Amtliche Bekanntmachungen der TU Bergakademie Freiberg

Nr. 21, Heft 2 vom 17. Mai 2023

Modulhandbuch

für den

Masterstudiengang

International Business and

Resources in Emerging

Markets (IBRE_neu)

Inhaltsverzeichnis

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

Data:	ADVBETH. MA. / Examination number: 62501	Version: 06.05.2022	Start Year: WiSe 2022
Module Name:	**Advanced Business Ethics**		
(English):			
Responsible:	Walkowitz, Gari / Prof. Dr.		
Lecturer(s):	Walkowitz, Gari / Prof. Dr.		
Institute(s):	Professor of Business Ethics		
Duration:	1 Semester(s)		
Competencies:	Students 1) develop a philosophical, psychological, and economic understanding of human decision-making in dilemma situations, especially in organizations and markets, 2) understand advanced, specialized theories, 3) learn methods for analyzing influencing factors (e.g., personal dispositions, situational factors, incentive structures) in ethically relevant decision-making, 4) apply their acquired knowledge to relevant case studies, 5) assess their own decision process in self- and external reflection and identify development potentials, 6) derive implications for the design of institutions, 7) gain experience in developing their own research questions and in applying empirical methods in business ethics.		
Contents:	This module introduces basic concepts of behavioral ethics and applies them to decision making by managers and employees. It draws on theories of normative ethics, as well as on behavioral theories and empirical findings from social psychology and behavioral economics. Against the background of these foundations, individual and collective decisions in organizations and in markets (e.g., against the background of sustainability, human rights, and environmental protection considerations) are analyzed and evaluated. Case studies are used to illustrate and apply the theoretical concepts.		
Literature:	Scientific articles De Cremer, D., & Tenbrunsel, A. E. (Eds.). (2012). Behavioral business ethics: Shaping an emerging field. Routledge.		
Types of Teaching:	S1 (WS): Lectures (2 SWS) S1 (WS): Exercises (2 SWS)		
Pre-requisites:	**Recommendations:** Einführung in die Unternehmens- und Wirtschaftsethik, 2023-02-16		
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. The private studies consist of preparation and repetition for/of lectures and tutorials as well as the preparation for the exam.		

Data:	BNM MA. / Examination number: -	Version: 16.02.2023	Start Year: SoSe 2023
Module Name:	**Business Negotiation Management**		
(English):			
Responsible:	Walkowitz, Gari / Prof. Dr.		
Lecturer(s):	Walkowitz, Gari / Prof. Dr.		
Institute(s):	Professor of Business Ethics		
Duration:	1 Semester(s)		
Competencies:	Students are able to describe negotiation processes on the basis of the theory they have learned and to compare and evaluate different negotiation strategies. They are able to transfer concepts of negotiation management into practice, i.e. they know how to assess negotiation situations correctly, how to design suitable strategies - adapted to the situation - and how to apply them. The theory is taught in an application-oriented manner, whereby students go through the negotiation process themselves in extensive role-plays and are able to critically compare, evaluate, and optimize their negotiation strategies and outcomes.		
Contents:	The module is designed to provide students with advanced theoretical and application-oriented knowledge about negotiations. The theory of negotiation includes: 1) Analysis of different negotiation strategies, 2) Cooperative negotiation management, 3) Identification and assessment of potential negotiation mistakes, 4) Approaches to avoid negotiation mistakes, 5) Identification of pitfalls that lead to inefficient solutions on both sides, 6) Learning how to influence a negotiation partner, 7) The precise preparation of a negotiation tailored to the subject of the negotiation, 8) Use of adequate body language, 9) Use of modern internet-based means of communication in negotiation preparation, implementation, and analysis, 10) Use of suitable presentation techniques		
Literature:	Bazerman, M. H., & Neale, M. A. (1993). Negotiating rationally. Simon and Schuster. Fisher, R., Ury, W. L., & Patton, B. (2011). Getting to yes: Negotiating agreement without giving in. Penguin. Shapiro, D. (2018): Verhandeln: Die neue Erfolgsmethode aus Harvard, 1. Aufl., Campus Verlag.		
Types of Teaching:	S1 (SS): Lectures (2 SWS) S1 (SS): Seminar (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: in examination variant 1: KA or in examination variant 2: AP*: Seminar paper AP*: Defense The number of participants in the course in the second week of the lecture period is used to determine the type of examination performance. If there are more than 18 participants the examination variant 1 (KA) will apply. Otherwise examination variant 2 will apply. * 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: in Prüfungsvariante 1: KA oder in Prüfungsvariante 2: AP*: Seminararbeit AP*: Verteidigung Die Anzahl der Teilnehmer wird in der zweiten Vorlesungswoche bestimmt. Bei mehr als 18 Teilnehmern wird die Prüfungsvariante 1 (KA) festgelegt, ansonsten die Prüfungsvariante 2. * 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): in examination variant 1: KA [w: 1] or in examination variant 2: AP*: Seminar paper [w: 3] AP*: Defense [w: 2] * 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. The private studies consist of preparation and repetition for/of lectures and tutorials as well as the preparation for the exam.

Data:	CMCRMI. MA. Nr. 3626 / Examination number: 42810	Version: 19.09.2017	Start Year: WiSe 2019
Module Name:	**Classifying Machines, Crushers, Mills**		
(English):			
Responsible:	Lieberwirth, Holger / Prof. Dr.-Ing.		
Lecturer(s):	Meltke, Klaus / Dr.-Ing.		
Institute(s):	Institute of Processing Machines and Recycling Systems Technology		
Duration:	1 Semester(s)		
Competencies:	The students will be enabled to select, calculate and design classifying machines, crushers and mills according to the specific requirements of their applications.		
Contents:	Planning and design of classifying machines, crushers and mills (Static, Vibrating and Drum Screens, Cyclons and Air Separators; Jaw, Double Roll, Cone, Gyratory, Hammer and Impact Crushers; Tumbling, High Pressure Grinding, Vertical Roller, Vibrating, Stirred Media, Impact, Beater and Jet Mills)		
Literature:	Wills, B.A.; Napier-Munn, T.J.: Mineral Processing Technology, Elsevier, 2007 Gupta, A.; Yan, D.: Mineral Processing, Design and Operations, Elsevier, 2016 Metso: Crushing and Screening Handbook, 2006 Höffl, K.: Zerkleinerungs- und Klassiermaschinen, Dt. Verlag für Grundstoffindustrie, Leipzig 1985		
Types of Teaching:	S1 (WS): Lectures (2 SWS) S1 (WS): Exercises (1 SWS) S1 (WS): Experimental trainings, exercises and a design exercise. / Practical Application (1 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: MP/KA (KA if 10 students or more) [MP minimum 30 min / KA 90 min] PVL: At least 90% of the exercises are completed successfully (protocols). PVL have to be satisfied before the examination.		
	Voraussetzung für die Vergabe von Leistungspunkten ist das Bestehen der Modulprüfung. Die Modulprüfung umfasst: MP/KA (KA bei 10 und mehr Teilnehmern) [MP mindestens 30 min / KA 90 min] PVL: Mindestens 90 % der Praktika und Übungen erfolgreich absolviert (Protokolle). PVL müssen vor Prüfungsantritt erfüllt sein bzw. nachgewiesen werden.		
Credit Points:	5		
Grade:	The Grade is generated from the examination result(s) with the following weights (w): MP/KA [w: 1]		
Workload:	The workload is 150h. It is the result of 60h attendance and 90h self-studies. The latter includes the preparation and preparation of the exercises, experimental trainings and preparation for the examination.		

Data:	CCE. MA. / Examination number: 60319	Version: 23.01.2020	Start Year: SoSe 2017
Module Name:	**Climate Change Economics**		
(English):			
Responsible:	Rübbelke, Dirk / Prof. Dr.		
Lecturer(s):	Rübbelke, Dirk / Prof. Dr.		
Institute(s):	Professor of Economics, esp. Resource Economics		
Duration:	1 Semester(s)		
Competencies:	Students will be able to understand the key aspects of climate change economics. National as well as international issues will be covered.		
Contents:	Among the topics are the economics of adaptation to and mitigation of climate change, international negotiations, climate finance.		
Literature:	Buchholz, W., & Rübbelke, D. (2019). Foundations of Environmental Economics. Springer Texts in Business and Economics. Gintis, H. (2009). Game Theory Evolving: A Problem-Centered Introduction to Modeling Strategic Interaction. Princeton University Press. Perman, R. et al. (2011), Natural Resource & Environmental Economics, Pearson. Tol, R.S.J. (2014), Climate Economics, Edward Elgar. Markandya, A. Galarraga, I. & Rübbelke, D.T.G. (2017), Climate Finance, World Scientific.		
Types of Teaching:	S1 (SS): Lectures (2 SWS) S1 (SS): Exercises (2 SWS)		
Pre-requisites:	**Recommendations:** Economic Theory: Micro-Economics, 2016-07-12		
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: Written test [60 min] AP: Presentation		
	Voraussetzung für die Vergabe von Leistungspunkten ist das Bestehen der Modulprüfung. Die Modulprüfung umfasst: KA: Schriftliche Klausurarbeit [60 min] AP: Präsentation		
Credit Points:	6		
Grade:	The Grade is generated from the examination result(s) with the following weights (w): KA: Written test [w: 4] AP: Presentation [w: 1]		
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 the preparation of presentations and of examinations.		

Data:	COMMAR MA Nr. / Examination number: 60415	Version: 15.06.2022	Start Year: SoSe 2021
Module Name:	**Commodity Marketing**		
(English):			
Responsible:	Leischnig, Alexander / Prof.		
Lecturer(s):	Leischnig, Alexander / Prof.		
Institute(s):	Professor of Business-to-Business Marketing		
Duration:	1 Semester(s)		
Competencies:	After successful completion of this module, students should have an advanced understanding of the role and nature of commodities and the processes of commoditization and de-commoditization. Students should be able to recognize commodity traps and explain drivers of commoditization. In addition, they should be able to explain de-commoditization approaches and develop strategies to implement them.		
Contents:	The module will discuss the fundamentals of commodities and commodity marketing and outline different concepts, frameworks, and approaches associated with the processes of commoditization and de-commoditization. It will approach the topic from different perspectives and integrate them to develop a comprehensive understanding of commodity marketing.		
Literature:	d'Aveni, R. A. (2010). Beating the commodity trap: How to maximize your competitive position and increase your pricing power. Harvard Business Press. Enke, M., Geigenmüller, A., & Leischnig, A. (2022): Commodity marketing. Strategies, concepts, and cases. Springer. Homburg, C., Kuester, S., & Krohmer, H. (2013). Marketing management: a contemporary perspective. McGraw-Hill Higher Education.		
Types of Teaching:	S1 (SS): Lectures (2 SWS) S1 (SS): 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: 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.		

Data:	COMIPR. MA. Nr. 2078 / Examination number: 62002	Version: 09.03.2023	Start Year: SoSe 2009
Module Name:	**Competition Policy and Intellectual Property Rights**		
(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:	This module is split into two sections. The objective of the first section is to make students aware of the role of market-competition and competition policy for economic catch-up development with a focus on emerging markets. In particular, the pros and cons of competition law enforcement in emerging markets, as discussed in academia and the (international) political sphere, are critically reviewed and discussed with a view on developing an own educated opinion. The objective of the second section is to make students aware of the two faces of IPR protection (copyright, trademark, trade secrets, and patents): the protection of IPR as a driver of investment, research and development, as well as innovation on the one side, and IPR as a hindrance to the dissemination, use of knowledge, and of competition on the other. In addition, the discussion of the design of IPR regimes focuses on how enterprises in catch-up economies can use IPR regimes to excel in international competitiveness. Students develop an own educated opinion of the form and function of forward looking institution of an IPR regime that balances the needs of both sides of the IPR market.		
Contents:	Course I: Market-competition and competition policy I.1 The economic analysis of competition I.1.1 Conceptual approaches to competition I.1.2 Economic effects of competition I.1.3 Competition and market structure, oligopoly-theory I.2 Competition policy for emerging markets I.2.1 The goals of competition policy I.2.2 Competition as an engine of technological economic growth I.2.3 Socialist planning as an alternative to competition? I.2.4 The concept of Developmental States Course II: The economics of intellectual property rights II.1 Characterisation of intellectual property (IP) II.1.1 The motivation for IP and its significance II.1.2 Patents and IPR regimes II.2 The economic rationales for IPR regimes II.2.1 The goods-character of IP II.2.2 The investment, R&D, and innovation incentive II.2.3 The knowledge-dissemination incentive II.2.4 The resource-allocation incentive of IPR protection II.3 IPR protection and the protection of competition II.3.1 IPR regime as part of a competition regime II.3.2 Patent thicket, patent trolls, etc. II.4 IPR regime and economic development II.4.1 International agreements on IPR (TRIPS, etc.) II.4.2 Development-oriented IPR regimes		

Literature:	Course I Fox, E. (2003) Abuse of dominance and monopolisation: How to protect competition without protecting competitors, EUI-RSCAC Hayek, F.A. (1944), The Road to Serfdom, Routledge: “Why the worst get on top”; “Panning vs. the rule of law”; “Is planning ‘inevitable’?” Lipzynski, J. and J. Wilson (2001), ‘Chapter 1: Industrial organisation: an introduction’, in: *Industrial Organisation: An Analysis of Competitive Markets*, FT Prentice Hall Person Education, pp. 1-13 Lipzynski, J. and J. Wilson (2001), ‘Chapter 11: Competition policy’, in: *Industrial Organisation: An Analysis of Competitive Markets*, FT Prentice Hall Person Education, pp. 347-378 Singh, A. (2002), *Competition and Competition Policy in Emerging Markets: International and Developmental Dimensions*, UNCTAD G-24 Discussion Paper No. 18. (available online: http://www.unctad.org/en/docs/gdsmdpbg2418_en.pdf) Course II Andersen, B. (2003), ‘If ‘intellectual property rights’ is the answer, what is the question? Revisiting the patent controversies’, Econ. Innov. New Techn., 13(5), pp. 417-442 Netanel, N.W. (2009) (ed.), Chapter 1: Introduction, in “The Development Agenda; global intellectual property and developing countries”. New York: Oxford University Press, pp. 1-29. Stiglitz, Joseph E. (2004), Towards a pro-developmental and balanced IPR regime, Columbia University, mimeo. UNCTAD (2002) Competition policy and the exercise of intellectual property rights, TD/B/COM.2/CLP/22/Rev.1.
Types of Teaching:	S1 (SS): Lectures (2 SWS) S1 (SS): Exercises (2 SWS)
Pre-requisites:	**Recommendations:** Knowledge of micro-economics and macro-economics at Bachelor level equivalent to 6 ECTS points each is required to be able to follow teaching and tutorials in the module and successfully complete the module.
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 [60 min] PVL: Case studies presentations and accompaying papers PVL have to be satisfied before the examination.
	Voraussetzung für die Vergabe von Leistungspunkten ist das Bestehen der Modulprüfung. Die Modulprüfung umfasst: KA [60 min] PVL: Fallstudienvorträge und Hausarbeiten 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.

Daten:	CYBRI. MA. / Prüfungs-Nr.: 60914	Stand: 14.01.2022	Start: WiSe 2022
Modulname:	**Cyber-Risikomanagement**		
(englisch):	Cyber Risk Management		
Verantwortlich(e):	Wiens, Marcus / Prof. Dr.		
Dozent(en):	Wiens, Marcus / Prof. Dr.		
Institut(e):	Professur Allgemeine BWL, insbesondere Innovations- und Risikomanagement		
Dauer:	1 Semester		
Qualifikationsziele / Kompetenzen:	Die Studierenden erlernen einen systematischen Zugang zur Analyse von sogenannten Cyberrisiken aus ökonomischer Perspektive. Sie sind in der Lage, verschiedene Ebenen und Kategorien von Cyberrisiken zu unterscheiden und ihre aktuelle empirische Relevanz im industriellen Kontext einzuordnen. Der zweite Teil des Moduls versetzt die Studierenden in die Lage, Cyberrisiken mit ökonomischen Methoden zu modellieren, zu analysieren und ansatzweise zu bewerten. Die Studierenden lernen den Einsatz spieltheoretischer Modelle und sind in der Lage, verhaltensökonomische und psychologische Implikationen von Cyberrisiken aus der Nutzerperspektive zu analysieren und Maßnahmen für das Risikomanagement sowie für Digitalisierungsstrategien abzuleiten.		
Inhalte:	Das Modul vermittelt zu Beginn die wesentlichen ökonomischen Grundlagen zu Cyberrisiken (sowie zu „adversiellen Risiken“ allgemein) und gibt einen Überblick über die aktuelle Relevanz dieser Risiken für verschiedene Industrien auf Basis empirischer Studien. Im zweiten Teil erfolgt die ökonomische und informationstheoretische Modellierung von Cyberrisiken auf Grundlage von Cyber Threat Intelligence, Angriffsbäumen und spieltheoretischen Konzepten wie Defender-Attacker-Games und Interdependent-Security-Games. Der dritte Teil vermittelt die Möglichkeiten und Grenzen einer ökonomischen Bewertung dieser Risiken, stellt Ansätze für effiziente Risikoreduktion (bspw. „bezahlbare Cybersicherheit“) vor und leitet Anforderungen an sichere Digitalisierungsstrategien ab. Der letzte Teil des Moduls betrachtet Cyberrisiken aus einer verhaltensökonomischen und psychologischen Perspektive. Dabei wird die Rolle von Risikowahrnehmung, Risiko-Awareness sowie die Akzeptanz von risikoreduzierenden Maßnahmen durch die Nutzer betrachtet und auf Basis experimenteller Studien analysiert.		
Typische Fachliteratur:	Königs, H.-P. (2017): IT-Risikomanagement mit System: Praxisorientiertes Management von Informationssicherheits-, IT- und Cyber-Risiken; Springer Vieweg. Banks, D. L.; Aliaga, J. M. R. & Insua, D. R. (2015). Adversarial Risk Analysis. Chapman and Hall. Bartholomae, F. & Wiens, M. (2020): Spieltheorie – Ein anwendungsorientiertes Lehrbuch; Springer-Gabler. Pohlmann, N. (2019): Cyber-Sicherheit: Das Lehrbuch für Konzepte, Prinzipien, Mechanismen, Architekturen und Eigenschaften von Cyber-Sicherheitssystemen in der Digitalisierung; Springer Vieweg.		
Lehrformen:	S1 (WS): Vorlesung (2 SWS) S1 (WS): Übung (2 SWS)		
Voraussetzungen für die Teilnahme:	**Empfohlen:** Risikoanalyse und Resilienz von Systemen, 2022-01-14		
Turnus:	jährlich im Wintersemester		
Voraussetzungen für die Vergabe von	Voraussetzung für die Vergabe von Leistungspunkten ist das Bestehen der Modulprüfung. Die Modulprüfung umfasst:		

Leistungspunkten:	KA [90 min]
Leistungspunkte:	6
Note:	Die Note ergibt sich entsprechend der Gewichtung (w) aus folgenden(r) Prüfungsleistung(en): KA [w: 1]
Arbeitsaufwand:	Der Zeitaufwand beträgt 180h und setzt sich zusammen aus 60h Präsenzzeit und 120h Selbststudium. Letzteres umfasst Vor- und Nachbereitung von Vorlesung und Übung sowie Klausurvorbereitung.

Data:	EU. MA. Nr. 2966 / Examination number: 60509	Version: 25.05.2016	Start Year: SoSe 2011
Module Name:	**Decision Support Systems**		
(English):			
Responsible:	Felden, Carsten / Prof. Dr.		
Lecturer(s):	Felden, Carsten / Prof. Dr.		
Institute(s):	Institute of IManagement 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:	Gluchowski, P.; Gabriel, R.; Chamoni, P. (1997): Management Support Systeme Computergestützte Informationssysteme für Führungskräfte und Entscheidungsträger, Berlin et al.: Springer Turban, E.; J.E. Aronson; T.-P. Liang (2004): Decision Support Systems and Intelligent Systems, 7th ed. Upper Saddle River, N.J.: Prentice Hall Luger, G. F. (2004): Artificial Intelligence - Structures and Strategies for Complex Problem Solving, 5th ed. Reading Massachusetts: Addison-Wesley Sprague, Ralph; Watson, Hugh (1996): Decision Support for management, Prentice Hall		
Types of Teaching:	S1 (SS): Lectures (2 SWS) S1 (SS): 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: 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.		

Daten:	DEU A1/ 1.Sem. BA. Nr. 948 / Prüfungs-Nr.: 71101	Stand: 04.08.2017	Start: WiSe 2016
Modulname:	**Deutsch A1/ 1. Semester**		
(englisch):	German A 1/ 1st Semester		
Verantwortlich(e):	Polanski, Katja		
Dozent(en):			
Institut(e):	Internationales Universitätszentrum/ Sprachen		
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		
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 an mindestens 80% des 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.		

Daten:	DEU A1/ 2. Sem. BA. Nr. 949 / Prüfungs-Nr.: 71102	Stand: 04.08.2017	Start: SoSe 2017
Modulname:	**Deutsch A1/ 2. Semester**		
(englisch):	German A1/ 2nd Semester		
Verantwortlich(e):	Polanski, Katja		
Dozent(en):			
Institut(e):	Internationales Universitätszentrum/ Sprachen		
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 an mind. 80% des 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. Der Zeitaufwand beträgt 120 Stunden und setzt sich zusammen aus 60 Stunden Präsenzzeit und 60 Stunden Selbststudium.		

Daten:	DEU A2/1. Sem. BA.Nr. 950 / Prüfungs-Nr.: 71103	Stand: 04.08.2017	Start: WiSe 2016
Modulname:	**Deutsch A2/ 1. Semester**		
(englisch):	German A2/ 1st Semester		
Verantwortlich(e):	Polanski, Katja		
Dozent(en):			
Institut(e):	Internationales Universitätszentrum/ Sprachen		
Dauer:	1 Semester		
Qualifikationsziele / Kompetenzen:	Die Teilnehmer erweitern ihre Kenntnisse zu Grundlagen der deutschen Grammatik sowie ihren allgemeinsprachlichen Wortschatz und führen Gespräche zu verschiedenen Themen des Alltags.		
Inhalte:	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; Reflexivpronomen; Zukunft ausdrücken; Adjektivdeklination		
Typische Fachliteratur:	Begegnungen A2+, Schubert Verlag		
Lehrformen:	S1 (WS): Übung (4 SWS)		
Voraussetzungen für die Teilnahme:	**Obligatorisch:** Deutsch A1/ 2. Semester, 2015-08-26 oder äquivalente Sprachkenntnisse		
Turnus:	jährlich im Wintersemester		
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 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.		

Daten:	DEUA/2.Sem BA.Nr. 951 / Prüfungs-Nr.: 71105	Stand: 26.08.2015	Start: SoSe 2017
Modulname:	**Deutsch A2/ 2. Semester**		
(englisch):	German A2/ 2nd Semester		
Verantwortlich(e):	Polanski, Katja		
Dozent(en):			
Institut(e):	Internationales Universitätszentrum/ Sprachen		
Dauer:	1 Semester		
Qualifikationsziele / Kompetenzen:	Die Teilnehmer erweitern ihre Kenntnisse zu Grundlagen der deutschen Grammatik sowie ihren allgemeinsprachlichen Wortschatz und führen Gespräche zu verschiedenen Themen des Alltags.		
Inhalte:	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,		
Typische Fachliteratur:	Begegnungen A2+, Schubert Verlag		
Lehrformen:	S1 (SS): Übung (4 SWS)		
Voraussetzungen für die Teilnahme:	**Obligatorisch:** Deutsch A2/ 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 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.		

Daten:	DEUB1/1.Sem. Nr. 952 / Prüfungs-Nr.: 71104	Stand: 04.08.2017	Start: WiSe 2016
Modulname:	**Deutsch B1/ 1.Semester**		
(englisch):	German B1/ 1st Semester		
Verantwortlich(e):	Polanski, Katja		
Dozent(en):			
Institut(e):	Internationales Universitätszentrum/ Sprachen		
Dauer:	1 Semester		
Qualifikationsziele / Kompetenzen:	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.		
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 (WS): Übung (4 SWS)		
Voraussetzungen für die Teilnahme:	**Obligatorisch:** Deutsch A2/ 2. Semester, 2015-08-26 oder äquivalente Sprachkenntnisse		
Turnus:	jährlich im Wintersemester		
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 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.		

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):	Polanski, Katja		
Dozent(en):			
Institut(e):	Internationales Universitätszentrum/ Sprachen		
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: 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.		

Daten:	B2.1 BA. Nr. 3636 / Prüfungs-Nr.: 70311	Stand: 05.05.2022	Start: WiSe 2016
Modulname:	**Deutsch B2/ 1. Semester**		
(englisch):	German B2/ 1st Semester		
Verantwortlich(e):	Polanski, Katja		
Dozent(en):			
Institut(e):	Internationales Universitätszentrum/ Sprachen		
Dauer:	1 Semester		
Qualifikationsziele / Kompetenzen:	Die Teilnehmer bauen ihre sprachlichen Kenntnisse und Fertigkeiten auf dem Niveau B2.1 aus. Mithilfe handlungsorientierter Aufgaben und Aktivitäten entwickeln die Teilnehmer ihre Kenntnisse zu Lernstrategien, Grammatik, Wortschatz, Landeskunde und interkulturellen Aspekten weiter. Die Teilnehmer verstehen den Hauptinhalt komplexer, authentischer Texte. Sie können längeren Redebeiträgen folgen und sich spontan und fließend verständigen. Sie können sich zu einem breiten Themenbereich klar und detailliert ausdrücken, ihren Standpunkt erläutern und die Vor- und Nachteile verschiedener Möglichkeiten angeben.		
Inhalte:	globales, selektives, detailliertes Hör- und Leseverstehen; Halten eines strukturierten Kurzvortrags, Textproduktion, z.B. Grafikbeschreibung, Erörterung, mündliche und schriftliche Stellungnahme; sprachliche Strukturen und Wortschatz gemäß Lehrmaterial (u.a. Satzbau, verschiedene Satzkombinationen, Passivformen, Nominalisierung, Wortbildung)		
Typische Fachliteratur:	Kompass DaF B2.1 (Klett Verlag)		
Lehrformen:	S1 (WS): Übung (4 SWS)		
Voraussetzungen für die Teilnahme:	**Obligatorisch:** Deutsch B1/ 2.Semester oder äquivalente Sprachkenntnisse		
Turnus:	jährlich im Wintersemester		
Voraussetzungen für die Vergabe von Leistungspunkten:	Voraussetzung für die Vergabe von Leistungspunkten ist das Bestehen der Modulprüfung. Die Modulprüfung umfasst: AP: Portfolioprüfung bestehend aus 4 Teilen zum Nachweis aller Sprachfertigkeiten (Hörverstehen, Leseverstehen, Sprechen, Schreiben) AP: Aufgaben und aktive Teilnahme an mind. 80% d. Unterrichts		
Leistungspunkte:	4		
Note:	Die Note ergibt sich entsprechend der Gewichtung (w) aus folgenden(r) Prüfungsleistung(en): AP: Portfolioprüfung bestehend aus 4 Teilen zum Nachweis aller Sprachfertigkeiten (Hörverstehen, Leseverstehen, Sprechen, Schreiben) [w: 1]		
Arbeitsaufwand:	Der Zeitaufwand beträgt 120h und setzt sich zusammen aus 60h Präsenzzeit und 60h Selbststudium. Letzteres umfasst die Vor- und Nachbereitung von Lehrveranstaltungen sowie die Vorbereitung der Aufgaben und der Prüfungsleistung.		

Daten:	B2.2 BA. Nr. / Prüfungs-Nr.: 70312	Stand: 05.05.2022	Start: SoSe 2017
Modulname:	**Deutsch B2/ 2. Semester**		
(englisch):	German B2/ 2nd Semester		
Verantwortlich(e):	Polanski, Katja		
Dozent(en):			
Institut(e):	Internationales Universitätszentrum/ Sprachen		
Dauer:	1 Semester		
Qualifikationsziele / Kompetenzen:	Die Teilnehmer bauen ihre sprachlichen Kenntnisse und Fertigkeiten auf dem Niveau B2.2 aus. Mithilfe handlungsorientierter Aufgaben und Aktivitäten entwickeln die Teilnehmer ihre Kenntnisse zu Lernstrategien, Grammatik, Wortschatz, Landeskunde und interkulturellen Aspekten weiter. Die Teilnehmer verstehen den Hauptinhalt komplexer, authentischer Texte. Sie können längeren Redebeiträgen folgen und sich spontan und fließend verständigen. Sie können sich zu einem breiten Themenbereich klar und detailliert ausdrücken, ihren Standpunkt erläutern und die Vor- und Nachteile verschiedener Möglichkeiten angeben.		
Inhalte:	Schriftliches und mündliches Zusammenfassen von Texten; informelle/ formelle E-Mails schreiben; Grafikinterpretation; in einer Diskussion Tatsachen, Meinungen und Argumentation erkennen, auf Redebeiträge eingehen und eigene Redebeiträge halten; Grammatik und Wortschatz gemäß Lehrmaterial (u.a. Textzusammenhang; Partizipien als Adjektiv, indirekte Rede, Konjunktiv I & II, Modalsätze; Passiversatz; Wortbildung; Nomen-Verb-Verbindungen)		
Typische Fachliteratur:	Kompass DaF B2.2 (Klett Verlag)		
Lehrformen:	S1 (SS): Übung (4 SWS)		
Voraussetzungen für die Teilnahme:	**Obligatorisch:** Deutsch B2/ 1. Semester, 2016-04-04 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: AP: Portfolioprüfung bestehend aus 4 Teilen zum Nachweis aller Sprachfertigkeiten (Hörverstehen, Leseverstehen, Sprechen, Schreiben) AP: Aufgaben und aktive Teilnahme an mind. 80% d. Unterrichts		
Leistungspunkte:	4		
Note:	Die Note ergibt sich entsprechend der Gewichtung (w) aus folgenden(r) Prüfungsleistung(en): AP: Portfolioprüfung bestehend aus 4 Teilen zum Nachweis aller Sprachfertigkeiten (Hörverstehen, Leseverstehen, Sprechen, Schreiben) [w: 1]		
Arbeitsaufwand:	Der Zeitaufwand beträgt 120h und setzt sich zusammen aus 60h Präsenzzeit und 60h Selbststudium. Letzteres umfasst die Vor- und Nachbereitung von Lehrveranstaltungen sowie die Vorbereitung der Aufgaben und der Prüfungsleistung.		

Data:	ECOSYS. MA. Nr. 2918 / Examination number: 20205	Version: 10.08.2009	Start Year: WiSe 2009
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) Aber & Melillo: Terrestrial Ecosystems (Academic Press)		
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.		

Daten:	EMPMAKROOE. MA. / Prüfungs-Nr.: 61420	Stand: 17.01.2022	Start: WiSe 2022
Modulname:	**Empirische Makroökonomik**		
(englisch):	Empirical Macroeconomics		
Verantwortlich(e):	Czudaj, Robert / Prof. Dr.		
Dozent(en):	Czudaj, Robert / Prof. Dr.		
Institut(e):	Professur für Allgemeine Volkswirtschaftslehre		
Dauer:	1 Semester		
Qualifikationsziele / Kompetenzen:	Die Studierenden erhalten einen Einblick in die Anwendung wichtiger ökonometrischer Methoden zur Untersuchung makroökonomischer Fragestellungen (unterstützt durch die Statistik-Software R), so dass sie die Validität Ihnen präsentierter ökonometrischer Studien einschätzen und eigene empirische Analysen durchführen können.		
Inhalte:	Eigenschaften makroökonomischer Zeitreihen, Prognose, VAR-Modelle; Impulse Response-Analyse; Strukturelle VAR-Modelle; Kointegration.		
Typische Fachliteratur:	Enders, W.: Applied Time Series Econometrics, 4. Aufl. Wiley, 2014; Lütkepohl, H.: New Introduction to Multiple Time Series Analysis. Springer, 2005		
Lehrformen:	S1 (WS): Vorlesung (2 SWS) S1 (WS): Übung (2 SWS)		
Voraussetzungen für die Teilnahme:	**Empfohlen:** Einführung in die Ökonometrie, 2021-12-13 Makroökonomik, 2021-12-13		
Turnus:	jährlich im Wintersemester		
Voraussetzungen für die Vergabe von Leistungspunkten:	Voraussetzung für die Vergabe von Leistungspunkten ist das Bestehen der Modulprüfung. Die Modulprüfung umfasst: KA [90 min]		
Leistungspunkte:	6		
Note:	Die Note ergibt sich entsprechend der Gewichtung (w) aus folgenden(r) Prüfungsleistung(en): KA [w: 1]		
Arbeitsaufwand:	Der Zeitaufwand beträgt 180h und setzt sich zusammen aus 60h Präsenzzeit und 120h Selbststudium. Letzteres umfasst die Vor- und Nachbereitung der Lehrveranstaltung und die Klausurvorbereitung.		

Data:	ENVMGTPOL. MA. Nr. 2909 / Examination number: 62403	Version: 31.05.2018	Start Year: WiSe 2018
Module Name:	**Environmental Management and Policies**		
(English):			
Responsible:	Glöser-Chahoud, Simon / Prof.		
Lecturer(s):	Glöser-Chahoud, Simon / Prof.		
Institute(s):	Corporate Sustainability and Environmental Management		
Duration:	1 Semester(s)		
Competencies:	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.		
Contents:	The course covers among others: • Environmental impacts of industrial and business activities, • Societal, economic and legal frameworks of environmental protection, • Environmental Management Systems, and • Methods and tools of Cleaner Production.		
Literature:	• Calow (1999): Blackwells Concise Encyclopedia of Environmental Management, John Wiley & Sons • Dobson (2016): Environmental Politics, Oxford University Press • Russo (2008): Environmental Management: Readings and Cases, Sage Pubn • Schaltegger, Burritt, Petersen (2003): An Introduction to Corporate Environmental Management, Greenleaf Publishing • Tinsley, Pillai (2016): Environmental Management Systems: Understanding Organizational Drivers and Barriers, Routledge		
Types of Teaching:	S1 (WS): Lecture Environmental Management and Policies / Lectures (2 SWS) S1 (WS): Tutorial Environmental Management and Policies / 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: 4]		
Workload:	The workload is 180h. It is the result of 60h attendance and 120h self-studies.		

Data:	RCPSO.MA / Examination number: 31731	Version: 11.06.2021	Start Year: SoSe 2021
Module Name:	**European Summer School on Responsible Consumption and Production (UniQuESt)**		
(English):			
Responsible:	Drebenstedt, Carsten / Prof. Dr.		
Lecturer(s):	Drebenstedt, Carsten / Prof. Dr.		
Institute(s):	Institute of Mining and Special Civil Engineering		
Duration:	2 Month(s)		
Competencies:	After completion of the course students have acquired a deep level of expertise in the respective academic field(s) of “Responsible Consumption and Production”. Furthermore, through interactive concepts students will have attained a set of transferable skills with reference to key competencies for sustainability such as critical thinking and integrated problem-solving.		
Contents:	Basic concepts of the EURECA-PRO universities and their philosophy, the history, concepts and cultural values of Europethe Sustainable Development Goals and Circular Material Flows as well as Innovation & Social Entrepreneurship with lectures of the EURECA-PRO Universities (Montanuniversität Leoben, Universidad de Léon, Polytechneio Kritis, Universitatea din Petrosani, Politechnika Slaska, Hochschule Mittweida), from Industry and stakeholders		
Literature:	UN Sustainable Development Goals (https://en.unesco.org/sustainabledevelopmentgoals), further literature will be recommended in Summer School		
Types of Teaching:	S1 (SS): Online language lessons before the start of the presence week, Lectures at presence week / Lectures (4 d) S1 (SS): Project Work in international Groups, presentation and report / project (5 d) S1 (SS): Companies and research institutes / Excursion (1 d)		
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: MP: Two presentations (individual and group) AP: Report on the results of the assignment No grades, only successful completion or submission of the report.		
	Voraussetzung für die Vergabe von Leistungspunkten ist das Bestehen der Modulprüfung. Die Modulprüfung umfasst: MP: Zwei Präsentationen (Einzeln und als Gruppen) AP: Bericht über die gestellte Aufgabe Das Modul wird nicht benotet.		
Credit Points:	3		
Grade:	The examination results are not rated. The credits are given when the exams are passed successfully.		
Workload:	The workload is 90h. It is the result of 80h attendance and 10h self-studies.		

Data:	Examination number: 60811	Version: 23.01.2020	Start Year: SoSe 2020
Module Name:	**Financial Management in Emerging and Developing Countries**		
(English):			
Responsible:	Horsch, Andreas / Prof. Dr. Kunerts, Sophie		
Lecturer(s):			
Institute(s):	Professor of Investment and Finance		
Duration:	1 Semester(s)		
Competencies:	Students learn to detect and evaluate differences (and common features) of corporate finance in developing and emerging countries on the one hand and industrialized countries on the other hand and to understand how selected corporate finance options help to overcome the particular challenges of the former markets.		
Contents:	1. Peculiarities of financial markets in developing and emerging countries 2. Basics of Financial Risk Management 3. Financial Intermediation 4. Microfinance 5. Project Finance 6. Case Studies of Banking and Finance in Selected Emerging Markets		
Literature:	Ashta (2011): Advanced Technologies for Microfinance. Advances in Finance, Accounting, and Economics, 1st ed., Heshey; Besley / Brigham (2015): Principles of finance, 6th ed., Mason; Brealey / Myers / Allen (2019): ISE Principles of Corporate Finance, 13th ed., McGraw-Hill Education Ltd; Damodaran (2014): Applied corporate finance, 4th ed., Hoboken; Gatti: (2018): Project Finance in Theory and Practice: Designing, Structuring, and Financing Private and Public Projects, 3rd ed., Academic Press; Hillier / Grinblatt / Titman (2011): Financial markets and corporate strategy, 2nd ed., McGraw-Hill Education Ltd; Ledgerwood / Earne / Nelson (2013): The new microfinance handbook: A financial market system perspective, 2nd ed., The World Bank; Cornett / Saunders (2017): Financial institutions management: A risk management approach, 9th ed., McGraw-Hill/Irwin; Kawai / Prasad (2008): Financial market regulation and reforms in emerging markets, 1st ed., . Bookings institution press		
Types of Teaching:	S1 (SS): Lectures / Lectures (2 SWS) S1 (SS): Tutorials / 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: 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.		

Data:	FCRY. MA. Nr. 3611 / Examination number: 23002	Version: 02.02.2018	Start Year: WiSe 2018
Module Name:	**Fundamentals of Crystallography**		
(English):			
Responsible:	Gumeniuk, Roman / Prof.		
Lecturer(s):	Gumeniuk, Roman / Prof.		
Institute(s):	Institute of Experimental Physics		
Duration:	1 Semester(s)		
Competencies:	Students should be able to describe crystal structure, to perform structural analysis and to understand relationships between crystal structure and some physical properties.		
Contents:	Crystal lattice, symmetry elements, pointgroups, infinite symmetry elements, space group, International tables of crystallography Reciprocal lattice, Structural factors, reflection conditions, Single crystal- and powder X-ray diffraction methods. Crystal growth, Tensor properties and transformation, pyro-, piezo-electricity, permittivity, elastic properties etc.		
Literature:	W. Borchardt-Ott: Crystallography: An Introduction, Springer V.K. Pecharsky, P.Y. Zavalij: Fundamentals of Powder Diffraction and structural Characterization of Materials, Springer M. de Graef, M.E. McHenry: Structure of Materials: An Introduction to Crystallography, Diffraction and Symmetry, Cambridge University Press R.E. Newnham: Properties of Materials: Anisotropy, Symmetry, Structure; Oxford University Press		
Types of Teaching:	S1 (WS): Lectures (2 SWS) S1 (WS): Exercises (1 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 [120 min]		
	Voraussetzung für die Vergabe von Leistungspunkten ist das Bestehen der Modulprüfung. Die Modulprüfung umfasst: KA [120 min]		
Credit Points:	4		
Grade:	The Grade is generated from the examination result(s) with the following weights (w): KA [w: 1]		
Workload:	The workload is 120h. It is the result of 45h attendance and 75h self-studies.		

Data:	Geomod. MA. Nr. 638 / Examination number: 30114	Version: 05.12.2018	Start Year: WiSe 2019
Module Name:	**Geomodelling – Geostatistics for Natural Resource Modelling**		
(English):			
Responsible:	Benndorf, Jörg / Prof. Dr.-Ing.		
Lecturer(s):			
Institute(s):	Institute for Mine Surveying and Geodesy		
Duration:	1 Semester(s)		
Competencies:	After successful completion of the course, students are able to: - explain the theoretical foundation of spatial data analysis, geostatistical model building and estimation, - apply geostatistical methods in the context of estimating natural re-sources/reserves, - critically evaluate model assumptions of different estimation and simuation method and choose suitable methods for specific applications, - discuss the critical character of the SMU-size to recoverable reserves, - conduct a resource/reserve estimation in a simple case study.		
Contents:	Importance of Resource Modelling and Estimation in the Value Chain of Mining, Uni-variate and Multi-variate Explorative Data Analysis, Analysis of Spatial Continuity, the Spatial Random Function Model, Model Assumptions of Stationarity and Ergodicity, Inference of a Spatial Random Function using unbiased Estimators, Dealing with Preferential Sampling, Variography and Variogram Modeling, Simple Methods for Spatial Estimation including the Polygon Method, Triangulation, Inverse Distance Power and Polynomial Regression, Geostatistical Methods for Spatial Estimation including Simple Kriging, Ordinary Kriging and Universal Kriging, Integrating Secondary Information into Spatial Modeling using Techniques of Co-Kriging, other methods including Indicator Kriging and Block Kriging, Introduction in Modeling spatial Uncertainty using Conditional Simulation, the Method of Sequential Gaussian Simulation, Geostatistical Considerations in Estimating Reserves in Terms of Volume-Variance Relationship for defining Smallest Minable Units and Grade Tonnage Curves, Applications in Mining Cases, Introduction to CRIRSCO-based International Reporting standards (example JORC Code).		
Literature:	M. Armstrong: “Basic Linear Geostatistics”, Springer Verlag; H. Akin, H. Siemes: „Praktische Geostatistik“, Springer Verlag; A. G. Journel, and C.J. Huijbregts, 1978, Mining Geostatistics, Academic Press; P. Goovaerts: “Geostatistics for Natural Resource Evaluation“, Oxford University Press; T. Schafmeister: “Geostatistik für die hydrogeologische Praxis“, Springer Verlag		
Types of Teaching:	S1 (WS): Geomodelling – Geostatistics for natural resource modelling - Lecture / Lectures (2 SWS) S1 (WS): Geomodelling – Geostatistics for natural resource modelling - Practical work in the computer lab / Practical Application (2 SWS)		
Pre-requisites:	**Recommendations:** Angewandte Statistik, 2021-11-22 Infinitesimalrechnung, An introductory course in statistics.		
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*: Set of assignments * 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*: Hausarbeiten * Bei Modulen mit mehreren Prüfungsleistungen muss diese Prüfungsleistung bestanden bzw. mit mindestens "ausreichend" (4,0) bewertet sein.
Credit Points:	5
Grade:	The Grade is generated from the examination result(s) with the following weights (w): KA* [w: 2] AP*: Set of assignments [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 150h. It consists of 60h presence time (lectures and practical), and 90 hours independent work including group work, practical, self-study and preparation for examination.

Data:	GWCGWMB. MA. Nr. 3628 / Examination number: 31722	Version: 04.07.2018	Start Year: WiSe 2018
Module Name:	**Ground Water Chemistry for GW-Management - Basics**		
(English):			
Responsible:	Drebenstedt, Carsten / Prof. Dr. Hoth, Nils / Dr.		
Lecturer(s):	Hoth, Nils / Dr.		
Institute(s):	Institute of Mining and Special Civil Engineering		
Duration:	1 Semester(s)		
Competencies:	The student is widening his chemical know how in the field of hydrochemical aspects in particular with respect to groundwater. He will be able to understand and solve basic as well as more complex water quality problems. He gains an understanding of basic practical lab work for analysis.		
Contents:	- water as universal solvent - drinking water standards / disease aspects - basics of thermodynamics in relation to Ground waters (ionic strength, activity versus concentration, saturation index) - species interactions, solubility of gases in water - redox reactions - stability diagrams - solution/ precipitation of mineral phases – equilibria to the fluid phase - hydrochemical milieu measurements (background) - Acidity, alkalinity - Kb,Ks values - and titration in general - Carbonic acid - Carbonate phases interaction - Ground Water Sampling (hydraulic and chemical criteria) - Field handling of Water Samples (Filtration, Conservation)		
Literature:	APPELO & POSTMA (1996) or (2005): Geochemistry, groundwater and pollution, Balkema.		
Types of Teaching:	S1 (WS): Basics of GW chemistry / Lectures (2 SWS) S1 (WS): practical lab courses - Basic hydrochemical lab work, basics of titration, photometry etc. / Practical Application (2 SWS)		
Pre-requisites:	**Recommendations:** Basic knowledge of chemistry and hydrogeology		
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*: written exam to GW-chemistry [90 min] AP*: reports of lab practical work * 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*: Klausur Grundwasserchemie - Grundlagen [90 min] AP*: Protokolle zu den Laborpraktika Grundwasserchemie-Grundlagen * 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*: written exam to GW-chemistry [w: 2]		

	AP*: reports of lab practical work [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. (120 h are spent on preparation, writing the lab course reports and self study)

Data:	HISTENV. MA. Nr. 3424 / Examination number: 60134	Version: 01.07.2015	Start Year: SoSe 2016
Module Name:	**History of the Environment**		
(English):			
Responsible:	Albrecht, Helmuth / 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 Donald Worster: Dust bowl. The Southern plains in the 1930s. Oxford 1979. Donald Worster: The wealth of nature. Environmental history and the ecological imagination. Oxford 1993.		
Types of Teaching:	S1 (SS): History of environment / Seminar (2 SWS)		
Pre-requisites:	**Recommendations:** 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.		

Data:	HRMOB. MA. Nr. 3203 / Examination number: 61008	Version: 14.02.2017	Start Year: SoSe 2011
Module Name:	**Human Resource Management and Organizational Behavior**		
(English):			
Responsible:	Stumpf-Wollersheim, Jutta / Prof. Dr. rer. pol.		
Lecturer(s):	Stumpf-Wollersheim, Jutta / Prof. Dr. rer. pol.		
Institute(s):	International Management and Stategy		
Duration:	1 Semester(s)		
Competencies:	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.		
Contents:	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., learning in teams) 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		
Literature:	Mathis, R.L.; Jackson, J.H.: „Human Resource Management“, South Western College Publishing: Cincinnati 2006 Judge, T.A.; Robbins, S.P.: „Organizational Behavior“, Pearson Prentice Hall: Upper Saddle River, N.J. 2016		
Types of Teaching:	S1 (SS): Lectures (2 SWS)		
Pre-requisites:	**Recommendations:** 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: Final test [90 min]		
	Voraussetzung für die Vergabe von Leistungspunkten ist das Bestehen der Modulprüfung. Die Modulprüfung umfasst: KA: Abschlussklausur [90 min]		
Credit Points:	3		
Grade:	The Grade is generated from the examination result(s) with the following weights (w): KA: Final test [w: 1]		
Workload:	The workload is 90h. It is the result of 30h attendance and 60h self-studies.		

Data:	HYGWMB. MA. Nr. 3629 / Examination number: 31723	Version: 04.07.2018	Start Year: WiSe 2018
Module Name:	**Hydrogeology for GW-Management - Basics**		
(English):			
Responsible:	Drebenstedt, Carsten / Prof. Dr. Hoth, Nils / Dr.		
Lecturer(s):	Hoth, Nils / Dr.		
Institute(s):	Institute of Mining and Special Civil Engineering		
Duration:	1 Semester(s)		
Competencies:	The student will gain general knowledge to characterise and investigate hydrogeological systems. So he will be able to solve relevant hydrogeological tasks. He will be able to select appropriate techniques for investigation and data evaluation. Furthermore he will gain knowledge around groundwater protection measures.		
Contents:	Lecture: - general understanding of subsurface flow-processes (water-saturated GW-zone and water-unsaturated “soil-zone”). - porous media behaviour of loose rock aquifers (differences of kf-value versus permeability) - fissure/ fracture driven preferential flow in hard rock bodies - methods to estimate relevant flow parameters (challenges around) - pumping test (design, performance) and evaluation - saline water intrusion (fresh-saltwater interface at coastal sites). - Ground water flow to wells and drilling of wells (well development, rehabilitation) - basic understanding of acid mine drainage generation - Well head protection zones – general GW protection - European water frame work Practical exercises: Estimation of relevant aquifer parameters (kf-values) Characterisation of water samples Sampling (low flow sampling), filtration, impact of construction materials on monitoring wells, Classification of loose rock materials hXRF-measurements as basis for qualitative characteristics of loose rock and dump/ tailings materials		
Literature:	Fetter (1993): Applied Hydrogeology. Domenico & Schwartz (1998): Physical and Chemical Hydrogeology. USGS (2004) Water Supply Paper. Sterret (2007): Groundwater and Wells. DWGW-Richtlinie W101		
Types of Teaching:	S1 (WS): Lectures (2 SWS) S1 (WS): hydrogeology - practica and exercises / Practical Application (2 SWS)		
Pre-requisites:	**Recommendations:** Basic knowledge in Geology, Applied Geosciences		
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*: Practica and exercises		

	* 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*: Praktikum und Übungen * 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: 2] AP*: Practica and exercises [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. (120 h are spent on preparation for the classes, preparing the reports and self study)

Data:	OMIS. MA. Nr. 2903 / Examination number: 60517	Version: 06.07.2016	Start Year: WiSe 2016
Module Name:	**Information Management**		
(English):			
Responsible:	Felden, Carsten / Prof. Dr.		
Lecturer(s):	Felden, Carsten / Prof. Dr.		
Institute(s):	Institute of IManagement 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:	Beynon-Davies, P.: Business Information System, Palgrave Macmilian edition 2, London, 2013 Bocij, P.; Business Information System, Global Edition, Pearson Education LTD, Harlow, 2014 Laudon, K.; Laudon, J.: Management Information Systems, edition 14, Pearson Education, Prentice Hall, 2015.		
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.		

Data:	INAM. MA. / Examination number: 60913	Version: 14.01.2022	Start Year: SoSe 2022
Module Name:	**Innovation Analysis and Management**		
(English):			
Responsible:	Wiens, Marcus / Prof. Dr.		
Lecturer(s):	Wiens, Marcus / Prof. Dr.		
Institute(s):	Professor of Innovation and Risk Management		
Duration:	1 Semester(s)		
Competencies:	After successful completion of the module, students should be able to explain the drivers and dynamics of innovation and to determine the value of innovation-driven investments. Students should be able to model innovation processes based on extreme value theory and learning theories. Furthermore, they shold be able to apply behavioral and game-theoretic approaches explaining incentives for cooperative research & development, innovation networks, patent-races and contracting.		
Contents:	The module starts with a systematic overview of invention and innovation, providing basic economic knowledge about the sources, drivers and barriers for innovation. Selected practical examples and case studies shed light on particularly innovative industries. The module covers behavioral and strategic implications of innovation-oriented investments and analyses in depth issues like learning strategies, strategic cooperation and innovation networks and tournaments. Finally, the module derives conclusions for efficient innovation policies, from both a business and public perspective.		
Literature:	Uzunidis, D. et al. (ed.) (2021): Innovation Economics, Engineering and Management Handbook 2, Wiley & Sons. Hall, B. H. & Rosenberg, N. (2010): Handbook of the Economics of Innovation, Elsevier. Goyal, S. (2007): Connections – An Introduction to the Economics of Networks, Princeton University Press.		
Types of Teaching:	S1 (SS): Lectures (2 SWS) S1 (SS): 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: 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.		

Data:	INTMAN. MA. Nr. 2072 / Examination number: 62007	Version: 09.03.2023	Start Year: SoSe 2016
Module Name:	**International Business and Management**		
(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:	The intention of this module is that students are enabled to analyse the particularities of management of firms where several international markets are involved. The module prepares to-be-managers or high-level public administration employees for the particular challenges and problems involved with the internationalisation of firms, the governance of foreign direct investment (inward and outward), and the management of multi-national corporations. After completion of the module, students can analyse and assess the value of inward and outward foreign direct investment of firms for the host and home countries. The first part of this course focuses on the ability to explain 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 enables students to analyse 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 enables students to understand and apply strategies of management of knowledge and R&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&D management on subsidiary development and on technology transfer externalities (spillovers). The final part enables students to assess national and regional policies to attract or demotivate internationalisation of firms and industries.		
Contents:	**Part 1: Economic theories of internationalisation and TNC** • The Transnational Corporation is a particular kind of firm ◦ Developing the reasons of existence of TNCs ◦ Defining a TNC ◦ An empirical representation of TNCs in the world ◦ TNCs in emerging markets ◦ Internationalisation of SMEs ◦ Micro-Multinationals and “How start-ups go global” • Hymer’s theory of the multinational firm: market imperfections • Product life cycle: a maturing theory • Internalisation theory: transaction costs and market failure • Dunning’s eclectic OLI-paradigm • The Scandinavian School: stages in the internationalisation process • Cantwell’s theory of technological accumulation • Kogut and Zander’s theory of MNCs as social communities • Verbeke’s evolutionary theory of the MNE **Part 2: Internationalisation strategies** • Network theory and “International Entrepreneurship”		

	• MNCs as an cross-country organisation: management and corporate control issues • GVC governance: the orchestration of fragmented and internationally dispersed operations (WIR 2013, pp. 140-144) • Aspect one: international strategic management • Aspect two: Elements of a suitable strategy for firm-internationalisation • Management of knowledge and technology in TNCs **Part 3: The role of FDI for economic development** • Two cases from empirical research in International Business ◦ Knowledge and technology spillovers and the role of national innovation systems ◦ The relationship between foreign trade, licensing and franchising, and foreign direct investment **Part 4: Policy-implications** • Foreign Direct Investment policies ◦ Motivating FDI policy ◦ Pitfalls and dangers of FDI policies ◦ Overview of policy-strategies and instruments ◦ Main questions to be asked/answered ◦ Some conclusions
Literature:	Blomström, M. and A. Kokko (1998), MNCs and spillovers, Journal of economic surveys, Vol. 12, No. 3, pp. 247-277. Cavusgil, S.T., G. Knight, and J.R. Riesenberger (2008) International Business, Pearson International, New Jersey. Cavusgil, S.T. et al. (2012) Doing Business in Emerging Markets, Sage Publishing Dunning, J. and S.M. Lundan (2008), Multinational Enterprises and the Global Economy, 2nd edition. Cheltenham: Edward Elgar. Ietto-Gillies, G. (2005), Transnational Corporations and International Production – Concepts, Theories, Effects. Cheltenham: Edward Elgar. Jindra, B. (2006), The theoretical framework: FDI and Technology Transfer, in J. Stephan (ed) Technology Transfer via Foreign Direct Investment in Central and Eastern Europe – Theory, Method of Research and Empirical Evidence, Houndsmill, Basingstoke (UK): Palgrave Macmillan, Chapter 2 (pp. 6-29). Moran, T.H. et al. (eds) (2005), Does Foreign Direct Investment Promote Development? Institute for International Ecomnomics, Center for Global Development, Washington, DC Pitelis, C. (ed.) (2000), The nature of the transnational firm, 2nd edition. London: Routledge. Peng, M. and K. Meyer (2011), International Business, Centage Learning: London. World Investment Report (2005), Transnational Corporations and the Internationalization of R&D: Chapter VI: Development implications, pp. 179-200.
Types of Teaching:	S1 (SS): Lectures (2 SWS) S1 (SS): Exercises (2 SWS)
Pre-requisites:	**Recommendations:** Knowledge of micro-economics and macro-economics at Bachelor level equivalent to 6 ECTS points each is required to be able to follow

	teaching and tutorials in the module and successfully complete the module.
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: Presentations and paper submissions 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: Präsentationen und Hausarbeiten 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.

Data:	IDEVRES. MA. Nr. 3417 / Examination number: 62005	Version: 09.03.2023	Start Year: WiSe 2013
Module Name:	**International Development and Resources**		
(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 are enabled 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: consideration of the implications of weak markets and statehood; of national and international development strategies; and such coordinated by multilateral organisations and international NGOs. Students become aware that 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 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 role of foreign direct investments, and incentive systems for outward investment.		
Contents:	**Course I The process of economic development and emerging markets** I.1 Foreign exchange and economic development I.2 Characteristics of developed, emerging, and developing countries I.3 Theories of Economic Development: Overview I.4 Development Policies: Approaches, Failures, and New Consensus? **Course II The role of natural resources for economic development** II.1 Natural resources and environment as production factor II.2 The concept of the resource curse in general II.3 Concepts for a benign role of resources for development (“Successful resource-based development”) II.4 Natural resources global markets and national focus		
Literature:	**Reading for Course I** Clark, D.A. (ed.) The Elgar Companion to Development Studies (Elgar)Todaro, M. P. and S. C. Smith (12th edition) Economic Development (The Pearson Series In Economics) Desai, V. and R.B. Potter (eds) The Companion to Development Studies (Routledge) Journal articles from e.g. “World Development”; “World Bank Economic Review”; “Journal of Development Economics”; “The Review of International Organizations” World Bank Development Reports (annual) **Reading for Course II** Brautigam, D. (2009) The Dragon’s Gift - China in Africa: The Real Story (Oxford University Press) Conrad, J. M. and D. Rondeau (eds) (2020) Natural Resource Economics: Analysis, Theory, and Applications (Cambridge University Press) Andersen, A. D. and B. Johnson (2014) Monocausalism versus Systems Approach to Development ' The Possibility of Natural Resource-based		

	Development. Institutions and Economies, Vol. 6, No. 2, pp. 27-54 Gylfason, T. (2001) Natural resources, education, and economic development. European Economic Review, Vol. 45, Issue 4-6, pp. 847-859 Sachs, J. D. and A. M. Warner (1997) Natural Resource Abundance and Economic Growth. NBER Working Papers Series van den Ploeg (2011) Natural Resources: Curse or Blessing? Journal of Economic Literature 49/2, pp. 366-420
Types of Teaching:	S1 (WS): Lectures (2 SWS) S1 (WS): Exercises (2 SWS)
Pre-requisites:	**Recommendations:** Knowledge of micro-economics and macro-economics at Bachelor level equivalent to 6 ECTS points each is required to be able to follow teaching and tutorials in the module and successfully complete the module.
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: Presentations and accompanying papers 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: Präsentationen und Hausarbeiten 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.

Daten:	INTWBEZ. MA. / Prüfungs-Nr.: 61422	Stand: 17.01.2022	Start: WiSe 2022
Modulname:	**Internationale Wirtschaftsbeziehungen**		
(englisch):	International Economics		
Verantwortlich(e):	Czudaj, Robert / Prof. Dr.		
Dozent(en):	Czudaj, Robert / Prof. Dr.		
Institut(e):	Professur für Allgemeine Volkswirtschaftslehre		
Dauer:	1 Semester		
Qualifikationsziele / Kompetenzen:	Die Studierenden erhalten Einblick in die grundlegenden Theorien und Modelle der internationalen Wirtschaftsbeziehungen und erlernen diese Modelle für wirtschaftspolitische Anwendungen in offenen Volkswirtschaften einzusetzen.		
Inhalte:	Reale Außenwirtschaftstheorie zur Erklärung der Determinanten sowie der Vor- und Nachteile von Handelsbeziehungen, Instrumente der Außenhandelspolitik, Politische Ökonomie der Handelspolitik; Monetäre Außenwirtschaftstheorie.		
Typische Fachliteratur:	Krugman, P.; Obstfeld, M.; Melitz, M.: Internationale Wirtschaft: Theorie und Politik der Außenwirtschaft, 11. Aufl. Pearson, 2019		
Lehrformen:	S1 (WS): Vorlesung (2 SWS) S1 (WS): Übung (2 SWS)		
Voraussetzungen für die Teilnahme:			
Turnus:	jährlich im Wintersemester		
Voraussetzungen für die Vergabe von Leistungspunkten:	Voraussetzung für die Vergabe von Leistungspunkten ist das Bestehen der Modulprüfung. Die Modulprüfung umfasst: KA [90 min]		
Leistungspunkte:	6		
Note:	Die Note ergibt sich entsprechend der Gewichtung (w) aus folgenden(r) Prüfungsleistung(en): KA [w: 1]		
Arbeitsaufwand:	Der Zeitaufwand beträgt 180h und setzt sich zusammen aus 60h Präsenzzeit und 120h Selbststudium. Letzteres umfasst die Vor- und Nachbereitung der Lehrveranstaltung und die Klausurvorbereitung.		

Data:	Examination number: 69907	Version: 09.03.2023	Start Year: SoSe
Module Name:	**Internship [IBRE]**		
(English):			
Responsible:	Stephan, Johannes / Prof. Dr.		
Lecturer(s):			
Institute(s):	Professor of International Resource Policy and Economic Development		
Duration:	8 Week(s)		
Competencies:	The objective of the international internship (i.e. within an internationalised firm, typically not in the location of the home country) is to enable students to apply the international management competences acquired during their theoretical studies in practice.		
Contents:	The tasks allocated to students in the internship focus on aspects of competences that students have acquired in the taught modules.		
Literature:			
Types of Teaching:			
Pre-requisites:	**Mandatory:** Prüfung auf Übereinstimmung der Ziele des Praktikums mit den Zielen des Studienganges durch den Prüfungsausschuss. Approval of the examination committee of IBRE that the planned internship matches the objectives of the study programme.		
Frequency:	constantly		
Requirements for Credit Points:	For the award of credit points it is necessary to pass the module exam. The module exam contains: AP: Written report about the internship with a length of 15 pages of text, excl. graphs, pictures, and lists. The module is not graded.		
	Voraussetzung für die Vergabe von Leistungspunkten ist das Bestehen der Modulprüfung. Die Modulprüfung umfasst: AP: Schriftlicher Bericht (15 Seiten Text) Das Modul wird nicht benotet.		
Credit Points:	10		
Grade:	The examination results are not rated. The credits are given when the exams are passed successfully.		
Workload:	The workload is 300h.		

Data:	MINING. MA. Nr. 2914 / Examination number: 31703	Version: 28.04.2010	Start Year: WiSe 2010
Module Name:	**Introduction to Mining**		
(English):			
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.		
Literature:	Hartmann et al: SME Mining Engineering Handbook, Vol. 1 and 2, Society of Mining, Metallurgy and Exploration, Littleton, Colorado, actual edition 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.		

Data:	SDG. MA. / Examination number: 31730	Version: 17.06.2021	Start Year: SoSe 2021
Module Name:	**Introduction to Sustainable Development Goal 12**		
(English):			
Responsible:	Drebenstedt, Carsten / Prof. Dr.		
Lecturer(s):	Drebenstedt, Carsten / Prof. Dr. Bongaerts, Jan C. / Prof. Dr.		
Institute(s):	Institute of Mining and Special Civil Engineering Professor of Environmental & Resource Management		
Duration:	1 Semester(s)		
Competencies:	On completion of the course students shall be able to explain the Sustainable Development Goals of the United Nations (UN) with special emphasis on SDG12 “Responsible Consumption and Production” (RCP). They have an understanding about the different research and development approaches which contribute to the goal. They learn innovative solutions for current issues in society and industry and challenges for of entrepreneurship in practical responsible consumption and production and they are able to explain, analyse and value the solutions for current issues. The course is suitable as an introduction to the subject of RCP and is thus intended to be accessible to students of all study backgrounds.		
Contents:	Introduction of SDGs with special emphasis on responsible consumption and production Lectures by guest lecturers (experts from 7 European Universities) on the following topics: European Union Culture and relevance of RCP, Sustainable Resource Economics, Sociology of sustainable business and consumption and the Circular Economy with case studies including waste management, material science, recycling, mining, and energy technologies		
Literature:	UNESCO Sustainable Development Goals (https://en.unesco.org/sustainabledevelopmentgoals), further literature will be recommended by each lecturer		
Types of Teaching:	S1 (SS): Lecture Series on SDG12 Topics / Lectures (2 SWS) S1 (SS): Introduction to term paper and scientific writing / Seminar (1 SWS) S1 (SS): Preparing a term paper - selfstudy with the compilation of an academic paper (10-pages) pp 30h / project		
Pre-requisites:	**Recommendations:** Good knowledge of English (understanding of the lectures, writing skills)		
Frequency:	each 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 KA: Written Exam [60 to 90 min] PVL: Active participation in class (at least 80%) PVL have to be satisfied before the examination.		
	Voraussetzung für die Vergabe von Leistungspunkten ist das Bestehen der Modulprüfung. Die Modulprüfung umfasst: AP: Semesterarbeit KA: Schriftliche Prüfung [60 bis 90 min] PVL: Teilnahme an mindestens 80% der Vorlesungen PVL müssen vor Prüfungsantritt erfüllt sein bzw. nachgewiesen werden.		
Credit Points:	5		
Grade:	The Grade is generated from the examination result(s) with the following weights (w):		

	AP: Term paper [w: 1] KA: Written Exam [w: 1]
Workload:	The workload is 150h. It is the result of 45h attendance and 105h self-studies.

Data:	INSTAE. MA. Nr. 3621 / Examination number: 42809	Version: 20.09.2017	Start Year: WiSe 2019
Module Name:	**Maintenance Engineering**		
(English):			
Responsible:	Lieberwirth, Holger / Prof. Dr.-Ing.		
Lecturer(s):			
Institute(s):	Institute of Processing Machines and Recycling Systems Technology		
Duration:	1 Semester(s)		
Competencies:	The students shall be enabled to understand maintenance as a complex of technical, technological, organizational and economic tasks and to plan the maintenance process within the framework of the production process control, to prepare it technologically and to implement it rationally, taking into account legal requirements.		
Contents:	- Content / Purpose / Tasks / Organization of maintenance - Damage processes, technical diagnostics, renewal processes - Maintenance methods - Planning of maintenance measures - Maintenance organization - Technology of maintenance - Reliability of technical systems - Maintenance-friendly design and configuration - Analysis of weak points of machines and plants		
Literature:	Manzini, R., Regattieri A., Pham, H., Ferrari, E.: Maintenance of Industrial Systems, Springer, 2010 DIN EN 13306:2010-12: Maintenance – Maintenance Terminology, Beuth, 2010		
Types of Teaching:	S1 (WS): 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: MP/KA (KA if 10 students or more) [MP minimum 30 min / KA 90 min]		
	Voraussetzung für die Vergabe von Leistungspunkten ist das Bestehen der Modulprüfung. Die Modulprüfung umfasst: MP/KA (KA bei 10 und mehr Teilnehmern) [MP mindestens 30 min / KA 90 min]		
Credit Points:	3		
Grade:	The Grade is generated from the examination result(s) with the following weights (w): MP/KA [w: 1]		
Workload:	The workload is 90h. It is the result of 30h attendance and 60h self-studies. The latter includes the preparation and follow-up of the lectures as well as preparation for the examination.		

Data:	SUSGMF. MA. Nr. 083 / Examination number: 60204	Version: 01.01.2014	Start Year: WiSe 2014
Module Name:	**Management and Finance of Mining Operations along the Life Cycle**		
(English):			
Responsible:	Drebenstedt, Carsten / Prof. Dr. Bongaerts, Jan C. / Prof. Dr.		
Lecturer(s):	Bongaerts, Jan C. / Prof. Dr.		
Institute(s):	Professor of Environmental & Resource Management Institute of Mining and Special Civil Engineering		
Duration:	1 Month(s)		
Competencies:	Environmental remediation projects require careful financial planning and control since their time frame can be often quite long and uncertain and considerable financial means are required from different sources. Public funding institutions and private/corporate sources require that a remediation project be carried out at minimal cost in minimal time. Strong financial skills are absolutely essential for a successful future career of this course's participants. Students will, therefore, be equipped with a sound knowledge and broad overview of general management concepts with special emphasis on project finance, financial control and accounting, cost estimating and forecasting/simulation techniques as well as funding mechanisms. Students will also familiarise themselves with concepts how to handle uncertainty and risk.		
Contents:	According to the objectives, the module is structured into two separate but closely linked parts: Part A: General management • Management and strategic thinking • Project and team structures, management styles • Introduction to structural models of corporations and project teams • Fundamentals of human resources management: choosing the ri ght people and structures Part B: Financial management • Fundamentals of finance, basic concepts: balance sheets, profit/loss statements, cash-flow reports, ratio analysis • Using conceptual models for financial planning: fundamentals and practical use of soft-ware tools • Cost-estimating techniques for large-scale remediation projects • Cash-flow planning in remediation projects • Dealing with uncertainties in financial forecasts • Cost control and reporting • Sources of finance: public, corporate, foundations. Their role and specific expectations/requirements to spending money and reporting • Incorporating the potential after-use and redevelopment scenarios of remediated site into the planning and evaluation of remediation projects • Communication of financial information at different levels The subjects will be presented using overview texts and summary texts,		

	and graphs. The students will receive numerous handouts that not only contain the content of the lectures and case studies but will also serve for future reference. Students will be encouraged to participate actively in the presentation to solicit ideas as well as individual situations experienced and integrate these in the structured presentation. Where appropriate real-life situations will be simulated. A wide range of software tools for simulation of financial processes will be presented in the context of case studies to demonstrate their application to practical situations. Presentation of small group projects and case studies forms an essential part of the module in order to train communication skills.
Literature:	Peter Attril & Eddie McLaney: Financial Accounting for decision makers, Fourth edition, Pearson education, 2004; Kenneth Merchant, Wim Van der Stede; Management Control Systems, Performance Measurement, Evaluation and Incentives, 2nd Edition, Pearson education, 2007; Rudolf Volkart: Corporate Finance
Types of Teaching:	S1 (WS): Lectures (4 d) S1 (WS): Exercises (4 d)
Pre-requisites:	**Recommendations:** No previous knowledge of management 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 [120 min] PVL: Home assignment PVL have to be satisfied before the examination.
	Voraussetzung für die Vergabe von Leistungspunkten ist das Bestehen der Modulprüfung. Die Modulprüfung umfasst: KA [120 min] PVL: Hausarbeit 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 64h attendance and 116h self-studies.

Data:	MARINT. MA. Nr. 2962 / Examination number: 60407	Version: 28.04.2020	Start Year: WiSe 2020
Module Name:	**Marketing Intelligence**		
(English):			
Responsible:	Leischnig, Alexander / Prof.		
Lecturer(s):	Leischnig, Alexander / Prof.		
Institute(s):	Professor of Business-to-Business Marketing		
Duration:	1 Semester(s)		
Competencies:	After successful completion of the module, students should be able to explain the goals and functions of market research. Furthermore, students should know the steps of the market research process and be able to explain these steps and apply the knowledge. Students should be able to plan a research project and execute it to obtain the necessary insights.		
Contents:	The module will discuss the fundamentals of market research as well as approaches to obtain marketing intelligence. It will outline the steps of the market research process with focus on determining the research problem, selecting the research design, executing the research design, preparing and analyzing data, and reporting of findings. In addition, the module will illuminate international marketing research.		
Literature:	Field, A. (2013). Discovering statistics using IBM SPSS. 4th ed., Los Angeles: Sage. Hair, J. Jr., Black, W. C., Babin, B. J., & Anderson, R. E. (2014). Multivariate data analysis. 7th ed., Harlow et al.: Pearson. Iacobucci, D. & Churchill, G. A. (2015). Marketing research: methodological foundations. 11th ed., Boston: Cengage Learning. Malhotra, N. K., Birks, D. F., & Wills, P. (2015). Essentials of marketing research: A hands-on orientation. Upper Saddle River: Prentice Hall.		
Types of Teaching:	S1 (WS): Lectures (2 SWS) S1 (WS): Exercises (2 SWS)		
Pre-requisites:	**Recommendations:** -		
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.		

Data:	Examination number: 9900	Version: 09.03.2023	Start Year: SoSe
Module Name:	**Master's thesis [MBA IBRE]**		
(English):			
Responsible:	Stephan, Johannes / Prof. Dr.		
Lecturer(s):			
Institute(s):	Professor of International Resource Policy and Economic Development		
Duration:	4 Month(s)		
Competencies:	By developing an own topic for a master's thesis and completing all tasks involved with the analysis of research questions, with writing texts, with submission of the thesis, and with defending their own master's thesis, students are enabled to produce an academically sound and valuable contribution to the scientific literature, and this within a limited period of time.		
Contents:	The tasks of students include searching for a business-centred topic that closely relates to the taught contents of the modules in the study programme and motivates a professor at the TU Freiberg to academically support the research project. Students develop their own scientific topics, search for and select relevant literature, and do their own scientific contribution by elaborating on defined research questions using apt methods of analysis and correct academic writing and presentation and critical discussion of results with caveats. The written thesis includes own texts with own illustrations and figures and graphs (where applicable) and is presented in an oral defence.		
Literature:	Depends on the topic of the master's thesis.		
Types of Teaching:			
Pre-requisites:	**Mandatory:** Abschluss von Modulen im Umfang von 84 Leistungspunkten des Studienprogramms (Completion of 84 credit points of the MBA IBRE programme).		
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*: Master's thesis (60-80 pages) AP*: Defence with discussion [30 to 40 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*: Masterarbeit (60 - 80 Seiten)) AP*: Kolloquium mit Diskussion [30 bis 40 min] * Bei Modulen mit mehreren Prüfungsleistungen muss diese Prüfungsleistung bestanden bzw. mit mindestens "ausreichend" (4,0) bewertet sein.		
Credit Points:	20		
Grade:	The Grade is generated from the examination result(s) with the following weights (w): AP*: Master's thesis (60-80 pages) [w: 3] AP*: Defence with discussion [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 600h.

Data:	MFALCA. MA. Nr. / Examination number: 62402	Version: 15.07.2016	Start Year: SoSe 2017
Module Name:	**Material Flow Analysis and Life Cycle Assessment**		
(English):	Material Flow Analysis and Life Cycle Assessment		
Responsible:	Glöser-Chahoud, Simon / Prof.		
Lecturer(s):	Glöser-Chahoud, Simon / Prof.		
Institute(s):	Corporate Sustainability and Environmental Management		
Duration:	1 Semester(s)		
Competencies:	The students • 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:	1. Baccini & Brunner (2012): Metabolism of the Anthroposphere: Analysis, Evaluation, Design, MIT Press 2. Brunner/Rechberger (2004): Practical handbook of material flow analysis, Lewis 3. Guinée (2002): Handbook on Life Cycle Assessment, Kluwer 4. Hauschild/ Huijbregts (2015): Life Cycle Impact Assessment (LCA Compendium - The Complete World of Life Cycle Assessment), Springer 5. Klöpfer, W. (2014): Background and Future Prospects in Life Cycle Assessment, Springer 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:	S1 (SS): Material Flow Analysis and Life Cycle Assessment (lecture) - Material Flow Analysis and Life Cycle Assessment (lecture) / Lectures (2		

	SWS) S1 (SS): Material Flow Analysis and Life Cycle Assessment (tutorial) - Material Flow Analysis and Life Cycle Assessment (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*: Assignment KA [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 [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 [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.

Data:	FÖTEE. MA. Nr. 3625 / Examination number: 44402	Version: 19.09.2017	Start Year: SoSe 2019
Module Name:	**Materials Handling**		
(English):			
Responsible:	Mütze, Thomas / Dr.-Ing. Lieberwirth, Holger / Prof. Dr.-Ing.		
Lecturer(s):			
Institute(s):	Institute of Mechanical Process Engineering and Mineral Processing Institute of Processing Machines and Recycling Systems Technology		
Duration:	1 Semester(s)		
Competencies:	Starting out from the methods of material characterization and the fundamentals of the different processes, the students acquire competences regarding the possibilities of various conveying techniques (pneumatic, hydraulic, mechanical conveying), the associated machines / apparatuses and the calculation and design of selected conveyors and conveying systems for mineral, renewable raw materials and waste.		
Contents:	Possibilities and methods of bulk material characterization, process basics, classification, calculation and design of selected conveyors (pneumatic, hydraulic, mechanical) as well as design of conveyor systems (for example in the processing of primary and secondary raw materials as well as waste).		
Literature:	Wolfgang Beitz, B.J. Davies, Karl-Heinz Küttner, Heinrich Dubbel, DUBBEL - Handbook of Mechanical Engineering (Englisch) – 28. September 1994 Scheffler, M.: Mechanische Fördermittel und ihre Anwendung für Transport, Umschlag und Lagerung), VEB Fachbuchverlag Leipzig 1984		
Types of Teaching:	S1 (SS): Lectures (2 SWS) S1 (SS): Practical exercises and one design exercise / Exercises (1 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: MP/KA (KA if 10 students or more) [MP minimum 30 min / KA 90 min] PVL: At least 90% of the practical exercises are passed successfully. PVL have to be satisfied before the examination.		
	Voraussetzung für die Vergabe von Leistungspunkten ist das Bestehen der Modulprüfung. Die Modulprüfung umfasst: MP/KA (KA bei 10 und mehr Teilnehmern) [MP mindestens 30 min / KA 90 min] PVL: Mindestens 90% der Praktika und der Übungen erfolgreich absolviert. PVL müssen vor Prüfungsantritt erfüllt sein bzw. nachgewiesen werden.		
Credit Points:	4		
Grade:	The Grade is generated from the examination result(s) with the following weights (w): MP/KA [w: 1]		
Workload:	The workload is 120h. It is the result of 45h attendance and 75h self-studies. The work load is 120h. It is the result of 60h attendance and 60h self-studies. The latter includes the preparation for exercises, practical trainings, and preparation for the exam.		

Data:	MoAaE. MA. Nr. 3418 / Examination number: 62008	Version: 09.03.2023	Start Year: WiSe 2016
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 conduct scientific work by evaluating and understanding analysis of business and market data. Students learn how to read business-related research in a critical way and are able to understand the most important methods of analysis in social sciences. This allows students to distinguish between business propaganda and the creation and use of scientific sound knowledge. This implicitly helps to inform the overall learning process. For the empirical side of research, the focus is on providing students the competency to read and understand econometric methods, as well as to conduct own models to quantify economic relationships and to test hypotheses.		
Contents:	The methodology-part of the module introduces the students to the ideas of deductive research methods, falsification, and to the rigours of positive and normative analyses. This is wound up into setting the minimum standard rules for sound academic writing. The empirical part is starts with statistical basics: least squares, maximum likelihood and how to test hypotheses. Then, this part focuses on cross sectional analysis, associated with microeconomics. Finally, analysis of time series, associated with macroeconomics, will be considered. Applications will be made throughout this second part under STATA or R (both software packages for econometrics). **Part I Research methodology in economics** I.1 Theories and models: explanation & prediction I.2 Inductivism vs deductivism I.3 Positivism vs normativism I.4 Falsification vs evolutions of theories **Part II Method of scientific research** II.1 Why and how to write a literature review? II.2 How to tap existing data from databases? II.3 How to generate new data in field work? **Part III The literature review and scientific production** III.1 Sound academic writing III.2 Effective academic presentations III.3 Summary: Milestones **Part IV Econometric analysis** IV.1 Econometric models and estimation methods IV.2 Cross section data, time series data VI.3 Post-estimation tests (multicollinearity, heteroskedasticity, autocorrelation)		
Literature:	Baddeley, M. and D. Barrowclough (2009) Running Regressions - A Practical Guide to Quantitative Research in Economics, Finance and Development Studies. Cambridge University Press. Blaug, M. (1994) The methodology of economics, Cambridge University Press. Dow, S. (2002) Economic methodology: an enquiry, Oxford University Press.		

	Davis, J.B. and D.W. Hands (2011) The Elgar Companion to Recent Economic Methodology, Edward Elgar. Gelman, A., Hill, J., & Vehtari, A. (2020) Regression and Other Stories (Analytical Methods for Social Research). Cambridge: Cambridge University Press. Greene (2018) Econometric Analysis, 8ed, Pearson. Gujarati, D. (2014) Econometrics by example, 2nd edition, Palgrave MacMillan. Kronthaler, F. and S. Zöllner (2022) An easygoing introduction to data analysis with Rstudio, Springer. Schwab, D.P. (2005) Research Methods for Organizational Studies, Routledge, Taylor & Francis Group. Wilson, J. (2021) Understanding Research for Business Students, SAGE Publications. Wooldridge J.M. (2001) Econometric Analysis of Cross Section and Panel Data. MIT Press. Wooldridge, J.M. (2012) Introductory Econometrics. A Modern Approach, South-Western Cengage Learning.
Types of Teaching:	S1 (WS): Lectures (3 SWS) S1 (WS): Exercises (1 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 [60 min] PVL: A sample econometric analysis in scientific paper format, 7 pages PVL have to be satisfied before the examination.
	Voraussetzung für die Vergabe von Leistungspunkten ist das Bestehen der Modulprüfung. Die Modulprüfung umfasst: KA [60 min] PVL: A sample econometric analysis in scientific paper format, 7 pages 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.

Data:	OPMAN. MA. Nr. 2970 / Examination number: 61304	Version: 06.07.2015	Start Year: WiSe 2016
Module Name:	**Operations Management**		
(English):			
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:	Davis, M. & Heineke, J. (2005): Operations Management, 5/e, McGraw-Hill Cachon & Terwiesch (2006): Matching Supply and Demand, McGraw-Hill Stevenson (2007): Operations Management, 9/e, McGraw-Hill.		
Types of Teaching:	S1 (WS): Lectures (2 SWS) S1 (WS): Exercises (2 SWS)		
Pre-requisites:	**Recommendations:** 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.		

Data:	OREDEP. MA. Nr. 2915 / Examination number: 31201	Version: 28.04.2010	Start Year: SoSe 2011
Module Name:	**Ore Deposits & Economic Geology**		
(English):			
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:	Evans, A. M. (1993). Ore Geology and Industrial Minerals, Oxford: Blackwell.Guilbert, J.M. and Park, C.F. (1986). The Geology of Ore Deposits, New York: Freeman.Kesler, E. (1994) Mineral Resources, Economics and the Environment, New York: Macmillan.		
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:	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.		

Data:	PET. MA. Nr. 3361 / Examination number: 62401	Version: 14.07.2016	Start Year: SoSe 2016
Module Name:	**Plant Economics and Technology**		
(English):			
Responsible:	Glöser-Chahoud, Simon / Prof.		
Lecturer(s):	Glöser-Chahoud, Simon / Prof.		
Institute(s):	Corporate Sustainability and Environmental Management		
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: 1. Peters/Timmmerhaus/West (2003): Plant Design and Economic for Chemical Engineers, McGrawHill 2. Chauvel (2003): Manual of Process Economic Evaluation, Edition Technip 3. Couper (2003): Process engineering economics, Marcel Dekker Inc Further literature recommendations will be given in the lecture.		
Types of Teaching:	S1 (SS): Plant Economics and Technology / Lectures (2 SWS) S1 (SS): Plant Economics and Technology / Lectures (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: PVL: Assignments KA [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: Aufgaben KA [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 [w: 1]
Workload:	The workload is 180h. It is the result of 60h attendance and 120h self-studies.

Data:	PROFCOM. BA. Nr. 349 / Examination number: 60701	Version: 29.06.2022	Start Year: WiSe 2022
Module Name:	**Professional Communication**		
(English):			
Responsible:	Jacob, Mark / Dr. Polanski, Katja		
Lecturer(s):	Jacob, Mark / Dr.		
Institute(s):	International Centre/ Languages		
Duration:	1 Semester(s)		
Competencies:	The module introduces participants to fundamental principles and practices of communication. Participants familiarize themselves with essential linguistic features and typical structures of oral and written texts. They acquire strategies to cope with various oral and written communication situations in academic and professional contexts. They are able to present content and to communicate in a way that is specific and suitable for the type of text and context and to argue their own point of view in a variety of situations. The module is taught in English.		
Contents:	• Analysis of a variety of written and oral texts • Fundamentals of professional communication, e.g. communication theory, formal and informal communication, verbal and nonverbal communication • Aspects of English grammar and stylistics • Preparation of written texts, e.g. forms of digital communication, application documents, report, argumentative essay • Presenting • Simulation of oral communication situations, e.g. job interview, moderation of and participating in group discussions		
Literature:	Selected teaching material. *The participants are also expected to have read the following textbooks:* Adler, R.B; Rodman, G.R; Athena DuPré, A. Understanding Human Communication (2019) Oxford ; New York: Oxford University PressMarquet L.D. (2020) Leadership Is Language: The Hidden Power of What You Say--and What You Don't. 1st Ed. New York: Portfolio/Penguin		
Types of Teaching:	Seminar (4 SWS)		
Pre-requisites:	**Recommendations:** General English level B2		
Frequency:	each semester		
Requirements for Credit Points:	For the award of credit points it is necessary to pass the module exam. The module exam contains: AP: Portfolio exam consisting of 4 mandatory assignments covering written and oral communication situations as well as receptive and productive skills AP: Active participation in at least 80% of the classes and completion of self-study tasks		
	Voraussetzung für die Vergabe von Leistungspunkten ist das Bestehen der Modulprüfung. Die Modulprüfung umfasst: AP: Portfolioprüfung bestehend aus 4 Teilen, die mündliche und schriftliche Kommunikationssituationen sowie rezeptive und produktive Fertigkeiten abbilden AP: Aktive Teilnahme an mind. 80% der Lehrveranstaltungen und Bearbeitung von Aufgaben im Selbststudium		
Credit Points:	6		
Grade:	The Grade is generated from the examination result(s) with the following weights (w):		

	AP: Portfolio exam consisting of 4 mandatory assignments covering written and oral communication situations as well as receptive and productive skills [w: 1]
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, literature review, completion of tasks and portfolio exam assignments.

Data:	SUSPCM. MA. Nr. 084 / Examination number: 60216	Version: 01.01.2014	Start Year: WiSe 2014
Module Name:	**Project and Contract Management**		
(English):			
Responsible:	Drebenstedt, Carsten / Prof. Dr. Bongaerts, Jan C. / Prof. Dr.		
Lecturer(s):	Bongaerts, Jan C. / Prof. Dr.		
Institute(s):	Professor of Environmental & Resource Management Institute of Mining and Special Civil Engineering		
Duration:	1 Semester(s)		
Competencies:	The objectives of the module are to convey principal elements of project and contract management. Project Management: The student will be able to identify, analyze and structure the issues involved in a large scale environmental remediation project. On the basis of this skill, the student will be in a position to set up, organise, and control a project and its components including the procurement of outside services. He/she will be capable of managing the tendering of contracts, identifying critical paths, setting up financial controlling, initiating technical controlling as well as establishing quality assurance and control. Contract Management: The student will be able to identify the various types of contracts required to manage large scale environmental remediation projects. In particular, he/she will be in a position to compile information required to generate contracts, formulate draft contracts, expedite the execution of contracts, and to establish the organizational structures to facilitate the storage and retrieval of crucial information by project personnel. Presentation of small group projects and case studies forms an essential part of the module in order to train communication skills.		
Contents:	Project management is a set of principles, practices, and techniques applied to lead project teams and control project schedule, cost, and performance risks. The basic elements are • Project integration including the establishment of life cycle phases ending in milestones, producing a set of project documents and preparing a project management plan, • Project scope definition including the definition of requirements, breaking down the work into single components, establishing cost and schedule baselines, • Time management using automated scheduling systems, conducting critical path analysis, • Cost management covering the preparation of cost estimates, tracking costs at the work package level, • Quality management by defining goals and stating methods toachieve quality assurance, implementing quality measurement and continuous quality improvement, • Risk management composed of risk analysis and implementing measures for risk avoidance and mitigation • Human Resources management entailing the establishment of clear goals, maintaining channels of communication, and instruments to resolve conflicts, • Communications, including internal project team communication and external public relations, • Procurement.		

	Contract management covers aspects that are part of project management such as Procurement. Although contract management is an integral part of project management it deserves particular attention due to its legal implication during the execution of a project and the potential to preserve knowledge in spite of long-term staff attrition. Therefore, it is focused on further by discussing • Life Cycle of contracts, contract types, e.g. expert opinions, services, supplies and contract structures • Parties involved in designing contracts • Contract elements, e.g. risks, occupational health and safety, conflicts of interest, ownership and tights to the use of intellectual property, dispute resolution, regulatory controls) • Contract negotiations and elements of contract administration • Cost and price analysis The subjects will be presented using summary texts, graphs, software demonstration and case studies. Students shall participate in the presentation to solicit ideas as well as individual situations experienced and integrate these in the structured presentation. Where appropriate, real-life situations will be simulated.
Literature:	Johanna Rothman, Successful Project Management, The Pragmatic Programmers, 2007; Tom de Marco: The Deadline: A Novel About Project Management, B & T Publishing, 1997
Types of Teaching:	S1 (WS): Lectures (6 d) S1 (WS): Seminar (9 d)
Pre-requisites:	**Recommendations:** No previous knowledge of management 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 [120 min] PVL: Presentation of results of practical training PVL have to be satisfied before the examination.
	Voraussetzung für die Vergabe von Leistungspunkten ist das Bestehen der Modulprüfung. Die Modulprüfung umfasst: KA [120 min] PVL: Ausarbeitung und Vorstellung eines Projekts im Rahmen eines Kolloquiums 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 120h attendance and 60h self-studies.

Data:	BBREKL. MA. Nr. 2087 / Examination number: 31719	Version: 13.07.2014	Start Year: SoSe 2014
Module Name:	**Reclamation**		
(English):			
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:	The module provides the development of expertise and methodological skills in the field of mining engineering. The students learn the theory and practice of reclamation in mining as essential element of balance for mining impacts. They understand the parallelism of mine and reclamation planning and the fact, why reclamation can exceed the mine project phase. Additionally the students will be qualified to explain scientifically reclamation measures, plan technical measures and calculate the financial expenses.		
Contents:	- Impacts of mining and its effects - Legal requirements for permission - Scientific fundamentals of reclamation (soil, ground water balance,...) - Utilization requirements and realization in the post-mining landscaping (agriculture, forestry, waterbodies, nature protection, recreation, miscellaneous) - Concepts, Case studies		
Literature:	Pflug (Hrsg.), 1998, Braunkohlentagebau und Rekultivierung, Springer Verlag Olschowy, Bergbau und Landschaft, 1993, Paray Verlag Gilscher, Bruns, 1999, Renaturierung von Abbaustellen, Verlag Eugen Ulmer Stuttgart		
Types of Teaching:	S1 (SS): Lectures (3 SWS) S1 (SS): Exercises (2 SWS) S1 (SS): Practical Application (1 SWS)		
Pre-requisites:	**Recommendations:** Mathemathic-scientific fundamentals		
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: MP/KA (KA if 21 students or more) [MP minimum 30 min / KA 60 min] PVL: Submission and positive evaluation of module exercises PVL: Participation in 2 excursions of the chair Surface-Mining PVL have to be satisfied before the examination.		
	Voraussetzung für die Vergabe von Leistungspunkten ist das Bestehen der Modulprüfung. Die Modulprüfung umfasst: MP/KA (KA bei 21 und mehr Teilnehmern) [MP mindestens 30 min / KA 60 min] PVL: Erfolgreicher Abschluss der Übungsaufgaben PVL: 2 Fachexkursionen Tagebau 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): MP/KA [w: 1]		
Workload:	The workload is 180h. It is the result of 90h attendance and 90h self-studies. Self-study includes autonomous and instructed preparation and performance of follow-up course work and examination preparation.		

Data:	RESMGT. MA. Nr. 2082 / Examination number: 62407	Version: 31.05.2018	Start Year: WiSe 2016
Module Name:	**Resource Management**		
(English):			
Responsible:	Glöser-Chahoud, Simon / Prof.		
Lecturer(s):	Glöser-Chahoud, Simon / Prof.		
Institute(s):	Corporate Sustainability and Environmental Management		
Duration:	1 Semester(s)		
Competencies:	Students • 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 a 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:	• Bausch (2009): Handbook Utility Management, Springer • Thiede (2012): Energy Efficiency in Manufacturing Systems, Springer • Thonemann (2015): Operations Management, Pearson • Vrat (2014): Materials Management, Springer • Wagner, Enzler (2006) Material Flow Management, Physica		
Types of Teaching:	S1 (WS): Lectures (2 SWS) S1 (WS): 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: AP*: Case study with oral presentation KA* [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*: Fallstudie mit mdl. Präsentation KA* [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*: Case study with oral presentation [w: 1] KA* [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.

Data:	RESPCON. BA. Nr. / Examination number: 31732	Version: 04.07.2022	Start Year: SoSe 2023
Module Name:	**Responsible Consumption**		
(English):	Responsible Consumption		
Responsible:	Drebenstedt, Carsten / Prof. Dr.		
Lecturer(s):	Bongaerts, Jan C. / Prof. Dr.		
Institute(s):	Professor of Environmental & Resource Management Institute of Mining and Special Civil Engineering		
Duration:	1 Semester(s)		
Competencies:	Students learn the essence and the significance of responsible consumption, both from the side of consumers and of producers in their function as enablers through appropriate product design, materials selection, ethically correct production conditions and respect for the environment. Students learn the potentials of consumers to behave responsibly and the opportunities of producers to enhance these potentials.		
Contents:	Consumer economics: the rational neo-classical consumer model, consumer models of behavioural economics, psychological models of the learning consumer, sociological consumer models, ecological consumer models Consumer law, consumer education and information, standards, guidelines and labels for product development, manufacturing, distribution and recycling Marketing tools and techniques Measurement and evaluation systems for the assessment of products and services: Life Cycle Analysis, CO_2 footprint, ecological handprint and others Development (by engineers) of enabling technologies and management practice for responsible consumption: recyclable materials, design for recycling, durability of product use, human health and animal welfare etc. Case studies		
Literature:	Arto O. Salonen: Responsible Consumption, in: Samuel O. Idowu, Nicholas Capaldi, Liangrong Zu, Ananda Das Gupta (Eds): Encyclopedia of Corporate Social Responsibility, Springer, 2013, DOI: https://doi.org/10.1007/978-3-642-28036-8_119 Journal of Cleaner and Responsible Consumption (Elsevier Open Access)		
Types of Teaching:	S1 (SS): Lectures (2 SWS) S1 (SS): Seminar (1 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: KA* [90 min] AP*: term paper (minimally 12 pages) * 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*: Ausarbeitung (mindestens 12 Seiten) * Bei Modulen mit mehreren Prüfungsleistungen muss diese Prüfungsleistung bestanden bzw. mit mindestens "ausreichend" (4,0) bewertet sein.
Credit Points:	5
Grade:	The Grade is generated from the examination result(s) with the following weights (w): KA* [w: 2] AP*: term paper (minimally 12 pages) [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 150h. It is the result of 45h attendance and 105h self-studies.

Data:	SSSE. MA. Nr. 3653 / Examination number: 43112	Version: 24.09.2018	Start Year: WiSe 2018
Module Name:	**Selective Separation of Strategic Elements**		
(English):			
Responsible:	Bräuer, Andreas / Prof. Dr.-Ing.		
Lecturer(s):	Haseneder, Roland / Dr. rer. nat.		
Institute(s):	Institute of Thermal, Environmental and Natural Products Process Engineering		
Duration:	1 Semester(s)		
Competencies:	On completion of the course the student shall be able to explain membrane technology and the different applications like extraction and membrane assisted processes regarding the separation of value products. Focus is put on strategic elements. They can use their physico-chemical knowledge on membrane separation, development of hybrid operation systems and the influences for practical applications and are familiar with the methods and problems related to separation devices. Due to the seminar the students will be able to dicuss the current literature on the topic.		
Contents:	• membranes, modules, hybrid processes • driving forces, transport resistances • structures, materials • mass transfer • module construction • MF, UF, NF, RO • standard applications • scaling, fouling effects • special applications: mine water treatment, leaching solutions, resourcerecovery • internship to membrane processes		
Literature:	Heinrich Strathmann: Introduction to Membrane Science and Technology, Wiley-VCH, 2011 Anil K. Pabby, Syed S.H. Rizvi, Ana Maria Sastre Requena: Handbook of Membrane Separations, CRC-Press 2008		
Types of Teaching:	S1 (WS): Lectures (2 SWS) S1 (WS): Seminar (1 SWS) S1 (WS): Practical Application (1 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:	5		
Grade:	The Grade is generated from the examination result(s) with the following weights (w): KA [w: 1]		
Workload:	The workload is 150h. It is the result of 60h attendance and 90h self-studies.		

Data:	SEMVWETH. MA. / Examination number: 62503	Version: 16.02.2023	Start Year: WiSe 2022
Module Name:	**Seminar Behavioral and Business Ethics**		
(English):			
Responsible:	Walkowitz, Gari / Prof. Dr.		
Lecturer(s):	Walkowitz, Gari / Prof. Dr.		
Institute(s):	Professor of Business Ethics		
Duration:	1 Semester(s)		
Competencies:	Students 1) apply learned theories and empirical findings in a solution-oriented manner, 2) analyze issues and challenges in the context of specific contexts, 3) collect, systematize and synthesize literature and data material for a scientific paper on a selected topic, 4) communicate continuously and purposefully within teaching and learning groups, 5) justify and evaluate independently developed positions, 6) present and/or discuss results with teachers and other students, 7) critically question and reflect on current social developments, 8) design their learning and working processes independently, 9) use techniques of scientific work and good scientific practice under guidance.		
Contents:	This master's seminar focuses on the ethical analysis of human decision-making in companies and markets. Ethically relevant decision-making is determined by a wide variety of determinants, including ethical considerations as well as phenomena that can be explained by behavioral science. Studying theories and empirical evidence from business psychology and behavioral economics, we will examine the conditions under which ethical principles can be applied to human actions in companies and markets. The discussion will focus on personal and situational factors, as well as incentive and organizational structures, and technological and cultural conditions.		
Literature:	Biasucci, C., & Prentice, R. (2020). Behavioral Ethics in Practice: why we sometimes make the wrong decisions. Routledge. Bicchieri, C. (2005). The grammar of society: The nature and dynamics of social norms. Cambridge University Press. The further selection of literature depends on the concrete seminar topics and includes in particular articles in relevant journals, which are newly indicated for each semester.		
Types of Teaching:	S1 (WS): Seminar (2 SWS)		
Pre-requisites:	**Recommendations:** Einführung in die Unternehmens- und Wirtschaftsethik, 2023-02-16 Forschungsmethoden der Wirtschaftswissenschaften, 2022-06-15		
Frequency:	each semester		
Requirements for Credit Points:	For the award of credit points it is necessary to pass the module exam. The module exam contains: AP*: Seminar paper 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: AP*: Seminararbeit AP*: Verteidigung * Bei Modulen mit mehreren Prüfungsleistungen muss diese Prüfungsleistung bestanden bzw. mit mindestens "ausreichend" (4,0)		

	bewertet sein.
Credit Points:	4
Grade:	The Grade is generated from the examination result(s) with the following weights (w): AP*: Seminar paper [w: 3] AP*: Presentation [w: 2] * 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 120h. It is the result of 30h attendance and 90h self-studies. The latter includes homework including the preparation of the seminar paper and of the presentation.

Data:	SIR. MA. Nr. 2911 / Examination number: 62404	Version: 14.07.2016	Start Year: SoSe 2017
Module Name:	**Strategies of the Resource Industry**		
(English):			
Responsible:	Glöser-Chahoud, Simon / Prof.		
Lecturer(s):	Bartz, Stefan		
Institute(s):	Corporate Sustainability and Environmental Management		
Duration:	1 Semester(s)		
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.		
Literature:	Wellmer, F.-W., Dalheimer, M., Wagner, M. (2008): Economic Evaluations in Exploration, Springer Berlin Heidelberg New York. Rudenno, V. (2012): The Mining Valuation Handbook: Mining and Energy Valuation for Investors and Management, 4th Edition, Wiley, New Jersey. Narbel, P., Hanssen, J.P., Lien, J.R. (2014): Energy Technologies and Economics, Springer Berlin Heidelberg New York.		
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 knowledge.
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*: Group Work KA* [120 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*: Gruppenarbeit KA* [120 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*: Group Work [w: 0] 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 90h. It is the result of 30h attendance and 60h self-studies.

Data:	SCM. MA. Nr. 937 / Examination number: 61305	Version: 06.07.2015	Start Year: SoSe 2016
Module Name:	**Supply Chain Management**		
(English):			
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:	Chopra, S.; Meindl, P. (2006): Supply Chain Management, 3rd Ed., Pearson Prentice Hall, New York. Cachon, G.; Terwiesch, C. (2006): Matching Supply with Demand, McGraw-Hill, Boston.		
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]		
Workload:	The workload is 180h. It is the result of 60h attendance and 120h self-studies. Letzteres umfasst Vor- und Nachbereitung der Vorlesungen, die selbständige Bearbeitung von Fallstudien sowie die Vorbereitung auf die Klausur.		

Data:	THT. MA. Nr. / Examination number: 41215	Version: 29.08.2017	Start Year: WiSe 2018
Module Name:	**Thermodynamics and Heat Transfer**		
(English):			
Responsible:	Fieback, Tobias / Prof. Dr. Ing.		
Lecturer(s):	Fieback, Tobias / Prof. Dr. Ing.		
Institute(s):	Institute of Thermal Engineering		
Duration:	1 Semester(s)		
Competencies:	- knowledge of basic thermodynamic principles - appyling of those principles to beginner level thermodynamic processes - getting a brief understanding of heat and mass transfer processes		
Contents:	- Fundamentals of thermodynamics (equations of state, reversible processes, system boundaries) - First and second law of thermodynamics - Thermodynamic properties of pure fluid substances - Thermodynamic investigation of cycle processes (carnot, clausius-rankine, ...) - Thermodynamics of simple mixtures (humid air) - Basic introductions to heat and mass transfer processes		
Literature:	- The Laws of Thermodynamics: A Very Short Introduction; Peter W. Atkins (just for getting started) - Thermodynamik: Grundlagen und technische Anwendungen; H.D. Baehr / S. Kabelac (German) - VDI-Wärmeatlas (Thermodynamic Properties in German)		
Types of Teaching:	S1 (WS): Lecture / Lectures (1 SWS) S1 (WS): Exercise / 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: MP/KA (KA if 10 students or more) [MP minimum 40 min / KA 120 min]		
	Voraussetzung für die Vergabe von Leistungspunkten ist das Bestehen der Modulprüfung. Die Modulprüfung umfasst: MP/KA (KA bei 10 und mehr Teilnehmern) [MP mindestens 40 min / KA 120 min]		
Credit Points:	4		
Grade:	The Grade is generated from the examination result(s) with the following weights (w): MP/KA [w: 1]		
Workload:	The workload is 120h. It is the result of 45h attendance and 75h self-studies.		

Data:	TPT. MA. Nr. / Examination number: 40316	Version: 15.09.2022	Start Year: WiSe 2022
Module Name:	**Training in Particle Technology**		
(English):			
Responsible:	Peuker, Urs Alexander / Prof. Dr.-Ing.		
Lecturer(s):	Mitarbeiter des Institutes MVT/AT Peuker, Urs Alexander / Prof. Dr.-Ing.		
Institute(s):	Institute of Mechanical Process Engineering and Mineral Processing		
Duration:	1 Semester(s)		
Competencies:	The module aims at recalling the fundamentals of particle technology. It is set up using special exercises to practice scientific and technological calculations of particle size distributions and fundamental micro-processes. The principles of the mechanical micro-processes are introduced. The exercises also apply the fundamental approaches (micro-processes) to describe and to design process equipment. This will be done using case studies.		
Contents:	Particle characterization Particle size distribution Mixing of particle size distributions Separation of particle size distributions (classification) Grade recovery curves Micro processes in particle technology • Particles in flow-fields (i.e. sedimentation) • Flow through porous media • Particle-particle interactions (e.g. van-der-Waals-forces, electrostatic interactions, DLVO-theory, capillary forces) • Breakage laws (i.e. breakage energy) Selected case studies form the fields: • Filtration • Sedimentation • Agglomeration • Classification • Comminution • And others		
Literature:	M. Stieß: Mechanische Verfahrenstechnik 1 - Partikeltechnologie, Springer-Verlag, Berlin, Heidelberg, 2009 H. Schubert: Handbuch der Mechanischen Verfahrenstechnik, Wiley-VCH, Weinheim, 2003 selected scientific papers		
Types of Teaching:	S1 (WS): Recall of fundamentals - (also digital available every semester - provided as screencasts) / Lectures (1 SWS) S1 (WS): Application of fundamentals - case studies - (also digital available every semester - provided as screencasts with feedback rounds in a virtual classroom) / 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: in examination variant 1: MP/KA (KA if 8 students or more) [MP minimum 30 min / KA 120 min] or		

	in examination variant 2: PVL: Midtermtests (parallel to lectures and excercises) AP: Home work assignment The variant 2 applies only for students of the virtual faculty. PVL have to be satisfied before the examination.
	Voraussetzung für die Vergabe von Leistungspunkten ist das Bestehen der Modulprüfung. Die Modulprüfung umfasst: in Prüfungsvariante 1: MP/KA (KA bei 8 und mehr Teilnehmern) [MP mindestens 30 min / KA 120 min] oder in Prüfungsvariante 2: PVL: Testate (veranstaltungsbegleitend) AP: Hausarbeit Die Prüfungsvariante 2 gilt nur für Studierende der virtuellen Fakultät. PVL müssen vor Prüfungsantritt erfüllt sein bzw. nachgewiesen werden.
Credit Points:	4
Grade:	The Grade is generated from the examination result(s) with the following weights (w): in examination variant 1: MP/KA [w: 1] or in examination variant 2: AP: Home work assignment [w: 1]
Workload:	The workload is 120h. It is the result of 45h attendance and 75h self-studies.

Daten:	VMAKROOE. MA. / Prüfungs-Nr.: 61419	Stand: 17.01.2022	Start: WiSe 2022
Modulname:	**Vertiefung Makroökonomik**		
(englisch):	Advanced macroeconomics		
Verantwortlich(e):	Czudaj, Robert / Prof. Dr.		
Dozent(en):	Czudaj, Robert / Prof. Dr.		
Institut(e):	Professur für Allgemeine Volkswirtschaftslehre		
Dauer:	1 Semester		
Qualifikationsziele / Kompetenzen:	Die Studierenden erhalten einen Einblick in die makroökonomische Theorie und lernen makroökonomischen Zusammenhänge zu verstehen.		
Inhalte:	Finanzmärkte und Erwartungen; Erwartungsbildung, Konsum und Investitionen; Güter- und Finanzmärkte in einer offenen Volkswirtschaft; Produktion, Zinssatz und Wechselkurs; Wechselkursregime; Fiskalpolitik; Geldpolitik.		
Typische Fachliteratur:	Blanchard, O.; Illing, G.: Makroökonomie, 8. Aufl. Pearson, 2021		
Lehrformen:	S1 (WS): Vorlesung (2 SWS) S1 (WS): Übung (2 SWS)		
Voraussetzungen für die Teilnahme:	**Empfohlen:** Makroökonomik, 2021-12-13		
Turnus:	jährlich im Wintersemester		
Voraussetzungen für die Vergabe von Leistungspunkten:	Voraussetzung für die Vergabe von Leistungspunkten ist das Bestehen der Modulprüfung. Die Modulprüfung umfasst: KA [90 min]		
Leistungspunkte:	6		
Note:	Die Note ergibt sich entsprechend der Gewichtung (w) aus folgenden(r) Prüfungsleistung(en): KA [w: 1]		
Arbeitsaufwand:	Der Zeitaufwand beträgt 180h und setzt sich zusammen aus 60h Präsenzzeit und 120h Selbststudium. Letzteres umfasst die Vor- und Nachbereitung der Lehrveranstaltung und die Klausurvorbereitung.		

Freiberg, den 16. Mai 2023

gez.
Prof. Dr. Jörg Matschullat
Prorektor für Forschung und Transfer

in Vertretung für den Rektor
Prof. Dr. Klaus-Dieter Barbknecht

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