td>
</tr>
<tr>
<td>Advanced Seminar Consumers, Technology and Sustainability</td>
<td>54</td>
</tr>
<tr>
<td>Advanced Seminar Innovation and Entrepreneurship</td>
<td>22</td>
</tr>
<tr>
<td>Advanced Seminar Marketing, Strategy and Leadership</td>
<td>41</td>
</tr>
<tr>
<td>[WI001166] Advanced Topics in Innovation &amp; Entrepreneurship: Entrepreneurial Prototyping</td>
<td>38-39</td>
</tr>
<tr>
<td>Auflagen</td>
<td>86</td>
</tr>
<tr>
<td>[WI001178] Consumer Analytics &amp; Big Data [CABIDA]</td>
<td>13-14</td>
</tr>
<tr>
<td>[WI000739] Consumer Behavior [none]</td>
<td>6-7</td>
</tr>
<tr>
<td>[WI001175] Consumer Behavior Research Methods</td>
<td>11-12</td>
</tr>
<tr>
<td>[WI000740] Consumer Economics and Policy</td>
<td>16-17</td>
</tr>
<tr>
<td>[20181] Consumer Science</td>
<td>5</td>
</tr>
<tr>
<td>Consumers, Technology and Sustainability</td>
<td>78</td>
</tr>
<tr>
<td>Elective Modules Consumers, Technology and Sustainability</td>
<td>57</td>
</tr>
<tr>
<td>Elective Modules Innovation and Entrepreneurship</td>
<td>25</td>
</tr>
<tr>
<td>Elective Modules Marketing, Strategy and Leadership</td>
<td>44</td>
</tr>
<tr>
<td>Electives in Consumer Science and Technology</td>
<td>75</td>
</tr>
<tr>
<td>Electives in Economics</td>
<td>15</td>
</tr>
<tr>
<td>[WI000286] Environmental and Natural Resource Economics</td>
<td>68-69</td>
</tr>
<tr>
<td>[POL70070] Ethics of Technology</td>
<td>64-65</td>
</tr>
<tr>
<td>[WI001147] Exploring society through future technologies</td>
<td>32-33</td>
</tr>
<tr>
<td>[WI001147] Exploring society through future technologies</td>
<td>70-71</td>
</tr>
<tr>
<td>Innovation and Entrepreneurship</td>
<td>76</td>
</tr>
<tr>
<td>[WI001136] Innovation, Society, and Public Policy</td>
<td>29-31</td>
</tr>
<tr>
<td>[POL40100] Introductory Lecture: Politics and Technology</td>
<td>62-63</td>
</tr>
<tr>
<td>[WI000116] Lead User Project [LUP]</td>
<td>26-28</td>
</tr>
<tr>
<td>[WI001140] Luxury Marketing</td>
<td>51-52</td>
</tr>
<tr>
<td>Marketing, Strategy and Leadership</td>
<td>77</td>
</tr>
<tr>
<td>Master's Thesis</td>
<td>83</td>
</tr>
<tr>
<td>[WI900766] Master's Thesis (Master in Consumer Science)</td>
<td>84-85</td>
</tr>
<tr>
<td>[WI000994] Negotiation Strategies</td>
<td>45-46</td>
</tr>
</tbody>
</table>
Other Electives

<table>
<thead>
<tr>
<th>Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>POL00011</td>
<td>Politics for Rocket Scientists: An Introduction to Political Science for Non-</td>
<td>60-61</td>
</tr>
<tr>
<td></td>
<td>Political Scientists</td>
<td></td>
</tr>
<tr>
<td>WI001056_1</td>
<td>Principles of Economics</td>
<td>18-19</td>
</tr>
</tbody>
</table>

Project Studies

- [WI900686] Project Studies (Master in Consumer Science) 81-82
- [WI001174] Qualitative and Quantitative Methods in Consumer Research 8-10

Required Modules

- Requirement Proof of Proficiency in German 87

Specialization in Management

- Specialization in Management: Consumers, Technology and Sustainability 53
- Specialization in Management: Innovation and Entrepreneurship 21
- Specialization in Management: Marketing, Strategy and Leadership 40

- [WI001128] Strategies in MNEs 49-50
- [WI001165] Sustainable Entrepreneurship - Getting Started 36-37
- [WI001150] Sustainable Entrepreneurship - Theoretical Foundations 34-35