International Summer Program (ISP)

Track A: Engineering
Track B: German and European Studies
Track C: Business and Entrepreneurship

Course Catalog 2021
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German Language Course

(Elective class for all tracks)

Lecturers

Friedrich Haupt

Time

Wednesdays, 2:00 pm – 6:00 pm

Location & Course Materials

The following Zoom link is used for the course:

https://tu-dortmund.zoom.us/j/91872032229?pwd=UkNlekRGQkt5alR0WU5DHQwSlZ3Zz09

(Meeting-ID: 918 7203 2229, Kenncode: 351821)

Course Description

For beginners of German we will offer the German A1.1 course. This class focuses on the introduction to the German language, simple oral and written communication, and basic German grammar. The following competences are imparted: Students who pass the course successfully will be able to provide information about themselves and their country of origin; to greet and to say goodbye; to talk about their family; to express their condition, preferences and resentments; to talk about their hobbies and leisure time; to make and understand time designations; to name prices and quantities; to name things of everyday life (groceries, furniture); to phrase simple
German Language Course

questions; to talk about simple activities and events in the past tense.

The textbook "Schritte plus: Deutsch als Fremdsprache" (1 through 6 according to the course level) will be used in class.

Credits

The German language course meets once a week throughout the 7 weeks of the lecture period. This corresponds to 4.5 ECTS credit points or 3 credit hours.

Exam

There will be a final written or oral exam.
Germany – Politics, Culture and Society

(Elective class for all tracks)

Lecturers

Iris-Aya Laemmerhirt

Time

Mondays, 12:00 pm (noon) – 2:00 pm
starts on June 7th

Location & Course Materials

Information regarding the organization of the course and course materials can be found in Moodle:

https://moodle.tu-dortmund.de/course/view.php?id=28729

Enrollment key: Berlin

Aim of Lecture

The German culture course “Germany – Politics, Culture and Society” is designed to introduce students to Germany’s cultural landscapes and political life. You will gain insights into your host country’s past and present and will be encouraged to contribute your own first-hand experiences to class discussions.

Course Description

The compact seminar covers the following topics:

- General introduction to Germany
Germany – Politics, Culture and Society

- Topic specific workshops on German politics (including short student presentations)
- German history before and after World War II, including reunification (the material includes nonfiction, historical texts and visual material)
- German literature (short overview and some examples)
- German culture (including German food culture, sports, music)
- Migration in Germany: introduction to the topic; discussion of migration including a contemporary German film on the topic
- The Ruhr Area (focus on this specific region, its history and culture)

This course is a mandatory seminar for students who take classes exclusively from Track A – Engineering. If you attend classes from Track B – German and European Studies, you may choose whether to take part in this course. You will meet on two separate days at the beginning and at the end of the program for one day of compact seminar each.

Requirements
Interest in Germany.

Credits
The course will be taught 2 hours/week over a partial semester. This corresponds to 1 hours/semester-week or 1.5 ECTS credits.
Part I:
Track A – Engineering
Chapter 1: Biochemical and Chemical Engineering
Chapter 1:

Biochemical and Chemical Engineering

1.1. Dynamic Simulation

Lecturers

Prof. Dr.-Ing. Sebastian Engell
M.Sc. Jens Ehlhardt
M.Sc. Robin Semrau

Time

Mondays, 3:00 pm – 6:00 pm

Location & Course Materials

Information regarding the organization of the course and course materials can be found in Moodle:

https://moodle.tu-dortmund.de/enrol/index.php?id=28556

Aim of Lecture

The aim of the course is that the student obtains an understanding how dynamic process simulators work and is able to formulate, solve and analyze problems in advanced dynamic process simulators.

Lecture Content

The course dynamic simulation teaches the theoretical and practical use of advanced dynamic process simulators. The software used is gPROMS, a commercial equation-oriented modeling and optimization framework, which is widely used in the chemical industry. In order to teach the students the handling and implementation in gPROMS, the following topics are dealt with:
Chapter 1:

Biochemical and Chemical Engineering

- Basics of numerical mathematics:
  - Types of dynamic systems
  - Numerical stability
  - Numerical solution of ODEs
- Basics of gPROMS
  - Implementation of basic models
  - Solving basic models in gPROMS
- Object oriented programming in gPROMS
  - Theory of object oriented programming
  - Realization in gPROMS
- Logical conditions and scheduling in gPROMS
- Numerical solutions of partial differential equations
  - Discretization methods
  - Initial and boundary conditions
- Implementation of partial differential equations in gPROMS
- Dynamic optimization
  - Basics of optimization theory
  - Solving of dynamic optimization problems
  - Dynamic optimization of chemical processes in gPROMS

Requirements

The students should be able to derive models of chemical processes and to understand given process models.

Credits

The course will be taught 3 hours/week over a partial semester. This corresponds to 1.5 hours/semester-week or 1.5 ECTS credits.
Chapter 1:

Biochemical and Chemical Engineering

Exam

Written (computer-based) or oral exam.

Website

Chapter 1:

Biochemical and Chemical Engineering

1.2. Logistics of Chemical Production Processes

Lecturers

Dr.-Ing. Christian Sonntag
M.Sc. Christian Klanke

Time

Thursdays, 2:15 pm – 3:45 pm
Fridays, 8:00 am – 9:30 am

Location & Course Materials

Information regarding the organization of the course and course materials can be found in Moodle:

https://moodle.tu-dortmund.de/enrol/index.php?id=27480

Aim of Lecture

The students obtain an overview of supply chain management and planning, scheduling problems in the chemical industry, techniques and tools for modeling as well as simulation and optimization. These include discrete event simulation, equation-based modeling, mixed-integer linear programming, heuristic optimization methods as well as modeling and optimization using timed automata.

The students will be enabled to identify logistic problems, to select suitable tools and techniques for simulation and optimization as well as to apply them to real-world problems.
Chapter 1:

Biochemical and Chemical Engineering

Lecture Content

1. Introduction to batch processes and supply chain management
2. Discrete event simulation: problem abstraction, classification, queuing policies, random number generation, probability distributions
3. Scheduling: Gantt charts, terminology and generic problem representation, machine environments, state task networks (STN), resource task networks (RTN), classification of batch scheduling problems, uniform discrete and non-uniform continuous time representation, campaign and moving horizon scheduling
4. Linear programming: properties of linear programs, graphical method, simplex method
5. Mixed Integer Linear Programming:
   Integer and binary variables, branch and bound algorithm, concept of relaxation, concept of convex hull, search algorithms
6. Modeling: modeling with binary variables, contingent decisions, big “M” constraints, case-study: production of expandable polystyrene (EPS)
7. Heuristic optimization: exact and heuristic optimization, heuristic algorithms, meta heuristic algorithms, classification of search techniques
8. Scheduling with timed automata: comparison of MI(N)LP and TA, TA modeling, semantics, reachability analysis, reduction techniques, reactive scheduling
Chapter 1:

Biochemical and Chemical Engineering

Tutorial and Laboratory Contents

1. Paper-based supply chain management game
   Bullwhip effect, decisions with limited information
2. Discrete event simulation with INOSIM Professional
   (computer-based): recipe driven simulation of a paint factory
3. Production scheduling with Schedule Pro and Lekin
   (computer-based): dispatching rules, impact of
4. Sequence-dependent changeovers, campaign scheduling
5. Mixed Integer Linear Programming (paper-based):
   modeling and solution of MILPs, graphical solution, branch and bound algorithm
6. Modeling and Optimization with AIMMS (computer-based):
   building of graphical user interface, economic optimization of EPS production
7. Timed Automata Scheduling with TAOpt (computer-based)

Requirements

Higher mathematic course.

Credits

The course will be taught 4 hours/week over a partial semester. This corresponds to 2 hours/semester-week or 3 ECTS credits.

Exam

Written or oral final exam.
Chapter 1:

Biochemical and Chemical Engineering

Recommended Reading


Website

Chapter 1:

Biochemical and Chemical Engineering

1.3. Bubbles and Drops in Chemical and Biochemical Processes

Lecturers

Prof. Dr.-Ing. Norbert Kockmann
M.Sc. Alexander Behr

Time

Wednesdays, 10:00 am – 2:00 pm

Location & Course Materials

Information regarding the organization of the course and course materials can be found in Moodle:

https://moodle.tu-dortmund.de/enrol/index.php?id=3874

Aim of Lecture

Methods of generation, application and basics of discrete multiphase systems

Lecture Content

Chapter 1:
Biochemical and Chemical Engineering

Requirements
Basic knowledge in Fluid Mechanics.

Tutorials
Calculation of typical applications in process engineering.

Laboratory
Demonstration of capillary flow and two phase columns.

Credits
The course will be taught 4 hours/week over a partial semester. This corresponds to 2 hours/semester-week or 3 ECTS credits.

Exam
Written or oral final exam.

Recommended Reading
All slides presented, will be given to attendants of the course together with recommendations of the literature.

Website
Chapter 1:

Biochemical and Chemical Engineering

1.4. Essentials of Micro Process Engineering

Lecturers

Prof. Dr.-Ing. Norbert Kockmann
M.Sc. Aljoscha Frede

Time

Thursdays, 12:00 pm (noon) – 3:30 pm

Location & Course Materials

Information regarding the organization of the course and course materials can be found in Moodle:

https://moodle.tu-dortmund.de/enrol/index.php?id=19807

Lecture Content

Micro-structured apparatuses allow intensified processes with excellent heat transfer, fast mixing and continuous process control. Applications in chemistry, analytics, process engineering and energy technology are covered. Special attention is given to single-phase and multi-phase flows, micromixers, mass and heat transfer, micro heat exchangers, microcontactors, chemical reactions, micro-reactors, continuous production processes and various applications. Manufacturing and design, application, laboratory and miniplant equipment, process intensification.

Requirements

Basic knowledge in Fluid Mechanics.
Chapter 1: Biochemical and Chemical Engineering

Credits
The course will be taught 4 hours/week over a partial semester. This corresponds to 2 hours/semester-week or 3 ECTS credits.

Exam
Written or oral final exam.

Recommended Reading
All slides presented, will be given to attendants of the course together with recommendations of the literature.

Website
Chapter 2: Automation and Robotics

Chapter 2: Automation and Robotics
Chapter 2: Automation and Robotics

2.1. Single-Loop and Multi-Loop Controller Design

Lecturers

Prof. Dr.-Ing. Sebastian Engell
M.Sc. Yehia Abdelsalam
M.Sc. Afaq Ahmad

Time

Thursdays, 2:15 pm – 3:45 pm
Fridays, 8:00 am – 9:30 am
Starting on June 10th, 2021

Location & Course Materials

Information regarding the organization of the course and course materials can be found in Moodle:

https://moodle.tu-dortmund.de/enrol/index.php?id=28636
Chapter 2: 
Automation and Robotics

Lecture Content

- Specification of controller design tasks, design using frequency response approximation, performance limitations in SISO control loops
- I/O-system description of multivariable systems, poles, zeros, zero directions, stability criteria
- Classical Design Techniques: decoupling, sequential loop closure, approximate decoupling, multivariable frequency response approximation, robustness
- Control Structure Selection: Static and dynamic controllability analysis, plant directionality, relative gain array, computation of the attainable performance

Aim of Lecture

The students can design multivariable controllers for chemical and biochemical processes based on input-output descriptions. They are aware of the limitations of controller performance in the scalar and in the multivariable case and of the influence of plant-model mismatch on stability and controller performance. They can apply modern tools to the selection of control structures.

Requirements

Basic knowledge in single loop controller design for plants with linear dynamics. The concepts of transfer functions and frequency responses should be known.
Chapter 2:

Automation and Robotics

Credits
The course will be taught 4 hours/week over a partial semester. This corresponds to 2 hours/semester-week or 2.5 ECTS credits.

Exam
Written or oral exam.

Website
2.2. Process Optimization

Lecturers

Prof. Dr.-Ing. Sergio Lucia
M.Sc. Benjamin Karg
M.Sc. Felix Fiedler

Time

Mondays, 8:00 am – 10:00 am (Lecture)
Tuesdays, 10:00 am – 12:00 pm (noon) (Tutorial)

Location & Course Materials

Information regarding the organization of the course and course materials can be found in Moodle:

https://moodle.tu-dortmund.de/enrol/index.php?id=28386

Aim of Lecture

At the end of the lecture the students are capable to solve different (industrially relevant) types of optimization problems.

Requirements

Basic Mathematics (linear algebra, functional analysis), basic knowledge of differential equations and basic knowledge of MATLAB.
Chapter 2:

Automation and Robotics

Lecture Content

- Introduction to mathematical optimization, types of optimization problems, basics of convex analysis
- Scalar optimization problems: definition and properties, optimality conditions, solution methods (interval bracketing, golden-section method, steepest-descent method, secant method, Newton method), convergence, applications
- Multidimensional optimization problems: definition and properties, optimality conditions, solution methods (simplex method, Nelder-Mead method, steepest-descent method, quasi-Newton methods, Newton method, conjugate gradient method), line search, convergence, applications
- Metaheuristics search: definition and properties, solution methods (simulated annealing, tabu search, evolutionary algorithms, applications
- Constrained optimization problems: definition and properties, convexity, optimality conditions, KKT conditions, duality principle, solution methods (Newton method, generalized reduced gradient method, active set method, interior-point methods, sequential quadratic programming), sensitivity analysis, applications
- Linear programming: definition and properties, applications, optimality conditions, duality principle, solution methods (Dantzig’s simplex algorithm, interior-point methods)
- Quadratic programming: applications, optimality conditions, solution methods, Introduction to Linear Model Predictive Control
- Dynamic optimization problems: definition and properties, solution methods (sequential, simultaneous and multiple
Chapter 2:

Automation and Robotics

shooting techniques), applications, extensions to Nonlinear Model Predictive Control

Tutorials

Applications of the methods presented in the lectures are realized on exemplary case studies related to processing industries and other engineering domains in the computer-based tutorial sessions using MATLAB.

There will be two optional computer-based tutorials. Attendance in these tutorials is not mandatory, but strongly recommended and will be awarded with extra credits (if the course is completed successfully).

Credits

The course will be taught 4 hours/week over a partial semester. This corresponds to 2 hours/semester-week or 3 ECTS credits.

4 ECTS credits will be given if the two optional computer-based tutorials are attended.

Exam

Written or oral exam, closed book.
Chapter 2: Automation and Robotics

Recommended Reading

Slides presented at the lecture will be handed out to attendants of the course. The course covers selected topics from the following standard textbooks:


Website

Chapter 2:

Automation and Robotics

2.3. Data-Based Dynamic Modeling

Lecturers

Prof. Dr.-Ing. Sebastian Engell
M.Sc. Pourya Azadi
M.Sc. Filippo Tamagnini
M.Sc. Joschka Winz

Time

Wednesdays, 8:30 am – 10:00 am
Thursdays, 3:45 pm – 5:15 pm

Location & Course Materials

Information regarding the organization of the course and course materials can be found in Moodle:

https://moodle.tu-dortmund.de/enrol/index.php?id=27298

Aim of Lecture

- Concepts of models, which can be identified from data
- Judging the quality and the limitations of data-based models
- Theory and basic calculations of the z-transformation

The students can identify the dominant dynamics of a process from step responses and can apply modern methods and algorithms to identify the parameters of linear process models from measured data. The students know the concept of the z-transformation. They
know the structure of nonlinear black box models and can judge the quality and the limitations of data-based models.

Requirements
The students should know basic concept of the Laplace-transformation and transfer functions.

Lecture Content
This lecture deals with different linear and non-linear black-box models.

The identification of the parameters of these models is the first topic, beginning with the identification of simple models from step responses. The goal here is to find a model of a system by looking at its step response. Stable or unstable systems, systems with over- and/or undershoot or oscillating systems can be modeled by simple transfer functions in the Laplace-domain. Methods like Kupfmüller or Schwarze can be applied to given step responses. The identifiability of poles and zeros of transfer functions also depends on their position in the complex plane.

The next types of models, which are covered in this lecture, are linear transfer functions in the (sampled) z-domain. An introduction to sampling and problems which arise from sampling are discussed (e.g. Shannon theorem). The z-transformation is introduced and calculation rules e.g. for inverse transformations are discussed and applied. The relation between transfer functions in the s- and z-domains (position of the poles, transformation) is discussed.

An important class of black-box models is described as prediction error methods. The theory behind ARX, ARMAX and OE models is
Chapter 2:

Automation and Robotics

explained in detail. Different methods for the numerical parameter estimation (linear and nonlinear numerical least squares estimation) are discussed. The capability of representing a systems behavior by such models is highly dependent on the model order. Accuracy and overfitting are discussed.

The last part is about modeling using nonlinear black box models (perceptron neural nets, radial-basis-function nets). Concepts of training and the usage of neural networks as dynamic models are introduced. The quality of neural net models is discussed.

Tutorials

The lectures are supported by tutorials, in which the concepts are applied. Some of the tutorials are computer-based and are carried out in a computer lab. The tutorial contents are listed below:

- Step response identification (Methods of Kupfmüller, Strejc and Schwarze)
- Computer lab: step response identification (validation of graphical methods / Optimization-based step response identification (with MATLAB))
- Discrete-time systems / z-Transform
- Computer lab: ARX parameter estimation (with MATLAB)
- Computer lab: prediction error methods (with MATLAB)
- Non-linear black box modeling
Credits
The course will be taught 4 hours/week over a partial semester. This corresponds to 2 hours/semester-week or 2.5 ECTS credits.

Exam
The students are graded with an assignment (15%) and one written or oral exam (85%). The assignment is an application example, which has to be solved using a computer. The solution has to be described and submitted.

Website
Chapter 2:

Automation and Robotics

2.4. Cyber-Physical System Fundamentals

Lecturers

Prof. Dr. Jian-Jia Chen

Dr. Ing. Kuan-Hsun Chen

Time

Lecture: Fridays, 10:15 am – 11:45 am

Tutorials: Tuesdays, 10:00 am – 11:00 am OR

Wednesdays, 10:00 am – 11:00 am OR

Wednesdays, 11:00 am – 12:00 pm (noon)

Location & Course Materials

Information regarding the organization of the course and course materials can be found in Moodle:

https://moodle.tu-dortmund.de/enrol/index.php?id=26340#section-0

Aim of Lecture

The aim of this course is to provide an overview over fundamental techniques of designing embedded systems (information processing systems embedded into products such as telecommunication systems, vehicles or robots). At the end of the course, the students will be able to put the different areas of embedded systems into perspective and to understand more specialized topics, such as timing predictability, modeling, scheduling, or performance evaluation.
Chapter 2:

Automation and Robotics

Lecture Content

The compact seminar covers the following topics:

Introduction of Cyber-Physical Systems

- Motivation, application areas and challenges in design
- Specifications and modeling
- Models of computation (i.e. state charts, SDK, dataflow, petri nets, discrete event modeling)
- CPS-hardware: discretization, memory systems, sampling theory and signal converter
- System software: real-time operating systems, resource access protocols and middleware
- Evaluation and validation: multi-objective optimization, real-time calculus, dependability analysis
- Application mapping: scheduling, dependency and design space exploration

The course is organized as an inverted classroom. Students are asked to watch the lecture at home and do the theoretical exercises together with the lecturer in the classroom and the practical exercises in lab sessions. The practical exercises can be replaced by the virtual exercises if it is necessary. There will be lab assignments to let students get familiar with the modeling tools, embedded hardware platforms.

The course on cyber-physical systems fundamentals can be seen on youtube as well:

http://www.youtube.com/user/cyphysystems
Chapter 2: Automation and Robotics

Requirements
Basic education in computer science or computer engineering; we assume that students are familiar with at least one programming language (preferably C/C++ or Java) and do understand computer structures (at the level of Hennessy/Patterson: Computer Structures), finite state machines, NP completeness, simple electronic circuits and systems of linear equations. Typically, we expect students to be third year undergraduates or graduate students. EE or ME students should study the above subjects before attending the course.

Tutorials
1.5 hrs per week. The content of laboratory can be itemized as follows:

- StateChart Tutorial and Models of Computation (3 weeks)
- WCET analysis: Tools and ILP (2 weeks)
- Robotic Application and OSEK Standard on LEGO EV3 (3 weeks)

Credits
The lecture/tutorial will be taught 4 hours/ semester-week over a partial semester (+1.5 hours laboratory) which corresponds to 6 ECTS credits.
Exam
To participate in the exam, the students have to pass at least 50% of total points in each lab session. In 2021, there will be a written or an oral exam for ISP students.

Recommended Reading

Website
https://daes.cs.tu-dortmund.de/teaching/courses/ss2021/cyber-physical-system-fundamentals-cpsf/
Chapter 3: Applied Mathematics
3.1. Intensive Course in Statistics

Lecturers

Prof. Dr. Markus Pauly
Dr. Marc Ditzhaus

Time

Lecture: Wednesdays & Thursdays: 12:00 pm (noon) – 2:00 pm
Tutorial: Wednesdays: 10:00 am – 12:00 pm (noon)

Location & Course Materials

Information regarding the organization of the course and course materials can be found in Moodle

https://moodle.tu-dortmund.de/enrol/index.php?id=26502

Aim of Lecture

The course gives an introduction to statistical concepts that are useful for research projects in various fields of application and areas of science.

Lecture Content

Table of contents:

1. Introduction (random experiments, random variables, sample space)
2. Empirical distributions and exploratory data analysis (frequency tables, bar charts, histograms, distribution characteristics)
3. Probability theory (probability, conditional probability, independence, total probability, Bayes rule)
4. Random variables and their distribution (discrete distributions (Uniform, Bernoulli, Binomial, Hypergeometric, Poisson), continuous distributions (Uniform, Normal), expectation and variance, sampling distribution theory, joint distributions, covariance and correlation)
5. Estimation and confidence intervals (properties of estimators, Maximum Likelihood estimator, confidence intervals)
6. Hypothesis testing (Test of statistical hypotheses (Binomial test, Gaussian test, t-test, approximate tests), power, p-value)
7. Regression (simple / multiple regression, tests concerning regression)
8. Time series analysis (descriptive time series analysis (moving average, differencing), stationarity)

Requirements
Except for basic mathematical calculus no prior knowledge is necessary.
Chapter 3:

Applied Mathematics

Tutorials and Laboratory
The tutorial will be used to practice the course material by solving statistical problems and to further discuss student questions. The statistical computer package R will be introduced for statistical programming and used by the students to analyze small data sets. This includes theoretical tutorials and software labs.

Exam
Written or oral exam.

Credits
The lecture/tutorial will be taught 3 hours/semester-week which corresponds to 5 ECTS credits.

Recommended Reading
Basics of Probability and Statistics:


Basics of R:

Chapter 3:

Applied Mathematics

Website

https://www.statistik.tu-dortmund.de/2943.html
Chapter 4: Computer Science
4.1. Architecture & Implementation of DBMS

Lecturers

Prof. Dr. Jens Teubner
Roland Kühn

Time

 Lectures: Mondays, 8:00 am – 10:00 am
           Wednesdays, 10:00 am – 12:00 pm (noon)
 Tutorials: Mondays, 10:00 am – 12:00 pm (noon) OR
           Wednesdays, 12:00 pm (noon) – 2:00 pm

Location & Course Materials

Information regarding the organization of the course and course materials can be found in Moodle:

https://moodle.tu-dortmund.de/enrol/index.php?id=25953

Course Description

Database systems form the heart of virtually any enterprise application. They manage vast amounts of data, yet allow for fast and efficient search; they handle thousands of updates every second, yet will not trip over problems due to concurrency; and guarantee consistency and data integrity even in the case of catastrophic events (loss of hardware, etc.).

In this course we learn how database systems can provide this service and performance. We will look “under the hoods” and understand how a database is built internally. We will get to see
Chapter 4:

Computer Science

...techniques that allow to construct a system in a scalable and robust manner.

ISP students will attend the second part of the course, in which we will discuss transaction management (concurrency control, two-phase locking); failure tolerance (recovery, ARIES); distributed data management; and database support for special applications (analytics, text search).

Credits

The course will be taught 6 hours/week over a partial semester. This corresponds to 3 hours/semester-week or 4 ECTS credits.

Exam

Written or oral exam.

Website

Part II:
Track B – German & European Studies
Chapter 5: Courses for German & European Studies
5.1. The Union at Risk: History and the Future of the European Union

Lecturers

Jan Hildenhagen

Time

Mondays, 4:00 pm – 7:15 pm
1st Zoom Session: June 7th at 3 pm

Location & Course Materials

Information regarding the organization of the course (incl. Zoom links) and course materials can be found in Moodle:

https://moodle.tu-dortmund.de/enrol/index.php?id=27237

Enrollment Key for Moodle: Europe4Ever

Course Description

Ever since of the so-called “economic and financial crisis” that started in 2008, the European Union seems at risk, in particular after the so-called “migration-crisis” in 2015 and the (since 2016) announced BREXIT. Using journalistic and scientific articles, students will enter into a dialogue with the instructor and each other regarding the history and the future development of the EU. Discussing various opinions and potential alternate models, the students will get a better understanding of the European Union in the context of “European identity”.
Chapter 5:

Courses for German & European Studies

Credits
The course will be taught 2 hours/semester-week which corresponds to 3 ECTS credits.
Chapter 5:

Courses for German & European Studies

5.2. 19th- and 20th-Century American Drama and Theater: Transatlantic Connections

Lecturers

Randi Gunzenhäuser

Time

Tuesdays, 12:15 pm – 3:45 pm

Film screening: Fridays, 10:00 am – 12:00 pm (noon)

Location

Digital – Prof Gunzenhäuser will send out Zoom-Links to students registered in her class.

Course Description

In this seminar, we will read theories of drama and theater, as well as watch and discuss examples of U.S.-American and German plays typical for their respective traditions – from melodrama across expressionist plays up to family drama. Between the 19th and the end of the 20th century, drama and theatre practices in the U.S. and Germany were distinctly different, but kept influencing each other at the same time. Not only on the stage and through performances themselves, but also through other media such as film and TV, theatre developed as a transatlantic phenomenon.

Credits

The course will be taught 2 hours/semester-week which corresponds to 3 ECTS credits.
5.3. The Tenderness of the Slaveholder: Race, Postcolonial Theory and Charles Sealsfield’s German-American Fiction

Lecturers
Walter Grünzweig

Time
Tuesdays, 4:00 pm – 7:00 pm

Location
Digital – Prof. Grünzweig will send out WebEx links to students registered in his class.

Course Description
Charles Sealsfield (1793-1864) was a German-American author who wrote in English and German. Both his non-fiction and his fiction are characterized by the diversity of 19th century U.S. society and culture, which are represented in colorful narratives and highlights the exceptionalist position of the country in the international system. Sealsfield’s work provides an interesting insight into the transatlantic dialog in the 19th century.

Credits
The course will be taught 2 hours/semester-week which corresponds to 3 ECTS credits.
5.4. Coffee & Cafés – A Beverage and Its Cultural Impact

Lecturers
Bernd Essmann

Time
Thursdays, 10:15 am – 1:45 pm

Location & Course Materials
Information regarding the organization of the course and course materials can be found in Moodle:
https://moodle.tu-dortmund.de/course/view.php?id=27964

The following zoom link is used:
https://tu-dortmund.zoom.us/j/96108793333?pwd=b2xwYktGcUJ5ZIvVVBvWEg1MvY3UT09

Course Description
Coffee is a ubiquitous beverage that we usually take for granted without reflecting on the impact it has on our culture(s). We will take a closer look at it, specifically the places that it is frequently – & publicly – consumed in, the cafés. Be those traditional cafés (the coffeehouses in Vienna come to mind) or rather recent developments such as Starbucks. In this course we will try to find out their function in our culture(s), to find out whether cafés are, as Ray Oldenburg puts it, "hangouts at the heart of a community". For this we will take a look at the US and Germany; the perspective of the International Summer Program participants will give us valuable cross-cultural insights.
Chapter 5:

Courses for German & European Studies

Credits
The course will be taught 2 hours/semester-week which corresponds to 3 ECTS credits.
Chapter 5:

Courses for German & European Studies

5.5. What is “German“? German History and Identity Formation

Lecturers

Jan Hildenhagen

Time

Fridays, 12:00 pm (noon) – 3:15 pm
1st Zoom Session: June 11th at 12 p.m. (noon).

Location & Course Materials

Information regarding the organization of the course (incl. Zoom links) and course materials can be found in Moodle:

https://moodle.tu-dortmund.de/enrol/index.php?id=27236

Enrollment Key for Moodle: Alman

Course Description

Germany is a perfect example of how the political construction of nations (imagined communities) and borders shape societies and influence them; for example through a culture of remembrance. Using journalistic and scientific articles, students will enter into a dialogue with the instructor and each other regarding the history of the “Germans”. Discussing various moments of German history the students will get a better understanding of the alleged “German identity”. Mandatory Reading includes: MacGregor, Neil: Germany: Memories of a Nation, Penguin 2016.
Chapter 5:

Courses for German & European Studies

Credits
The course will be taught 2 hours/semester-week which corresponds to 3 ECTS credits.
5.6. Feminism and International Politics

Lecturers
Marta Twardowska

Time
Thursday, July 1<sup>st</sup>: 4:00 pm – 7:15 pm
Friday, July 2<sup>nd</sup>: 12:00 pm (noon) – 7:15 pm
Saturday, July 3<sup>rd</sup>: 9:00 am – 6:15 pm
Sunday, July 4<sup>th</sup>: 9:00 am – 2:00 pm

Location
Digital – Dr Twardowska will send out WebEx links to students registered in her class.

Course Description
At first glance the relationship between "women" and International Politics might seem relatively enigmatic. However, "the lives of women", though often neglected, unquestionably deserve and require much attention and recognition. Asking the question "where are the women?" encourages us to explore the field of International Relations with feminist, gender-sensitive tools. It also enables us to question traditional gender roles, gender power dynamics and the workings of both femininities and masculinities, and thus view international politics as primarily gendered. By getting curious, we can examine the ways in which women's experiences and attitudes are shaped and affected at a local, international, and global level, which makes the feminist analysis a clearly multi-level one.
Chapter 5:

Courses for German & European Studies

Credits

The course will be taught 2 hours/semester-week which corresponds to 3 ECTS credits.
Part III:
Track C –
Entrepreneurship
Chapter 6: Business and Entrepreneurship
6.1. Concepts and Cases in International Marketing

Lecturers

Prof. Dr. Hartmut H. Holzmüller
Dr. Sarah Köcher

Time

Thursdays, 4:00 pm – 7:00 pm
Fridays, 12:00 pm (noon) – 3:00 pm
Starting June 10th

Location & Course Materials

Information regarding the organization of the course (incl. Zoom links and a detailed course schedule) and course materials can be found in Moodle:

https://moodle.tu-dortmund.de/course/view.php?id=20685

Aim of Lecture

This course provides an introduction into issues and problems commonly encountered in strategy formation and decision making by companies operating on an international scale. Students of the course shall

(1) become more sensitive to international marketing issues and develop an understanding of current problems that international marketers face on global markets
(2) develop a knowledge of concepts and methods used in international marketing theory and business practice
Chapter 6:

Business and Entrepreneurship

(3) be capable of applying the presented framework, concepts and methods, to typical issues in international marketing management

Cases will help you to develop strategic thinking in an international marketing context and will provide you with an opportunity to sharpen your verbal and written communication skills. Utilizing a teaching approach that mixes cases, class discussions, group workshops, you will learn key concepts and tools used in solving international marketing problems.

Requirements

Basic knowledge in marketing.

Credits

The course will be taught 8 hours/week over a partial semester. This corresponds to 4 hours/semester-week or 7.5 ECTS credits.

Exam

Choice between

a) written and graded exam covering the entire class (both Concepts and Cases, 90 minutes)
b) Case Studies (1/3) + written and graded exam on Concepts (60 minutes, 2/3) (mode will be announced in time)
Recommended Reading

- A reading pack with cases and background notes will be available at the Department of Marketing

Website

https://www.wiwi2.tu-dortmund.de/wiwi/m/de/lehre/veranstalt/sose_21/Concepts_and_Cases/index.html
6.2. International Business (Bachelor)

Lecturers

Prof. Dr. Lorenz Graf-Vlachy

Time

Tuesdays, 9:00 am – 1:00 pm
Wednesdays, 9:00 am – 1:00 pm
Starting June 8th

Location & Course Materials

Information regarding the organization of the course (incl. Zoom link) and course materials can be found in Moodle:

https://moodle.tu-dortmund.de/course/view.php?id=28144

Aim of Lecture

The module provides a comprehensive understanding of business strategies under consideration of external and internal influences as well as international aspects. Based on this, the module discusses growth strategies and cultural influences for international companies and underlines the distinct role of innovations in this context.

Requirements

None
Chapter 6:

Business and Entrepreneurship

Credits
The course will be taught 8 hours/week over a partial semester. This corresponds to 4 hours/semester-week or 7.5 ECTS credits.

Exam
Students can choose between two types of examination:

1. 100% of total course points in exam (90 minute-exam)
2. 60% of total course points in exam (60 minute-exam), 40% of total course points in student presentation

Website
https://uf.wiwi.tu-dortmund.de/lehre/sommersemester/ib/
6.3. Business Model Innovation

Lecturers

Prof. Dr. Tessa Flatten  
Wiss. Mit. Selina Wilke

Time

Kick-Off and Introduction:  
Thursday, June 10, 2021, 4:00pm – 6:00pm

Pitch & BMC Workshop:  
Friday, June 25, 2021, 10:00am – 2:00pm

Final Presentation:  
Thursday, July 15, 2021, 2:00pm – 5:00pm

Participation in all sessions is mandatory.

Location & Course Materials

Information regarding the organization of the course (incl. Zoom links) and course materials can be found in Moodle:

https://moodle.tu-dortmund.de/course/view.php?id=28657

Course Content

In the bachelor seminar Business Model Innovation students get to know the process of business development. In addition to the theoretical teaching of tools for the identification of business ideas, the focus is on practical application. Students develop their own business ideas in teams using the Business Model Canvas and
present their results in a final presentation designed to convince potential investors of your idea.

Website


Credits

The course will be taught 4 hours/week over a partial semester. This corresponds to 2 hours/semester-week or 5 ECTS credits.