

**Module Manual
International Online Semester
1 September 2024 – 14 March 2025**

General English - B2

Susanne Kroner

Aims:

- Students will be able to understand and appropriately use the language in written and spoken forms at an upper-intermediate level in a certain number of professional, academic, and higher education-related situations.
- They will be able to perceive cultural differences in the professional and higher education domains and to respond appropriately and comprehensibly.

Contents:

- Development of language skills (listening and reading comprehension, speaking, writing, grammar, vocabulary).
- Training of professional and academic communication forms (presentations, role-plays, writing functional emails, phone calls, writing a CV, etc.).
- Talking about practical everyday topics and intercultural questions such as preparation for a stay abroad (short texts of simple to moderate difficulty and projects on practical everyday topics, role-plays, reading short texts of intermediate complexity on current events, TV shows, etc.).

Modul number: 960700010A

Hours per week / Credits

4 SWS / 5 ECTS

Exam

Written exam (Listening: 25%; Reading: 25%; Text production: 25%; Oral presentation: 25%)

Business English for Agricultural Engineering (B2 Ger)

Thomas Bartl

Aims:

- Students will be able to understand a larger number of situations relevant to study and work in the foreign language in written and spoken forms of communication at an upper-intermediate level.
- They will express themselves appropriately and comprehensibly about the fields of agricultural engineering, marketing, sales, and quality management in agricultural technology companies, as well as recognize and comment on aspects of advice in new agricultural technological applications and the organization of cross-company machine usage.

Contents:

- Development of language skills (listening and reading comprehension, speaking, writing, grammar, vocabulary).
- Training study-related communication forms (presentations, role-playing, for example, conversations with business partners; reading complex academic texts; creating complex written reports).
- Training in subject-oriented communication situations (projects, presentations, and discussions about subject-related material).

Modul number: 960200020A

Hours per week / Credits

4 SWS / 5ECTs

Exam

Written exam (Listening: 25%; Reading: 25%; Text production: 25%; Oral presentation: 25%)

English UNIcert® II - Practical English for the Workplace (B2 Ger)

Susanne Kroner

Aims:

- Students will be able to understand and appropriately use the language in written and spoken forms at an upper-intermediate level in a certain number of professional, academic, and higher education-related situations.
- They will be able to perceive cultural differences in the professional and higher education domains and to respond appropriately and comprehensibly.

Contents:

- Development of language skills (listening and reading comprehension, speaking, writing, grammar, vocabulary).
- Training of professional and academic communication forms (presentations, role-plays, writing functional emails, phone calls, writing a CV, etc.).

Modul number: 960500140A

Hours per week / Credits

2 SWS / 3 ECTS

Exam

Written exam (Listening: 25%; Reading: 25%; Text production: 25%; Oral presentation: 25%)

German as a Foreign Language - Course 1 (A1 Ger)

Susanne Kroner

Aims:

- Students will be able to manage some simple everyday situations in written and spoken communication forms in the foreign language, as well as to provide basic information about studying, university, and career aspirations.
- They will be able to perceive cultural differences and express themselves in simple statements about them.

Contents:

- Development of language skills (listening and reading comprehension, speaking, writing, grammar, vocabulary).
- Training of professional and academic communication forms (presentations, role-plays, composing functional emails, making phone calls, writing a resume, etc.)

Modul number: 960400030A

Hours per week / Credits

4 SWS / 5ECTS

Exam

Written exam (Listening: 25%; Reading: 25%; Text production: 25%; Oral presentation: 25%)

Data Collection

PhD in Economics, Associate Professor Alina Brychko

Abstract

Information is the basis of management. Marginal analysis is a modern method of economic analysis used when making decisions about profitability / business efficiency in various sectors of the economy. At the same time, the success of such an analysis is determined by the reliability, relevance, reliability, sufficiency and accuracy of the information used. This course is aimed at forming a system of necessary theoretical knowledge and practical skills for collecting internal and external information necessary for making management decisions using the methodology of marginal analysis at agricultural enterprises of various organizational and legal forms and forms of ownership in market conditions. Studying this course ensures that students learn the basic principles and methods of organizing and conducting research on the collection of production data; acquiring practical skills in working with statistical reporting of enterprises, conducting surveys, searching for data on markets and prices, forming databases of production and economic information. This course will be useful to students of various fields of knowledge and specialties, contributing to their acquisition of data collection competencies for decision-making at various levels of the management hierarchy, in various areas of the economy, as well as when organizing their own business.

The course is offered in a 3 ECTS.

Course structure

Topic 1. Introduction to the discipline (purpose of collecting production data at the enterprise; principles of marginal analysis).

Topic 2. The format of the production data base.

Topic 3. Types and sources of data in economic analysis.

Topic 4. Data collection: legal and ethical aspects.

Topic 5. Methods of data collection and data processing.

Topic 6. Formation of a database on intra-farm processes (main indicators for various types of production processes in agriculture, work with reporting, research preparation, questionnaire preparation).

Topic 7. Formation of databases of information about markets and prices.

Modul number: 950400010

Hours per week / Credits

2 hours of contact work / 3 ECTS

Exam

Written examination

Academic Research and Writing

PhD in Economics, Associate Professor Tetiana Kharchenko

Abstract

Scientific research is the driver of human development. It is in the higher school the skills of carrying out scientific research are formed and developed, which is a whole corresponds to the mission of the academic community in society. Scientific research in any branches of science are distinguished by their problem-targeted character, methodology, and style specific to scientific texts. This course aims to provide students with the necessary knowledge about the organization, methodology of scientific research and presentation features results (both in publications and during presentations) and develop relevant skills. The course provides for the study of the basic rules of formulating a scientific problem, research goals and objectives; the main methods of scientific research that exist universal; stylistics and lexical constructions that are characteristic of scientific style; rules of text structuring, presentation of results research in the form of abstracts of reports, scientific articles, presentations before the speech. In the know an overview of the most common social networks connecting scientists is also given all over the world and serve as a "business card" of the researcher. Studying the course lays the foundations for further improvement of scientific research skills at the next levels of education and in relevant institutions, preparation of academic and analytical texts, contributing better professional realization of the future specialist.

The course is offered in a 3 ECTS.

Course structure

1. Problem-target aspect of scientific research.
2. Research preparation, work with literary sources.
3. Methodology of scientific research.
4. Academic writing style.
5. Preparation of tabular and graphic research material.
6. Preparation of scientific texts (theses of reports, scientific article).
7. Presentation of research results in a report.
8. Digital ecosystem of scientists.

Modul number: 950100040

Hours per week / Credits

2 hours of contact work / 3 ECTS

Exam

Written examination

International Rural Development

PhD in Economics, Associate Professor Tetiana Kharchenko

Abstract

Rural poverty and global inequality continue to persist with environmental and socioeconomic concerns, albeit decades of policy debates and interventions. The main activities of this course are oriented on the study the concepts of International Rural development. The course highlights the importance of a system-wide approach to rural development that simultaneously acknowledges the plurality of knowledge systems, sustainability and the contextual specificities of rural livelihood and how these relate to wider structural drivers at the local, national and international level. The structure of the course envisages the study of the following aspects: basic concepts such as neo-liberal approaches to rural development, and interrogate the role of business, government, and civil society in driving strategies for so-called ‘development’ and sustainable rural livelihoods. Studying this course allows future specialists to gain insights into implementing, evaluating, and monitoring rural development projects. The activities include (joint) problem identification, co-creation of relevant solutions, and capacity-building. Some activities contribute to developing core competencies and skills such as critical thinking, cross-cultural communication, research ethics, teamwork, presentation skills. This course will be useful for students of various fields of knowledge and specialties, promoting the importance of a system-wide approach to international rural development.

The course is offered in a 3 ECTS.

Course structure

1. What is International Rural development?
2. Market Approaches to Development.
3. Sustainable Livelihood Framework.
4. Measuring rural livelihoods: Human Right-based Approaches.
5. Climate change and sustainable development.
6. Livestock and rural political economies.
7. The approaches for responding to climate risk.

Modul number:

Hours per week / Credits

2 SWS / 3 ECTS

Exam

Written examination

Project management

PhD in Economics, Associate Professor Alina Brychko

Abstract

The course is designed to acquire knowledge and skills that provide the opportunity to participate in the implementation of projects of various orientations in the course of performing one's professional activities by specialty. The structure of the course envisages the study of the following aspects of managerial activity: mastering skills in planning and executing projects, forming and complying with requirements for project product quality, identifying and managing project risks, methods of making managerial decisions. Studying this course allows future specialists to form a theoretical and methodological base necessary for the organization and management of labor, material, financial and other project resources, ensuring the achievement of defined goals; acquisition of practical management decision-making skills in the process of implementing project activities. This course will be useful to students of various fields of knowledge and specialties, contributing to their acquisition of competencies in the development and implementation of projects and the ability to manage them, to show initiative and entrepreneurship; the ability to make management decisions and ensure the conditions for their implementation in order to ensure the quality of the project.

The course is offered in a 5 ECTS.

Course structure

1. Introduction to the "Project Management" course. General characteristics of project management.
2. Methodology, tools and project assessment criteria.
3. The main forms of the organizational structure of the project
4. General approaches to project planning and control
5. Project structuring
6. Planning of the project in time
7. Project management
8. Project marketing. Ecological analysis of projects
9. Risk management in projects
10. Project quality management
11. Project team management
12. Project communications management. Project management process software

Modul number:

Hours per week / Credits

4 SWS / 5 ECTS

Exam

Written examination

Small Scale Farming and Global Food Supply

PhD in Economics, Associate Professor Alina Brychko

Abstract

The course explores the contribution that small scale farms make to food supplies in a variety of countries globally. Estimates of the number of small farmers in the world vary; however, it is generally agreed that half of the world's population depends on subsistence farming, around 40% of cultivatable land is worked by small farmers and some 60% of all farms are small-scale. This emphasizes the significance of small-scale farmers to agricultural production and food security. The structure of the course envisages the study of the following aspects: the significance of scale in farming and food supply systems; policy and small-scale farming in a range of country contexts; initiatives in small scale farming including (but not limited to) organics, urban agriculture, biodynamics, permaculture, regenerative agriculture; soil, sustainability and small-scale farming; global food supply – initiatives, innovations and potentials; economics and small-scale farming and global food production; ethics in food supply systems and in relation to 'scale' in agriculture; small scale farming – future prospects. Studying this course allows future specialists to evaluate the impact of small-scale agriculture and food on local food supply on a range of agricultural systems; critically evaluate the sustainability of small-scale farming and local food supply systems using appropriate indicators; appraise the current and potential contribution of small-scale and local food supply systems to local, regional and national food security. This course will be useful for students of various fields of knowledge and specialties, promoting their development of concepts about small farms and the global food supply.

The course is offered in a 3 ECTS.

Course structure

1. What do we mean by Small Scale Farming?
2. Agricultural Production and the Contribution of Small Holders
3. Organizing Principles and Innovations in Approaches to Managing Small Scale Farms
4. Soil, Sustainability and Small Scale Farming
5. Small Scale Farming in Urban and Peri-Urban contexts
6. Contract Farming and Small Scale Farming Businesses
7. Innovations in Alternative Food Systems: Direct Sales, Intermediated Markets, and Brands

Modul number:

Hours per week / Credits
2 SWS / 3 ECTS

Exam

Written examination

Business Management

PhD in Economics, Associate Professor Svitlana Lukash

Abstract

The Business Management course provides a comprehensive understanding of fundamental principles, theories, essential concepts, principles, and practical applications related to managing businesses effectively. Students will explore topics such as cost and revenue analysis, factors of production, personnel management, business ethics, and managerial analysis of economic activities. The course aims to equip learners with the knowledge and skills needed to make strategic decisions, optimize resources, and drive organizational success.

The course is offered in a 5 ECTS.

Course structure

1. Scientific and Economic Foundations of Business Management.
2. Concepts of Business Ethics.
3. Benchmarking in Business management.
4. Business Models and Business Modelling.
5. Factors of Production and Value.
6. Costs and Revenues Assumptions.
7. Fixed Assets: Essence and Effectiveness of Their Use.
8. Basic Aspects of the Economy of Labour Resources. Personas.
9. Personnel Management, Remuneration Systems.
10. Motivation Theory, Conflict Resolution, Leadership and Team Management.
11. Marketing Strategy.
12. Production and Operations Management.
13. Financial Management. Cash Flow Analysis.
14. Innovation Strategies and Business Development.
15. Risk Management and Entrepreneurship Challenges.

Modul number:

Hours per week / Credits

4 SWS / 5 ECTS

Exam

Written examination

Growth Marketing and Business Strategies

PhD in Economics, Associate Professor Svitlana Lukash

Abstract

The aim of this course is to provide students with the knowledge and skills necessary to develop and implement effective growth marketing strategies and strategic business plans. It aims to equip students with the ability to drive business growth through innovative marketing techniques, data-driven decision-making, and strategic planning.

The course is offered in a 5 ECTS.

Course structure

1. Introduction to Growth Marketing. Growth Mindset and Strategies.
2. Market Analysis and Research.
3. Customer Acquisition Strategies and Digital Marketing Channels.
4. Content Marketing Strategies.
5. Social Media Marketing for Growth.
6. Campaign Planning and Execution.
7. Marketing Analytics and Marketing Strategies for Growth.
8. Sales Strategies and Business Development.
9. Financial Strategies for Growth.
10. Entry Strategies for International Markets.
11. Business model canvas and strategic planning.
12. Digital Transformation and Technology Integration. AI-driven strategies.
13. Ethics in Growth Marketing. Sustainability and Responsible Growth
14. Leadership and Change Management.
15. Measuring and Evaluating Growth

Modul number:

Hours per week / Credits

4 SWS / 5 ECTS

Exam

Written examination

Investment Theory

D.Sc. in Economics, Professor Larysa Kalachevska

Abstract

Investment Theory is a foundational course designed to provide students with a comprehensive understanding of the principles and techniques essential for evaluating investment opportunities and making informed financial decisions. This course explores key concepts in investment analysis and decision-making, focusing on static and multiperiod profitability calculations, payment flows, periods, and cash flow management, as well as the principles of compounding interest and discounting. Additionally, it delves into profitability criteria in multiperiod investment calculations, including the significance of decision-making criteria and the application of Net Present Value (NPV) methodology. Through lectures, case studies, and practical exercises, students will develop the analytical skills necessary to assess investment opportunities, quantify risks, and optimize returns. Emphasis will be placed on applying theoretical concepts to real-world scenarios and understanding the implications of investment decisions on financial performance.

The course is offered in a 3 ECTS.

Course structure

1 Key principles

- 1.1 Static and multiperiod profitability calculations
- 1.2 Payment flows, periods and cash flow
- 1.3 Compounding interest and discounting
- 1.4 Present value

2 Profitability criteria in multiperiod investment calculations

- 2.1 Significance of decision-making criteria
- 2.2 Net Present Value (NPV)
- 2.3 Equivalent annuity
- 2.4 Internal rate of return
- 2.5 Payoff period
- 2.6 Benefit-Cost Ratio (BCR)
- 2.7 Net benefit-investment ratio (NBIR)
- 2.8 Comparing interpretations of the different profitability criteria

3 Sensitivity analyses

4 Differentiated method of determining cash flow

Modul number:

Hours per week / Credits

2 SWS / 3 ECTS

Exam

Written examination

Machinery Cost

Vadym Petrenko

Objectives of the course

The goal of the course is to provide the theoretical basis for decision-making in production and the subsequent illustration on specific practical examples. In this case, the course deals primarily with the issue of purchasing long-term means of production such as tractors. In the process, the question is addressed whether the long-term means of production should preferably be purchased or leased. With the example of such questions, the theoretical basics of economic decisions are illustrated and discussed. Subsequently the developed theoretical principles are applied to specific practical examples. The results are discussed and evaluated from the perspective of decision-makers. Additionally, the course is utilizing Moodle. For each module, there is time for questions and discussions in a virtual chat room scheduled, to which all users have access to. Next to acquiring theoretical knowledge, students will conduct a project based on the course content: students will calculate typical machinery combination of their country and presents the results.

Learning outcome:

- To accurately define costs, to explain cost categories and to apply the terms to typical examples of agriculture
- To define and apply machinery costs, procedural costs and comparative costs
- To calculate and appropriately interpret the total costs per year and costs per unit of output such as tractors hours or hectares
- To calculate the Minimum Extent of Utilization for machinery, equipment and typical agricultural means of production and to appropriately evaluate the results

further information: <https://ima.hswt.de/en/triesdorf-en/mooc-en>

Modul number: 951300050

Hours per week / Credits

2 SWS / 3-5 ECTS

Exam

The module is examined by a written exam 45 min (50%) and the presentation of the project (50%).

Interdisciplinary Group Research Project

Dr. Kateryna Tuzhyk, Carsten Hümmer

Objectives of the course/Learning outcome

Students are enabled to answer agricultural related questions in a scientific manner. During this course all steps of scientific work will be realized: starting with the formulation of a research question, stating a hypothesis, identification of suitable methods to answer proposed questions, data collection and “re-search”, summarizing and presenting results, and finally prepare a written document in paper format.

The following topics are proposed:

- Water-Food-Energy-Nexus,
- Principles of sustainable agriculture,
- Climate-Smart Agriculture,
- Caring about the “unseen” – soils and groundwater
- Agriculture in 2050

Course format: Seminar / working groups of 4-5 students

Modul number: 950900020

Hours per week / Credits

4 SWS / 5 ECTS

Exam

Project paper and oral presentation

Food Biotechnology and Quality

Prof. Dr. habil. agr. Dr. Ing. Dr. Iryna Smetanska

Objectives of the course/Learning outcome

The course provides overview of food processing technologies and food quality.

Recently, a variety of innovative techniques has been developed, based on advances in food technology. Particularly the modern technologies for the production of nutraceuticals, functional and customized food through the application of modified atmosphere storage, high-pressure and microwave processing, high voltage electric pulses, ultraviolet, intensive light and plasma treatments has been established. Topics on minimally processed food as well as innovative non-thermal technologies for food processing are represented in this course.

Over last years the interest of consumers and market in alternative meat and milk products, such as plant-based milk, plant protein products and cultured meat and milk is increasing tremendous. Therefore, the main techniques for production of plant-based products are described in this course.

Emerging technologies aim to develop sustainable ways for obtaining valuable products from in vitro cultures (cell, transformed root, and organ cultures), algae, moos, and fungi. They include numerous aspects as genetic resources, cultivation strategies, techniques for gene overexpression and targeted genome editing by CRISPR/Cas technology. Several lectures about this field of science and technology are also included in this course.

However, independent on food processing techniques, the issue of food quality and safety remains to be a priority issue for food producers and consumers. Therefore, during purposed course of lectures it will be given an overview on regulatory requirements related to food quality and safety including quality standards, principles of quality assurance, hazard analysis of critical control points, flow charts and identification of hazards and critical points and Nutrition Labelling.

During the seminar part students will learn to review technological tasks and exercise decision-making skills. This will improve team work and contribute to students' communication skills.

After this course students will be expected:

- to understand the processes, functions, constructions, and applications of technical equipment for food processing,
- to evaluate process parameters and estimate critical point in term of food quality and safety requirements
- to possess and be able to demonstrate knowledge in traditional and innovative bioprocessing methods and techniques.

After this course students will be able to use the acquired technical and methodological skills for the production of innovative food commodities with the required quality parameters.

Hours per week / Credits

4 SWS / 5 ECTS

Exam

- Presentation of individual tasks (Weighting 20%)
- Individual term work (ca. 15 pages) (Weighting 30%)
- Final exam (online, individual interview, apprx. 20 minutes) (Weighting 50%)

Production economics (master)

PhD, Associate Professor Nataliia Kovalenko

Abstract

The main aim of the proposed course is to get knowledge of objective laws, conditions, processes and specific features of economic activity and development of agriculture, agrarian trade, as well as acquiring skills for their practical application.

1. Knowledge of the methodical bases of the production economy
2. Ability to distinguish and assess important trends of development and production and economic problems of crop production
3. Ability to determine the natural and monetary data of the most important processes of agricultural production, discuss and critically evaluate the results of activities in the context of the entire enterprise, general economic and social development
4. Ability to apply computer information management systems

Course structure

1. Impact of climate change on agriculture in Ukraine
2. Fundamentals of production economics.
3. Methodology of Assessment of Farm Enterprises
4. Economic evaluation of the production of marketable plant production
5. Economic evaluation of the production of fodder crops
6. Economic evaluation of the production processes: dairy farming
7. Economic evaluation of the production processes: Cattle breeding (fattened bull, heifer).
8. Economic evaluation of the production processes: Sow breeding (piglets production).
9. Economic evaluation of the production processes: Fattening pigs.
10. Determination of the capital requirements for livestock and current assets.
11. Simplified planning of the enterprise's economic activity using software planning I.

Hours per week / Credits

4 hours of contact work / 5 ECTS

Exam

Written examination

Introduction to applied near-infrared spectroscopy (NIRS)

Dr. Olena Sobko

Aims:

The aim of the module is to introduce students from the Faculties of Agriculture, Food and Nutrition and Environmental Engineering to the physical-technical principles and application of NIRS sensors and to demonstrate the variety of possible applications in different subject areas.

The students have an overview of the potential applications in connection with water (water content of products), alcohols, sugar, oils, fats, protein compounds and other components of organic samples. Accordingly, there are many possible applications in agriculture, raw materials management, food processing, quality control, product monitoring, process control and monitoring.

Students are able to record, process and analyze spectral data.

Contents:

Basics of NIRS:

Physical-technical basics

Definition of light / spectra / parameters such as reflection, reflectance, absorption, transmission, resonance / camera types (resolutions)

1. Sensor technology

Designs / areas of application / manufacturers / interfaces and presentation of data

2. Data acquisition and processing

Filtering, smoothing, derivation / calculation of important indices e.g. NDVI, REIP / reference values and annotations / calculation of calibration curves with orange / validation, cross-validation, confusion matrix, accuracy, precision, RMSE

3. Applications & target values in agriculture and post-harvest production

a. Areas of application:

Plant stocks, soil properties; grain and maize (silage and grain utilization; animal feed; milk; meat

b. Target variables:

Biomass; nitrogen uptake; crop cover; nutrients manure (NPK), moisture; protein content; fat content and / or oil content; sugar content;

Elaboration of presentation on new measurement application.

Modul number: 960700010

Hours per week / Credits

2 SWS / 3 ECTS

Exam

Written exam (45 min)

Personal branding and social media strategies for business

Oksana Vitriak

Aims:

- Participants will be able to understand where to start building a personal brand (your brand as a specialist, business person or just a good person).
Why there needs to be a brand philosophy and what it is.
- They will be able to create and maintain social media. Participants will learn how to create photos and videos for brand promotion and how to write captions to promote their brand.

Contents:

- Branding basics for creation, brand philosophy
- The role of media & concrete planning
- Create and maintain social media
- Develop the right mindset
- Photo and video making for the for brand promotion in social media
- Develop a right captions for your brand promotion

Hours per week / Credits

4 SWS / 5 ECTS

Exam:

0.4 * In-class examination results + 0.6 * Online course results (project)

English for Studying, Working, and Living Abroad (B2.2)

Emma Phelan, Anna Tüchert, Vincenzo Spagnolo

Julius-Maximilians-Universität Würzburg

Abstract

This is an online skills course for students from all academic fields. This course is designed for the student that would like to go abroad to study and/or work and is oriented on the B2 level of the Common European Framework. “English for Studying, Working, and Living Abroad” will concentrate on covering letters, email communication and banking, housing/accommodation, and survival skills all with a touch of intercultural training. It is a task-based course where students learn to identify key vocabulary in job adverts and assess their skills using a SWOT (strengths, weaknesses, opportunities, and threats) analysis. The participants write a covering letter and improve email writing skills through:

- email register
- correct word usage

Furthermore, they improve intercultural skills through vocabulary and terminology in:

- banking
- finding accommodation
- arranging a medical appointment and going to the doctor

Course structure

1. Job Descriptions and Covering Letters
2. Email Communication
3. Banking/Housing/Accommodation and Dealing with Medical Appointments

Hours per week / Credits

2 SWS / 3 ECTS

Exam

Modular tests

German as a Foreign Language A1: German After English

German as a second foreign language –
a German course using the English language knowledge of the learners

Dr. Thomas Stahl
Universität Regensburg

Abstract

Based on tertiary language didactics, the course provides basic knowledge on the A1 level for learners of German who want to learn German quickly and efficiently with the help of their English skills. The focus is on receptive skills.

Course structure Module 1: Vocabulary

- Internationalisms and anglicisms
- Similar words, important differences
- Strategies for vocabulary learning Module 2: Grammar
- The verb in focus
- The noun in focus
- The adjective in focus Module 3: Reading comprehension
- Reading strategies
- Different text types e.g. advertisements, e-mails, articles Module 4: Typical everyday situation
- Travel
- Food
- At the university

Hours per week / Credits

2 SWS / 3 ECTS

Exam

Assessed tasks and module tests (online)

Deep Learning for Beginners

Prof. Dr. Thomas Meier
Friedrich-Alexander-Universität Erlangen-Nürnberg

Abstract

Deep Learning (DL) has attracted much interest in a wide range of applications such as image recognition, speech recognition, and artificial intelligence, both from academia and industry. In this course, you will learn the core elements of neural networks and deep learning, such as convolutional layers, activation and loss functions, and regularization techniques.

Course structure

1. Introduction
2. Signal Processing
3. Image Processing
4. Feedforward Networks
5. Loss and Optimization
6. Activations, Convolution and Pooling
7. Regularization
8. Common Practices
9. Architectures
10. Unsupervised Learning
11. Segmentation and Object Detection

Hours per week / Credits

2 SWS / 2,5 ECTS

Exam

Written examination

Advanced Business English (C1)

Prof. Dr. Thomas Steger, Dr. Thomas Stahl
Universität Regensburg

Abstract

This advanced English language course is designed for students of business, economics or related disciplines with the objective of improving their use of Business English for academic and professional purposes. It consists of five units focusing on listening, reading and writing skills. The content is based on real-world scenarios within a wide range of business contexts, generating functional language which can be instantly transferred to your academic or business setting.

Course structure Orientation

Unit 1: Leadership in Contemporary Business Unit 2: Culture in International Business

Unit 3: Digital Innovation

Unit 4: Strategic Branding and Financial Performance Unit 5: Succeeding in Business

Team Assignment

Thank you and Evaluation

Hours per week / Credits

2 SWS / 3 ECTS

Exam

The course assessment includes five unit tests (counts 50% of your final grade, to be completed in weeks 1-10) and one team assignment (counts 50% of your final grade, to be completed in weeks 11-14). For your team assignment, you will have to complete numerous activities together. All activities are based on course materials from our course.

English for Sustainable Technologies – Re-newable Energy, Smart Buildings and Electric Mobility (CEFR Level B2)

Introductory Course

Prof. Dr. Mona Riemenschneider, Bill Field
Hochschule für angewandte Wissenschaften Landshut

Abstract

This course covers the three topics of renewable energy, smart buildings, and e-mobility. The learners will gain a deeper understanding of these topics and their development in Germany, and, very importantly, improve their English skills as they relate to these subjects. Learners will use their listening, reading, writing and grammatical skills in completing the course units for all subjects.

Course structure Unit 1: Introduction

Module: Renewable Energy Unit 2: Solar Technologies Unit 3: Wind Technology Unit 4: Hydropower
Unit 5: Renewable Energy for the Future

Module: Smart Buildings Unit 6: Building Design

Unit 7: Building Management Systems Unit 8: Passive Buildings

Unit 9: Intelligent Workplaces and Dwellings

Module: Electric Mobility Unit 10: Hybrid Technology Unit 11: Electric-only Cars

Unit 12: Other Renewable-mobility Technologies Unit 13: The Future of Transport

Hours per week / Credits

2 SWS / 3 ECTS

Exam

Written examination

Business English Scenario Training BEST4Engineers

Prof. Dr. Sylvana Krauß
Technische Hochschule Aschaffenburg

Abstract

The online course Business English Scenario Training for Engineers (or in short BEST4Engineers) is designed for engineering students who want to acquire basic skills for writing e-mails, telephoning and business-related small talk situations. BEST4Engineers consists of two task-based scenarios with six units each. Every unit contains preliminary exercises in which the students gain a deeper understanding of the respective topic. The acquired skills are subsequently applied in their assignments.

Course structure

Scenario 1: A Technical Visit

1. Addressing Requests
2. Exchanging Contact Details
3. Fixing Appointments
4. Rescheduling Appointments
5. Enjoying Dinner Talk
6. Expressing Appreciation

Scenario 2: A Sales Situation

2. Finding Suitable Equipment
3. Talking Numbers
4. Visiting Trade Fairs
5. Calls for Offers and Procurement
6. Handling Complaints
7. Solving Problems

Hours per week / Credits

2 SWS / 2 ECTS

Exam

Written examination

SoundAdvice. A university training course for the pronunciation of American English

Dr. Gunter Lorenz
Friedrich-Alexander-Universität Erlangen-Nürnberg

Abstract

“SoundAdvice” is an intensive training course for the main features of the pronunciation of American English. The course was specifically designed for German-speaking English students who are familiar with the main theoretical concepts of English phonetics. Students from other fields with a high proficiency level of English (B2+), however, are perfectly welcome to join “SoundAdvice”, too. This online course serves as a learning tool for the pronunciation of American English; it seeks to support and strengthen the following areas of proficiency:

- accurate pronunciation
- self-monitoring and -correction
- reading skills/structuring longer text passages
- familiarity with authentic speech contexts and idiomacity
- spoken English fluency

Course Structure

- A. Learning to See the Bigger Picture
- B. Individual Sounds
- C. Intonation

Hours per week / Credits

2 SWS / 2.5 ECTS

Exam

Oral Examination

Data Collection Methods in the Social and Behavioral Sciences

Prof. Dr. Klaus Moser
Friedrich-Alexander-Universität Erlangen-Nürnberg

Abstract

This course provides students with a broad overview of data collection methods in the social and behavioral sciences. The goal is to prepare students to write a thesis in which the collection and/or evaluation of primary data on individuals, groups, or organizations plays a key role. Students will therefore learn where to find these methods and how to evaluate them, but will also gain insight into their application in scientific research. Furthermore, examples from HR, organizational psychology and consumer research will prepare them for using the methods appropriately in their future careers.

The course is offered in a 3 ECTS version and in a 6 ECTS version. You will receive more detailed information inside the course.

Course structure

- I. BACKGROUND
 - I.1 Basics of data collection in the social and behavioral sciences
 - I.2 The process of empirical research
- II. DATA COLLECTION METHODS IN THEORY AND PRACTICE
 - II.1 Interviewing I
 - II.2 Interviewing II
 - II.3 Rating, judging, comparing
 - II.4 Psychological testing I
 - II.5 Psychological testing II
 - II.6 Observation and simulation
 - II.7 Unobtrusive measures
 - II.8 Physiological measures
- III. LEGAL AND ETHICAL ASPECTS: HANDLING DATA RESPONSIBLY

Hours per week / Credits

2 SWS / 6 ECTS

Exam

Written examination for 3 ECTS

Written examination and case study elaboration for 6 ECTS

International Project Management B2

Prof. Dr. Mona Riemenschneider, Bill Field
Hochschule für angewandte Wissenschaften Landshut

Abstract

This course covers the four themes of Communication Media, Tools for International Project Management, Intercultural Conflicts/Challenges in an International Environment, and Project Management. The learner will gain a deeper understanding of these themes, their development in Germany, and very importantly, improve their English skills as they apply to these subjects. Learners will use their listening, reading, writing and grammatical skills in completing the course units for all subjects.

Course structure

1. Introduction
2. E-Mail/Informal Written
3. Presentations
4. Teleconferences/Telephoning
5. Software Tools
6. Rapid Prototyping
7. 3-D Printing
8. High and Low Context Cultures
9. Verbal and Non-verbal Communication
10. Dealing with Intercultural Conflicts
11. Documentation
12. Managing People
13. Managing Across Boarders

Hours per week / Credits

2 SWS / 2 ECTS

Exam

Written examination

Electronic Human Resources Management

Prof. Dr. Sven Laumer
Friedrich-Alexander-Universität Erlangen-Nürnberg

Abstract

The course deals with the management of one of the most important resources in a company: its employees. In addition to teaching the basics of Human Resources Management (HRM), the course focuses on the use and development of digital technologies and considers how digital work systems are changing HRM. The fundamentals of strategic and electronic human resources are discussed, the use of social media in HR is considered, data-driven approaches and their use in HR are addressed, and the challenges and opportunities of electronic human resources management (E-HRM) are discussed.

Course structure

1. Fundamentals of strategic and electronic HRM
 - The Digital HR Organization
 - Human Resources Information Systems
 - Workflow Management and HRM
2. Social Media
 - Enterprise Social Media and Network Analysis for HRM
 - Social Media, Employer Branding, and Gamification
3. Data-driven approaches and their use in HRM
 - People Analytics – Big Data, AI, and HRM
 - Recommender Systems
 - Chatbots in HRM
4. Challenges and opportunities of E-HRM
 - E-Performance, E-Learning, and employer development
 - Technology Acceptance

Hours per week / Credits

4 SWS / 6 ECTS

Exam

Written examination

Elementary Quantitative Risk Assessment

Prof. Dr. Rainer Göb
Julius-Maximilians-Universität Würzburg

Abstract

There are often considerable methodological deficits in risk management, for example when, in a popular but simplistic approach, risks are assessed as a mathematical product of probability of occurrence and impact of damage. If a very low probability and a very high impact of damage are used to quantify the current situation, this would result in a low to moderate risk. It is obvious that such risk measures are illusive. In practice, there are still considerable differences between existing risk management and effective risk management. Effective risk management therefore goes far beyond simplistic approaches and requires – in addition to a practiced risk culture in the company – a deeper understanding and correct use of quantitative risk assessment procedures. Quantitative assessment procedures and simulations based thereon can provide valid statements about a company's overall risk position (e.g., in the form of risk measures). Only then the company's capital requirements (= risk buffer) required for the risk situation can reasonably be determined. However, this requires that risk managers are also familiar with the necessary mathematical-statistical procedures. This challenge is addressed by the present course, which teaches these competencies at a basic level for bachelor students.

Course structure

Learning module 1: Concepts and terminology of quantitative risk modeling. Learning module 2: Mathematical and Statistical Foundations of Risk Modelling

- A) Data
- B) Mathematical and statistical principles of risk modelling
- C) Distribution parameters as risk indicators
- D) Right tail behaviour of distributions Learning module 3 | Stochastic Risk Measures
 - A) The purpose of stochastic risk measures
 - B) The Value at Risk
 - C) Conditional Value at Risk (CVaR)

Hours per week / Credits

2 SWS / 3 ECTS

Exam

Written examination

Global Retail Logistics

Prof. Dr.-Ing. Evi Hartmann
Friedrich-Alexander-Universität Erlangen-Nürnberg

Abstract

This course offers specific insights on the logistic processes in the global retail industry. Upon completion of the course, the students should understand the peculiarities of logistics for fast moving consumer goods. The course consists of ten lectures, which are enriched by case studies, additional readings as well as exercises and tests.

Course structure

1. Overview
2. Characteristics & basics
3. Trends & challenges
4. Point of sale & E-Commerce
5. Interfaces
6. Load units & transport logistics
7. Cross docking
8. Warehousing & distribution
9. Food supply chain
10. Sustainability

Hours per week / Credits

4 SWS / 6 ECTS

Exam

Written examination

International Marketing

Prof. Dr. Dirk Holtbrügge
Friedrich-Alexander-Universität Erlangen-Nürnberg

Abstract

The participants acquire detailed expertise in the field of international marketing. Effective international marketing is increasingly important for companies due to rising international connectivity between countries and companies, and companies' need to grow by selling their products and services globally. They can understand, explain, reflect, and apply the theories, concepts, and terminology of the field and are familiar with empirical studies in the field of international marketing. The participants understand the challenges of international marketing and can independently develop solutions for problems to questions of standardization and differentiation in an international context, of international market entry, and of the design of the marketing mix in an international context. They also understand these aspects with regard to different industries (B2B, B2C) and different countries. Special attention is paid to the transfer of theoretical contents to practical examples. Therefore, different country and company case studies are included in the form of video interviews. The participants are provided with interesting insights into the international marketing activities of several international companies headquartered in the Nürnberg Metropolitan Area.

Course structure

- | | |
|--|--|
| <ul style="list-style-type: none">1. Challenges and Opportunities of International Marketing2. International Market ResearchIII. Strategies3. International Market Entry Strategies4. Standardization vs. Differentiation of International MarketingIV. Policies: International Marketing Mix5. International Product Policy6. International Price Policy7. International Placement Policy8. International Promotion Policy | <p>I. Foundations</p> <p>II. Methods</p> |
|--|--|

Hours per week / Credits

2 SWS / 5-6 ECTS

Exam

Seminar paper

International Supply Chain Management

Prof. Dr.-Ing. Jörg Franke
Friedrich-Alexander-Universität Erlangen-Nürnberg

Abstract

Supply chain management “[...] encompasses the planning and management of all activities involved in sourcing and procurement, conversion, and all logistics management activities. Importantly, it also includes coordination and collaboration with channel partners [...]. In essence, Supply Chain Management integrates supply and demand management within and across companies.”

Course structure

1. Integrated Logistics, Procurement, Materials Management, and Production
2. Material Inventory and Material Requirements in the Enterprise
3. Strategic Procurement
4. Management of Procurement and Purchasing
5. In-Plant Material Flow and Production Systems
6. Distribution Logistics, Global Tracking and Tracing
7. Modes of Transport in International Logistics
8. Disposal Logistics
9. Logistics Controlling
10. Network Design in Supply Chains
11. Global Logistic Structures and Supply Chains
12. IT Systems in Supply Chain Management
13. Sustainable Supply Chain Management

Hours per week / Credits

4 SWS / 5 ECTS

Exam

Written examination

Fundamentals of Strategic Management

A Cross-Sectoral Perspective

Prof. Dr. Markus Westner
Ostbayerische Technische Hochschule Regensburg

Abstract

In this course students acquire fundamental knowledge about key aspects of strategic management. The course can be attended without any prerequisites although having attended an introduction course to general management ("Allgemeine Betriebswirtschaftslehre") can be helpful. The course covers fundamental aspects of strategic management such as main terms, the strategic management process and the corporate environment in which strategic management happens. The subsequent chapters then cover strategic analysis followed by strategy formulation and strategy implementation.

Course structure

1. Fundamentals
 - What is Strategy: Definition of Strategy; Competitive Advantage; Industry vs. Firm Effects; Stakeholder Impact; Stakeholder Strategy
 - Strategic Management: Vision, Mission, and Values; Strategic Management Process; Leadership vs. Management
2. Strategic Analysis
 - External Analysis: PESTEL; the Five Forces Model; Industry Dynamics; Strategic Groups
 - Internal Analysis: Core Competencies; The Resource-Based View; Dynamic Capabilities; Value Chain Analysis
 - Joint analysis: Competitive Advantage; Firm Performance; Business Models
3. Strategy Formulation
 - Business Strategy: Differentiation; Cost Leadership; Blue Ocean Strategy; Innovation; Entrepreneurship
 - Corporate Strategy: Vertical Integration; Diversification; Strategic Alliances; Mergers and Acquisitions; Global Strategy
4. Strategy Implementation
 - Organizational Design: Structure; Culture; Control; Balanced Scorecard
 - Corporate Governance: Values; Governance; Ethics

Hours per week / Credits

4 SWS / 5 ECTS

Exam

Written examination

Tech Writing B2: Computer Science/IT

Dr. Gunter Lorenz/Prof. Dr. Michael Kohlhase
Friedrich-Alexander-Universität Erlangen-Nürnberg

Abstract

Tech Writing B2: Computer Science/IT is a course developed specifically for students from computer science and IT backgrounds who wish to hone their technical English writing skills.

Course structure

Skills to learn were derived from real-world applications specific to computer scientists for the purpose of improving explanations, sentence and written structure, logic in writing, maintaining objectivity and precision, using online tools for the writing process and data analysis. Further, a brief review of hypotheticals and the appropriateness of active versus passive voice in technical writing is covered.

These topics are covered over the course of four separate modules. The first addresses deepfake technology, which exemplified legitimate versus illegitimate sources. Here, students are introduced to hypotheticals as a review. Next, particularly problematic punctuation in English – commas, semicolons and hyphens – are reviewed. Finally, the module concludes with a guided tour of online writing resources to ease the writing process.

In module 2, students will learn how to write software documentation as well as the appropriate phraseology for this text type. This is accompanied by how students can best draft and revise their written work. Identifying and extracting collocations for students personal expansion of their vocabulary is another core skill of module 2. Finally, typical pitfalls in academic and technical writing are introduced so that students can more closely adhere to conventions of computer science texts. The third module covers data mediation, which involves describing, analyzing and interpreting data in line graphs, bar charts and pie charts. Relevant vocabulary and phraseology are presented and practiced at length there. Further, describing how code works by using pseudocode is a core skill this module covers. Typical structures students can employ and relevant vocabulary for these structures are taught. Finally, sign-posting devices are introduced as a way to ensure structural and logical development in students' writing.

The fourth and final module primarily covers paraphrasing, summarizing and sentence reformulation. Being able to rewrite what others have written but in your own words is a skill required both in research and in professional contexts. It is additionally important for ensuring that others' work is not plagiarized. This skill is complemented by learning how to diversify sentence structure through sign-posting devices and advanced language expressions.

Hours per week / Credits

2 SWS / 2,5 ECTS

Exam Exercises

Design Thinking

Customer-centered Approach to Solving Complex Problems

Prof. Dr. Thomas Groll

Ostbayerische Technische Hochschule Regensburg

Abstract

In this course, you will learn basic theories, concepts, and methods of design thinking. With practical case studies and exercises, you will gain insights into various approaches and applications of design thinking in different industries and functional areas. The course is interdisciplinary and therefore suitable for students of many disciplines. Previous knowledge is not assumed.

You will learn central terms, the historical development, and the necessity based on changing frameworks. Based on the basics, in the second chapter you will get an insight into the theory of Design Thinking, which includes concepts, rules, and principles as well as performance areas. We will then introduce you to the Design Thinking process, which consists of five steps: Emphasize, Define, Ideate, Prototype, and Test. These five steps will be deepened and practiced in chapters three through eight. In addition to the most common methods and tools, you will also gain insights into practical applications for each chapter. At the end of the course, in chapter nine, you will reflect on what you have learned and connect it to related approaches.

Course structure

1. Introduction
2. Theoretical foundations
3. The Design Thinking Process
4. Empathize
5. Define
6. Ideate
7. Prototype
8. Test
9. Reflection and Outlook

Hours per week / Credits

2 SWS / 3 ECTS

Exam

Written examination

Basics Sustainability

Prof. Dr. Robert Feicht
Technische Hochschule Deggendorf

Abstract

The consistent overstepping of planetary boundaries by humans is the cause of many environmental problems and social tensions regionally, globally and between generations. For sustainable development in the sense of a fair distribution of resources, an interdisciplinary approach to solutions and the consideration of the interrelationships of social, ecological and economic factors and actors are indispensable. The course "Basics Sustainability" teaches the most important sustainability models and analysis methods for sustainable development. From environmental and resource economics, basic methods for a fair distribution of environmental goods as well as environmental policy instruments and tools for sustainable spatial design are presented. With regard to materiality, the goal is the use of renewable raw materials for the production of materials and products, the recycling or pollutant-free landfilling of existing products and materials, and the optimisation of natural processes from a material and energy point of view. Against the background of climate change, students learn about current technologies and developments and assess measures in the field of renewable energy systems in the context of grid expansion, energy distribution and storage technologies.

Course structure

1. General principles of sustainability
2. Economic framework for sustainability
3. Materiality and sustainability
4. Energy and sustainability

Hours per week / Credits

4 SWS / 5 ECTS

Exam

Written examination

Fundamentals of Intercultural Communication

Prof. Dr. Rainer Liedtke / PD Dr. Wieland Kranich / Dr. Thomas Stahl Universität Regensburg
(University of Regensburg)

Abstract

Due to the global division of labor and mobility, increasing global tourism as well as the global dimension of digital communication, there is more and more contact between people of different cultures. In different areas, whether in personal experience, in social networks or in international relations, more and more intercultural encounters are taking place. At the same time, in today's professional contexts it is often expected to be able to communicate effectively and appropriately with people from different cultures. Intercultural communication skills are becoming increasingly important in our globalized world, and this key skill is increasingly required and sought after in the job market. The course offers the opportunity to become familiar with the fundamentals of intercultural communication. The course will introduce students to key concepts of intercultural communication and enable them to apply them both in an academic context and in future fields of work. Students will develop their awareness of the challenges and opportunities of intercultural communication. A major goal is to enable students to independently develop their communication skills and their competence to act in cross-cultural situations.

Overall, the course is designed to lay the terminological and conceptual basis for dealing with interculturality in a professional manner in both academic and professional contexts and to foster a key competency for working in an international context.

Throughout, the course will also offer suggestions for in-depth study and independent further work, as well as links to practical training opportunities.

Course structure

1. Introductory Module (organization)
2. Culture(s)
3. Intercultural Encounters
4. Intercultural Interactions
5. Intercultural Communication
6. Applications in academic and professional life
7. Final Module (review and outlook)

Hours per week / Credits 2 SWS / 5 ECTS

Exam Online test

Global Education

Focus on languages

Prof. Dr. Heiner Böttger
Katholische Universität Eichstätt-Ingolstadt

Abstract

GE as a holistic concept provides pedagogic as well as didactical answers to questions on globalization, cultural diversity and the development of the world's society. The roles languages and language acquisition play in this context will be the main focus of the online seminar, which will be held in English only.

Course structure

Unit 1: Global (Language) Skills Unit 2: Media Education

Unit 3: Conflict Resolution

Unit 4: Sustainability Education Unit 5: Workshop I

Unit 6: Workshop I

Unit 7: Global Citizenship

Unit 8: Human Rights & Responsibilities Unit 9: Transcultural Education

Unit 10: Workshop II Unit 11: Workshop II

Hours per week / Credits

2 SWS / 4 ECTS

Exam Portfolio