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# LIST OF COURSES FROM

## THE INTERNATIONAL STUDY PROGRAMME (ISP)

### and

## THE REGULAR STUDY PROGRAMME (RSP)

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Please note that the classes from the International Study Programme (ISP) may change depending on the number of applicants for the specific class (the minimum number of participants 5) and on the semester.

If you mix courses from the ISP and the Regular Study Programme (RSP) it might be possible, that some lecturing dates are overlapping.

10-12 hours of lecture pro 1 ECTS  
1 credit (ECTS) = 30 hours of work

## 1. APP-DEVELOPMENT (ISP)

### Course objectives:

Students learn how to develop applications for mobile devices, including smartphones and tablets. Students are introduced to the survey of current mobile platforms, mobile application development environments, mobile device input methods, as well as developing applications for popular mobile platforms. Students will design and build a variety of Apps throughout the course to reinforce learning and to develop real competency.

Working language: English

Workload: 40 hours of lecture presence / 110 hours of independent study

Exam / credits: project / 5 ECTS

Offered: winter semester

Available seats: no restrictions

## 2. BASICS OF SCIENTIFIC WORKING (ISP)

Obligatory class for all international exchange and study abroad students.

### Content outline:

Basics of academic research – Formal requirements - Structure of the paper - Documentation of sources and references and methods of quotation - Source directory

Working language: English

Workload: 8 hours of lecture presence

Exam / credits: no examination / no credits

Offered: winter semester and summer semester

Available seats: no restrictions

## 3. COMPUTER VISION (RSP)

### Course objectives and content outline:

This lecture focuses on the fast growing field of “Seeing Machines” in the context of Artificial Intelligence. During the class we start with basics in light, cameras, and optics. Very quickly we jump into the algorithmic challenges of edge detection, interest points, and local image features in general. Further topics include the Hough transform, stereo vision, feature tracking and optical flow.

The class has a strong application orientation inspired by the lecturer who actively works in the field of autonomous driving in the car industry.

Working language: English

Workload: 25 hours of lecture presence / 60 hours of independent study

Exam / credits: programming project and a presentation / 2,5 ECTS

Offered: summer semester

Available seats: restrictions possible

#### 4. CORE ELEMENTS OF THE INTERNAL VALUE CHAINS (RSP)

**Content outline:**

Material and immaterial goods - procurement - production of services and goods - warehouse management - logistics - decision-making

Working language: English

Workload: 24 hours of lecture presence / 36 hours of independent study

Exam / credits: written examination / 2 ECTS

Offered: summer semester

Available seats: restrictions possible

#### 5. DISTRIBUTED SYSTEMS (RSP)

**Course objectives and content outline:**

This focuses on the process of designing and implementing distributed systems and on their fundamental concepts, properties, and forms, such as:

- Technical and commercial requirements profiles (e.g. scalability, functionality, load distribution)
- Underlying design and implementation approaches (e.g. architecture models, multi-layer models for presentation, application logic and data storage, model-view-controller (MVC) paradigm, data patterns for distributed applications, component models)
- Communications infrastructure: distributed object systems and remote method access (e.g. Java RMI, DCOM, .NET, CORBA), message-oriented middleware (e.g. JMS, publish-subscribe mechanisms), event-based communication

The fundamentals of distributed systems listed above can also be supplemented and expanded upon with the following aspects:

- Implementations and technologies for presentation (e.g. JSP/servlets, JSF, ASP.NET), application logic (e.g. EJB, .NET), or data storage and access (e.g. JDBC, JPA, ADO.NET)
- Concepts and implementation of web services dependent on underlying middleware (e.g. JEE, .NET)
- Comparison of different middleware concepts and architectures (e.g. JEE vs. .NET, web services) and various criteria, e.g. the programming language used (Java, C# etc.)
- Middleware products, such as application servers, or the frameworks built on them
- Large-scale systems

Working language: English

Workload: 33 hours of lecture presence / 57 hours of independent study

Exam / credits: written examination / 3 ECTS

Offered: summer semester

Available seats: restrictions possible

#### 6. DOING BUSINESS IN THE ARAB WORLD (ISP)

**Course objectives and learning outcomes:**

To provide an introduction to the cultures of the modern Middle East, and to Arab Business Culture in particular.

To prepare students for doing business with Arab partners successfully.

By the end of the course, students will be able to

- Understand Arab values and stereotypes and see your own values and stereotypes in context
- Know about the regional differences in the Arab Region
- Recognize the importance of values such as “hospitality” and “tribalism” for your Arab counterpart
- Acquire a fundamental understanding of Arab business culture
- Learn how to deal with typical aspects of conducting business with Arabs
- Learn how to deal with conflicts and how to recognize “success”

- Develop effective communication techniques to obtain the best results while negotiating with Arabs

**Content outline:**

The Arab Region spans over 6,437 kilometers and two continents, and its population reaches about 300 million people. Some countries have seen the introduction of modern management and organizations, but the political and administrative environment remains a very traditional one. In order to work successfully and effectively with Arabs, it is essential to recognize this unique cultural diversity and business infrastructure.

Working language: English

Workload: 40 hours of lecture presence / 110 hours of independent study

Exam / credits: final exam (70% of final grade), presentation (20% of final grade), class participation (10% of final grade) / 5 ECTS

Offered: winter semester and summer semester

Available seats: no restrictions

## 7. EMPLOYABILITY SKILLS – GERMAN FOR THE WORKPLACE (ISP)

**Course objectives and content outline:**

Improve students' competences in handling situations at the work place in Germany, such as applying for the job, job interviews, the daily situations in the company, small-talk and German work culture. The main stress will be held on specific vocabulary and interactive role plays in German in order to improve the language skills and get the basic employability skills around German work place.

Working language: English

Workload: 36 hours of lecture presence / 54 hours of independent study

Exam / credits: written examination / 3 ECTS

Offered: winter semester and summer semester

Available seats: no restrictions

## 8. FINANCE AND INVESTMENT (RSP)

**Content outline:**

Overview of corporate finance - capital budgeting - capital markets and products - portfolio investment - capital: cost, structure and long-term financing - working capital management - static and dynamic methods of investment - cost utility analysis - capital asset pricing model

Working language: English

Workload: 33 hours of lecture presence / 57 hours of independent study

Exam / credits: written examination / 3 ECTS

Offered: winter semester

Available seats: restrictions possible

## 9. GERMAN CULTURE AND COMMUNICATION STYLES (ISP)

**Course objectives and content outline:**

Knowing the specifics in German Culture and its impacts on the Communication Style.

This class is divided into three parts. The first part gives a brief theoretical overview of intercultural communication (IC). Students will get an idea of the following topics: The importance of IC in today's world / The role of perception in IC / Key values which shape a culture's communication / Factor's that shape a culture's verbal codes, nonverbal codes and the decoding of messages / Attitudes, knowledge and skills required for intercultural communication competence.

The second and main part will look at German business behavior and its historical background. By defining the following six central German cultural themes and explaining their historical development, students will get a better understanding of “typical” German behavior: Objectivism / Appreciation of regulations and structures / Rule orientation and internalized control / Time planning / Separation of personality and living spheres / The German low context communication style In the last part students will give a presentation (individual or as a group) of their own culture. Groups are expected to show the other class participants what their subject culture’s communicative behavior looks and sounds like, while interpreting the behavior presented in terms of the course content. The presentation should take viewers to that culture by presenting as many of the subject culture’s norms, values, and beliefs as possible. During the course of the class, students will write a cultural journal in which they describe, document, and reflect on their reactions to the German aspects of behavior, attitudes, and customs, as well as the similarities and differences in the lives of citizens of Germany and the students own culture. This paper will permit the students to identify important insights, observations, etc., and provide a commentary on learning from observation. This class is divided into three parts.

Working language: English

Workload: 40 hours of lecture presence / 110 hours of independent study

Exam / credits: academic paper (10-15 pages) / 5 ECTS

Offered: winter semester and summer semester

Available seats: no restrictions

## 10. GERMAN LANGUAGE (ISP)

### Course objectives and content outline:

The German language intensive class treats the four competences (reading, listening, writing, speaking) on a basic level (A1.a); level test in advance - based on the results, the course outline will be adapted.

Working language: German

Workload: 36 hours of lecture presence / 54 hours of independent study

Exam / credits: oral examination (10 minutes) / 3 ECTS

Offered: winter semester and summer semester

Available seats: no restrictions

## 11. GERMAN LANGUAGE INTENSIVE CLASS (prior to the semester start) (ISP)

### Course objectives and content outline:

Different levels possible; placement test will take place; fees apply.

Working language: English

Workload: 75 hours of lecture presence / 105 hours of independent study

Exam / credits: oral examination (10 minutes) / 6 ECTS

Offered: winter semester

Available seats: no restrictions

## 12. INFORMATION TECHNOLOGY SERVICE MANAGEMENT (ISP)

### Content outline:

- The lifecycle of Information Technology Infrastructure Library V3 (ITIL® V3)
- ITSM Governance: Association and Dependency to the Business
- Process oriented structures for ITSM and compliance
- IT-Services; Structure and Implementation
- Operational IT Setup

- IT Outsourcing
- Contracts and Service Level Management
- Financial aspects
- Quality Management

Working language: English

Workload: 40 hours of lecture presence / 110 hours of independent study

Exam / credits: written examination / 5 ECTS

Offered: winter semester and summer semester

Available seats: no restrictions

### 13. INTERCULTURAL NEGOTIATION TRAINING (ISP)

#### **Course objectives and content outline:**

Improve students' competences in handling business with foreign cultures.

Throughout the seminar, a wide range of situations will be discussed and analyzed which are intended to simulate daily life in international organisations. The "foreignness" of these situations is increased by the time pressure to which participants will be subjected. The objective here is to test out strategies which help to overcome ambiguity and insecurity in students own behaviour and in that of their partners. Each student will analyze and discuss a specific topic of foreignness in class which will enable students to improve their competence in intercultural encounters. This involves a sensitization in relation to culture-specific behavior conventions, the ability to perform in foreign and multilingual situations and the practicing of "role distance" as well as recognising and using intercultural synergy potential.

Working language: English

Workload: 44 hours of lecture presence / 110 hours of independent study

Exam / credits: written examination and presentation / 5 ECTS

Offered: winter semester and summer semester

Available seats: no restrictions

### 14. INTERCULTURAL TRAINING GERMANY (ISP)

Obligatory class for all international exchange and study abroad students.

#### **Course objectives:**

Develop intercultural competence, identify pitfalls and prevent misunderstandings. The increased sensitivity leads to stress reduction and improved performance.

#### **Content:**

Welcome to Germany!

- I. Introduction culture, cultural dimensions, Intercultural Competence
- II. stereotypes and prejudices
- III. Germany: Country, people, history, language, culture, structures of society, education, business structures

Living in Germany

- I. Culture Shock
- II. Communication
- III. Separation of private and professional sphere
- IV. Bureaucracy
- V. Leisure

Working in Germany

- I. Business Etiquette
- II. Supervisors, co-workers, colleagues
- III. Punctuality and other work-values
- IV. Criticism
- V. Teamwork

**Methods:**

The concept of the workshop is very practical. Short presentations, discussion and dialogue, case studies, media, metalog tools are used as appropriate.

Working language: English

Workload: 32 hours of lecture presence

Exam / credits: no examination / no credits

Offered: winter semester and summer semester

Available seats: no restrictions

**15. INTERNATIONAL MANAGEMENT –CASE STUDIES (ISP)****Course objectives:**

Upon successful completion of this module, students are able to understand and analyze

- basic challenges of international business and globalization of markets;
- core concepts in managing international corporations;
- strategies and market entry forms in international management;
- intercultural aspects in managing firms across borders and culture, so that they are able to make basic comparisons and draw conclusions about cross culture differences.

Individual cases about the successful and non-successful internationalization of German and non-German firms.

**Content outline**

1. Introduction to international management: Trends in international trade, foreign direct investments (FDI) and international licensing of business firms
2. Overview of international business strategies: International versus global versus multinational versus transnational strategies
3. International market entry strategies
4. International supply chain and production management
5. Cross cultural management and international human resource management
6. Case studies (1): Internationalization strategies of big German Corporations
7. Case studies (2): Internationalization strategies of German "Hidden Champions"
8. New challenges and topics international management: Internationalization of research and development in firms, offshoring and outsourcing, international supply chain management, international protection of IP

Working language: English

Workload: 32 hours of lecture presence / 58 hours of independent study

Exam / credits: written examination / 3 ECTS

Offered: winter semester and summer semester

Available seats: no restrictions

**16. INTERNATIONAL MARKETING (RSP)****Content outline:**

Introduction in international marketing - international marketing strategy - advantages and disadvantages of standardization vs. localization - characteristics of international marketing mix (product and programme policy, pricing and conditions policy, distribution policy, communications policy) - case studies

Working language: English

Workload: 44 hours of lecture presence / 110 hours of independent study

Exam / credits: written examination / 4 ECTS

Offered: winter semester

Available seats: restrictions possible



## 17. INTERNATIONAL MARKETING: CONSUMER BEHAVIOUR (RSP)

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**Content outline:**

Consumer behavior and organizations.

Working language: English

Workload: 16 hours of lecture presence / 54 hours of independent study

Exam / credits: written examination / 2 ECTS

Offered: summer semester

Available seats: restrictions possible

## 18. INTERNATIONAL OPERATIONS MANAGEMENT & LOGISTICS I (PROCUREMENT LOGISTICS) (RSP)

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**Content outline:**

Strategic procurement planning (in-depth) – Sourcing strategies – operative sourcing (in-depth) – e-procurement – ECR – Supply-chain management – (Logistics) international procurement markets – Logistics service providers – Supplier appraisal and development – Selected in-depth logistics project management – Laws and regulations pertaining to procurements.

Working language: English

Workload: 40 hours of lecture presence / 110 hours of independent study

Exam / credits: academic paper / 4 ECTS

Offered: winter semester

Available seats: restrictions possible

## 19. INTERNATIONAL OPERATIONS MANAGEMENT & LOGISTICS II (OPERATIONS MANAGEMENT) (RSP)

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**Course objectives and content outline:**

Production and operations management (ERP/PPS) – Application of ERP and inventory management systems – Decision making processes for production and warehousing sites – Global production – Quality management and Certifications – Controlling: measuring performance, analyzing potential of improvement – Value-chain analysis and design – Case studies

Working language: English

Workload: 40 hours of lecture presence / 110 hours of independent study

Exam / credits: written examination / 4 ECTS

Offered: summer semester

Available seats: restrictions possible

## 20. INTERNATIONAL PRODUCTION AND LOGISTICS (RSP)

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**Content outline:**

Tasks and opportunities of the order processing between the poles of costs, delivery service, environmental protection and social responsibility - strategic design of the system of international warehousing, manufacturing and transport - materials scheduling and inventory optimization - delivery service policy - outsourcing - global sourcing strategies - international supplier relationship management - international logistics strategies - global cooperation within the process chain

Working language: English  
Workload: 24 hours of lecture presence / 54 hours of independent study  
Exam / credits: written examination / 2 ECTS  
Offered: summer semester  
Available seats: restrictions possible

## 21. INTERNATIONAL SOCIAL MEDIA MARKETING AND DIGITAL STORYTELLING (ISP)

### Course objectives and content outline:

Students will learn about the global development of social media and analyze the challenges and possibilities of international social media marketing. The focal point will be which kind of marketing goals can be better achieved via social media and which strategies can be applied. Practical aspects, e.g. the analysis of social media campaigns or how to create engagement & gaining visibility in social media networks, will also be discussed.

Then, the course will focus on digital storytelling – an approach more and more global brands rely on when creating content for their social media channels. By analyzing international campaigns, students will learn what makes a good story, how social media influence the way stories are told, and how effective storytelling helps brands to reach their marketing goals.

Furthermore, students will gain insights into social media and storytelling at Bosch Power Tools and Daimler (incl. excursion).

Working language: English  
Workload: 30 hours of lecture presence / 60 hours of independent study  
Exam / credits: written examination / 3 ECTS  
Offered: winter semester and summer semester  
Available seats: no restrictions

## 22. INTERNATIONAL STUDENT CASE COMPETITION (SIMULATION GAME) (ISP)

### Course objectives:

- Participants
- assume the role of a manager of a company
  - have to find a prosperous strategy
  - plan their processes
  - make decisions in all parts of the business process like personal staff, production, advertisement, R&D, finance and accounting
  - have to be responsive to market behaviour
  - present their results at the annual general meeting (or similar)

### Content outline:

Day 1  
 Intercultural and social competence training  
 Introduction to Business administration with BTI Factory (incl. special business vocabulary)  
 Day 2  
 Introduction to the simulation game TOPSIM Easy Management  
 Expert groups and presentations  
 Decisions Period 1-3 – Presentation results of Period 1-3  
 Special Task 1 (i.e. strategic planning concept)  
 Decisions Period 4 – Presentation results of Period 4  
 Day 3  
 Special Task 2 (i.e. advertisement campaign)  
 Decisions Period 5-6 – Presentation results of Period 5-6  
 Preparation Annual General Meeting  
 Annual General Meeting and Feedback

Working language: English  
Workload: 24 hours of lecture presence / 60 hours of independent study  
Exam / credits: successful participation, presentations and a short test at the beginning of day 3 / 3 ECTS  
Offered: winter semester and summer semester  
Available seats: no restrictions

## 23. INTRODUCTION TO BUSINESS INFORMATION MANAGEMENT (ISP)

### Course objectives and content outline:

Upon completion of the module, students have an overview of the basic tasks, concepts, and systems of business information management. They understand their role as an intermediary between business administration and information management, can name and explain the key tasks of systems analysis and design, and have found their place within the spectrum of business information management activities.

Topic and knowledge objectives of business information management - Requirements and activity profile for business information managers - The concept of the information system - Information and knowledge management - Types of information system (ERP, BI, CRM, e-business, CMS, DMS etc.) - Examples and case studies

Working language: English  
Workload: 24 hours of lecture presence / 36 hours of independent study  
Exam / credits: written examination / 2 ECTS  
Offered: winter semester and summer semester  
Available seats: no restrictions

## 24. IT-SECURITY (RSP)

### Course objectives and content outline:

#### Part 1: Cryptography

Basics of cryptographic systems, history of cryptography, known historical examples and implications for today's technologies, steganography and graphical methods, fundamentals and overview of modern encryption algorithms, logic circuits, blocks and shift registers in the e-technology, industry-standard encryption algorithms and their implementation by means of concrete examples from the current practice, modern applications of various encryption methods, digital signatures, certificates, PKI, IPSEC, SSL, etc., vulnerabilities and design flaws of modern encryption methods, overview of common attack methods using current examples from industry practice (e.g. GSM/A5-1 real time hack, fake certificates)

#### Part 2: Network and Computer Security

History of network technology and computer communication, history and basics of internet communication, overview and introduction to the main or current network protocols, Focus on TCP / IP, security vulnerabilities in the implementation in today's applications and infrastructure, design of a typical network infrastructure and analysis of security-related vulnerabilities, Introduction to common attack methods, introduction to current computer or network security technologies, Focus : VPN infrastructures, firewalls and IDS ( intrusion detection systems ), structure, functioning and implementation of modern virus scanners, Focus: Vulnerabilities in WLANs and current attack methods and their detection / countermeasures, "hands-on" configuration of a modern IDS , planning example / tutorial "Building a secure network infrastructure covering multiple locations and home offices"

Working language: English  
Workload: 25 hours of lecture presence / 60 hours of independent study  
Exam / credits: written examination / 2,5 ECTS  
Offered: summer semester  
Available seats: restrictions possible

## 25. SYSTEM ANALYSIS AND SYSTEM DESIGN (RSP)

### Course objectives and content outline:

One of the toughest problems in developing IT systems is to extract the relevant information regarding requirements from interviews with non-IT experts. The course will introduce into concepts to extract functional requirements from natural language and to document the information in a standardized notation using the Unified Modeling Language (UML). Multiple models and techniques will be introduced to support the different phases of a project from a first high-level sketch to the implementation. Models to document static aspects as well as models for dynamic aspects will be introduced.

The course will be a mixture of theory and practical assignments. During the assignments we will use modeling tools to develop models from recorded interviews.

Working language: English

Workload: 36 hours of lecture presence / 90 hours of independent study

Exam / credits: written examination and assignments / 3 ECTS

Offered: summer semester

Available seats: restrictions possible

## 26. THE FINANCIAL MARKET IN GERMANY (ISP)

### Course objectives and content outline:

For a better understanding of current issues at the worldwide financial markets, this lecture provides an overview of the most common investments as a basis for further discussions and analysis. Students are given the chance to invest a certain amount of fictitious capital to learn the consequences of their decisions.

Shares / functioning of the stock markets / bonds / investment funds / fundamental and technical analysis / macroeconomic influences (central bank decisions)

Working language: English

Workload: 40 hours of lecture presence / 110 hours of independent study

Exam / credits: written examination and presentation / 5 ECTS

Offered: winter semester and summer semester

Available seats: no restrictions

## 27. THE CONTEMPORARY POLITICAL AND ECONOMIC SYSTEM OF THE EUROPEAN UNION AND GERMANY ESP. (ISP)

### Course objectives and content outline:

Students are meant to pose specific questions for comprehension, actively participate in subject-related discussions, and gradually, assume responsibility for their learning outcome. They are expected to give proper feedback to teaching professors. For a better understanding of current issues of the European agenda such as the ongoing process of the EU enlargement and the acceptance of a common constitution, this lecture provides an overview of the main institutions of the European Union as a base for further discussions.

Brief historical overview / The institutions / The European Parliament / The European Commission / The Council of the European Union / The European Central Bank Structure / The policy of the ECB / The Economic and Monetary Union / Stability and growth pact / Euro Crisis

Working language: English

Workload: 40 hours of lecture presence / 110 hours of independent study

Exam / credits: written examination / 5 ECTS

Offered: winter semester and summer semester

Available seats: no restrictions