COURSE CATALOG

Information for incoming students applying for 2026/27 at FOI UNIZG

\ Foreword \ Guidelines \ List of Courses

University of Zagreb

Faculty of Organization and Informatics

FOREWORD

Exchange students participating in the Erasmus+ programme, engaging in bilateral cooperation, or applying as freemovers, are encouraged to select courses from the provided list encompassing all English-taught courses offered at the University of Zagreb (UNIZG) Faculty of Organization and Informatics (FOI. Additionally, students have the option to 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.

The majority of **short intensive programmes (workshops**) are scheduled for the summer (second) semester. Students have the option to enroll in one or more workshops, with a maximum of three. It's important to recognize that workshops are not graded; however, upon successful completion, students will earn 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 Academic Advisor / ECTS Coordinator** – Assoc. Prof. Katarina Pažur Aničić, Ph.D., ects.coordinator@foi.unizg.hr
- **FOI International Relations Office**, international@foi.unizg.hr

foi

GUIDELINES

ONE

We advise exchange students to take around 30 ECTS credits per semester. In order for the course to be conducted in the English language, it is necessary for a minimum of 3 students to enroll in it.

TWO

Courses are initially selected according to the bachelor and master programs in informatics or economics. However, exchange students have the flexibility to enroll in courses from various study programmes and levels.

THREE

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.

FOUR

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

FIVE

Should you require additional information regarding a course or workshop you wish to enroll in, please reach out to the FOI academic advisor (ECTS coordinator).

SIX

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

3

LIST OF COURSES

Course title	Semester	Level	ECTS
Business Communication	Winter	BA	3
Design Thinking in Digital Transformation	Winter	BA	6
Development of Applications for Mobile and Smart Devices	Winter	BA	6
English for Information Technology	Winter	BA	3
Financial Mathematics	Winter	BA	4
Internet of Things Systems Development	Winter	BA	6
Introduction to Knowledge Modelling	Winter	BA	6
Knowledge Management		BA	4
Process Oriented Applications	Winter	BA	4
Programming for Data Analytics	Winter	BA	6
Software Development	Winter	BA	6
Advanced Computer Networks	Winter	MA	5
Business Decision Analysis	Winter	MA	6
Corporate Governance	Winter	MA	5
Discrete Structures with Graph Theory	Winter	MA	6
Economy for Entrepreneurs	Winter	MA	6
Entrepreneurial Strategies	Winter	MA	5
ERP Systems	Winter	MA	5
Knowledge Bases and Semantic Web	Winter	MA	5
Multiagent Systems	Winter	MA	4
Operational Management	Winter	MA	6
Organizational Behavior	Winter	MA	6
Organizational Performance Measurement	Winter	MA	5
Process Performance Management	Winter	MA	4
Project Cycle Management	Winter	MA	4

Software Analysis and Design	Winter	MA	6
Strategic Human Resources Management	Winter	MA	4
Business Decision Making	Summer	BA	4
Business English Language 1	Summer	BA	4
Computer Networks	Summer	BA	6
Customer Relationship Management In Digital Environment	Summer	BA	4
Databases 1	Summer	BA	6
Data Mining	Summer	BA	4
Informatics Services Management	Summer	BA	4
Information Systems Security	Summer	BA	6
Interactive Systems Development	Summer	BA	6
Internet of Things Services	Summer	BA	4
Operations Management	Summer	BA	4
Small Business Management	Summer	BA	4
Software Engineering	Summer	BA	6
Testing and Quality of Software Products	Summer	BA	6
Data Warehouses and Business Intelligence	Summer	MA	5
Internet Marketing	Summer	MA	4
Management of Institutional Investors	Summer	MA	5
Managerial Communication and Leadership	Summer	MA	4
Negotiating in International Environment	Summer	MA	4
Organizational Changes and Risks of Digital Transformation	Summer	MA	4
Physical Design of Databases	Summer	MA	5
Small and Medium Enterprises in the EU	Summer	MA	5

Workshop title	*Semester*	*ECTS*
Advanced Python Workshop	Summer	2
Application of Biometric Methods in Forensics	Summer	2
Competitive Web Design	Summer	2
Computer Games Development by Examples	Summer	3
Croatian Language & Culture Workshop	Winter/Summer	1

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. Antonela Devčić, Ph.D. Socio. Ana Kutnjak, M.Econ.
ECTS	3
Course code	214448
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.
	Dr. sc. socio. Šlibar Barbara
	Full Prof. Stjepan Vidačić, Ph.D.
	Tena Jagačić, M.Econ.
ECTS	6
Course code	214482
Study programme	Information and Business Systems (Module: Analysis and Design of 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.
	Kristina Takač, M. Inf.
ECTS	6
Course code	214471
Study programme	Information and Business Systems (Module: Development of Software 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
Course code	214447
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. Asst. Prof. Petra Žugec, Ph.D.
ECTS	4
Course code	214496
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
Course code	214478
Study programme	Information and Business Systems (Module: Artificial Inteligence in Business), 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
Course code	214494
Study programme	Information and Business Systems, 3rd year BA

Follow the link for detailed course description

Internet of Things 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, mag. inf.
ECTS	6
Course code	214476
Study programme	Information and Business Systems (Module: Networked Systems and Computer Games), 3rd year BA

Follow the link for detailed course description

Programming for Data Analytics

Summary	The objective of this data analytics programming course is to equip participants with essential coding skills and techniques necessary for effective data analysis and manipulation using Python.
Lecturers	Asst. Prof. Marcel Maretić, Ph.D. Full Prof. Markus Schatten, Ph.D.
ECTS	6
Course code	214477
Study programme	Information and Business Systems (Module: Artificial Intelligence in Business), 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	Full Prof. Katarina Tomičić-Pupek, Ph. D. Full Prof. Neven Vrček, Ph.D. Snježana Križanić, mag. inf.

ECTS	4
Course code	214488
Study programme	Information and Business Systems, 3rd year BA

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. Asst. Prof. Marko Mijač, Ph.D.
ECTS	6
Course code	214472
Study programme	Information and Business Systems (Module: Development of Software Systems), 3rd year BA

Master level

Advanced Computer Networks

Summary	The main goal of this course is to give students conceptual and practical knowledge in advanced topics such as security, peer to peer architecture, wireless and mobile networks, multimedia streaming, routing, network management and network programming. This course develops critical thinking and promotes planning, making expert opinions and decisions based on the analytical approach, research, modelling, simulation and formal methods.
Lecturers	Assoc. Prof. Nikola Ivković, Ph.D. Full Prof. Ivan Magdalenić, Ph.D. Luka Milić, Ph.D. Elvis Popović, M. Inf.

	Roko Milošević, M. Inf.
	Ivan Mihaljević, mag. ing. comp.
	Assoc. Prof. Korhan Cengiz, Ph.D.
ECTS	5
Course code	256111
Study programme	Information and Software Engineering / Databases and Knowledge Bases, 1st year MA

Follow the link for detailed course description

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.
	Tena Jagačić, M. Econ.
ECTS	6
Course code	76540
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	Full Prof. Marina Klačmer Čalopa, Ph.D.
	Asst. Prof. Ivana Đunđek , Ph.D.
	Ph.D. Socio. Karolina Kokot
ECTS	5
Course code	93107
Study programme	Economics of Entrepreneurship, 2nd year MA

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 learns 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. Renato Babojelić, mag. inf. et. math.
ECTS	6
Course code	93106
Study programme	Information and Software Engineering / Business Systems Organization, 1st year MA

Economy for Entrepreneurs

Summary	Main aim of this course is to help students develop economical ways 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	Full Prof. Vladimir Kovšca, Ph. D. Assoc. Prof. Zrinka Lacković Vincek, Ph.D. Ivana Dvorski Lacković, Ph.D.
ECTS	6
Course code	76545

Study programme	Economics of Entrepreneurship, 1st year MA

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 ventures 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	Assoc. Prof. Kristina Detelj, Ph.D. Full Prof. Ksenija Vuković, Ph.D. Asst. Prof. Tamara Šmaguc, Ph.D.
ECTS	5
Course code	200744
Study programme	Economics of Entrepreneurship, 2nd year MA

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
ECTS	5

Course code	93136
Study programme	Business Systems Organization / Information and Software Engineering, 2nd 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. Vlatka Sekovanić, mag. educ. inf.
ECTS	5
Course code	214603
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. Asst. Prof. Bogdan Okreša Đurić, Ph.D. Tomislav Peharda, M.Inf.
ECTS	4

Course code	93150
Study programme	Databases and Knowledge Bases, 2st year MA

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. Nenad Perši, Ph.D.
ECTS	5
Course code	76567
Study programme	Economics of Entrepreneurship, 2nd year MA

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. Ph.D. Socio. Nikolina Dreven Lorena Pikl, M.Econ.
ECTS	6
Course code	76546
Study programme	Economics of Entrepreneurship, 1st year MA

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 at 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. Larisa Hrustek, M. Econ.
ECTS	5
Course code	93141
Study programme	Business Systems Organization, 2nd 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. Larisa Hrustek, M. Econ. Full Prof. Stjepan Vidačić, Ph.D.
ECTS	4
Course code	200745
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. Assoc. Prof. Katarina Pažur Aničić, Ph.D. Petra Vondra, M.Inf. Barbi Svetec, mag. educ. philol. croat., mag. educ. philol. angl.
ECTS	4
Course code	76573
Study programme	Economics of Entrepreneurship, 2nd year MA

Follow the link for detailed course description

Software Analysis and Design

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. Lovro Posarić, M.Inf. Lea Masnec, M.Inf.
ECTS	6
Course code	93066
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 into the 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. Asst. Prof. Ivana Đunđek, Ph.D. Ph.D. Socio. Karolina Kokot
ECTS	4
Course code	76571
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 analyzes 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 the 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 a 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. Ph.D. Socio. Barbara Šlibar Tena Jagačić, M. Econ.
ECTS	4
Course code	214455
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
Course code	128647
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	Assoc. Prof. Nikola Ivković, Ph.D. Full Prof. Ivan Magdalenić, Ph.D. Elvis Popović, M.Inf. Roko Milošević, M.Inf. Ivan Mihaljević, mag. ing. comp. Marko Peras, M.Inf. Assoc. Prof. Korhan Cengiz, Ph.D.
ECTS	6
Course code	214464
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. Iva Gregurec, Ph.D. Magdalena Kuštelega, M.Econ.
ECTS	4
Course code	214513
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
Course code	128690
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. Asst. Prof. Bogdan Okreša Đurić, Ph.D. Maja Cerjan, mag. educ. inf Vlatka Sekovanić, mag. educ. inf.
ECTS	6
Course code	214451
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. Full Prof. Renata Mekovec, Ph.D. Assoc. Prof. Katarina Pažur Aničić, Ph.D. Marija Kuštelega, M. Inf.
ECTS	4
Course code	214469
Study programme	Information and Business Systems, 2nd year BA

Follow the link for detailed course description

Information Systems Security

Summary	- Understanding the meaning of IS security and protection in the functionality of ICT and business systems - Understanding the risk management process - Acquaintance with existing cryptographic primitives - Awareness of the importance of protection against malicious code - Analyzing protocols in a secure and insecure communication channels - Understanding application vulnerabilities - Adoption of application security recommendations and practices
Lecturers	Assoc. Prof. Petra Grd, Ph.D. Assoc. Prof. Igor Tomičić, Ph.D. Domagoj Tuličić, M. Inf.
ECTS	6
Course code	214499
Study programme	Information and Business Systems (Module: Development of Software Systems), 3rd 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. Matej Mihaljević, M. Inf. Shareef Ahmed, M. Inf.
ECTS	6
Course code	214501
Study programme	Information and Business Systems (Module: Networked Systems and Computer Games), 3rd year BA

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. Asst. Prof. Boris Tomaš, Ph. D. Assoc. Prof. Korhan Cengiz, Ph.D.
ECTS	4
Course code	214508
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
Course code	214454
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
Course code	128666
Study programme	Economics of Entrepreneurship, 2nd year BA
	[Follow the link for detailed course description]()

Software Engineering

Summary	The goal of the Software Engineering course is to give students the insights into the most important phases, activities and the best practices of software product development, management of development project, tools to support this process, and associated technologies. The discipline of Software Engineering is a young discipline of science and the profession, but it is being highly intensively developed and is constantly undergoing numerous changes. By having insights into the most important stages of the development process, as well as understanding the mentioned process, students will gain fundamental knowledge about this complex area, which will give them a solid ground for their further development in these areas of development of software, applications for mobile or smart devices, web applications, and other systems like internet of things, embedded systems and alike.
Lecturers	Full. Prof. Vjeran Strahonja, Ph.D. Assoc. Prof. Zlatko Stapić, Ph.D. Asst. Prof. Marko Mijač, Ph.D. Dijana Peras, M. Inf. Matej Mihaljević, M. Inf. Lovro Posarić, M. Inf. Lea Masnec, M. Inf. Kristina Takač, M. Inf.
ECTS	6
Course code	214467
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. Asst. Prof. Marko Mijač, Ph.D. Matej Mihaljević, M. Inf.

ECTS	6
Course code	214498
Study programme	Information and Business Systems (Module: Development of Software 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
Course code	214598
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. Assoc. Prof. Iva Gregurec, Ph.D.

28

	Magdalena Kuštelega, M. Econ.
ECTS	4
Course code	200741
Study programme	Economics of Entrepreneurship, 1ˢᵗ year MA

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Follow the link for detailed course description

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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 Devčić, Ph.D. Socio.
ECTS	4
Course code	76562
Study programme	Economics of Entrepreneurship, 1ˢᵗ year MA

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Follow the link for detailed course description

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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. Asst. Prof. Ivana Đunđek , Ph.D. Karolina Kokot, Ph.D. Socio.

ECTS	5
Course code	76550
Study programme	Economics of Entrepreneurship, 1st year MA

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 Devčić, Ph.D. Socio.
ECTS	4
Course code	76556
Study programme	Economics of Entrepreneurship, 1st year MA

Organizational Changes and Risks of Digital Transformation

Summary	The main objectives of the course are to acquaint students with contemporary organizational changes and risks related to digital transformation. Students are enabled to understand and connect theoretical and practical business concepts, and the subject deals with the concept and categories of organizational changes, models of organizational changes, change management, resistance to changes, digital transformation as a change and as a project, changes in the domain of organizational structure due to DT, changes in the domain of business processes due to DT, changes in the domain of organizational culture due to DT, changes in the domain of people potential as a result of DT, changes in the domain of management due to DT, changes in the business model, changes regarding customers, roles of leaders in DT changes, communication in the organization during DT changes, and changes due to the introduction of characteristic digital technology.
Lecturers	Full Prof. Robert Fabac, PhD Ivana Dvorski Lacković, PhD
ECTS	4

Course code	256127
Study programme	Business Systems Organization , 1st year MA

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
Course code	93119
Study programme	Databases and Knowledge Bases, 1st year MA

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 provide students with a critical analysis of local, regional and national economic policies in terms of EU integration.
Lecturers	Full Prof. Ksenija Vuković, Ph.D. Asst. Prof. Tamara Šmaguc, Ph.D.
ECTS	5
Course code	76548
Study programme	Economics of Entrepreneurship, 1st year MA

LIST OF WORKSHOPS

Exchange students have the option to enroll in one or more short intensive programs (workshops) based on their interests. These workshops will be conducted in English, with the majority scheduled for the summer semester. Students are allowed to select a maximum of three workshops.

The workshops typically span a duration of approximately 6-8 weeks. Upon successful completion of each workshop, students will receive ECTS credits, which are integrated into their study plan at FOI. It's important to highlight that workshops are not graded.

Furthermore, for a deeper understanding of our country and culture, students have the opportunity to participate in the Croatian Language & Culture Workshop, which does not offer ECTS credits.

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)

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)

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

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

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. Martina Đuras Sekovanić, M.Econ.
ECTS	1 (no grade)