COURSE CATALOG

Information for incoming students
applying for 2023/24 at FOI UNIZG

\ Foreword \ Guidelines \ List of Courses and Workshops

Faculty of Organization and Informatics
University of Zagreb

FOREWORD

Exchange students (coming via Erasmus+ programme, bilateral cooperation and freemovers) should choose courses from the list below containing **all courses** at the **Faculty of Organization and Informatics (FOI), University of Zagreb (UNIZG)** that are taught in English. Aside courses, students can enroll in one or more **short intensive programmes (workshops)**.

Exchange students who can prove that they have a sufficient knowledge of the Croatian language can be allowed to take courses that are taught and examined in Croatian.

This list can still undergo changes until the start of the semester, but it can be used as a guideline for putting together an acceptable **Learning Agreement (LA)** for Erasmus+ and other applicants. The Learning Agreement can still be changed upon arrival.

Students who would like to write a **final thesis**, need to find a lecturer at our Faculty who accepts to be their mentor before the application deadline. Please contact us for more information on this possibility.

Most of the short intensive programmes (workshops) will be organized in summer (second) semester. Students can enroll in one or more workshops (maximum is 3). Please note that the workshops are not graded, upon successful completion students get ECTS credits).

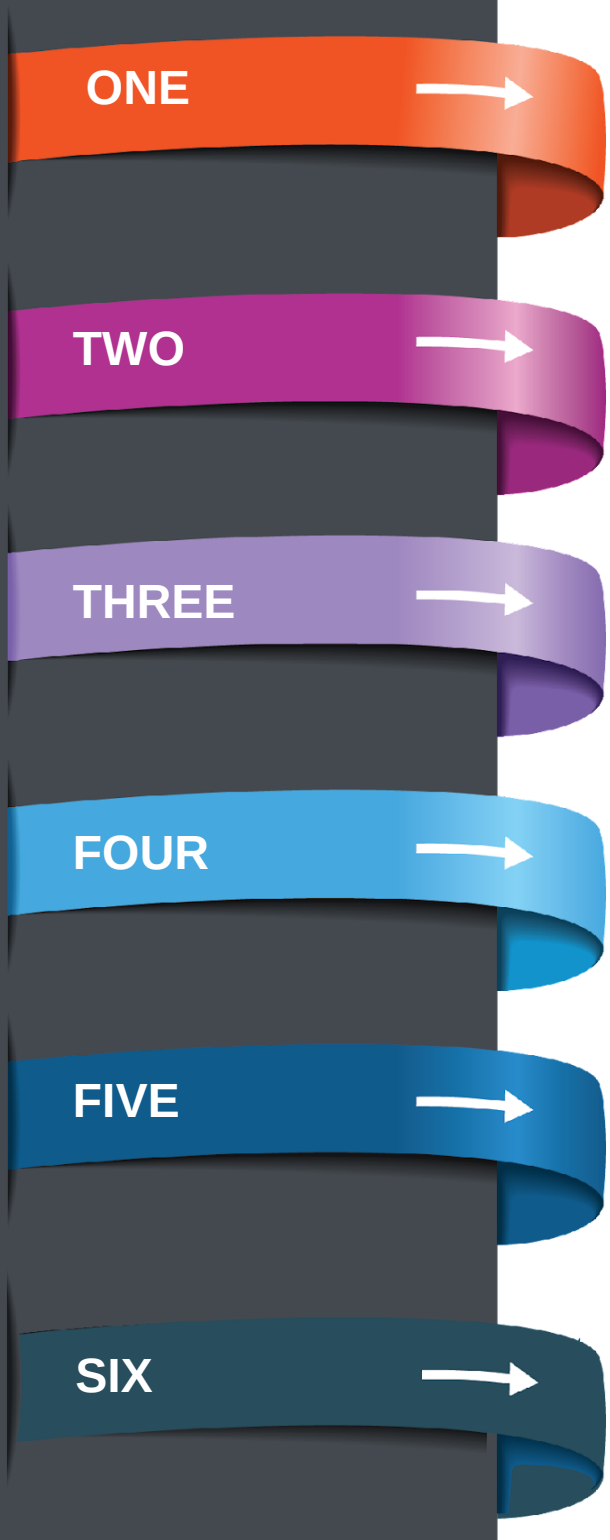
While in Croatia, you might want to learn the basics of the Croatian language, or get acquainted with Croatian history, geography, natural and cultural heritage. If interested, you can enroll in our 10-hour interactive workshop called **Croatian language and culture workshop**.

CONTACT

For more information about the courses and workshops please contact:

- **FOI ECTS coordinator** (academic advisor) – Assoc. Prof. Martina Tomičić Furjan, Ph.D., ects.coordinator@foi.unizg.hr
- **FOI International Relations Office**, international@foi.unizg.hr

GUIDLINES



We advise exchange students to take around 30 ECTS credits per semester.

The courses are selected by bachelor and master programme, informatics or economics study programme, but exchange students can take courses from the different study programmes and study level.

Always check the prerequisites of each course (by clicking on the course description), to see whether you have enough previous knowledge to follow the course successfully.

For more information about the course (content, prerequisites, evaluation etc.), please click on the course description or search the course on FOI website.

If you miss some information about the course or a workshop that you would like to take, please contact FOI ECTS coordinator (academic advisor).

Most of the courses are offered as blended learning courses. Therefore, students can use LMS to study some of the course materials.

LIST OF COURSES

Winter semester

Bachelor level

Business Communication	
Summary	The main goal of the course is student adoption of basic knowledge required for successful interpersonal communication in business environments and efficient figuration of messages in public and written communication and during the presentation of information. Also, the students will gain required knowledge and skills in applied fields of business communication, such as execution of presentation, sales communication, negotiation, conduction of meetings, interviewing, electronic mediated communication etc.
Lecturers	Full Prof. Goran Bubaš, Ph.D. Full Prof. Violeta Vidaček-Hainš, Ph. D. Asst. Prof. Dijana Plantak Vukovac, Ph. D. Antonela Čižmešija, M. Inf. Ana Kutnjak, M.Econ.
ECTS	3
Study programme	Information and Business Systems, 1st year BA
Follow the link for detailed course description	

Design Thinking in Digital Transformation	
Summary	The objective of the course is to acquaint the students with contemporary concepts of systems and design thinking with the aim of defining complex business problems and identifying ways of solving them, structured innovation process, and ultimately deciding on particular scenarios or variants of complex business problems in the context of digital transformation. Acquiring knowledge about digital transformation, implementation methods, trends and influence on the application of technological concepts in the improvement and transformation of business in order to achieve business goals and realize business concepts. Adopting the generic concept of system, systems thinking and systems approach as a methodology and tools that enable identification, analysis and problem solving in complex systems. Adopting a Design Thinking Method for the purpose of a structured, user-oriented process of innovating and creating added value for customers or users by enhancing the process or product in the context of digital transformation. Introduction to decision making processes in the context of digital transformation, and with the

	problems and challenges that can occur. Also, students will be acquainted with specific decision-making methods and they will be able to apply them for making a decision within the problem-solving process.
Lecturers	Full Prof. Nina Begičević Ređep, Ph.D. Assoc. Prof. Igor Pihir, Ph. D. Asst.Prof. Nikola Kadoić, Ph.D. Ana Kutnjak, M.Econ. Barbara Šlibar, M.Inf. Full Prof. Stjepan Vidačić, Ph.D.
ECTS	6
Study programme	Information and Business Systems, 3rd year BA

Follow the link for detailed course description

Development of Applications for Mobile and Smart Devices	
Summary	The goal of the practicum of Development of Applications for Mobile and Smart Devices is to through lectures, mentoring and hands-on project work to give students insight into the concepts and specifics of mobile and other smart devices applications development. Using technologies and tools specific to the development of mobile and other smart devices, students will learn through teamwork to implement the agile scrum development process, and will master the skills of prototyping, code versioning, documenting, quality assurance in development for the mentioned devices.
Lecturers	Assoc. Prof. Zlatko Stapić, Ph. D. Dijana Peras, M.Inf. Mislav Matijević, M.Inf.
ECTS	6
Study programme	Information and Business Systems, 3rd year BA

Follow the link for detailed course description

English for Information Technology	
Summary	The goal of the course is to improve students' linguistic competences with the aim to enable them to more efficiently use professional literature for the purpose of finding information and retelling disciplinary content accurately and meaningfully in speaking (presentation) or writing (creating notes or summaries). Developing these competencies is intended to prepare students for a future career in an environment dominated by the use of the English language. To

	accomplish that, students will become more familiar with the lexis and phraseology pertaining to the role of English as a global language and an essential means of communication in the informatics profession; specificities of the information technology jargon; computer systems, hardware and software; computer networks, internet and the World Wide Web; careers in informatics. It is expected that, after successfully completing the course, students will be able to understand and apply basic terminology in English as well as recognize main points in both written texts related to the aforementioned topics and multimedia sources, and logically structure and report the key points.
Lecturers	Andreja Kovačić, Ph.D.
ECTS	3
Study programme	Information and Business Systems, 1st year BA

Follow the link for detailed course description

Financial Mathematics	
Summary	Introduction to basic concepts of financial mathematics necessary for understanding and development of models required for financial management and business calculations.
Lecturers	Full Prof. Zlatko Erjavec, Ph.D. Damir Horvat, M.A. Petra Žugec, Ph.D.
ECTS	4
Study programme	Information and Business Systems, 3rd year BA

Follow the link for detailed course description

Introduction to Knowledge Modelling	
Summary	The main goal of the course is to introduce students to the basics of modelling and the presentation of domain knowledge and to automated reasoning as the core areas of artificial intelligence. Students will gain knowledge from automata theory and propositional and predicate logic, and they will apply this knowledge practically for modelling and problem solving in different domains of business. They will also learn the role of formalisms for knowledge modelling in the overall process of developing information and intelligent systems.
Lecturers	Full Prof. Sandra Lovrenčić, Ph.D.

	Vlatka Sekovanić, mag. educ. inf.
ECTS	6
Study programme	Information and Business Systems, 3rd year BA

Follow the link for detailed course description

Knowledge Management	
Summary	The aim of this course is to enable the students to understand theory, practice, tools and techniques of knowledge management (KM). In the scope of the course students will learn and be able to apply methods of analysis and evaluation of KM solutions as well as learn and apply methods of semantic modelling and knowledge reasoning in KM. Also, students will understand the role of KM in organizations, which can assist them in development of a successful career.
Lecturers	Full Prof. Sandra Lovrenčić, Ph.D. Vlatka Sekovanić, mag. educ. inf.
ECTS	4
Study programme	Information and Business Systems, 3rd year BA

Follow the link for detailed course description

Networked Systems Development	
Summary	Students are to be introduced to the architectural design of IoT systems, taking in consideration user requirements and peculiarities of business systems. In order to gain hands-on experience and a better understanding of IoT devices, students will participate in extensive lectures and project work focused on creating a smart business environment.
Lecturers	Full Prof. Neven Vrček, Ph.D. Lovro Posarić, univ. bacc. inf.
ECTS	6
Study programme	Information and Business Systems, 3rd year BA

Follow the link for detailed course description

Process Oriented Applications	
Summary	New digital technologies are shaping information systems development paradigms. Creative business models based on effective and efficient business processes supported by modern technologies are the essence of new enterprise architectures and key for competitive advantage of modern organizations. The objective of this course is to teach students theoretical foundations and tools for modelling and development of enterprise architectures. After finishing this course students should have detailed knowledge to generate applications based on business process models.
Lecturers	Assoc. Prof. Katarina Tomičić-Pupek, Ph. D. Full Prof. Neven Vrček, Ph.D.
ECTS	4
Study programme	Information and Business Systems, 3rd year BA
Follow the link for detailed course description	

Software Development	
Summary	The goal of the Software Development course is to provide students with a thorough overview of the entire field of software product and system engineering and to teach students the methodological development of software products and software development trends. Students will be mentored in the practical and team work assignment of development of complete software product including its features and documentation.
Lecturers	Assoc. Prof. Zlatko Stapić, Ph. D. Full Prof. Vjeran Strahonja, Ph.D. Marko Mijač, Ph.D.
ECTS	6
Study programme	Information and Business Systems, 3rd year BA
Follow the link for detailed course description	

Master level

Business Decision Analysis	
Summary	To train students to analyze business decisions in conditions of security, uncertainty and risk, and to apply methods and tools that are characteristic of the analysis of business decisions. The student is expected to acquire sufficient knowledge to be able to recognize and apply a certain method and tool for analyzing decision-making problems and give a proposal for a business decision in a real situation, given the available information.
Lecturers	Full Prof. Nina Begičević Ređep, Ph.D. Asst. Prof. Nikola Kadoić, Ph.D.
ECTS	6
Study programme	Economics of Entrepreneurship, 1st year MA
Follow the link for detailed course description	

Corporate Governance	
Summary	The aim of the course is to introduce students to the basic principles of corporate governance and ethics that apply in managing socially responsible private companies, financial institutions and state enterprises.
Lecturers	Assoc. Prof. Marina Klačmer Čalopa, Ph.D. Ivana Đunđek Kokotec, Ph.D. Karolina Kokot, M. Econ. Marijan Cingula
ECTS	5
Study programme	Economics of Entrepreneurship, 2nd year MA
Follow the link for detailed course description	

Discrete Structures with Graph Theory	
Summary	The purpose of the course is introducing and deepening students' knowledge of the core of the mathematical knowledge necessary for the development of information sciences. This core coincides largely with the field of discrete mathematics. One of the aims of this course is to develop a mechanism of rigorous mathematical thinking among students, which is necessary for anyone who wants to follow the requirements of a very dynamic IT discipline. The aim is also that the student develops a sense of different degrees of mathematical rigor and formalism and learn to use them appropriately to a

	problem situation. The chapters chosen for this subject are intended for all those who want to do research in informatics, as well as more advanced information technology.
Lecturers	Full Prof. Divjak Blaženka, Ph.D. Asst. Prof. Marcel Maretić, Ph.D. Damir Horvat, M.A.
ECTS	6
Study programme	Information and Software Engineering, 1st year MA
Follow the link for detailed course description	

Economy for Entrepreneurs	
Summary	Main aim of this course is to help students develop economical way of thinking and reasoning and to provide them with basic knowledge of economics and economics of business systems. Within this basic goal, this theme is systematically elaborated in relation to the basic unit of economy – the firm – starting with the firm's establishment, through its inclusion in the economic system and its interactions within this system, to its functioning and business evaluation.
Lecturers	Assoc. Prof. Vladimir Kovšca, Ph. D. Asst. Prof. Zrinka Lacković Vincek, Ph.D. Ivana Dvorski Lacković, Ph.D.
ECTS	6
Study programme	Economics of Entrepreneurship, 1st year MA
Follow the link for detailed course description	

Entrepreneurial Strategies	
Summary	The aim of the course is to enable students to identify and evaluate entrepreneurial opportunities. We try to present students with potential entrepreneurial strategies (mostly by introducing numerous business cases) and develop their ability to analyze and select a suitable entrepreneurial strategy. We want to encourage students to take a strategic approach to entrepreneurship that will enable an innovative approach to entrepreneurial venture of any size. To do so they must gain knowledge of theoretical and practical foundations of entrepreneurship. They must know different skills of organizing and managing entrepreneurial ventures, be familiar with marketing techniques and be able to create an operating business plan.
Lecturers	Asst. Prof. Kristina Detelj, Ph.D.

	Full Prof. Ksenija Vuković, Ph.D. Tamara Šmaguc, Ph.D.
ECTS	5
Study programme	Economics of Entrepreneurship, 2nd year MA
Follow the link for detailed course description	

ERP Systems	
Summary	The aim of the course is to introduce students to the role of the ERP system in modern enterprises. The course describes how ERP systems are used for integration of business processes and shows the relationship between business processes and software modules that make such a complex information system. The structure of the ERP system is being analyzed at the theoretical and practical level. It also stresses out the importance of organizational preparations for the introduction of the ERP systems. The course analyzes the methods and tools for evaluation of the organization, implementation of ERP systems and maintenance of achieved results. It also analyzes the project structure and resources, roles and responsibilities necessary for effective implementation.
Lecturers	Full Prof. Neven Vrček, Ph.D. Full Prof. Ruben Picek, Ph.D Marko Mijač, Ph.D.
ECTS	5
Study programme	Business Systems Organization, 2nd year MA
Follow the link for detailed course description	

Information Systems Security	
Summary	Introducing the students to problematics of information system security, especially in conditions of dependency of business systems upon business content communication with support of information technology. European legal regulative and means of fulfilment of that regulative as a pre-condition for certification. Introduction to methods of design and development of security. Role of individual measures for reduction of risk levels in individual segments of information system. Development of skills of construction of particular security measures. The goal of exercises is to introduce the students to technical means for realization of particular forms of protection and security of information systems. After passing the colloquium of exercises, the students should be able to build and manage protection of segment of information system supported

	by computer through aspects of protection which may be implemented on that level.
Lecturers	Assoc. Prof. Petra Grd, Ph.D. Asst. Prof. Igor Tomičić, Ph.D. Full Prof. Miroslav Bača, Ph.D. Assoc. Prof. Sandro Gerić, Ph.D. Ena Barčić, mag. forens.
ECTS	5
Study programme	Databases and Knowledge bases / Information and Software Engineering / Business Systems Organization, 1st year MA
Follow the link for detailed course description	

Intelligent Systems	
Summary	The aim of this course is to create a solid theoretical knowledge of intelligent systems technology and their most significant techniques, which should give a listener the competence to solve complex problems of practical implementation, as well as the research. In addition, the emphasis is on gaining competences for practical usage of theoretical knowledge to solve complex problems.
Lecturers	Full Prof. Božidar Kliček, Ph.D. Assoc. Prof. Dijana Oreški, Ph.D. Dunja Višnjić, M.Econ.
ECTS	4
Study programme	Databases and Knowledge bases, 2st year MA
Follow the link for detailed course description	

Knowledge Bases and Semantic Web	
Summary	The aim of course Knowledge Bases and Semantic Web is to acquaint students with two important, intertwined areas, dealing with intelligent structuring and intelligent processing of data (information) in the environment of the Web. Structured data in dynamic interaction with each other, a combination of classic search and deductive statements, resulting in knowledge bases. In recent years, the notion of knowledge base is replaced by the notion of ontologies. Semantic Web is set in the context of the Web and provides intelligent access to heterogeneous, distributed IT facilities. The course will provide students with the necessary theoretical knowledge, acquaint them with modern programming languages and tools, and pass them through

	practical work on computers equipped for the use of Semantic Web systems and their development.
Lecturers	Full Prof. Sandra Lovrenčić, Ph.D. Assoc. Prof. Renata Mekovec, Ph.D. Vlatka Sekovanić, mag. educ. inf.
ECTS	5
Study programme	Databases and Knowledge bases, 2st year MA
Follow the link for detailed course description	

Multiagent Systems	
Summary	The main objective of the course is to introduce students to the fundamental theoretical and practical principles of multi-agent systems. The course is focused on the formalization of multi-agent systems' features by applying various approaches including reasoning about knowledge, game theory, swarm theory, organization theory, automated negotiation, logic argumentation and automated planning.
Lecturers	Full Prof. Markus Schatten, Ph.D. Bogdan Okreša Đurić, Ph.D. Tomislav Peharda, M.Inf.
ECTS	4
Study programme	Databases and Knowledge bases, 2st year MA
Follow the link for detailed course description	

Operational Management	
Summary	The aim of the course is to acquaint students with the basic concepts of Operations Management necessary for understanding and developing the models needed to model and optimize business processes. Within the course, students will master mathematical programming with an emphasis on linear programming, dynamic programming, methods of solving transport problems, simple stock models, Markov analysis and the basics of game theory and project management. The adopted methods will be applied in the preparation of analysis and solving business problems, within which, in addition to teamwork skills, they will also develop presentation skills.
Lecturers	Assoc. Prof. Nikolina Žajdela Hrustek, Ph.D.
ECTS	6

Study programme	Economics of Entrepreneurship, 2nd year MA

Follow the link for detailed course description

Organizational Behavior	
Summary	Getting to know students with organizational variables: individuals, groups, teams, organizational values and acquiring knowledge of the human dimension of organization; ability to model knowledge of general organizational assumptions, models and elements of organizational structure.
Lecturers	Assoc. Prof. Ivan Malbašić, Ph. D. Nikolina Posarić, M. Econ. Lorena Pikl, M.Econ.
ECTS	6
Study programme	Economics of Entrepreneurship, 1st year MA

Follow the link for detailed course description

Organizational Performance Measurement	
Summary	The development of an organizational performance measurement model and its corresponding measurement system is a process covered by the continuum of strategic planning of an organization. Each model is, like any organization, unique and specific, but it is possible to define procedural guidelines and steps, which organizations can apply to make the development process easier and more successful. This course is aimed for students in graduate level to learn how to develop a strategic plan for an organization, that includes performance measurement as its focus, using Balanced Scorecard as the most common performance measurement method.
Lecturers	Assoc. Prof. Martina Tomičić Furjan, Ph.D. Full. Prof. Robert Fabac, Ph.D.
ECTS	5
Study programme	Business Systems Organization, 1st year MA

Follow the link for detailed course description

Process Performance Management	
Summary	Contemporary organizations are constantly striving to achieve their goals and improve their business through the improvement of business processes. Business processes are therefore the focus of business people, IT professionals, practitioners, and scientists involved in the development of information systems with the aim of supporting and managing business processes and increasing their performance. Process performance management is a set of business excellence methods, supported by modern ICT, and includes a wide range of management activities and scientific methods known as business process improvement (BPI), business process reengineering (BPR), or business process modeling (BPM), and strategic planning and measurements such as Balanced Scorecard (BSC) and SWOT. The common features of all these methods are the analysis of business processes, analysis of organizational goals, and setting metrics for measuring and evaluating process performance, which monitors the achievement of not only operational but also strategic goals of the organization. While listening to this course, students will learn how to recognize business processes, which methods and norms are applied in business process modeling, and managing and measuring process and organizational performance. Students will be introduced to new technological trends of business process improvement, business models, and digital transformation of modern organizations. Theoretical insights will be applied to multiple case studies, and practical skills will be complemented by students using modern computer-aided performance measurement tools. The knowledge gained in this course will enable graduate students to work as business analysts, managers, strategic development planners of the organization, development experts, and consultants for business excellence and modern forms of business.
Lecturers	Assoc. Prof. Igor Pihir, Ph.D. Assoc. Prof. Martina Tomičić Furjan, Ph.D. Full Prof. Stjepan Vidačić, Ph.D.
ECTS	4
Study programme	Economics of Entrepreneurship, 2nd year MA
Follow the link for detailed course description	

Project Cycle Management	
Summary	To train students for a project-based approach to problems and situations in their professional interest areas in order to support innovation. The course involves the application of methods and tools of classical project management as well as the project cycle approach. Furthermore, students are trained to work in a team when developing a comprehensive project plan, which includes a timeline, organization of project work, a financial and marketing

	(dissemination) plan, as well as a risk management plan to ensure deliverables and reaching project goals. Finally, students are supported in project proposal planning based on criteria given by sponsors, and especially in preparation and management of projects funded within EU funding programs.
Lecturers	Full Prof. Blaženka Divjak, Ph.D. Asst. Prof. Katarina Pažur Aničić, Ph.D. Petra Vondra, M.Inf. Barbi Svetec, mag. educ. philol. croat., mag. educ. philol. angl.
ECTS	4
Study programme	Economics of Entrepreneurship, 2nd year MA
Follow the link for detailed course description	

Software Analysis and Development	
Summary	The aim of the course Software Analysis and Design is to introduce students to the life cycle and stages of development of modern software products. Program development has become an important branch of industry that has its own laws and specific standards. The course goes through all stages of the life cycle: analysis of the domain name system, the specification of program requirements, methods and techniques program modelling, program development, program testing and debugging. In addition, students learn fundamental approaches that are used in development and engineering of complex software systems and modern tools and procedures that make this process easier.
Lecturers	Assoc. Prof. Zlatko Stapić, Ph.D. Full Prof. Neven Vrček, Ph.D. Marko Mijač, Ph.D. Dijana Peras, M.Inf. Žana Zekić, M.Inf.
ECTS	6
Study programme	Information and Software Engineering, 1st year MA
Follow the link for detailed course description	

Strategic Human Resources Management	
Summary	The goal is to provide knowledge and help develop skills for human resource management in business organizations. Through various topics and case studies, students can develop an understanding of the strategic importance of HR development and management of HR as well as gain insight in benefits of HRM in business organizations in a competitive environment. The aim is to

	show modern methods and techniques in HRM through theories and current research results and discussion with experts.
Lecturers	Full Prof. Marina Klačmer Čalopa, Ph.D. Full Prof. Violeta Vidaček-Hainš, Ph.D. Ivana Đunđek Kokotec, Ph.D. Karolina Kokot, M.Econ.
ECTS	4
Study programme	Economics of Entrepreneurship, 2nd year MA
Follow the link for detailed course description	

Summer semester

Bachelor level

Business Decision Making	
Summary	The course introduces the students to basics of business decision making and theories of decision making. It analyses separate phases of the decision-making process and factors which influence the process of decision making. Also, it is very important to introduce the students to different methods of decision making, and to various circumstances in which decision making is needed. Special emphasis is placed upon role and meaning of information systems as a support to decision making, and upon methods and techniques of decision making which ease the decision-making process. Information systems serve as the foundation for management because they present continued process of gathering various information which are processed for the needs of decision making.
Lecturers	Full. Prof. Nina Begičević Ređep, Ph.D. Asst. Prof. Nikola Kadoić, Ph.D. Barbara Šlibar, M.Inf.
ECTS	4
Study programme	Information and Business Systems, 1st year BA
Follow the link for detailed course description	

Business English Language 1	
Summary	The aim of the course is to introduce students with the terminology in the field of business English and morphological and syntactic peculiarities of business English. Students use acquired knowledge in language production and interaction in given communication situations in business context, in oral and written form. Students learn about basic stylistic and structural characteristics of representative texts in the fields of business English and adopt strategies for interpreting texts and reference texts. Students will master the communication skills needed for listening a foreign language conferences, discussions or presentation, including the basics of managing in a multicultural context. Students can also use information technology for self-expanding vocabulary and reading skills (analysis, synthesis of information)

	and through teamwork, through the provision of written assignments or oral presentations.
Lecturers	Andreja Kovačić, Ph.D.
ECTS	4
Study programme	Economics of Entrepreneurship, 1st year BA

Follow the link for detailed course description

Computer Networks	
Summary	This course introduces computer networks, network services and applications, and provides conceptual and practical knowledge for a successful IT career. The students are prepared to solve communication problems and determine parameters important for quality of service and efficient communication. The importance of layered approach of ISO-OSI and the modern Internet model will be explained, and the inner working of networks is studied through the application, transport, network, and link layer, which is demonstrated by relevant protocols and network applications.
Lecturers	Asst. Prof. Nikola Ivković, Ph.D. Assoc. Prof. Ivan Magdalenić, Ph.D. Elvis Popović, M.Inf. Ivan Mihaljević, mag. ing. comp. Marko Peras, M.Inf. Korhan Cengiz, Ph.D.
ECTS	6
Study programme	Information and Business Systems, 2rd year BA

Follow the link for detailed course description

Customer Relationship Management in Digital Environment	
Summary	This course will enable students to master the theoretical and practical knowledge required to work in domains that are directly related to customer relationship management. In doing so, the theoretical concepts of marketing and customer relationship management are upgraded with practical skills in using ICT tools and technologies in the customer relationship management domain. The course enables the students to upgrade and to refine their knowledge of marketing and e-commerce and to gain essential knowledge in

	organizational and business models as well as customer relationship management technologies and tools.
Lecturers	Full Prof. Damir Dobrinić, Ph.D. Assoc. Prof. Sandro Gerić, Ph.D. Assoc. Prof. Iva Gregurec, Ph.D.
ECTS	4
Study programme	Information and Business Systems, 3rd year BA
Follow the link for detailed course description	

Data Mining	
Summary	The aim of this course is to help students to understand and use data mining in economics, get to know techniques and algorithms, familiarize students with basic skills of data mining through tools and examples, and understand typical examples of usage.
Lecturers	Full Prof. Božidar Kliček, Ph.D. Assoc. Prof. Dijana Oreški, Ph.D. Dunja Višnjić, M.Econ.
ECTS	4
Study programme	Economics of Entrepreneurship, 3rd year BA
Follow the link for detailed course description	

Databases 1	
Summary	The aim of this course is straightforward: at the end of the course, students should be able to understand all the three components of Relational Database Management Systems (structural, operational, and integrity component). In addition, students should be able to realize and manage Relational Databases using SQL (creation, modification, queries, indexes, security and transactions). The text focuses on the use of relational database technology and SQL (the standard query language used to communicate with relational database management systems) as it is what students will encounter in businesses today.
Lecturers	Full Prof. Kornelije Rabuzin, Ph.D. Bogdan Okreša Đurić, Ph.D. Maja Cerjan, mag. educ. inf
ECTS	5

Study programme	Information and Business Systems, 2nd year BA

Follow the link for detailed course description

Informatics Services Management	
Summary	The main goal of this course is to provide students with detailed overview of IT services, make them understand the rapidly growing service economy sector, understand and apply best practices and reference models for IT services and prepare them for professional service delivery within a service organization, including the definition of service strategy, service design, service management and service delivery. The practical part of this course enables students to meet all phases of service design while working on a team project.
Lecturers	Full Prof. Vjeran Strahonja, Ph.D. Assoc. Prof. Renata Mekovec, Ph.D. Asst. Prof. Katarina Pažur Aničić, Ph.D.
ECTS	4
Study programme	Information and Business Systems, 2nd year BA

Follow the link for detailed course description

Interactive Systems Development	
Summary	Acquiring basic knowledge of human-computer interaction (HCI) and learning about the types and challenges of interactions encountered by the average user (or user with difficulty). Acquiring theoretical and practical knowledge of basic aspects related to usable design and user experience (UX), learning about the process of developing interactive systems, and applying various HCI methods of designing and developing interactive systems that are based on a user-oriented approach and user experience design.
Lecturers	Full Prof. Božidar Kliček, Ph.D. Assoc. Prof. Dijana Plantak Vukovac, Ph.D. Full Prof. Valentina Kirinić, Ph.D. Matija Šajn, M.Inf.
ECTS	6
Study programme	Information and Business Systems, 3rd year BA

Follow the link for detailed course description

Internet of Things Services	
Summary	The goal of the course is to introduce students to creation of thing as a service, connect and publish data from IoT devices to the cloud, and interoperability with other systems. The role of network protocols and standards for the Internet of Things, as well as the principles of service-oriented architecture in building an IoT system, will be also addressed. Students will be introduced to the architectures and platforms of the Internet of Things and the Web of Things.
Lecturers	Assoc. Prof. Darko Andročec, Ph.D. Asst. Prof. Nikola Ivković, Ph.D. Korhan Cengiz, Ph.D.
ECTS	4
Study programme	Information and Business Systems, 3rd year BA
Follow the link for detailed course description	

Operations Management	
Summary	The course covers topics that introduce students to business operations principles in productive companies and other profit and non-profit organizations, presents the company as a system and explains the role of modern ICT in company's management, systemizes processes in catalogue groups and systemizes informatics, material and other organization courses. Students also learn business logic and functioning algorithm of typical business processes.
Lecturers	Assoc. Prof. Igor Pihir, Ph.D. Assoc. Prof. Martina Tomičić Furjan, Ph.D. Larisa Hrustek, M.Econ. Ana Kutnjak, M.Econ.
ECTS	4
Study programme	Information and Business Systems, 1st year BA
Follow the link for detailed course description	

Small Business Management	
Summary	The course aims to introduce students to managerial processes and successful small business management in a competitive environment. Students will realize that small businesses have competitive advantages (such as speed, flexibility and innovation) that enable them to compete in the marketplace with larger enterprises. They will understand the basic managerial skills that small business managers need. Also, students will explore managerial challenges faced by small companies and analyze the existing good practice of small business management based on successful examples.
Lecturers	Assoc. Prof. Ivan Malbašić, Ph.D. Nikolina Posarić, M.Econ. Lorena Pikl, M. Econ.
ECTS	4
Study programme	Economics of Entrepreneurship, 2nd year BA
Follow the link for detailed course description	

Software Engineering	
Summary	The aim of the course is to provide a detailed overview of software engineering and teach the students methodological approach to developing software products.
Lecturers	Full. Prof. Vjeran Strahonja, Ph.D. Assoc. Prof. Zlatko Stapić, Ph.D. Snježana Križanić, M.Inf. Marko Mijač, Ph.D.
ECTS	6
Study programme	Information and Business Systems, 2nd year BA
Follow the link for detailed course description	

Testing and Quality of Software Products	
Summary	The goal of the course is to enable students to participate in planning, conducting and documenting software product testing, as well as performing quality evaluation activities. Through lectures and laboratory exercises, students will be familiarized with different principles, best practices and commonly used techniques and tools for testing, debugging and profiling software products. This is complemented with widely accepted metrics and

	techniques for software quality evaluation. Demonstrated knowledge will serve as a preparation for students' own projects.
Lecturers	Full Prof. Valentina Kirinić, Ph.D. Marko Mijač, Ph.D.
ECTS	6
Study programme	Information and Business Systems, 3rd year BA
Follow the link for detailed course description	

Master level

Data Warehouses and Business Intelligence	
Summary	Goal of this course is to introduce the students to basic principles of constructing and applying data warehouses technology, which should result in better decisions and performance improvements. At the end of the course, students should be able to select a data warehouse project, justify the price of a project, plan a data warehouse project, estimate the completeness of the plan, choose the appropriate architecture components, build a good quality data warehouse, integrate the knowledge of business systems and IT and thus achieve the maximum value of such an investment.
Lecturers	Full Prof. Kornelije Rabuzin, Ph.D. Maja Cerjan, mag. educ. inf.
ECTS	5
Study programme	Databases and Knowledge Bases / Business Systems Organization, 1st year MA
Follow the link for detailed course description	

Internet Marketing	
Summary	The Internet is becoming a very significant promotional sales media with a few specific advantages expressed through low usage costs and the ability of interactive communication. There are significant advantages over other forms of communication, resulting on its greater use in all areas of social and economic activity. The purpose of the course is to enable students to upgrade their existing marketing knowledge by familiarizing themselves with trends in the field and their specificities of analysis, planning and marketing activities.

Lecturers	Full Prof. Damir Dobrinić, Ph.D. Asst. Prof. Iva Gregurec, Ph.D.
ECTS	4
Study programme	Economics of Entrepreneurship, 1st year MA
Follow the link for detailed course description	

Internet Security	
Summary	Acquisition of basic knowledge and skills necessary to operate with internet and networked systems security, especially in everyday network environment and their implementation in everyday life is the basis of the course. Students will study the basic mistakes, weaknesses, security risks, countermeasures and protection, ways of collecting, processing, storing and comparing information and their use in security systems, and students will be informed about the latest developments in the field of Internet security. The course is structured to provide a complete overview of the most important internet security features.
Lecturers	Full Prof. Miroslav Bača, Ph.D. Asst. Prof. Igor Tomičić, Ph.D.
ECTS	4
Study programme	Databases and Knowledge Bases, 1st year MA
Follow the link for detailed course description	

Managerial Communication and Leadership	
Summary	Improving the knowledge and skills related to communication between leaders and managers in business organizations, and in relation to other employees at different levels, groups and teams, as well as representatives of other business organizations. Getting acquainted with communication processes in organizations, as well as processes related to communication in small groups and teams, communication in motivation and leadership, in decision-making, as well as intercultural business communication.
Lecturers	Full Prof. Goran Bubaš, Ph.D. Assoc. Prof. Ivan Malbašić, Ph.D. Antonela Čižmešija, M.Inf.
ECTS	4
Study programme	Economics of Entrepreneurship, 1st year MA

Follow the link for detailed course description

Management of Institutional Investors	
Summary	This course aims to acquaint students with the characteristics, operations, and reasons for the expansion of institutional investors (investment funds, pension funds, insurance companies). Each group of institutional investors has its specifics, which students will get to know through the teaching material. Through a theoretical and practical approach (guest lecturers from each financial sector), students acquire fundamental knowledge and get acquainted with the techniques used in the business and management of institutional investors. Knowing the business of institutional investors is extremely important for future entrepreneurs and managers because it simplifies the process of transferring financial resources.
Lecturers	Full Prof. Marina Klačmer Čalopa, Ph.D. Ivana Đunđek Kokotec, Ph.D. Karolina Kokot, M.Econ.
ECTS	5
Study programme	Economics of Entrepreneurship, 1st year MA

Follow the link for detailed course description

Negotiation in International Environment	
Summary	Main goals of the Course: Familiarizing with the specific characteristic of the negotiation in the international context, negotiation techniques and communication skills that leads to international agreements; Efficacy applying negotiation techniques and communication skills in face to face interpersonal communication and computer mediated communication.
Lecturers	Full Prof. Violeta Vidaček-Hainš, Ph.D. Antonela Čižmešija, M. Inf.
ECTS	4
Study programme	Economics of Entrepreneurship, 1st year MA

Follow the link for detailed course description

Physical Design of Databases	
Summary	This course complements the knowledge required for profound understanding of Systems Database Management Systems (DBMS), their functioning and practical application. This course uses knowledge from many other courses,

	for example Databases 1, Algorithms, Data structures etc., and represents their logical continuation in the similar context. The students are acquainted with the way a software system works. Software systems are the second most dominant system regarding their presence in a computer, right after the operating systems. DBMS is quite a complex system which itself contains various aspects that enable its functioning.
Lecturers	Full Prof. Alen Lovrenčić, Ph.D. Miljenko Novaković, mag. educ. phys. et inf.
ECTS	5
Study programme	Databases and Knowledge Bases, 1st year MA
Follow the link for detailed course description	

Small and Medium Enterprises in the EU	
Summary	The purpose of the course is to enable students to apply microeconomic techniques in the analysis of the small and medium-sized enterprises at national and European level and providing students with a critical analysis of local, regional and national economic policies in terms of EU integration.
Lecturers	Full Prof. Ksenija Vuković, Ph.D. Ivana Fojs, M.Econ. Tamara Šmaguc, Ph.D.
ECTS	5
Study programme	Economics of Entrepreneurship, 1st year MA
Follow the link for detailed course description	

LIST OF

WORKSHOPS

Exchange students can enroll, according to their interest, in one (or more) short intensive programmes (workshops) that will be delivered in English (most in the summer semester). Students can choose up to 3 workshops.

Duration of the workshops is approximately 6-8 weeks. At the end of the successfully completed workshop each student will get ECTS credits which are a part of the student's study plan at FOI. Please note that workshops are not graded. Additionally, to get to know our country and people a bit better, students can participate in Croatian Language & Culture Workshop (which does not have ECTS's).

Computer Games Development by Examples	
Summary	Computer games development industry is on the rise and game programmers are needed on the labor market. The purpose of this workshop is to present the basic knowledge of the computer games development process, and appropriate skill set, to the students. The main idea behind this workshop is to show students how computer games are made and to motivate students to explore this field of computer programming.
Lecturers	Asst. Prof. Mladen Konecki, Ph.D.
ECTS	3 (no grade)
Follow the link for detailed workshop description	

Application of Biometric Methods in Forensics	
Summary	Biometrics refers to the automatic recognition of individuals based on their physical and/or behavioral characteristics. Forensics involves the use of scientific principles for the analysis of evidence from the crime scene to reconstruct and describe the past events. Locard's exchange principle had a major impact on forensics, which says that the perpetrator of the criminal offense will bring something to the crime scene and take something out of it, and that both can be used as forensic evidence. At the crime scene it is possible to find many traces, and some of them have biometric features such as fingerprints, signature, voice or face. One of the goals of the forensic investigation is to link proof (e.g. signature) to the source (a person). The purpose of the education is to provide students with a more detailed insight into biometric methods with emphasis on the use of biometric methods in forensics. Education provides students with an understanding of the various parameters to be considered so that different aspects of fingerprints, iris, face recognition, and the like can be recognized, which could be applied in criminal cases involving the use of forensic biometrics. The purpose of the education is to connect students interested in biometrics and forensics, as well as exchange of knowledge and, thus, the training of students and raising their competences.
Lecturers	Assoc. Prof. Petra Grd, Ph.D. Full Prof. Miroslav Bača, Ph.D.
ECTS	2 (no grade)
Follow the link for detailed workshop description	

Advanced Python Workshop	
Summary	This is a programming workshop whose goal is to teach the advantages of the Python programming language hands-on. Topics: ● Features of the Python Language ● Python's Object Model ● Functional programming in Python ● Debugging and Testing in Python ● Scientific Python ● Overview of Essential Python Modules and Frameworks ● Software Carpentry of a Python Programmer
Lecturers	Asst. Prof. Marcel Maretić, Ph.D.

ECTS	2 (no grade)

Follow the link for detailed workshop description

Competitive Web Design	
Summary	Increasing of students' competencies in the field of competitive web design. The web design service is a type of service that is highly represented on the global market. To diversify one's service and to make it more prominent a high level of quality is needed. This will consequently make one's web designs and websites more competitive and interesting to all potential users. One of the key aspects of making competitive websites is creating high quality web interfaces. The purpose of this education is to increase the competences of its participants in the area of creating a competitive web designs and web interfaces and consequently more competitive websites in order to enhance the position of created websites on the overall market. Targeted audience: Students of all years and study programs, regardless of their prior knowledge.
Lecturers	Assoc. Prof. Mario Konecki, Ph.D.
ECTS	2 (no grade)

Follow the link for detailed workshop description

Croatian Language & Culture Workshop	
Summary	Upon arrival to FOI UNIZG, exchange students can enroll in Croatian Language & Culture Workshop in duration of 10 hours. This workshop is held at the beginning of each semester, and its goal is to familiarize international students with Croatian history, geography, cultural and natural heritage, as well as to give the students introduction to Croatian language, and to teach them some most common used terms and words in everyday life.
Lecturers	Josipa Bađari, M.A. Izabela Oletić Tušek, univ.spec.pol.
ECTS	Non