Modulhandbuch
für den
Masterstudiengang
International Management of Resources and Environment (IMRE)
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Abkürzungen

KA: schriftliche Klausur / written exam
MP: mündliche Prüfung / oral examination
AP: alternative Prüfungsleistung / alternative examination
PVL: Prüfungsvorleistung / prerequisite
MP/KA: mündliche oder schriftliche Prüfungsleistung (abhängig von Teilnehmerzahl) / written or oral examination (dependent on number of students)

SS, SoSe: Sommersemester / sommer semester
WS, WiSe: Wintersemester / winter semester
SX: Lehrveranstaltung in Semester X des Moduls / lecture in module semester x

SWS: Semesterwochenstunden
# Module Name: **Applied Environmental Management**

**Module Name:** Applied Environmental Management  
**Module Code:** [EMA. MA. Nr. 2909](#) / Examination number: -  
**Start Year:** WiSe 2009  
**Version:** 11.09.2013

**Responsible:** Bongaerts, Jan C. / Prof. Dr.  
**Lecturer(s):** Bongaerts, Jan C. / Prof. Dr.  
**Institute(s):** Professor of Environmental & Resource Management  
**Duration:** 1 Semester(s)

**Competencies:** The purpose of the cluster is to introduce concepts environmental management within a specific business or industrial context. Attention is paid to legal requirements, modelling techniques, costs calculations and monitoring and control of performance. Practical problems are associated with the management waste and environmental (and health) risks.

**Contents:** Using the “applied approach” two areas of environmental management are studied. On the one hand, there is the subject of Management of Residuals (MOR): what is waste?, characteristics of waste legislation, waste legislation put to practice in management structures, case studies on waste management, environmental costing and waste, waste management and recycling, waste to energy. On the other hand, there is the subject of the Assessment and management of environmental risks with special attention to chemicals (ERA): environmental risk modelling, environmental risk management, instruments of environmental risk management, environmental risk and costing, case studies.

**Literature:**  
P. Agamuthu, University of Malaya, Kuala Lumpur, Malaysia (Ed.): Waste Management & Research, International Solid Waste Association (ISWA)  

**Types of Teaching:**  
S1 (WS): Lectures (2 SWS)  
S1 (WS): Exercises (2 SWS)

**Pre-requisites:**  
**Recommendations:** Principles of Environmental Management, 2010-04-28

**Frequency:** yearly in the winter semester

**Requirements for Credit Points:** For the award of credit points it is necessary to pass the module exam.  
The module exam contains:  
AP: For MOR  
AP: For ERA

Voraussetzung für die Vergabe von Leistungspunkten ist das Bestehen der Modulprüfung. Die Modulprüfung umfasst:  
AP: Für MOR  
AP: Für ERA

**Credit Points:** 6

**Grade:** The Grade is generated from the examination result(s) with the following weights (w):  
AP: For MOR [w: 1]  
AP: For ERA [w: 1]

**Workload:** The workload is 180h. It is the result of 60h attendance and 120h self-studies.
<table>
<thead>
<tr>
<th><strong>Module Name:</strong></th>
<th>Applied Geophysics</th>
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</thead>
<tbody>
<tr>
<td><strong>Responsible:</strong></td>
<td>Buske, Stefan / Prof. Dr.</td>
</tr>
<tr>
<td><strong>Lecturer(s):</strong></td>
<td>Buske, Stefan / Prof. Dr.</td>
</tr>
<tr>
<td><strong>Institute(s):</strong></td>
<td>Institute of Geophysics and Geoinformatics</td>
</tr>
<tr>
<td><strong>Duration:</strong></td>
<td>1 Semester(s)</td>
</tr>
<tr>
<td><strong>Competencies:</strong></td>
<td>The aim of this course is an introduction to the most commonly applied geophysical exploration methods (gravimetry, magnetics, geoelectrics, electromagnetics, georadar, refraction and reflection seismics, borehole geophysics, etc.).</td>
</tr>
<tr>
<td><strong>Contents:</strong></td>
<td>Targets of geophysical exploration, theory / method / corrections / applications / case-studies of gravimetry / magnetics / geoelectrics / EM / georadar / seismics / borehole-geophysics.</td>
</tr>
</tbody>
</table>
Sheriff & Geldart, Exploration Seismology, University of Cambridge Press |
| **Types of Teaching:** | S1 (WS): Lectures (2 SWS)  
S1 (WS): Exercises (1 SWS) |
| **Pre-requisites:** | Recommendations:  
Höhere Mathematik für Ingenieure 1, 2009-05-27  
Physik für Naturwissenschaftler I, 2012-05-10 |
| **Frequency:** | yearly in the winter semester |
| **Requirements for Credit Points:** | For the award of credit points it is necessary to pass the module exam. The module exam contains:  
KA [90 min]  
AP: course exercises  
Voraussetzung für die Vergabe von Leistungspunkten ist das Bestehen der Modulprüfung. Die Modulprüfung umfasst:  
KA [90 min]  
AP: Erfolgreich abgeschlossene Übung |
| **Credit Points:** | 4 |
| **Grade:** | The Grade is generated from the examination result(s) with the following weights (w):  
KA [w: 1]  
AP: course exercises [w: 1] |
| **Workload:** | The workload is 120h. It is the result of 45h attendance and 75h self-studies. Self study comprises preparation time for lectures, exercises and exams. |
## Module Name:
**Aspects of the International Law of Resources & Environment 1**

### Responsible:
Jaeckel, Liv / Prof.

### Lecturer(s):
Albrecht, Maria

### Institute(s):
Professor of Public and Environmental Law

### Duration:
1 Semester(s)

### Competencies:
The purpose of the cluster is to give an introduction to the basic terms of law and to legal problems related to resources and environment. Students without a law background will be enabled to understand the characteristics of these fields as such, before turning to a range of more specific questions. After completion of the cluster, students should be able to identify the legal issues of simple cases in the fields of law and to decide on them using the established legal methods.

### Contents:
1. General Introduction to Law
   This part contains the basic legal terms, the introduction to the different fields of law and the interpretation of law.
2. Introduction to International and International environmental Law
   Problems of allocation of resources between states and international environmental problems will be discussed.
3. The topics 1 and 2 will also be presented by discussing cases (seminar).

### Literature:
Birnie/Boyle/Redgwell, International Law and the Environment, Oxford University Press

### Types of Teaching:
S1 (WS): Lectures (1 SWS)
S1 (WS): Exercises (1 SWS)

### Pre-requisites:
No previous knowledge of law is required.

### Frequency:
yearly in the winter semester

### Requirements for Credit Points:
For the award of credit points it is necessary to pass the module exam. The module exam contains:
KA [90 min]

Voraussetzung für die Vergabe von Leistungspunkten ist das Bestehen der Modulprüfung. Die Modulprüfung umfasst:
KA [90 min]

### Credit Points:
3

### Grade:
The Grade is generated from the examination result(s) with the following weights (w):
KA [w: 1]

### Workload:
The workload is 90h. It is the result of 30h attendance and 60h self-studies. Self-studies include assignments, preparation and wrapping up of lectures as well as preparation of examinations.
### Module Name:
**Aspects of the International Law of Resources & Environment 2**

### Responsible:
Jaeckel, Liv / Prof.

### Lecturer(s):
Albrecht, Maria

### Institute(s):
Professor of Public and Environmental Law

### Duration:
1 Semester(s)

### Competencies:
Students with the background of Aspects of International Law of Resources & Environment 1 will be enabled to understand the characteristics of cases in International environmental law. After completion of this cluster, students should be able to identify the legal issues of cases in the fields of law discussed and to decide them using the established legal methods.

### Contents:
1. **The WTO and conflicts between trade and environment**
   - The WTO as the only global International organization dealing with the rules of trade between nations.
   - Decisions of the WTO panel regarding conflicts of national environmental protection measures and free trade will be presented.
2. **European Union and its Environmental Policy**
   - Students should gain a basic knowledge of the law-making process in the EU and the characteristics of different types of legal measures.
3. The topics 1 and 2 will also be presented by discussing cases (seminar).

### Literature:
Birnie/Boyle/Redgwell, International Law and the Environment, Oxford University Press

### Types of Teaching:
S1 (SS): Lectures (1 SWS)
S1 (SS): Seminar (1 SWS)

### Pre-requisites:
**Recommendations:**
Aspects of the International Law of Resources & Environment 1, 2016-07-14

### Frequency:
yearly in the summer semester

### Requirements for Credit Points:
For the award of credit points it is necessary to pass the module exam.
The module exam contains:
KA [90 min]

Voraussetzung für die Vergabe von Leistungspunkten ist das Bestehen der Modulprüfung. Die Modulprüfung umfasst:
KA [90 min]

### Credit Points:
3

### Grade:
The Grade is generated from the examination result(s) with the following weights (w):
KA [w: 1]

### Workload:
The workload is 90h. It is the result of 30h attendance and 60h self-studies. Self-studies include assignments, preparation and wrapping up of lectures as well as preparation of examinations.
Module Name: **Business Communication**

(English): Hinner, Michael B. / Prof. Dr.

Lecturer(s): Hinner, Michael B. / Prof. Dr.

Institute(s): Professor of Business English, Business Communication and Intercultural Communication

Duration: 1 Semester(s)

Competencies: The module seeks to transmit the theoretical foundation for human communication principles and applies them in a business context to illustrate and analyze how communication influences, directs, and determines business transactions and relationships in, for example, the resource industry, engineering firms, global corporations, etc.

Contents: The module consists of one lecture and one tutorial and is structured as follows:

1. The lecture focuses on the following topics: Communication, communication models, perceptual process, communication channels and media, communication context, meaning, encoding and decoding, feedback analysis, verbal and nonverbal communication, business and communication.

2. The tutorial integrates the above topics into an applied business context (e.g. the resource industry, engineering firms, global corporations, etc.). Participants will analyze and discuss the topics and contexts in small groups and present the results informally and formally. The module is taught in English and assignments have to be completed in English.

Literature: Script sold at the beginning of the semester;


Types of Teaching: S1 (WS): Lectures (2 SWS)

S1 (WS): Exercises (2 SWS)

Pre-requisites: Recommendations: Abitur-level English, or equivalent knowledge of English.

Frequency: yearly in the winter semester

Requirements for Credit Points: For the award of credit points it is necessary to pass the module exam. The module exam contains:

KA*: [90 min]

AP*: Active Written and Oral Participation, Presentations, and Assignments in the Course

* In modules requiring more than one exam, this exam has to be passed or completed with at least "ausreichend" (4,0), respectively.

Voraussetzung für die Vergabe von Leistungspunkten ist das Bestehen der Modulprüfung. Die Modulprüfung umfasst:

KA*: [90 min]

AP*: Aktive schriftliche und mündliche Teilnahme, Präsentation und Belegarbeiten in der Veranstaltung

* Bei Modulen mit mehreren Prüfungsleistungen muss diese Prüfungsleistung bestanden bzw. mit mindestens "ausreichend" (4,0) bewertet sein.

Credit Points: 6
**Grade:**
The Grade is generated from the examination result(s) with the following weights (w):
- KA* [w: 4]
- AP*: Active Written and Oral Participation, Presentations, and Assignments in the Course [w: 1]

* In modules requiring more than one exam, this exam has to be passed or completed with at least "ausreichend" (4,0), respectively.

**Workload:**
The workload is 180h. It is the result of 60h attendance and 120h self-studies. Self-study time includes reading the relevant literature, preparation and follow-up work for in-class participation as well as preparation time for the written exam, i.e. "Klausurarbeit" and the assignments.
### Module Name:
**Cases & Strategies in Environmental Management**

### Responsible:
**Bongaerts, Jan C. / Prof. Dr.**

### Lecturer(s):
**Liu, Jiangxue / Dipl.-Kffrau**

### Institute(s):
**Professor of Environmental & Resource Management**

### Duration:
1 Semester(s)

### Competencies:
The cluster intends to give students the knowledge and the ability to understand the business and the strategic choices and decision making processes of corporations in the environmental sectors. Moreover, they will have to work themselves through case studies in order to be able to gain practical knowledge of these issues.

### Contents:
Definitions, structure size and trends of the international environmental industry, frameworks of business in the sector, in particular within the string regulatory arrangement and the high environmental standards, globalisation of companies and local delivery of services.

### Literature:
- Pindyck, R.S. (1978): *The optimal exploration and production of exhaustible resources*, in: Journal of Political Economy

### Types of Teaching:
- S1 (WS): Lectures (1 SWS)
- S1 (WS): Seminar (2 SWS)
- S1 (WS): Exercises (1 SWS)

### Pre-requisites:
**Recommendations:**
Admission to a graduate programme of the university (MBA IMRE or other Master’s Programmes) or admission through Exchange programmes (e.g. ERASMUS)

### Frequency:
yearly in the winter semester

### Requirements for Credit Points:
For the award of credit points it is necessary to pass the module exam. The module exam contains:

- AP: A paper of minimally fifteen pages will have to be prepared and presented during a twenty minutes session, which includes a ten minutes discussion

Voraussetzung für die Vergabe von Leistungspunkten ist das Bestehen der Modulprüfung. Die Modulprüfung umfasst:

- AP: Belegarbeit im Umfang von mindestens 15 Seiten mit Präsentation (20 Minuten) und anschließender Diskussion (10 Minuten)

### Credit Points:
3
| Grade: | The Grade is generated from the examination result(s) with the following weights (w):
<p>|        | AP: A paper of minimally fifteen pages will have to be prepared and presented during a twenty minutes session, which includes a ten minutes discussion [w: 1] |
| Workload: | The workload is 90h. It is the result of 60h attendance and 30h self-studies. |</p>
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<th>Data:</th>
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<th>Version: 12.07.2016</th>
<th>Start Year: SoSe 2017</th>
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<td>Module Name:</td>
<td>Climate Change Economics</td>
<td>(English):</td>
<td></td>
</tr>
<tr>
<td>Responsible:</td>
<td>Rübbelke, Dirk / Prof. Dr. cbaldauf</td>
<td></td>
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<tr>
<td>Lecturer(s):</td>
<td>Rübbelke, Dirk / Prof. Dr.</td>
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<tr>
<td>Institute(s):</td>
<td>Professor of Economics, esp. Resource Economics</td>
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<tr>
<td>Duration:</td>
<td>1 Semester(s)</td>
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<td>Competencies:</td>
<td>Students will be able to understand the key aspects of climate change economics. National as well as international issues will be covered.</td>
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<tr>
<td>Contents:</td>
<td>Among the topics are the economics of adaptation to and mitigation of climate change, international negotiations, climate finance.</td>
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<td>Types of Teaching:</td>
<td>S1 (SS): Lectures (2 SWS)</td>
<td>S1 (SS): Exercises (2 SWS)</td>
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<tr>
<td>Frequency:</td>
<td>yearly in the summer semester</td>
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<td>Requirements for Credit Points:</td>
<td>For the award of credit points it is necessary to pass the module exam. The module exam contains: KA: Written test [60 min] AP: Presentation</td>
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<tr>
<td>Credit Points:</td>
<td>6</td>
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<tr>
<td>Grade:</td>
<td>The Grade is generated from the examination result(s) with the following weights (w): KA: Written test [w: 4] AP: Presentation [w: 1]</td>
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<tr>
<td>Workload:</td>
<td>The workload is 180h. It is the result of 60h attendance and 120h self-studies. Self-studies include assignments, preparation and wrapping up of lectures as well as the preparation of presentations and of examinations.</td>
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<tr>
<td><strong>Data:</strong></td>
<td>CENRI. MA. Nr. / Examination number: - / Examination number: -</td>
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<td><strong>Version:</strong></td>
<td>14.07.2016</td>
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<tr>
<td><strong>Start Year:</strong></td>
<td>WiSe 2017</td>
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<tr>
<td><strong>Module Name:</strong></td>
<td><strong>Commodity Exchanges for the International Energy and Natural Resources Industries</strong></td>
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<tr>
<td><strong>(English):</strong></td>
<td>Commodity Exchanges for the International Energy and Natural Resources Industries</td>
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<tr>
<td><strong>Responsible:</strong></td>
<td>Fröhling, Magnus / Prof.</td>
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<tr>
<td><strong>Lecturer(s):</strong></td>
<td>Florin, Jan-Henrich / Prof. Dr.</td>
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<tr>
<td><strong>Institute(s):</strong></td>
<td>Professor of Economics, esp. Resource Economics Professor of Ressourcemanagement</td>
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<tr>
<td><strong>Duration:</strong></td>
<td>1 Semester(s)</td>
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<tr>
<td><strong>Competencies:</strong></td>
<td>Portfolio Management and Risk Management Knowledge of value chain in the energy and natural resources industries</td>
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<tr>
<td><strong>Contents:</strong></td>
<td>The principle of market imperfections The principles of pricing and hedging VaR (Value at Risk) and Hurdle Rate Credit Risk, Risk Mitigation, Risk Management Markets covered: Electricity, gas &amp; oil, coal, industrial metals etc.</td>
<td></td>
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<tr>
<td><strong>Literature:</strong></td>
<td>Reference is made to the literature list as presented on the website of the lecturer</td>
<td></td>
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</tr>
<tr>
<td><strong>Types of Teaching:</strong></td>
<td>S1 (WS): Lecture and Case Study / Lectures (2 SWS)</td>
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<tr>
<td><strong>Pre-requisites:</strong></td>
<td><strong>Mandatory:</strong> Finance &amp; Accounting</td>
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<tr>
<td><strong>Frequency:</strong></td>
<td>yearly in the winter semester</td>
<td></td>
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<tr>
<td><strong>Requirements for Credit Points:</strong></td>
<td>For the award of credit points it is necessary to pass the module exam. The module exam contains: KA: For the award of credit points it is necessary to pass the module exam. [90 min] Voraussetzung für die Vergabe von Leistungspunkten ist das Bestehen der Modulprüfung. Die Modulprüfung umfasst: KA: Klausurarbeit [90 min]</td>
<td></td>
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<tr>
<td><strong>Credit Points:</strong></td>
<td>3</td>
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<tr>
<td><strong>Grade:</strong></td>
<td>The Grade is generated from the examination result(s) with the following weights (w): KA: For the award of credit points it is necessary to pass the module exam. [w: 1]</td>
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<tr>
<td><strong>Workload:</strong></td>
<td>The workload is 90h. It is the result of 30h attendance and 60h self-studies.</td>
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</tbody>
</table>
Module Name: **Competition Policy and Intellectual Property Rights**

**Responsible:** Stephan, Johannes / Prof. Dr.

**Lecturer(s):** Stephan, Johannes / Prof. Dr.

**Institute(s):** Professor of International Resource Policy and Economic Development

**Duration:** 1 Semester(s)

**Competencies:** This module is split into two sections. The objective of the first section is to inform students about how management of international firms acts and reacts on different varieties of national anti-trust laws and on different competition-market structures in general. In particular, the role of the European Union Competition regime is reviewed. The objective of the second is to make the student aware of the two characteristics of IPR (copyright, trademark, trade secrets, and patents): the protection of IPR as a driver of innovation on the one side and IPR as a hindrance to the dissemination of knowledge. In addition, the module focuses on how enterprises in catch-up economies can use IPR regimes with a view on international competitiveness.

**Contents:** History of thought in competition policy (“competition-Leitbild”), main elements of a competition law, Competition policy-sensitive business practices, Competition policy enforcement: case studies, IPR: balancing innovation and the knowledge dissemination/use, Internat. protection of intellectual property rights through the WTO, Case studies.

**Literature:**
- Netanel, N.W. (2009) (ed.), The Development Agenda; global intellectual property and developing countries. New York: Oxford University Press. Here in particular chapters 1, 3, 7, (9, 10), and 17.

**Types of Teaching:**
- S1 (SS): Lectures (2 SWS)
- S1 (SS): Exercises (2 SWS)

**Pre-requisites:**

**Recommendations:**
- Makroökonomik, 2009-08-18
- Mikroökonomische Theorie, 2014-03-05

Basic knowledge in micro and macroeconomics is required.

**Frequency:** yearly in the summer semester

**Requirements for Credit Points:** For the award of credit points it is necessary to pass the module exam. The module exam contains:
- KA [90 min]
- AP: Case studies (15 pages)

Voraussetzung für die Vergabe von Leistungspunkten ist das Bestehen der Modulprüfung. Die Modulprüfung umfasst:
- KA [90 min]
- AP: Fallstudie (15 Seiten)

**Credit Points:** 6

**Grade:** The Grade is generated from the examination result(s) with the following weights (w):
- KA [w: 7]
| Workload: | The workload is 180h. It is the result of 60h attendance and 120h self-studies. |
Module Name: **Corporate Sustainability and Risk Management**

(English):

Responsible: Fröhling, Magnus / Prof.

Lecturer(s): Fröhling, Magnus / Prof.

Institute(s): Professor of Recourcesmanagement

Duration: 1 Semester(s)

Competencies: The students are able to identify, discuss and solve fundamental problems of sustainability and risk management in companies.

Contents: Among others the topics of the course comprise:

- Origin is the sustainability concept
- Relevance of the sustainability concept for companies
- Methods and tools for the operationalisation of sustainability management,
- Relevance of corporate risk management
- The risk management cycle
- Methods and tools for corporate risk management.

Literature:
- Taticchi, Carbone, Albino (Eds., 2013): Corporate Sustainability, Springer
- Okpara, Idowu (Eds., 2013): Corporate Social Responsibility, Springer
- Anderson (2005): Corporate Survival: The Critical Importance of Sustainability Risk Management, IUniverse
- Borghesi, Gaudenzi (Eds., 2013): Risk Management, Springer
- Merz (2011): Entwicklung einer indikatorenbasierten Methodik zur Vulnerabilitätsanalyse für die Bewertung von Risiken in der industriellen Produktion, KIT Scientific Publishing
- Bertsch (2011): Uncertainty handling in multi-attribute decision support for industrial risk management, KIT Scientific Publishing

Types of Teaching:
- S1 (SS): Corporate Sustainability and Risk Management (lecture) - Corporate Sustainability and Risk Management (lecture) / Lectures (2 SWS)
- S1 (SS): Corporate Sustainability and Risk Management (tutorial) - Corporate Sustainability and Risk Management (tutorial) / Exercises (2 SWS)

Pre-requisites:

Frequency: yearly in the summer semester

Requirements for Credit Points: For the award of credit points it is necessary to pass the module exam. The module exam contains:

- AP*: Assignments
- KA: Written examination [90 to 90 min]

* In modules requiring more than one exam, this exam has to be passed or completed with at least "ausreichend" (4,0), respectively.

Voraussetzung für die Vergabe von Leistungspunkten ist das Bestehen der Modulprüfung. Die Modulprüfung umfasst:

- AP*: Assignments
- KA: Written examination [90 bis 90 min]

* Bei Modulen mit mehreren Prüfungsleistungen muss diese Prüfungsleistung bestanden bzw. mit mindestens "ausreichend" (4,0) bewertet sein.

Credit Points: 6
| Grade: | The Grade is generated from the examination result(s) with the following weights (w):
|        | AP*: Assignments [w: 1]
|        | KA: Written examination [w: 4]
|        | * In modules requiring more than one exam, this exam has to be passed or completed with at least "ausreichend" (4,0), respectively.
<p>| Workload: | The workload is 180h. It is the result of 60h attendance and 120h self-studies. |</p>
<table>
<thead>
<tr>
<th>Data:</th>
<th>Module Name: <strong>Cost Accounting &amp; Controlling</strong></th>
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<tbody>
<tr>
<td></td>
<td><strong>Examination number:</strong> -</td>
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<tr>
<td></td>
<td><strong>Version:</strong> 28.04.2010</td>
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<td><strong>Start Year:</strong> WiSe 2010</td>
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<td><strong>Module Name:</strong></td>
<td><strong>Cost Accounting &amp; Controlling</strong></td>
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<tr>
<td><strong>(English):</strong></td>
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</tr>
<tr>
<td><strong>Responsible:</strong></td>
<td><strong>Grosse, Diana / Prof. Dr.</strong></td>
</tr>
<tr>
<td><strong>Lecturer(s):</strong></td>
<td><strong>Grosse, Diana / Prof. Dr.</strong></td>
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<td><strong>Institute(s):</strong></td>
<td><strong>Professor of Innovation Management</strong></td>
</tr>
<tr>
<td><strong>Duration:</strong></td>
<td>1 Semester(s)</td>
</tr>
<tr>
<td><strong>Competencies:</strong></td>
<td>Students will be enabled to apply different methods of cost accounting and controlling to provide the management with guidance for operational and strategic decisions.</td>
</tr>
<tr>
<td><strong>Contents:</strong></td>
<td>Within the MBA IMRE Programme this cluster comprises one main course dealing with financial management in organizations: Cost Accounting and Controlling (First part: Basics of Cost Accounting, Cost Category Accounting, Cost Center Accounting, Cost Unit Accounting, Operating Income Statement. Second part: Basics of Controlling, Operations Management, Strategic Management)</td>
</tr>
<tr>
<td><strong>Types of Teaching:</strong></td>
<td>S1 (WS): Lectures (1 SWS) S1 (WS): Exercises (1 SWS)</td>
</tr>
<tr>
<td><strong>Pre-requisites:</strong></td>
<td><strong>Recommendations:</strong> No previous knowledge of is required.</td>
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<tr>
<td><strong>Frequency:</strong></td>
<td>yearly in the winter semester</td>
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<tr>
<td><strong>Requirements for Credit Points:</strong></td>
<td>For the award of credit points it is necessary to pass the module exam. The module exam contains: KA [90 min] Voraussetzung für die Vergabe von Leistungspunkten ist das Bestehen der Modulprüfung. Die Modulprüfung umfasst: KA [90 min]</td>
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<td><strong>Credit Points:</strong></td>
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<tr>
<td><strong>Workload:</strong></td>
<td>The workload is 90h. It is the result of 30h attendance and 60h self-studies.</td>
</tr>
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</table>
Module Name: Decision Support Systems

(English):

Responsible: Felden, Carsten / Prof. Dr.
Lecturer(s): Felden, Carsten / Prof. Dr.
Institute(s): Institute of Information Management and Management Information Systems

Duration: 1 Semester(s)

Competencies: The lecture held in English language provides a widespread overview concerning the support of decision making from a theoretical and practical point of view. The theoretical basis comprises the System and Decision Theory as well as Business Intelligence. The practical point of view will be illustrated with the help of the demands of the energy sector. The individual situations lead to numerous concepts, methods and algorithms of decision making support. The practically relevant examples are meant to support the students theoretical and practical understanding of the system theory based context of support in decision making. This should qualify them to use the right methods and tools (methods and models) in real life situations.

Contents:

1. Systems theory
2. Decision theory
3. Behavioristical methods
4. Models and methods of decision support

Literature:


Types of Teaching: S1 (SS): Lectures (2 SWS)
S1 (SS): Exercises (2 SWS)

Pre-requisites: None

Frequency: yearly in the summer semester

Requirements for Credit Points:

For the award of credit points it is necessary to pass the module exam. The module exam contains:
KA [90 min]
PVL: Case Study
PVL have to be satisfied before the examination.

Voraussetzung für die Vergabe von Leistungspunkten ist das Bestehen der Modulprüfung. Die Modulprüfung umfasst:
KA [90 min]
PVL: Fallstudie
PVL müssen vor Prüfungsantritt erfüllt sein bzw. nachgewiesen werden.

Credit Points: 6

Grade: The Grade is generated from the examination result(s) with the following weights (w):
KA [w: 1]
| Workload: | The workload is 180h. It is the result of 60h attendance and 120h self-studies. The private studies consist of preparation and repetition for/of lectures and tutorials as well as the preparation for the exam. |
|--------------------------------------------------|-------------------|------------------|
| Modulname: Deutsch A1/ 1. Semester (englisch): | German A 1/ 1st Semester |
| Verantwortlich(e): Bellmann, Kerstin | Dozent(en): Paul, Sandra / Diplom-Lehrerin Bellmann, Kerstin |
| Institut(e): Internationales Universitätszentrum | Dauer: 1 Semester |
| Qualifikationsziele / Kompetenzen: | Im Kurs werden Grundlagen in Phonetik, Orthographie, Grammatik und Lexik vermittelt. Die Teilnehmer erwerben Grundkenntnisse und Grundfertigkeiten im Hören, Sprechen, Lesen und Schreiben auf der Basis der Allgemeinsprache sowie landeskundliche Kenntnisse. |
| Inhalte: Kommunikation im Alltag (Menschen kennen lernen, Einkaufen, Restaurantbesuch, Tagesabläufe, Uhrzeit); Grammatik: zum Beispiel Fragestellungen, Zahlen, Konjugation der Verben, Präsenz und Präteritum, Mengenangaben, Plural der Nomen, Komposita |
| Typische Fachliteratur: Begegnungen A1+, Schubert Verlag |
| Lehrformen: S1 (WS): Übung (4 SWS) |
| Voraussetzungen für die Teilnahme: Empfohlen: Keine Vorkenntnisse der deutschen Sprache notwendig |
| Turnus: Jährlich im Wintersemester |
| Leistungspunkte: 4 |
| Note: Die Note ergibt sich entsprechend der Gewichtung (w) aus folgenden(r) Prüfungsleistung(en): KA [w: 1] |
| Arbeitsaufwand: Der Zeitaufwand beträgt 120h und setzt sich zusammen aus 60h Präsenzzeit und 60h Selbststudium. |
**Daten:**
DEU A1/ 2. Sem. BA. Nr. 949 / Prüfungs-Nr.: 71102
Stand: 26.08.2015
Start: SoSe 2017

**Modulname:** Deutsch A1/ 2. Semester
**(englisch):** German A1/ 2nd Semester

**Verantwortlich(e):** Bellmann, Kerstin

**Dozent(en):**
- Paul, Sandra / Diplom-Lehrerin
- Bellmann, Kerstin

**Institut(e):** Internationales Universitätszentrum

**Dauer:** 1 Semester

**Qualifikationsziele / Kompetenzen:**
Im Kurs werden Grundlagen in Phonetik, Orthographie, Grammatik und Lexik vermittelt. Die Teilnehmer erwerben Grundkenntnisse und Grundfertigkeiten im Hören, Sprechen, Lesen und Schreiben auf der Basis der Allgemeinsprache sowie landeskundliche Kenntnisse.

**Inhalte:**
- Orientierung in der Stadt beziehungsweise in der Firma, öffentliche Verkehrsmittel, Wegbeschreibung, Berufe und Arbeitsalltag, Körper und Gesundheit, Wohnungssuche und -einrichtung, Lebenslauf, Kleidung;
- Grammatik: zum Beispiel Präpositionen, Frageartikel, Modalverben, Possessivartikel, Perfekt, Konjunktionen, Demonstrativpronomen, Graduierung und Komparativ

**Typische Fachliteratur:**
Begegnungen A1+, Schubert Verlag

**Lehrformen:**
- S1 (SS): Übung (4 SWS)

**Voraussetzungen für die Teilnahme:**
**Obligatorisch:**
- Deutsch A1/ 1. Semester, 2015-08-26
- oder äquivalente Sprachkenntnisse

**Turnus:**
jährlich im Sommersemester

**Voraussetzungen für die Vergabe von Leistungspunkten:**
Voraussetzung für die Vergabe von Leistungspunkten ist das Bestehen der Modulprüfung. Die Modulprüfung umfasst:
- KA [90 min]
- PVL: Aktive Teilnahme am Unterricht (mindestens 80%)

PVL müssen vor Prüfungsantritt erfüllt sein bzw. nachgewiesen werden.

**Leistungspunkte:**
4

**Note:**
Die Note ergibt sich entsprechend der Gewichtung (w) aus folgenden(r) Prüfungsleistung(en):
- KA [w: 1]

**Arbeitsaufwand:**
Der Zeitaufwand beträgt 120h und setzt sich zusammen aus 60h Präsenzzeit und 60h Selbststudium. Der Zeitaufwand beträgt 120 Stunden und setzt sich zusammen aus 60 Stunden Präsenzzeit und 60 Stunden Selbststudium.
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<td>Modulname:</td>
<td>Deutsch A2/ 1. Semester</td>
<td>(englisch):</td>
<td>German A2/ 1st Semester</td>
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<td>Verantwortlich(e):</td>
<td>Bellmann, Kerstin</td>
<td>Dozent(en):</td>
<td>Paul, Sandra / Diplom-Lehrerin Bellmann, Kerstin</td>
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<td>Institut(e):</td>
<td>Internationales Universitätszentrum</td>
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<td>Dauer:</td>
<td>1 Semester</td>
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<tr>
<td>Qualifikationsziele / Kompetenzen:</td>
<td>Die Teilnehmer erweitern ihre Kenntnisse zu Grundlagen der deutschen Grammatik sowie ihren allgemeinsprachlichen Wortschatz und führen Gespräche zu verschiedenen Themen des Alltags.</td>
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<tr>
<td>Inhalte:</td>
<td>Familie und Verwandtschaft, Feste und Feiern in Deutschland, Wohnung und Wohnungseinrichtung, Schule und Ausbildung, Aussehen und Mode, Jahreszeiten, Wetter und Urlaub, Aspekte der Geschichte (Deutschland, Österreich, Schweiz); Grammatik: z.B. Nebensätze mit weil, wenn, dass; Rektion der Verben; Ordinalzahlen; Präpositionen; Reflexivpronomene; Zukunft ausdrücken; Adjektivdeklination</td>
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<tr>
<td>Typische Fachliteratur:</td>
<td>Begegnungen A2+, Schubert Verlag</td>
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<td>Lehrformen:</td>
<td>S1 (WS): Übung (4 SWS)</td>
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<td>oder äquivalente Sprachkenntnisse</td>
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<td>Daten:</td>
<td>DEUA/2.Sem BA.Nr. 951 / Prüfungs-Nr.: 71105</td>
<td>Stand: 26.08.2015</td>
<td>Start: SoSe 2017</td>
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<td>(englisch):</td>
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<td>Bellmann, Kerstin</td>
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<td>Dozent(en):</td>
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<td>Internationales Universitätszentrum</td>
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<td>Dauer:</td>
<td>1 Semester</td>
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<td>Qualifikationsziele / Kompetenzen:</td>
<td>Die Teilnehmer erweitern ihre Kenntnisse zu Grundlagen der deutschen Grammatik sowie ihren allgemeinsprachlichen Wortschatz und führen Gespräche zu verschiedenen Themen des Alltags.</td>
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<td>Inhalte:</td>
<td>Freizeitaktivitäten (Sport, Vereine), Arbeit und Arbeitssuche, Politik in Deutschland, Städte (Leipzig, Berlin), Verkehr und Verkehrsmittel, Medien, Fernsehen in Deutschland, Kulturelle Unterschiede; Grammatik: z.B. Indefinita, Relativsätze, Nebensätze mit bevor, bis, als, deshalb, wenn, Konjunktiv II,</td>
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<tr>
<td>Typische Fachliteratur:</td>
<td>Begegnungen A2+, Schubert Verlag</td>
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<td>Modulname:</td>
<td>Deutsch B1 / 1 Semester</td>
<td>(englisch):</td>
<td>German B1 / 1st Semester</td>
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<td>Verantwortlich(e):</td>
<td>Bellmann, Kerstin</td>
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<td>Institut(e):</td>
<td>Internationales Universitätszentrum</td>
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<td>Dauer:</td>
<td>1 Semester</td>
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<td>Qualifikationsziele / Kompetenzen:</td>
<td>Die Teilnehmer bauen die in den Modulen Deutsch A1 und A2 erworbenen sprachlichen Kenntnisse und Fertigkeiten unter besonderer Berücksichtigung der mündlichen Kommunikation aus. Sie wiederholen und erweitern ihren Wortschatz. Auf der Basis aktueller und historischer Texte erhalten die Teilnehmer landeskundliche Informationen über die Bundesrepublik Deutschland.</td>
<td></td>
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<tr>
<td>Inhalte:</td>
<td>Zusammenleben der Menschen in Deutschland (Wohn- und Lebensformen, Vorstellungen über berufliche Entwicklung und Freizeitgestaltung, Konsumverhalten, Beziehung zur Natur)</td>
<td></td>
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<td>Typische Fachliteratur:</td>
<td>Begegnungen B1+, Schubert Verlag</td>
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<tr>
<td>Arbeitsaufwand:</td>
<td>Der Zeitaufwand beträgt 120h und setzt sich zusammen aus 60h Präsenzzeit und 60h Selbststudium.</td>
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**Daten:**
DEUB1/2. Sem. 953 / Prüfungs-Nr.: 71106
Stand: 26.08.2015
Start: SoSe 2017

**Modulname:** Deutsch B1/ 2. Semester
(englisch): German B1/ 2nd Semester

**Verantwortlich(e):** Bellmann, Kerstin

**Dozent(en):**

**Institut(e):** Internationales Universitätszentrum

**Dauer:** 1 Semester

**Qualifikationsziele / Kompetenzen:**
Die Teilnehmer bauen die in dem Modul Deutsch b1/1.Semster erworbenen sprachlichen Kenntnisse und Fertigkeiten unter besonderer Berücksichtigung der mündlichen Kommunikation aus. Sie wiederholen und erweitern ihren Wortschatz. Auf der Basis aktueller und historischer Texte erhalten die Teilnehmer landeskundliche Informationen über die Bundesrepublik Deutschland.

**Inhalte:**
Zusammenleben der Menschen in Deutschland (Wohn- und Lebensformen, Vorstellungen über berufliche Entwicklung und Freizeitgestaltung, Konsumverhalten, Beziehung zur Natur)

**Typische Fachliteratur:** Begegnungen B1+, Schubert Verlag

**Lehrformen:**
S1 (SS): Übung (4 SWS)

**Voraussetzungen für die Teilnahme:**
Obligatorisch:
Deutsch B1/ 1.Semester, 2015-08-26
oder äquivalente Sprachkenntnisse

**Turnus:** jährlich im Sommersemester

**Voraussetzungen für die Vergabe von Leistungspunkten:**
Voraussetzung für die Vergabe von Leistungspunkten ist das Bestehen der Modulprüfung. Die Modulprüfung umfasst:
KA [90 min]
PVL: Erfolgreiche aktive Teilnahme an mind. 80% d. Unterrichts
PVL müssen vor Prüfungsantritt erfüllt sein bzw. nachgewiesen werden.

**Leistungspunkte:** 4

**Note:** Die Note ergibt sich entsprechend der Gewichtung (w) aus folgenden(r) Prüfungsleistung(en):
KA [w: 1]

**Arbeitsaufwand:** Der Zeitaufwand beträgt 120h und setzt sich zusammen aus 60h Präsenzzeit und 60h Selbststudium.
<table>
<thead>
<tr>
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<tbody>
<tr>
<td>(englisch):</td>
<td>Bellmann, Kerstin</td>
<td>Dozent(en):</td>
<td>Bellmann, Kerstin</td>
</tr>
<tr>
<td>Institut(e):</td>
<td>Internationales Universitätszentrum</td>
<td>Dauer:</td>
<td>1 Semester</td>
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<td>Voraussetzungen für die Teilnahme:</td>
<td>Obligatorisch:</td>
<td>abgeschlossenes B1-Niveau</td>
<td>Turnus:</td>
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<td>Note:</td>
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<td>Arbeitsaufwand:</td>
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<td>Stand: 04.04.2016</td>
<td>Start: SoSe 2017</td>
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<tr>
<td>Inhalte: Kultur &amp; Geschichte, Fertigkeiten im Berufsleben (z.B. Telefonieren) deutsche Geschichte, Literatur, Zukunftsvisionen, Grammatik (u.a. Partizipien, indirekte Rede, Konjunktiv I &amp; II, Funktionverbgefüge)</td>
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<td>Lehrformen: S1 (SS): Übung (4 SWS)</td>
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<td>Arbeitsaufwand: Der Zeitaufwand beträgt 120h und setzt sich zusammen aus 60h Präsenzzeit und 60h Selbststudium.</td>
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<tr>
<td>Module Name:</td>
<td>Economic Theory: Macro-Economics</td>
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<tr>
<td>Responsible:</td>
<td>Schönfelder, Bruno / Prof. Dr.</td>
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<tr>
<td>Lecturer(s):</td>
<td>Schönfelder, Bruno / Prof. Dr.</td>
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<tr>
<td>Institute(s):</td>
<td>Professor of Economics</td>
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<tr>
<td>Duration:</td>
<td>1 Semester(s)</td>
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<tr>
<td>Competencies:</td>
<td>Students are able to discuss macro-economic problems on an intermediate level.</td>
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<tr>
<td>Contents:</td>
<td>The course relates to all relevant issues of macro-economics, such as national output and income, aggregate demand and supply, employment, fiscal and monetary policy.</td>
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<td>Pre-requisites:</td>
<td>Recommendations: No previous knowledge of economics is required.</td>
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<td>Frequency:</td>
<td>yearly in the summer semester</td>
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<tr>
<td>Requirements for Credit Points:</td>
<td>For the award of credit points it is necessary to pass the module exam. The module exam contains: KA [90 min] PVL: A midterm test and the fulfilment of up to three assignments. Further details are announced in class. PVL have to be satisfied before the examination. Voraussetzung für die Vergabe von Leistungspunkten ist das Bestehen der Modulprüfung. Die Modulprüfung umfasst: KA [90 min] PVL: Ein Zwischentest und Abgabe von bis zu drei Belegarbeiten. Genaueres wird in der Veranstaltung bekannt gegeben. PVL müssen vor Prüfungsantritt erfüllt sein bzw. nachgewiesen werden.</td>
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<td>Workload:</td>
<td>The workload is 180h. It is the result of 60h attendance and 120h self-studies. Self-studies include assignments, preparation and wrapping up of lectures as well as preparation of presentations and of examinations.</td>
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<td>Data:</td>
<td>Module Name: <strong>Economic Theory: Micro-Economics</strong></td>
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<td>(English):</td>
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<td>Responsible: Schönfelder, Bruno / Prof. Dr.</td>
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<td>Lecturer(s): Schönfelder, Bruno / Prof. Dr.</td>
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<td>Institute(s): Professor of Economics</td>
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<td>Duration: 1 Semester(s)</td>
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<td></td>
<td>Competencies: Students become proficient in microeconomic theory (at an intermediate level).</td>
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<td></td>
<td>Contents: The course offers an overview of all relevant micro-economic topics such as the economics of the firm, supply and demand, market structures, competition and monopoly, labor markets.</td>
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<td>S1 (WS): Exercises (2 SWS)</td>
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<td>Pre-requisites: Recommendations: Students should be familiar with calculus.</td>
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<td>Frequency: yearly in the winter semester</td>
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<td>Requirements for Credit Points: For the award of credit points it is necessary to pass the module exam. The module exam contains: KA [90 min] PVL: A midterm test, further details are announced in class PVL have to be satisfied before the examination.</td>
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<td>Workload: The workload is 180h. It is the result of 60h attendance and 120h self-studies. Self-studies include assignments, preparation and wrapping up of lectures as well as preparation of presentations and of examinations.</td>
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</table>
Module Name: **Ecosystems**  

(English):  

Responsible: Heilmeier, Hermann / Prof. (apl.) Dr.  

Lecturer(s): Heilmeier, Hermann / Prof. (apl.) Dr.  

Institute(s): Institute of Biosciences  

Duration: 1 Semester(s)  

Competencies: The aims of the lecture are:  

- understanding of major processes in ecosystems on physical, chemical and biological basics;  
- competence for ad hoc evaluation of fundamental anthropogenic disturbances of ecosystem components, processes and services;  
- Ability for stimulating management practices orientated towards a sustainable utilization of (semi-) natural and human-dominated ecosystems.  

Contents: The lecture "Ecosystems" gives an overview on principles of ecosystem structures and functions, based on fundamental scientific knowledge from physics, chemistry and biology. Following the description of energy flows and nutrient cycles and ecosystem services, major human impacts on ecosystems and different management practices are introduced.  

Literature:  

- Beeby: Applying Ecology (Chapman & Hall)  
- Newman: Applied Ecology & Environmental Management (Blackwell)  
- Odum: Ecology - A Bridge between Science and Society (Sinauer)  
- Vogt et al.: Ecosystems (Springer)  

Types of Teaching:  

- S1 (WS): Lectures (1 SWS)  
- S1 (WS): Exercises (2 SWS)  

Pre-requisites: **Recommendations:**  

No requirements.  

Frequency: yearly in the winter semester  

Requirements for Credit Points: For the award of credit points it is necessary to pass the module exam. The module exam contains:  

- AP: paper (15 pages)  

Voraussetzung für die Vergabe von Leistungspunkten ist das Bestehen der Modulprüfung. Die Modulprüfung umfasst:  

- AP: Belegarbeit (15 Seiten)  

Credit Points: 4  

Grade: The Grade is generated from the examination result(s) with the following weights (w):  

- AP: paper (15 pages) [w: 1]  

Workload: The workload is 120h. It is the result of 45h attendance and 75h self-studies.
Module Name: Environmental Impact Studies

Responsible: Bongaerts, Jan C. / Prof. Dr.

Lecturer(s): Bongaerts, Jan C. / Prof. Dr.

Institute(s): Professor of Environmental & Resource Management

Duration: 1 Semester(s)

Competencies: The cluster intends to give students the knowledge and the ability to understand the scientific background and the procedural approach of assessing environmental impacts associated with the exploration, the extraction and the processing of natural resource.

Contents: Legal background of Environmental Impact Studies (EIS) and Environmental impact Assessment (EIA), purposes of EIS, Structure of EIS and EIA, procedural phases, reporting and interpretation of EIS and EIA outcomes.


Types of Teaching: S1 (SS): Lectures (1 SWS)
S1 (SS): Exercises (1 SWS)

Pre-requisites: Admission to a graduate programme of the university (MBA IMRE or other Master’s Programmes) or admission through Exchange programmes (e.g. ERASMUS)

Frequency: yearly in the summer semester

Requirements for Credit Points: For the award of credit points it is necessary to pass the module exam. The module exam contains:
KA [90 min]
PVL: Presentation [15 min]
PVL have to be satisfied before the examination.

Credit Points: 3

Grade: The Grade is generated from the examination result(s) with the following weights (w):
KA [w: 1]

Workload: The workload is 90h. It is the result of 30h attendance and 60h self-studies.
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<td>Responsible:</td>
<td>Fröhling, Magnus / Prof.</td>
<td>Lecturer(s): Fröhling, Magnus / Prof.</td>
<td></td>
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<tr>
<td>Institute(s):</td>
<td>Professor of Ressourcemanagement</td>
<td>Duration: 1 Semester(s)</td>
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<tr>
<td>Competencies:</td>
<td>Students are able to identify and explain environmental issues accruing in companies. They explain the origin of environmental impacts, the framework which has to be considered and are able to apply selected methods and tools to solve (simplified) problems accruing in practice. They discuss the status of these methods and tools with regard to real problem instances and the current scientific literature and political discussion.</td>
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<tr>
<td>Contents:</td>
<td>The course covers among others:</td>
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<tr>
<td></td>
<td>• Environmental impacts of industrial and business activities,</td>
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<td></td>
<td>• Societal, economic and legal frameworks of environmental protection,</td>
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<td></td>
<td>• Environmental Management Systems, and</td>
<td></td>
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<td>• Methods and tools of Cleaner Production.</td>
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<td></td>
<td>Dobson (2016): Environmental Politics, Oxford University Press</td>
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<td></td>
<td>Russo (2008): Environmental Management: Readings and Cases, Sage Pubn</td>
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<td></td>
<td>Schaltegger, Burritt, Petersen (2003): An Introduction to Corporate Environmental Management, Greenleaf Publishing</td>
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<td>Types of Teaching:</td>
<td>S1 (WS): Environmental Management and Policies (lecture) - Environmental Management and Policies (lecture) / Lectures (2 SWS)</td>
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<td></td>
<td>S1 (WS): Environmental Management and Policies (tutorial) - Environmental Management and Policies (tutorial) / Exercises (2 SWS)</td>
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<td>Frequency:</td>
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<td>Requirements for Credit Points:</td>
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<td></td>
<td>KA: Written examination [90 to 90 min]</td>
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<td>* In modules requiring more than one exam, this exam has to be passed or completed with at least &quot;ausreichend&quot; (4,0), respectively.</td>
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Grade: The Grade is generated from the examination result(s) with the following weights (w):
AP*: Assignments [w: 1]
KA: Written examination [w: 4]
* In modules requiring more than one exam, this exam has to be passed or completed with at least "ausreichend" (4,0), respectively.

Workload: The workload is 180h. It is the result of 60h attendance and 120h self-studies. 180
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<td>Module Name:</td>
<td>Environmental Risk Assessment and Management</td>
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<td>Responsible:</td>
<td>Bongaerts, Jan C. / Prof. Dr.</td>
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<td>Bongaerts, Jan C. / Prof. Dr.</td>
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<td>Institute(s):</td>
<td>Professor of Environmental &amp; Resource Management</td>
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<td>Duration:</td>
<td>1 Semester(s)</td>
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<tr>
<td>Competencies:</td>
<td>Students learn the basic knowledge about environmental risks, in particular at the level of (industrial) organisations. Basic issues such as risk modelling and the assessment of risks will be studied. Students will also discover the role of legislation in risk assessment and management. Students will have to apply the theoretical principles to practical problems of decision-making and management.</td>
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<tr>
<td>Contents:</td>
<td>- Basic definitions of risk, descriptions of risk, risk models&lt;br&gt;- Applications to environmental risk with a special reference to aquatic risks&lt;br&gt;- Role of legislation in risk assessment and management&lt;br&gt;- Case study: hazardous materials in the industrial context&lt;br&gt;- Case study: environmental risk and safety at the work place&lt;br&gt;- Case Study: REACH&lt;br&gt;- Case Study: Environmental risks and product design and development&lt;br&gt;- Risk communication</td>
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<td>Types of Teaching:</td>
<td>S1 (WS): Lectures (2 SWS)</td>
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<td>Pre-requisites:</td>
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<td>Frequency:</td>
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<td>For the award of credit points it is necessary to pass the module exam. The module exam contains:&lt;br&gt;AP: Preparation of a case study&lt;br&gt;Voraussetzung für die Vergabe von Leistungspunkten ist das Bestehen der Modulprüfung. Die Modulprüfung umfasst:&lt;br&gt;AP: Anfertigung einer Fallstudie</td>
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<td>Workload:</td>
<td>The workload is 90h. It is the result of 30h attendance and 60h self-studies.</td>
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</table>
Module Name: Environmental Technology Corporations

(English):

Responsible: Bongaerts, Jan C. / Prof. Dr.
Lecturer(s): Bongaerts, Jan C. / Prof. Dr.
Institute(s): Professor of Environmental & Resource Management
Duration: 1 Semester(s)

Competencies: The aim is to explain the meaning and the scope of environmental technologies (ET) and of the industry which makes use of them for environmental protection purposes. The specific educational objective is to raise awareness for the link between major environmental problems at global/local scale and the ET Industry.

Contents:
- Definitions of Environmental Technologies (ET) as given by the World trade Organization (WTO), the OECD and the EU
- Statistical overview of the size of the ET Industry
- Environmental problems with a global-local scope, such as access to safe water, land erosion and contamination
- Access to clean energy
- Potential contribution for solutions offered by the ET Industry
- Regulatory frameworks, in particular related to Private-Public-Partnerships

Literature:

Types of Teaching:
- S1 (WS): Lectures (1 SWS)
- S1 (WS): Exercises (1 SWS)

Pre-requisites:

Recommendations: No previous knowledge and skills is required.

Frequency: yearly in the winter semester

Requirements for Credit Points:
For the award of credit points it is necessary to pass the module exam. The module exam contains:
KA [90 min]
PVL: Term paper and its presentation
PVL have to be satisfied before the examination.

Voraussetzung für die Vergabe von Leistungspunkten ist das Bestehen der Modulprüfung. Die Modulprüfung umfasst:
KA [90 min]
PVL: Belegarbeit mit Präsentation
PVL müssen vor Prüfungsantritt erfüllt sein bzw. nachgewiesen werden.

Credit Points: 3

Grade: The Grade is generated from the examination result(s) with the following weights (w):
KA [w: 1]

Workload: The workload is 90h. It is the result of 30h attendance and 60h self-studies.
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<th>Version: 01.07.2015</th>
<th>Start Year: SoSe 2016</th>
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</thead>
</table>

**Module Name:** History of the Environment (English)

**Responsible:** Albrecht, Helmut / Prof. Dr.

**Lecturer(s):** Pohl, Norman / Dr.

**Institute(s):** Institute of Industrial Archeology and History of Science and Technology

**Duration:** 1 Semester(s)

**Competencies:** The module seeks to transmit historical developments in the field of technology and ecology. Hence, providing the cultural and historic background of contemporary society.

**Contents:** The module offers an introduction to the development of environmental protection and technology and the use of natural resources.

**Literature:**
- John Robert McNeill: Blue Planet. 2003

**Types of Teaching:** S1 (SS): History of environment / Seminar (2 SWS)

**Pre-requisites:**
- Scholarly Rhetoric, 2012-02-10
- Abitur-level English or equivalent knowledge of English.

**Frequency:** yearly in the summer semester

**Requirements for Credit Points:** For the award of credit points it is necessary to pass the module exam. The module exam contains:
- AP*: 15 page paper
- AP: Presentation [20 to 30 min]

* In modules requiring more than one exam, this exam has to be passed or completed with at least "ausreichend" (4,0), respectively.

**Voraussetzung für die Vergabe von Leistungspunkten ist das Bestehen der Modulprüfung. Die Modulprüfung umfasst:**
- AP*: 15-seitige Belegarbeit
- AP: Präsentation [20 bis 30 min]

* Bei Modulen mit mehreren Prüfungsleistungen muss diese Prüfungsleistung bestanden bzw. mit mindestens "ausreichend" (4,0) bewertet sein.

**Credit Points:** 3

**Grade:** The Grade is generated from the examination result(s) with the following weights (w):
- AP*: 15 page paper [w: 1]
- AP: Presentation [w: 1]

* In modules requiring more than one exam, this exam has to be passed or completed with at least "ausreichend" (4,0), respectively.

**Workload:** The workload is 90h. It is the result of 30h attendance and 60h self-studies. Self-study includes preparation and follow-up work for in-class instruction as well as preparation for and completion of the 12 page paper and the presentation.
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<th>Version: 18.03.2015</th>
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<td><strong>Human Resource Management and Organizational Behavior (HRMOB)</strong></td>
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<td>Responsible:</td>
<td>Nippa, Michael / Prof. Dr.</td>
<td></td>
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<tr>
<td>Lecturer(s):</td>
<td>Nippa, Michael / Prof. Dr.</td>
<td></td>
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<tr>
<td>Institute(s):</td>
<td>Professor of Management, Leadership and Human Resources</td>
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</tr>
<tr>
<td>Duration:</td>
<td>1 Semester(s)</td>
<td></td>
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<tr>
<td>Competencies:</td>
<td>The primary objective of this course is to help you learn to diagnose management situations so that you will be able to transfer this skill to your working world. Specific objectives of the course include: 1. Understanding the relevance of human resources for organizations and the key concepts of human behavior in organizations. 2. Appreciating how the human side of management is an essential complement to the technical skills you are learning in other courses. 3. Learning concepts and approaches that will enable you to analyze HR- and organizational problems and to develop appropriate solutions. 4. Developing the knowledge and skills you need to be a successful manager of yourself and others.</td>
<td></td>
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</tr>
<tr>
<td>Contents:</td>
<td>1. Introduction 2. Organizational Behavior (OB) 2.1 Individual level (foundations of individual behavior; impacts of individual characteristics; impact of situational factors) 2.2 Group level (foundations of group behavior, understanding work teams; group processes e.g. communication, power, conflict) 2.3 Leadership 3. Human Resource Management (HRM) 3.1 Changing Nature of HRM 3.2 HRM Planning 3.3 Human Resource Adjustments 3.4 Training and Developing HR 3.5 Compensating HR Presentations and Conclusions</td>
<td></td>
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</tr>
<tr>
<td>Types of Teaching:</td>
<td>S1 (SS): Lectures (2 SWS)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pre-requisites:</td>
<td><strong>Recommendations:</strong> None</td>
<td></td>
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</tr>
<tr>
<td>Frequency:</td>
<td>yearly in the summer semester</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Requirements for Credit Points:</td>
<td>For the award of credit points it is necessary to pass the module exam. The module exam contains: KA: Mid term test [20 min] KA: Final test [90 min] Voraussetzung für die Vergabe von Leistungspunkten ist das Bestehen der Modulprüfung. Die Modulprüfung umfasst: KA: Zwischentest [20 min] KA: Abschlussklausur [90 min]</td>
<td></td>
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<tr>
<td>Credit Points:</td>
<td>3</td>
<td></td>
<td></td>
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<td>----------------</td>
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</tbody>
</table>
| Grade:         | The Grade is generated from the examination result(s) with the following weights (w):
| KA: Mid term test [w: 1] |
| KA: Final test [w: 3] |
| Workload:      | The workload is 90h. It is the result of 30h attendance and 60h self-studies. |
**Module Name:** **IMRE Project**

**Responsible:** Fröhling, Magnus / Prof.

**Lecturer(s):**
- Höck, Michael / Prof. Dr.
- Schönfelder, Bruno / Prof. Dr.
- Albrecht, Helmut / Prof. Dr.
- Enke, Margit / Prof. Dr.
- Jacob, Dieter / Prof. Dr.
- Hinner, Michael B. / Prof. Dr.
- Stephan, Johannes / Prof. Dr.
- Horsch, Andreas / Prof. Dr.
- Grosse, Diana / Prof. Dr.
- Bongaerts, Jan C. / Prof. Dr.
- Rübbelke, Dirk / Prof. Dr.

**Institute(s):**
- Professor of Industrial Management, Production Management and Logistics
- Professor of Economics
- Institute of Industrial Archeology and History of Science and Technology
- Professor of Marketing and International Trade
- Professor of Construction Management
- Professor of Business English, Business Communication and Intercultural Communication
- Professor of International Resource Policy and Economic Development
- Professor of Investment and Finance
- Professor of Innovation Management
- Professor of Environmental & Resource Management
- Professor of Economics, esp. Resource Economics
- Professor of Ressourcemanagement

**Duration:** 4 Month(s)

**Competencies:** The students develop their ability to work in teams. In particular, they gain competencies in structuring of a task, scheduling, coordination of the divided task processing, and presentation skills.

**Contents:** The project work includes the processing of a task with regard to research, development and analysis of problems in close cooperation with the institutions involved and/or in cooperation with other research institutions, industry or authorities. Projects are announced by the chairs of the faculty.

**Literature:** Depending on the selected theme. Further literature can be recommended by the supervisor.

**Types of Teaching:** S1 (WS): Instruction, consultations, workshops, self studies, presentation, discussion / project (4 Mon)

**Pre-requisites:** yearly in the winter semester

**Requirements for Credit Points:** For the award of credit points it is necessary to pass the module exam. The module exam contains:
- AP*: Project report
- AP*: Colloquium

* In modules requiring more than one exam, this exam has to be passed or completed with at least "ausreichend" (4.0), respectively.

Voraussetzung für die Vergabe von Leistungspunkten ist das Bestehen der Modulprüfung. Die Modulprüfung umfasst:
- AP*: Project report
Credit Points: 6

Grade: The Grade is generated from the examination result(s) with the following weights (w):
- AP*: Project report [w: 1]
- AP*: Colloquium [w: 1]

* In modules requiring more than one exam, this exam has to be passed or completed with at least "ausreichend" (4.0), respectively.

Workload: The workload is 180h. It is the result of 640h attendance and -460h self-studies.
**Module Name:** IMRE Seminar  
(English): Seminar  
**Responsible:** Fröhling, Magnus / Prof.  
**Lecturer(s):** Höck, Michael / Prof. Dr.  
Schönfelder, Bruno / Prof. Dr.  
Albrecht, Helmuth / Prof. Dr.  
Enke, Margit / Prof. Dr.  
Hinner, Michael B. / Prof. Dr.  
Stephan, Johannes / Prof. Dr.  
Horsch, Andreas / Prof. Dr.  
Grosse, Diana / Prof. Dr.  
Jäckel, Hans-Georg / Dr.-Ing.  
Bongaerts, Jan C. / Prof. Dr.  
Rübbelke, Dirk / Prof. Dr.  
**Institute(s):**  
Professor of Industrial Management, Production Management and Logistics  
Professor of Economics  
Institute of Industrial Archeology and History of Science and Technology  
Professor of Marketing and International Trade  
Professor of Business English, Business Communication and Intercultural Communication  
Professor of International Resource Policy and Economic Development  
Professor of Investment and Finance  
Professor of Innovation Management  
Institute of Mineral Processing Machines  
Professor of Environmental & Resource Management  
Professor of Economics, esp. Resource Economics  
Professor of Ressourcemanagement  
**Duration:** 1 Semester(s)  
**Competencies:** The seminar is aimed at enabling students for scientific work. For a given problem, the students are able to  
- find, structure and analyse relevant literature,  
- solve the problem scientifically,  
- discuss the solution critically,  
- summarize the work in a seminar thesis and a presentation, and  
- discuss and defend their work.  
**Contents:** Current topics of business administration, economics, law, energy, resource and environmental management. These are announced by the chairs of the faculty.  
**Literature:**  

<table>
<thead>
<tr>
<th>Types of Teaching:</th>
<th>S1 (SS): Instruction, consultations, workshops, presentation in a predefined time / Seminar / Seminar (2 SWS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-requisites:</td>
<td></td>
</tr>
<tr>
<td>Frequency:</td>
<td>yearly in the summer semester</td>
</tr>
<tr>
<td>Requirements for Credit Points:</td>
<td>For the award of credit points it is necessary to pass the module exam. The module exam contains: AP*: Seminar Thesis AP*: Presentation and Discussion [20 to 30 min]</td>
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<tr>
<td></td>
<td>* In modules requiring more than one exam, this exam has to be passed or completed with at least &quot;ausreichend&quot; (4,0), respectively.</td>
</tr>
<tr>
<td>Credit Points:</td>
<td>3</td>
</tr>
<tr>
<td>Grade:</td>
<td>The Grade is generated from the examination result(s) with the following weights (w): AP*: Seminar Thesis [w: 3] AP*: Presentation and Discussion [w: 1]</td>
</tr>
<tr>
<td></td>
<td>* In modules requiring more than one exam, this exam has to be passed or completed with at least &quot;ausreichend&quot; (4,0), respectively.</td>
</tr>
<tr>
<td>Workload:</td>
<td>The workload is 90h. It is the result of 30h attendance and 60h self-studies.</td>
</tr>
</tbody>
</table>
Module Name: Information Management

Responsible: Felden, Carsten / Prof. Dr.

Institute(s): Institute of Information Management and Management Information Systems

Duration: 1 Semester(s)

Competencies: Students get a general view to understand integration of business and technology in companies. This course provides a comprehensive and integrative understanding of essential new technologies, information system applications, and their impact on business models and managerial decision making. From a managerial perspective, the course addresses an application of concepts regarding hardware, software, and data organization. The students will understand and apply basics of information systems with a focus on economic issues as well as the significance of information systems for companies and the practical information and communication technologies to increase the efficiency and effectiveness of information systems.

Contents:
1. Introduction: the domain of business information systems
2. Organizations and systems
3. Data, information, and knowledge
4. Information systems, and organizational infrastructure
5. Communication infrastructure
6. ICT systems infrastructure
7. The business environment
8. Electronic business, electronic commerce, and electronic government
9. Assessing the use and impact of information systems
10. Planning, strategy, and management
11. Services, projects and operations
12. Information systems development
13. Successful informatics practice

Literature:

Types of Teaching:
Lecture / Lectures (2 SWS)
Recitation / Exercises (2 SWS)

Pre-requisites:

Frequency: yearly in the winter semester

Requirements for Credit Points:
For the award of credit points it is necessary to pass the module exam. The module exam contains:
KA [90 min]

Voraussetzung für die Vergabe von Leistungspunkten ist das Bestehen der Modulprüfung. Die Modulprüfung umfasst:
KA [90 min]

Credit Points: 6

Grade: The Grade is generated from the examination result(s) with the following weights (w):
KA [w: 1]

Workload: The workload is 180h. It is the result of 60h attendance and 120h self-studies.
<table>
<thead>
<tr>
<th>Data:</th>
<th>INTMAN. MA. Nr. 2072 / Examination number: 62007</th>
<th>Version: 29.05.2015</th>
<th>Start Year: WiSe 2016</th>
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</thead>
<tbody>
<tr>
<td>Module Name:</td>
<td><strong>International Business and Management</strong></td>
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<tr>
<td>(English):</td>
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<tr>
<td>Responsible:</td>
<td>Stephan, Johannes / Prof. Dr.</td>
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<tr>
<td>Lecturer(s):</td>
<td>Stephan, Johannes / Prof. Dr.</td>
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<tr>
<td>Institute(s):</td>
<td>Professor of International Resource Policy and Economic Development</td>
<td></td>
<td></td>
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<tr>
<td>Duration:</td>
<td>1 Semester(s)</td>
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<tr>
<td>Competencies:</td>
<td>The intention of this module is to teach students the particularities of management of firms where several international markets are involved. This helps to-be-managers to prepare for the particular challenges and problems involved in the internationalisation of firms. The first part of this course focuses on explaining the existence of the multinational enterprise by generalising the theory of the firm and its characterisation on the one side and particularities of management in multinational enterprises on the other. The management part of the course analyses strategies of entry into foreign markets, including entry modes, entry timing and the location from an institutional perspective and by use of case studies. The third part of the course is concerned with the management of knowledge and R&amp;D both within the multinational enterprise and between the multinational enterprise and its host economies. This is discussed in terms of effects of knowledge and R&amp;D management on subsidiary development and on technology transfer externalities (spillovers).</td>
<td></td>
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</tbody>
</table>
| Contents: | 1. Economic theories of internationalisation and TNC  
   - Static vs dynamic theories  
   - Internalisation-theories and asset-based theories  
  2. International management and entry strategies  
   - Network theory  
   - Choice of location and time of entry  
   - Entry modes, control and market power  
   - Internationalisation of knowledge  
  3. Economic analysis of TNCs and policy-implications  
   - FDI and host country effects, national innovation systems  
   - TNCs and Intellectual Property Rights  
   - Foreign Direct Investment policies | | |
| Types of Teaching: | S1 (WS): Lectures (2 SWS)  
S1 (WS): Exercises (2 SWS) | | |
| Pre-requisites: | **Recommendations:**  
Makroökonomik, 2009-08-18  
Mikroökonomische Theorie, 2014-03-05  
Knowledge at Bachelor level in business administration is required. | | |
<table>
<thead>
<tr>
<th>Frequency:</th>
<th>yearly in the winter semester</th>
</tr>
</thead>
</table>
| Requirements for Credit Points: | For the award of credit points it is necessary to pass the module exam. The module exam contains:

- KA [120 min]
- AP: Presentation [15 min]

Voraussetzung für die Vergabe von Leistungspunkten ist das Bestehen der Modulprüfung. Die Modulprüfung umfasst:

- KA [120 min]
- AP: Präsentation [15 min] |
| Credit Points: | 6 |
| Grade: | The Grade is generated from the examination result(s) with the following weights (w):

- KA [w: 4]
- AP: Presentation [w: 1] |
| Workload: | The workload is 180h. It is the result of 60h attendance and 120h self-studies. |
Module Name: **International Development and Resources**

(English): Stephan, Johannes / Prof. Dr.

Lecturer(s): Stephan, Johannes / Prof. Dr.

Institute(s): Professor of International Resource Policy and Economic Development

Duration: 1 Semester(s)

Competencies: Students will be able to understand the implications of management of firms in the environment of developing economies. Companies involved in a region that is characterised by much lower levels of economic development face particular challenges in the management: they have to consider the implications that development strategies, both national and coordinated by international organisations and NGOs, have on their activities. Of particular relevance in developing economies is the role of natural resources that are often abundant and currently their most precious source of national welfare. Students acquire the understanding that natural resources can easily turn into a curse, if they are not included into a coherent national development policy. Those include most prominently export-oriented policies, state-aid policies and the development of national champions, the attraction of foreign direct investments, and incentive systems for outward investment.

Contents:

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chapter 1</td>
<td>Measuring Development</td>
</tr>
<tr>
<td>Chapter 2</td>
<td>Theories of Economic Development</td>
</tr>
<tr>
<td>Chapter 3</td>
<td>Development Policies: Approaches, Failures, and New Consensus?</td>
</tr>
<tr>
<td>Chapter 4</td>
<td>The Role of Natural Resources for Economic Development and Welfare</td>
</tr>
<tr>
<td>Chapter 5</td>
<td>Trade Policy in the Framework of Development Policy</td>
</tr>
<tr>
<td>Chapter 6</td>
<td>Current Issues in Development Policy</td>
</tr>
</tbody>
</table>

Literature:

- World Bank Development Report (current years)

Types of Teaching:

<table>
<thead>
<tr>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>S1 (SS)</td>
<td>Lectures (2 SWS)</td>
</tr>
<tr>
<td>S1 (SS)</td>
<td>Exercises (2 SWS)</td>
</tr>
</tbody>
</table>

Pre-requisites:

**Recommendations:**

- Makroökonominik, 2009-08-18
- Mikroökonomische Theorie, 2014-03-05

Knowledge at Bachelor level in business administration is required.

Frequency: yearly in the summer semester

Requirements for Credit Points:

For the award of credit points it is necessary to pass the module exam. The module exam contains:
- KA [120 min]
- AP: Presentation [15 min]

Voraussetzung für die Vergabe von Leistungspunkten ist das Bestehen der Modulprüfung. Die Modulprüfung umfasst:
- KA [120 min]
- AP: Präsentation [15 min]

Credit Points: 6

Grade: The Grade is generated from the examination result(s) with the following weights (w):
- KA [w: 4]
| Workload: | The workload is 180h. It is the result of 60h attendance and 120h self-studies. |
**Module Name:** Introduction to Mining

**Responsible:** Drebenstedt, Carsten / Prof. Dr.

**Lecturer(s):** Drebenstedt, Carsten / Prof. Dr.

**Institute(s):** Institute of Mining and Special Civil Engineering

**Duration:** 1 Semester(s)

**Competencies:** Basic knowledge in role of mining and mining engineering processes and relationship to other disciplines; Understanding of sustainable development in mining industry: balance between mining production, social development and environment protection.

**Contents:** Mining is one of the oldest and most important sectors in our civilisation building the backbone of many further industries. Developed economies highly dependent on mineral and energy imports. The world knows many wars about reserves and resources. Mining production employs million of workers worldwide and is especially in developing countries an important source of income. On other side mining has a great influence to the environment and social sphere. Mining is today a modern industry with high standard in working safety and environment protection. The largest machines the world knows are operating in open pit mines. The lecture introduces this interesting and important world of mining and gives an understanding for economic, social and technical processes. Case studies will illustrate the practical side of knowledge application.


Hustrulid, Kuchta: Open pit mine planning and design, Balkema, latest edition

**Types of Teaching:** S1 (WS): Lectures (1 SWS)

S1 (WS): Exercises (1 SWS)

**Pre-requisites:** Recommendations:

No requirements.

**Frequency:** yearly in the winter semester

**Requirements for Credit Points:** For the award of credit points it is necessary to pass the module exam. The module exam contains:

KA [90 min]

Voraussetzung für die Vergabe von Leistungspunkten ist das Bestehen der Modulprüfung. Die Modulprüfung umfasst:

KA [90 min]

**Credit Points:** 3

**Grade:** The Grade is generated from the examination result(s) with the following weights (w):

KA [w: 1]

**Workload:** The workload is 90h. It is the result of 30h attendance and 60h self-studies.
Module Name: Investment and Finance
(English):
Responsible: Horsch, Andreas / Prof. Dr.
Lecturer(s): Horsch, Andreas / Prof. Dr.
Institute(s): Professor of Investment and Finance
Duration: 1 Semester(s)

Competencies: The module enables students to solve problems of investment and finance by applying basic analytic concepts. Students are able to recognize and distinguish relevant details of financial problems, to interpret them from a cashflow-based view and to apply appropriate tools to it. They are able to calculate fundamental economic ratios (as NPVs) and to conclude based hereupon if a particular financial option is preferable.

Contents: The module is concerned with basic concepts of corporate finance and corporate investments. During the first half, students study the concept, application, and drawbacks of evaluation methods like Net Present Value (NPV) and Internal Rate of Return (IRR/MIRR). Hereafter, possibilities to adjust these approaches to imperfect markets (including uncertainty, financing, taxes) are introduced. During the second half, methods of external corporate finance, i.e. equity and debt, are analyzed. Due to the relevance of the institutional framework, in particular universal principles of debt finance are discussed. Structure:
1 Liquidity vs. Profitability
2 Static Investment Analysis
3 Dynamic Investment Analysis
4 Extensions of Dynamic Approaches
5 Structuring Corporate Finance
6 Equity Finance
7 Debt Finance
8 Mezzanine Finance

Literature: A selection of recommended papers will be handed out as part of the set of slides. Besides, classic textbooks provide valuable insights, in particular:

Types of Teaching: S1 (SS): With Exercise Parts / Lectures (2 SWS)

Pre-requisites: No previous knowledge required. Good command of mathematics is desirable. Attending Cost Accounting before this module is recommended.

Frequency: yearly in the summer semester

Requirements for Credit Points: For the award of credit points it is necessary to pass the module exam. The module exam contains:
KA [90 min]

Credit Points: 3

Grade: The Grade is generated from the examination result(s) with the following weights (w):
KA [w: 1]
<p>| Workload: | The workload is 90h. It is the result of 30h attendance and 60h self-studies. |</p>
<table>
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<th><strong>Data:</strong></th>
<th>MIH MA Nr. / Examination number: -</th>
<th><strong>Version:</strong> 15.07.2016</th>
<th><strong>Start Year:</strong> SoSe 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Module Name:</strong></td>
<td>Marketing</td>
<td><strong>Responsibility:</strong></td>
<td>Enke, Margit / Prof. Dr.</td>
</tr>
<tr>
<td><strong>Lecturer(s):</strong></td>
<td>Enke, Margit / Prof. Dr.</td>
<td><strong>Institute(s):</strong></td>
<td>Professor of Marketing and International Trade</td>
</tr>
<tr>
<td><strong>Duration:</strong></td>
<td>1 Semester(s)</td>
<td><strong>Competencies:</strong></td>
<td>Gaining theoretical and practical knowledge about key issues of marketing as market-oriented management and applying this knowledge to practical examples. Students should be able to analyse and evaluate the company situation, the competitive environment and the customers of a company and to utilize the findings for developing marketing strategies.</td>
</tr>
<tr>
<td><strong>Types of Teaching:</strong></td>
<td>Incl. Practice Exercises / Lectures (2 SWS)</td>
<td><strong>Requirements for Credit Points:</strong></td>
<td>For the award of credit points it is necessary to pass the module exam. The module exam contains: KA [90 min] Voraussetzung für die Vergabe von Leistungspunkten ist das Bestehen der Modulprüfung. Die Modulprüfung umfasst: KA [90 min]</td>
</tr>
<tr>
<td><strong>Credit Points:</strong></td>
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<td><strong>Grade:</strong></td>
<td>The Grade is generated from the examination result(s) with the following weights (w): KA [w: 1]</td>
</tr>
<tr>
<td><strong>Workload:</strong></td>
<td>The workload is 90h. It is the result of 30h attendance and 60h self-studies.</td>
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<tr>
<td>Module Name:</td>
<td>Master Thesis IMRE including colloquium</td>
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<tr>
<td>(English):</td>
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<tr>
<td>Responsible:</td>
<td>Fröhling, Magnus / Prof.</td>
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<tr>
<td>Lecturer(s):</td>
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<tr>
<td>Institute(s):</td>
<td>Professor of Ressourcemanagement</td>
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<tr>
<td>Duration:</td>
<td>4 Month(s)</td>
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<tr>
<td>Competencies:</td>
<td>The student is supposed to elaborate a master thesis within a period of four months in order to prove that he/she is able to conduct research on a defined complex problem from a relevant area within a certain period of time. The problem shall be dealt with using and applying adequate scientific methods, and the whole research work including the results shall be described and illustrated in written and oral form.</td>
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<tr>
<td>Contents:</td>
<td>The topic of the master thesis can be chosen from the whole spectrum of research dealt with at TU Bergakademie Freiberg. The thesis work involves the elaboration of a concept for the project, the search for relevant literature, the acquirement and application of appropriate methods to fulfil the tasks of the thesis project, the conducting and assessing of practical and/or theoretical research, the discussion of results, the elaboration of the thesis, the public defending of the thesis in a colloquium of 20 minutes plus subsequent discussion.</td>
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<tr>
<td>Literature:</td>
<td>Depending on the topic</td>
<td></td>
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</tr>
<tr>
<td>Types of Teaching:</td>
<td>S1: The Master Thesis has to be submitted 4 month after topic release. / Thesis (4 Mon)</td>
<td></td>
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<tr>
<td>Pre-requisites:</td>
<td>Mandatory: Abschluss aller Pflichtmodule und Wahlpflichtmodule im Umfang von 24 Leistungspunkten (Completion of all obligatory modules and elective modules totalling 24 creditpoints.)</td>
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<tr>
<td>Frequency:</td>
<td>constantly</td>
<td></td>
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<tr>
<td>Requirements for Credit Points:</td>
<td>For the award of credit points it is necessary to pass the module exam. The module exam contains: AP*: Master Thesis AP*: Colloquium [50 min]</td>
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<tr>
<td>Credit Points:</td>
<td>16</td>
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<tr>
<td>Grade:</td>
<td>The Grade is generated from the examination result(s) with the following weights (w): AP*: Master Thesis [w: 3] AP*: Colloquium [w: 1]</td>
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<tr>
<td>Workload:</td>
<td>The workload is 480h. It is the result of 0h attendance and 480h self-studies.</td>
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</tbody>
</table>
### Module Name: Material Flow Analysis and Life Cycle Assessment

(English): Material Flow Analysis and Life Cycle Assessment

**Responsible:** Fröhling, Magnus / Prof.

**Lecturer(s):** Fröhling, Magnus / Prof.

**Institute(s):** Professor of Ressourcemanagement

**Duration:** 1 Semester(s)

**Competencies:**

- analyse material and energy flows from a system’s and from a product/service perspective,
- use the standardized terminology,
- name and describe the steps for conducting MFA & LCA studies,
- discuss the achievements and shortcomings of common methodological toolsets and data bases in the field,
- gather necessary information, choose suitable methods, and apply these for simple MFA & LCA studies, and
- discuss the quality of material flow analysis studies and life cycle assessment studies.

**Contents:**

- Systems and life cycle thinking
- Material flow networks
- Material and energy flow balancing
- Material flow modelling
- Life Cycle Assessment
  - Goal and Scope definition
  - Life Cycle Inventories (LCI)
  - Life Cycle Impact Assessment (LCIA)
  - Interpretation and Disclosure
- Current trends and developments
- Software systems and data bases for material flow analysis and life cycle assessment
- Case studies

**Literature:**

6. EU International Reference Life Cycle Data System (ILCD) Handbook Series
7. Journals:
   a. International Journal of Life Cycle Assessment
   b. Journal of Cleaner Production
   c. Journal of Industrial Ecology

Further literature recommendations will be given in the lecture.

**Types of Teaching:**

**Pre-requisites:**

**Frequency:** yearly in the summer semester

**Requirements for Credit Points:**

For the award of credit points it is necessary to pass the module exam. The module exam contains:
- AP*: Assignment
- KA: Examination [90 to 90 min]

* In modules requiring more than one exam, this exam has to be passed or completed with at least "ausreichend" (4,0), respectively.

**Credit Points:** 6

**Grade:** The Grade is generated from the examination result(s) with the following weights (w):
- AP*: Assignment [w: 1]
- KA: Examination [w: 4]

* In modules requiring more than one exam, this exam has to be passed or completed with at least "ausreichend" (4,0), respectively.

**Workload:** The workload is 180h. It is the result of 60h attendance and 120h self-studies.
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<tbody>
<tr>
<td>Module Name:</td>
<td><strong>Materials Science</strong></td>
<td>(English):</td>
<td></td>
</tr>
<tr>
<td>Responsible:</td>
<td>Leineweber, Andreas / Prof. Dr. rer. nat. habil.</td>
<td>Lecturer(s):</td>
<td>Geißler, David / Dr.-Ing.</td>
</tr>
<tr>
<td>Institute(s):</td>
<td>Institute of Materials Science</td>
<td>Duration:</td>
<td>1 Semester(s)</td>
</tr>
<tr>
<td>Competencies:</td>
<td>Qualification for cooperation with engineers.</td>
<td>Contents:</td>
<td>The lectures deal with the basics of materials science (structure, classes of materials), the main properties and the application of materials.</td>
</tr>
</tbody>
</table>
S1 (SS): Exercises (1 SWS) |
| Pre-requisites: |  | Recommendations: | |
| Frequency: | yearly in the summer semester | Requirements for Credit Points: | For the award of credit points it is necessary to pass the module exam. The module exam contains: KA [90 min] |
| Credit Points: | 3 | Grade: | The Grade is generated from the examination result(s) with the following weights (w): KA [w: 1] |
| Workload: | The workload is 90h. It is the result of 30h attendance and 60h self-studies. | | |
Module Name: **Methods of Analysis and Econometrics**

(English):

**Responsible:** Stephan, Johannes / Prof. Dr.

**Lecturer(s):** Stephan, Johannes / Prof. Dr.

**Institute(s):** Professor of International Resource Policy and Economic Development

**Duration:** 1 Semester(s)

**Competencies:** Students acquire the ability to evaluate and understand analysis of business data and markets. Students learn how to read business-related research in a critical way and are introduced to the most important methods of analysis. This allows students to distinguish between business propaganda and the creation and use of general knowledge, and also implicitly helps to inform the overall learning process.

**Contents:** The general part of the module introduces the students to the ideas of critical evaluation of analyses. This includes familiarity with the properties of a wide range of different business data (intra and inter) and other sources of information, as well as the methodology of their use in different kinds of analyses. Students learn to understand the method of deductive research, of falsification, and the rigours of positive and normative analyses. This is wound up into setting the minimum standard rules for sound academic writing. The empirical part focuses on the a critical view on the application of most usual methods of analysis: analysis of properties of data and hypotheses-testing.

- **Part I:** Critical view on analysis of business data and markets
  - I.1 Criteria for quality of data
  - I.2 Criteria for sound analysis

- **Part II:** Empirical analysis of business data and markets
  - II.1 Understanding statistical analysis
  - II.2 Evaluation of econometric analysis

**Literature:***


**Types of Teaching:**

- S1 (WS): Lectures (3 SWS)
- S1 (WS): Exercises (1 SWS)

**Pre-requisites:**

- **Recommendations:**
  - **Makroökonomik, 2009-08-18**
  - **Mikroökonomische Theorie, 2014-03-05**

**Frequency:** yearly in the winter semester

**Requirements for Credit Points:** For the award of credit points it is necessary to pass the module exam. The module exam contains:

- KA [90 min]

Voraussetzung für die Vergabe von Leistungspunkten ist das Bestehen
| Credit Points: | 6 |
| Grade: | The Grade is generated from the examination result(s) with the following weights (w): KA [w: 1] |
| Workload: | The workload is 180h. It is the result of 60h attendance and 120h self-studies. |
|---------------|-----------------------------------------------|---------------------|-----------------------|
| Module Name:  | Multicultural Communication, Language and Rhetoric (English):  |
| Responsible:  | Hinner, Michael B. / Prof. Dr.                |
| Lecturer(s):  | Hinner, Michael B. / Prof. Dr.                |
| Institute(s): | Professor of Business English, Business Communication and Intercultural Communication |
| Duration:     | 1 Semester(s)                                 |
| Competencies: | The module seeks to transmit, on the one hand, how scientific papers are researched, written, and presented in academic English. And, on the other hand, how culture influences human communication and behavior. |
| Contents:     | The module consists of two courses and is structured as follows: 1. Scholarly Rhetoric: The participants learn how to research, write, present, and discuss a scientific paper. To that end, the following topics will be addressed: Academic style and ethics; formulating research questions and hypotheses; quantitative, qualitative, experimental research, field studies, and content analysis methods; measurement in communication research; paper content; style and layout; documenting sources; writing abstracts and summaries; editing; presentations; discussions. 2. Intercultural Communication: The lecture focuses on the following topics: Culture, supraculture, macroculture, microculture; the perceptual process, description, interpretation, and evaluation; ethnocentrism, stereotypes, and prejudice; belief systems, values, and attitudes; culture and communication; culture and identity; culture shock; intercultural competence. |
| Literature:   | Scripts will be sold at the beginning of each course; Hinner, M. B. Ed. (2007, 2010). Freiberger Beiträge zur interkulturellen und Wirtschaftskommunikation, Volume 4 and 7. Frankfurt/M: Peter Lang. Additional readings will be based on the selected topics for the assignments and include various books, journals, and electronic sources. |
| Types of Teaching: | S1 (WS): Lectures (2 SWS) S1 (WS): Exercises (2 SWS) |
| Pre-requisites: | Recommendations: Abitur-level English, or equivalent knowledge of English. |
| Frequency:    | yearly in the winter semester |
| Requirements for Credit Points: | For the award of credit points it is necessary to pass the module exam. The module exam contains: KA* [90 min] AP*: Written assignment AP*: Presentation |
|               | * In modules requiring more than one exam, this exam has to be passed or completed with at least "ausreichend" (4,0), respectively. |

Voraussetzung für die Vergabe von Leistungspunkten ist das Bestehen der Modulprüfung. Die Modulprüfung umfasst: KA* [90 min] AP*: Belegarbeit AP*: Präsentation

* Bei Modulen mit mehreren Prüfungsleistungen muss diese Prüfungsleistung bestanden bzw. mit mindestens "ausreichend" (4,0)
<table>
<thead>
<tr>
<th>Credit Points:</th>
<th>6</th>
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</table>
| Grade:        | The Grade is generated from the examination result(s) with the following weights (w):
|               | KA* [w: 5]
|               | AP*: Written assignment [w: 4]
|               | AP*: Presentation [w: 1]
|               | * In modules requiring more than one exam, this exam has to be passed or completed with at least "ausreichend" (4.0), respectively. |
| Workload:     | The workload is 180h. It is the result of 60h attendance and 120h self-studies. Self-study includes preparation and follow-up work for in-class instruction as well as preparation for and completion of the written assignment, the formal presentation as well as the written exam, i.e. “Klausurarbeiten.” |
### Module Name: Oil, Gas & Coal

(English): 

#### Responsible:
Volkmann, Norbert / Prof. Dr.

#### Lecturer(s):
Volkmann, Norbert / Prof. Dr.

#### Institute(s):
Institute of Geology

#### Duration:
1 Semester(s)

#### Competencies:
The course provides an introduction into the formation of fossil fuels. In particular, it imparts an understanding of the fundamentals of the process, i.e. sedimentation of organic material, formation of peat, and oil/gas source rocks, the maturity of organic material and possibilities of investigation, the burial history of oil, gas, and coal, a basic knowledge of oil, gas, and coal deposits, its characterization and exploration.

#### Contents:
Basic course in coal, natural gas, and oil geology.

#### Literature:

#### Types of Teaching:
- S1 (SS): Lectures (1 SWS)
- S1 (SS): Exercises (1 SWS)

#### Pre-requisites:
Recommendations:
No requirements.

#### Frequency:
yearly in the summer semester

#### Requirements for Credit Points:
The module exam contains:
- KA [90 min]

Voraussetzung für die Vergabe von Leistungspunkten ist das Bestehen der Modulprüfung. Die Modulprüfung umfasst:
- KA [90 min]

#### Credit Points:
3

#### Grade:
The Grade is generated from the examination result(s) with the following weights (w):
- KA [w: 1]

#### Workload:
The workload is 90h. It is the result of 30h attendance and 60h self-studies.
**Module Name:** Operations Management  

**Responsible:** Höck, Michael / Prof. Dr.  

**Lecturer(s):** Höck, Michael / Prof. Dr.  

**Institute(s):** Professor of Industrial Management, Production Management and Logistics  

**Duration:** 1 Semester(s)  

**Competencies:** Foremost, the module aims to convey to the student problem-solving competencies with a view to putting the student in a position to analyse the complex questions in operations management, to structure them, and to develop solution alternatives.  

**Contents:** This course addresses the management of operations in manufacturing and service firms. Diverse activities, such as determining the size and type of production process, purchasing the appropriate raw materials, planning and scheduling the flow of materials and the nature and content of inventories, assuring product quality, and deciding on the production hardware and how it gets used, comprise this function of the company. Managing operations well requires both strategic and tactical skills. During the term, we will consider such topics as: process analysis, workforce issues, materials management, quality and productivity, technology, and strategic planning, together with relevant analytical techniques. This course will provide a survey of these issues.  

**Literature:**  


**Types of Teaching:**  

- S1 (WS): Lectures (2 SWS)  
- S1 (WS): Exercises (2 SWS)  

**Pre-requisites:** None  

**Frequency:** yearly in the winter semester  

**Requirements for Credit Points:** For the award of credit points it is necessary to pass the module exam. The module exam contains:  

- KA [90 min]  
- PVL: Case Studies  

PVL have to be satisfied before the examination.  

Voraussetzung für die Vergabe von Leistungspunkten ist das Bestehen der Modulprüfung. Die Modulprüfung umfasst:  

- KA [90 min]  
- PVL: Fallstudien  

PVL müssen vor Prüfungsantritt erfüllt sein bzw. nachgewiesen werden.  

**Credit Points:** 6  

**Grade:** The Grade is generated from the examination result(s) with the following weights (w):  

- KA [w: 1]  

**Workload:** The workload is 180h. It is the result of 60h attendance and 120h self-studies. Self-study consists of preparation and review of the lectures, independent work on case studies, as well as preparation for the written test.
**Module Name:** Ore Deposits & Economic Geology  
**Responsible:** Seifert, Thomas / Prof. Dr.  
**Lecturer(s):** Seifert, Thomas / Prof. Dr.  
**Institute(s):** Institute of Mineralogy  
**Duration:** 1 Semester(s)  
**Competencies:** Offering engineers and non-geoscientists the opportunity to get some background knowledge on the genesis of ore deposits and resulting implications for exploration and processing.  
**Contents:** An introduction to ore-forming environments. Major case studies of ore and industrial mineral deposits will also be discussed. An integral part of the course is the study of hand specimens.  
**Literature:**  
**Types of Teaching:** S1 (SS): Lectures (1 SWS)  
S1 (SS): Exercises (1 SWS)  
**Pre-requisites:** No requirements.  
**Frequency:** yearly in the summer semester  
**Requirements for Credit Points:** For the award of credit points it is necessary to pass the module exam. The module exam contains:  
KA [90 min]  
**Credit Points:** 3  
**Grade:** The Grade is generated from the examination result(s) with the following weights (w):  
KA [w: 1]  
**Workload:** The workload is 90h. It is the result of 30h attendance and 60h self-studies.
## Module Name:
**Organizational Communication**

### Responsible:
Hinner, Michael B. / Prof. Dr.

### Lecturer(s):
Hinner, Michael B. / Prof. Dr.

### Institute(s):
Professor of Business English, Business Communication and Intercultural Communication

### Duration:
1 Semester(s)

### Competencies:
The module seeks to transmit the theoretical foundation for organizational communication and apply it in a real world context (e.g. the resource industry, engineering, etc.) to see how effective internal and external communication can transmit competence, credibility, and ethics to all essential stakeholders within and without organizations as well as the public at large.

### Contents:
The module consists of one lecture and one tutorial and is structured as follows:

1. The lecture focuses on the following communication topics:
   - Organizational communication theory, social components of communication, social networks, diversity and communication, identity, corporate culture and communication, power and communication, negotiation, attitudes, and persuasion, conflict communication, internal and external communication, formal and informal communication, stakeholder communication, crisis communication, globalization, technology and communication.

2. The tutorial integrates the above topics into an applied context (e.g. the resource industry, engineering, etc.). Participants will analyze and discuss the topics and contexts in small groups and present the results informally and formally throughout the semester.

The module is taught in English and the assignments have to be completed in English.

### Literature:
The script is sold at the beginning of the semester.

### Types of Teaching:
- S1 (SS): Lectures (2 SWS)
- S1 (SS): Exercises (2 SWS)

### Pre-requisites:
**Recommendations:**
Abitur-level English, or equivalent knowledge of English.

### Frequency:
yearly in the summer semester

### Requirements for Credit Points:
For the award of credit points it is necessary to pass the module exam.
The module exam contains:
- KA*: [90 min]
- AP*: Active Written and Oral Participation, Presentations, and
Assignments in the Course

* In modules requiring more than one exam, this exam has to be passed or completed with at least "ausreichend" (4,0), respectively.

Voraussetzung für die Vergabe von Leistungspunkten ist das Bestehen der Modulprüfung. Die Modulprüfung umfasst:

KA* [90 min]
AP*: Aktive schriftliche und mündliche Teilnahme, Präsentation und Belegarbeiten in der Veranstaltung

* Bei Modulen mit mehreren Prüfungsleistungen muss diese Prüfungsleistung bestanden bzw. mit mindestens "ausreichend" (4,0) bewertet sein.

<table>
<thead>
<tr>
<th>Credit Points:</th>
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| Grade:         | The Grade is generated from the examination result(s) with the following weights (w):
|                | KA* [w: 4] |
|                | AP*: Active Written and Oral Participation, Presentations, and Assignments in the Course [w: 1] |

* In modules requiring more than one exam, this exam has to be passed or completed with at least "ausreichend" (4,0), respectively.

| Workload:      | The workload is 180h. It is the result of 60h attendance and 120h self-studies. Self-study time includes reading the relevant literature, preparation and follow-up work for in-class participation as well as preparation time for the written exam, i.e. "Klausurarbeiten" and the assignments. |
Module Name: **Plant Economics and Technology**

(English): Plant Economics and Technology

Responsible: Fröhling, Magnus / Prof.

Lecturer(s): Fröhling, Magnus / Prof.

Institute(s): Professor of Ressourcemanagement

Duration: 1 Semester(s)

Competencies: The students are enabled to understand the techno-economic issues associated with the life cycle of industrial plants. This comprises also linked topics of technology assessment and management. After completion of this module the students are able to characterise plant economic tasks and apply exemplary methods to fulfil these. They discuss the achievements and shortcomings of these methods for a practical application. They are able to transfer these contents to an application in practice.

Contents:
- Introduction to Plant Economics and Technology
  - Life cycle of industrial plants
  - Analysis and modelling of industrial production systems
  - Project management in engineering
  - Network and facility location planning
  - Process design
  - Investment estimation
  - Cost estimation
  - Plant and process optimisation
  - Maintenance and repair
  - Quality Management
  - Re-location, dismantling and recycling
  - Technology assessment and management

Literature:
- Recommended reading:

Further literature recommendations will be given in the lecture.

Types of Teaching:
- S1 (SS): Plant Economics and Technology (lecture) - Plant Economics and Technology (lecture) / Lectures (2 SWS)
- S1 (SS): Plant Economics and Technology (tutorial) - Plant Economics and Technology (tutorial) / Lectures (2 SWS)

Pre-requisites:
- yearly in the summer semester

Frequency:
- Requirements for Credit Points: For the award of credit points it is necessary to pass the module exam. The module exam contains:
  - PVL: Assignments
  - KA: Exam [90 to 90 min]
  - PVL have to be satisfied before the examination.

Voraussetzung für die Vergabe von Leistungspunkten ist das Bestehen der Modulprüfung. Die Modulprüfung umfasst:
- PVL: Assignments
- KA: Exam [90 bis 90 min]
- PVL müssen vor Prüfungsantritt erfüllt sein bzw. nachgewiesen werden.
| Credit Points: | 6 |
| Grade: | The Grade is generated from the examination result(s) with the following weights (w):
KA: Exam \[w: 1\] |
| Workload: | The workload is 180h. It is the result of 60h attendance and 120h self-studies. |
### Module Name: Principles of Environmental Management

**Responsible:** Bongaerts, Jan C. / Prof. Dr.

**Lecturer(s):** Bongaerts, Jan C. / Prof. Dr.

**Institute(s):** Professor of Environmental & Resource Management

**Duration:** 1 Semester(s)

**Competencies:** Students learn the basic knowledge about environmental management, in particular at the level of (industrial) organisations. Contemporary leading principles, such as sustainability, prudent handling of energy and resources will be introduced. Students will have to apply the theoretical principles to practical problems of decision-making and management.

**Contents:** The cluster gives an insight into the main and important issues of the management of environment such as: standards for management, ISO 14001, PDCA cycle, environmental aspects, environmental management manual, procedures, material safety data sheets, life cycle analysis.

**Literature:**
- Christopher Sheldon, Mark Yoxon; Installing Environmental Management Systems: A Step by Step Guide Earthscan

**Types of Teaching:**
- **S1 (WS):** Lectures (1 SWS)
- **S1 (WS):** Exercises (1 SWS)

**Pre-requisites:**
**Recommendations:** No previous knowledge and skills required.

**Frequency:** yearly in the winter semester

**Requirements for Credit Points:**
For the award of credit points it is necessary to pass the module exam. The module exam contains:
- AP: Team project documents
- AP: Presentation of the project

Voraussetzung für die Vergabe von Leistungspunkten ist das Bestehen der Modulprüfung. Die Modulprüfung umfasst:
- AP: Ausarbeitung zum Gruppenprojekt
- AP: Präsentation des Projektes

**Credit Points:** 3

**Grade:** The Grade is generated from the examination result(s) with the following weights (w):
- AP: Team project documents [w: 4]
- AP: Presentation of the project [w: 1]

**Workload:** The workload is 90h. It is the result of 30h attendance and 60h self-studies.
**Module Name:** Project Management  

**Responsible:** Jacob, Dieter / Prof. Dr. 

**Lecturer(s):** Erbe, Anita / Dr. 

**Institute(s):** Professor of Construction Management 

**Duration:** 1 Semester(s) 

**Competencies:** Students obtain an understanding of the concept of project management and become familiar with important tasks in relation to the management of projects. 

**Contents:** This course presents the principles and techniques of managing projects, primarily engineering projects, from the owner’s feasibility study through design and development to completion. It emphasises project management during the early stages of project development because it is at that point that the ability to influence the quality, cost and time of a project is at its highest. It includes project scope definition, development of work plan, planning and scheduling, procurement strategies and highlights the management of the three basic components of a project: quality/scope, budget/cost and time/schedule. A simulation exercise is included to demonstrate working in a group and highlight the importance of communication against a backdrop of determining procurement strategy. 


**Pre-requisites:** No pre-requisites are required. 

**Frequency:** yearly in the winter semester 

**Types of Teaching:** S1 (WS): Exercises (1 SWS)  
S1 (WS): Lectures (1 SWS) 

**Recommendations:** 

**Requirements for Credit Points:** For the award of credit points it is necessary to pass the module exam. The module exam contains: KA [90 min] 

**Voraussetzung für die Vergabe von Leistungspunkten ist das Bestehen der Modulprüfung. Die Modulprüfung umfasst:** KA [90 min] 

**Credit Points:** 3 

**Grade:** The Grade is generated from the examination result(s) with the following weights (w): KA [w: 1] 

**Workload:** The workload is 90h. It is the result of 30h attendance and 60h self-studies.
**Module Name:** Resource Management  
**Responsible:** Fröhling, Magnus / Prof.  
**Lecturer(s):** Fröhling, Magnus / Prof.  
**Institute(s):** Professor of Ressourcemanagement  
**Duration:** 1 Semester(s)  

**Competencies:**  
- Explain the resource related corporate management tasks, 
- structure these 
- use selected tools and methods and 
- explain the interplay between resource management and related tasks such as operations and supply chain management.

**Contents:**  
The course deals with the field of resource management from an industrial perspective. This comprises resource related management tasks, methods and tools to solve these and how they are embedded within functions and processes of companies. Thereby the focus lies on repetition factors mineral raw materials and energy carriers, renewable raw materials and energy carriers as well as secondary raw materials and energy carriers.

**Literature:**  

**Types of Teaching:**  
S1 (WS): Resource Management / Lectures (2 SWS)  
S1 (WS): Resource Management / Exercises (2 SWS)

**Pre-requisites:**  
yearly in the winter semester

**Requirements for Credit Points:**  
For the award of credit points it is necessary to pass the module exam. The module exam contains:  
AP*: Assignment  
KA*: Written Exam [90 min]  
* In modules requiring more than one exam, this exam has to be passed or completed with at least "ausreichend" (4,0), respectively.

Voraussetzung für die Vergabe von Leistungspunkten ist das Bestehen der Modulprüfung. Die Modulprüfung umfasst:  
AP*: Aufgabe  
KA*: Written Exam [90 min]  
* Bei Modulen mit mehreren Prüfungsleistungen muss diese Prüfungsleistung bestanden bzw. mit mindestens "ausreichend" (4,0) bewertet sein.

**Credit Points:**  
6

**Grade:**  
The Grade is generated from the examination result(s) with the following weights (w):  
AP*: Assignment [w: 1]  
KA*: Written Exam [w: 5]  
* In modules requiring more than one exam, this exam has to be passed or completed with at least "ausreichend" (4,0), respectively.
| Workload: | The workload is 180h. It is the result of 60h attendance and 120h self-studies. |
Module Name: **Resources Economics and Strategies of the Resource Industry**

(English): **Bongaerts, Jan C. / Prof. Dr.**

Lecturer(s): **Bartz, Stefan**

Institute(s): **Professor of Ressourcemanagement**

**Professor of Environmental & Resource Management**

Duration: 1 Semester(s)

Competencies: The cluster intends to give students the knowledge and the ability to understand the economic principles of resource economics and their usage for the strategic development of companies within the (upstream) natural resource industry. It is split into a theoretical part (Economics of Resources – ER) and an applied part (Strategies of the Resource Industry - SIR).

Contents:
- Optimal control theory and depletable and renewable resources
- Population growth and resources
- Resources in a globalized world
- Eresource markets
- Economic effects of resource wealth
- Structure and size of the international resources industry
- Setting objectives and developing long-term planning instruments
- Assessing performance through controlling instruments
- Economic feasibility studies in the mining and energy sectors
- Economic evaluation of environmental impacts
- Case studies

Literature:
- Roger Perman et al. Natural Resource and Environmental Economics (3rd Ed.) (2003), Addison- Wesley-Longman

Types of Teaching:
- S1 (SS): Lectures (2 SWS)
- S1 (SS): Exercises (2 SWS)

Pre-requisites: Admission to a graduate programme of the university (MBA IMRE or other Master’s Programmes) or admission through Exchange programmes (e.g. ERASMUS)

Frequency: yearly in the summer semester

Requirements for Credit Points: For the award of credit points it is necessary to pass the module exam. The module exam contains:
- KA* [90 min]
- KA* [90 min]
- PVL: Assignments
- PVL: Paper
- PVL have to be satisfied before the examination.
* In modules requiring more than one exam, this exam has to be passed or completed with at least "ausreichend" (4,0), respectively.

Voraussetzung für die Vergabe von Leistungspunkten ist das Bestehen der Modulprüfung. Die Modulprüfung umfasst:

- KA* [90 min]
- KA* [90 min]
- PVL: Belegarbeit
- PVL: Ausarbeitung

PVL müssen vor Prüfungsantritt erfüllt sein bzw. nachgewiesen werden.

* Bei Modulen mit mehreren Prüfungsleistungen muss diese Prüfungsleistung bestanden bzw. mit mindestens "ausreichend" (4,0) bewertet sein.

**Credit Points:** 6

**Grade:** The Grade is generated from the examination result(s) with the following weights (w):

- KA* [w: 1]
- KA* [w: 1]

* In modules requiring more than one exam, this exam has to be passed or completed with at least "ausreichend" (4,0), respectively.

**Workload:** The workload is 180h. It is the result of 60h attendance and 120h self-studies.
**Module Name:** Scenario Planning and Executive Dialogues  

**Responsibility:**  
Stephan, Johannes / Prof. Dr.  
Gillo, Martin / Prof. Dr.  

**Lecturer(s):**  
Stephan, Johannes / Prof. Dr.  
Gillo, Martin / Prof. Dr.  

**Institute(s):**  
Professor of International Resource Policy and Economic Development  
Professor for International Economic Relations  

**Duration:**  
1 Semester(s)  

**Competencies:**  
The students will understand the scenario planning method and learn to apply that method to various political, economic, and social issues and to discuss this with managers and politicians.  

**Contents:**  
Scenario planning is a method for determining possible futures for objects with high uncertainties. Scenarios are defined as hypothetical views of the future. It is aimed to recognize and support developments and prevent negative ones as much as possible. This method will be applied to different topics such as Europe 2030 or Freiberg 2030. Managers, politicians, and scientists are invited to comment as experts on these scenarios.  
The simulation game seminar gives students the opportunity to test their management abilities in a simulated, computer-network based environment of a competitive market. The presentations by practitioners in the format of executive dialogues provides students with insights into real-life experiences.  

**Literature:**  

**Types of Teaching:**  
S1 (SS): Lectures for scenario planning and simulation game in blocks / Lectures (2 SWS)  
S1 (SS): Several 4-hour seminars in the second part of the semester / Seminar (2 SWS)  

**Pre-requisites:**  
Recommendations:  
No previous knowledge is required.  

**Frequency:**  
yearly in the summer semester  

**Requirements for Credit Points:**  
For the award of credit points it is necessary to pass the module exam. The module exam contains:  
AP: Active participation in the scenario planning seminar, in the simulation game seminar, as well as in the executive dialogues.  
AP: Presentation  

Voraussetzung für die Vergabe von Leistungspunkten ist das Bestehen der Modulprüfung. Die Modulprüfung umfasst:  
AP: Aktive Teilnahme am Seminar Szenarioplanung, am Seminar Simulationsspiel und an den geführten Dialogen  
AP: Präsentation  

**Credit Points:**  
6  

**Grade:**  
The Grade is generated from the examination result(s) with the following weights (w):  
AP: Active participation in the scenario planning seminar, in the simulation game seminar, as well as in the executive dialogues. [w: 1]  
AP: Presentation [w: 1]  

**Workload:**  
The workload is 180h. It is the result of 60h attendance and 120h self-studies.
**Module Name:** Strategic Management

(English): Strategic Management

**Responsible:** Nippa, Michael / Prof. Dr.

**Lecturer(s):**

**Institute(s):** Professor of Management, Leadership and Human Resources

**Duration:** 1 Semester(s)

**Competencies:**
The students gain competencies in the field of strategic management and strategic decision making in the context of complex environments and competitive dynamics. This course introduces the key concepts, tools, and principles of strategy formulation and competitive analysis. It is concerned with managerial decisions and actions that affect the performance and survival of business enterprises. The course is focused on the information, analyses, organizational processes, and skills and business judgment managers must use to devise strategies, position their businesses, define firm boundaries and maximize long-term profits in the face of uncertainty and competition.

**Contents:**

Strategic Management:
- composition of a strategy
- strategic base elements
- examples for strategy development
- company strategies.

**Literature:**

**Types of Teaching:**
S1 (WS): Lectures, practical exercises and assignments / Lectures (2 SWS)

**Pre-requisites:**

**Frequency:** yearly in the winter semester

**Requirements for Credit Points:**
For the award of credit points it is necessary to pass the module exam.
The module exam contains:
KA: Examination [90 min]

Voraussetzung für die Vergabe von Leistungspunkten ist das Bestehen der Modulprüfung. Die Modulprüfung umfasst:
KA: Klausur [90 min]

**Credit Points:** 3

**Grade:** The Grade is generated from the examination result(s) with the following weights (w):
KA: Examination [w: 1]

**Workload:** The workload is 90h. It is the result of 30h attendance and 60h self-studies.
<table>
<thead>
<tr>
<th>Data: Data:</th>
<th>SIR. MA. NR. / Examination number: 62404</th>
<th>Version: 14.07.2016</th>
<th>Start Year: SoSe 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Responsible:</td>
<td>Fröhling, Magnus / Prof.</td>
<td>Lecturer(s): Bartz, Stefan</td>
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<tr>
<td>Institute(s):</td>
<td>Professor of Ressourcemanagement</td>
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<td></td>
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<tr>
<td>Duration:</td>
<td>1 Semester(s)</td>
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</table>
| Competencies: | • Understand the strategic role of valuations for the resource industry (energy and mining)  
• Learn basic valuation concepts and their practical application in energy and mining (examples based on real cases)  
• Transform verbal description of a real business case into a financial model (case studies based on simplified real business cases)  
Know recent developments of valuation in the relevant industries (e.g. real options, simulations, etc.) |
| Contents: | • Context of valuation and strategy development  
• Case history of a typical metal mine (example)  
• Economical characteristics of mining and energy businesses  
• Types of valuations for energy and mining businesses, valuation objects and subjects, staged approach for studies  
• Input data for valuations, availability to different stakeholders, brainstorming exercises  
• Role of value chains and industry cost curves for valuation, commodity-like goods and market imperfections (gold, coal, copper, power)  
• Wholesale power markets, merit order, influence of CO2 emissions trading and renewables (examples)  
• Application of basic P&L / CF statements for valuations (examples)  
• Traditional investment decision criteria (NPV, IRR, LAC, LAR, Payback)  
• Financing models and hurdle rates (examples)  
• Instruments for the analysis of uncertainty and risk in valuations, exercise “country risk”  
• Binary decision trees in exploration (example gold)  
• Real options: Example gas-fired power plant  
Case study: Prepare evaluation of a business plan and presentation. |
| Types of Teaching: | S1 (SS): Lectures (1 SWS)  
S1 (SS): Exercises (1 SWS) |
| Pre-requisites: | Recommendations:  
To take part in the module „Strategies of the Resource Industry“, it is strongly recommended that the student has prior knowledge of microeconomics and investment and finance. If this is not the case, the student is responsible to make himself familiar with the necessary |
<table>
<thead>
<tr>
<th>Frequency:</th>
<th>yearly in the summer semester</th>
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<tbody>
<tr>
<td>Requirements for Credit Points: For the award of credit points it is necessary to pass the module exam. The module exam contains: AP*: Group Work KA*: Examination [120 min]</td>
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<tr>
<td>* In modules requiring more than one exam, this exam has to be passed or completed with at least &quot;ausreichend&quot; (4,0), respectively.</td>
<td></td>
</tr>
<tr>
<td>Voraussetzung für die Vergabe von Leistungspunkten ist das Bestehen der Modulprüfung. Die Modulprüfung umfasst: AP*: Group Work KA*: Examination [120 min]</td>
<td></td>
</tr>
<tr>
<td>* Bei Modulen mit mehreren Prüfungsleistungen muss diese Prüfungsleistung bestanden bzw. mit mindestens &quot;ausreichend&quot; (4,0) bewertet sein.</td>
<td></td>
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<tr>
<td>Credit Points:</td>
<td>3</td>
</tr>
<tr>
<td>Grade: The Grade is generated from the examination result(s) with the following weights (w): AP*: Group Work [w: 0] KA*: Examination [w: 1]</td>
<td></td>
</tr>
<tr>
<td>* In modules requiring more than one exam, this exam has to be passed or completed with at least &quot;ausreichend&quot; (4,0), respectively.</td>
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<tr>
<td>Workload: The workload is 90h. It is the result of 30h attendance and 60h self-studies.</td>
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</tbody>
</table>
### Module Name: Supply Chain Management

**Responsible:** Höck, Michael / Prof. Dr.

**Lecturer(s):** Höck, Michael / Prof. Dr.

**Institute(s):** Professor of Industrial Management, Production Management and Logistics

**Duration:** 1 Semester(s)

### Competencies:
In this course students will view the supply chain from the point of view of a general manager. Logistics and supply chain management is all about managing the hand-offs in a supply chain - hand-offs of either information or product. The design of a logistics system is critically linked to the objectives of the supply chain. Our goal in this course is to understand how logistical decisions impact the performance of the firm as well as the entire supply chain. The key will be to understand the link between supply chain structures and logistical capabilities in a firm or supply chain.

### Contents:
Supply Chain Management (SCM) deals with the planning, implementing and controlling of efficient flow and storage of raw materials, in-process inventory, finished goods, and related information from point of origin to point of consumption. Issues discussed in the course will include the total logistics cost approach, supply chain network design and optimizing the overall performance. Effective logistics systems aim towards coordination of transportation, inventory positioning and supply contracts to provide quick service efficiently.

### Literature:

### Types of Teaching:
- S1 (SS): Lectures (2 SWS)
- S1 (SS): Exercises (2 SWS)

### Pre-requisites:
**Recommendations:** Keine

### Frequency:
Yearly in the summer semester

### Requirements for Credit Points:
For the award of credit points it is necessary to pass the module exam. The module exam contains:
- KA [90 min]
- PVL: Case Studies
PVL have to be satisfied before the examination.

Voraussetzung für die Vergabe von Leistungspunkten ist das Bestehen der Modulprüfung. Die Modulprüfung umfasst:
- KA [90 min]
- PVL: Fallstudien
PVL müssen vor Prüfungsantritt erfüllt sein bzw. nachgewiesen werden.

### Credit Points:
6

### Grade:
The Grade is generated from the examination result(s) with the following weights (w):
- KA [w: 1]
**Module Name:** Sustainability Management  

**(English):** Bongaerts, Jan C. / Prof. Dr.  

**Lecturer(s):** Bongaerts, Jan C. / Prof. Dr. Gurita, Nicoleta / MBA IMRE  

**Institute(s):** Professor of Environmental & Resource Management  

**Duration:** 1 Semester(s)  

**Competencies:** The aim of teaching of this cluster is that students get familiar with the concept of sustainability, its scope and the interrelation between the economic, social and ecological dimensions. It is intended that students will develop the ability to critically assess situations and make appropriate decisions as well as develop further their personal communication skills while working in teams and participating in lecture activities.

**Contents:** Since there are several angles to the theme of sustainable development the course starts with the fundamentals by providing a comprehensive theoretical overview of the concept of sustainable development. The course follows then with a more practical oriented approach using case studies. Throughout the course students will get good understanding of the implications of several approaches to sustainability for policy making, environmental management and inter-disciplinary research. Teaching is combined with assignments, group activities and guest lectures. The course is structured as follows:

1. The concept of sustainability  
2. Conceptual and theoretical foundations of sustainability (part I and II)  
3. Sustainability indicators and Reporting Frameworks  
4. Life Cycle Assessment - Concept Overview -  
5. Introduction to Sustainable Banking and Sustainable Asset Management  
6. Global Trends in Sustainability

**Literature:**  
The clean development mechanism, sustainable development and its assessment, Burian, Martin (2006)  

**Types of Teaching:** S1 (SS): Lectures (1 SWS)  
S1 (SS): Exercises (1 SWS)

**Pre-requisites:**  
**Recommendations:** No previous knowledge and skills is required.

**Frequency:** yearly in the summer semester

**Requirements for Credit Points:** For the award of credit points it is necessary to pass the module exam. The module exam contains:  
AP: term paper  
AP: paper presentation

Voraussetzung für die Vergabe von Leistungspunkten ist das Bestehen der Modulprüfung. Die Modulprüfung umfasst:  
AP: Belegarbeit  
AP: Präsentation der Belegarbeit

**Credit Points:** 3
Grade: The Grade is generated from the examination result(s) with the following weights (w):
AP: term paper [w: 7]
AP: paper presentation [w: 3]

Workload: The workload is 90h. It is the result of 30h attendance and 60h self-studies.

Freiberg, den 4. Oktober 2016

gez. i. V. Prof. Dr. Broder Merkel

Prof. Dr. Klaus-Dieter Barbknecht
Rektor