COURSES OFFERED IN A FOREIGN LANGUAGE IN THE ACADEMIC YEAR 2020/2021

Department of Information Sciences at the University of Zadar
Academic Year 2020/2021

Contents

COURSES OFFERED IN A FOREIGN LANGUAGE IN THE ACADEMIC YEAR 2020/2021

Undergraduate and Graduate Courses in English (Academic year 2020/2021 – Winter Semester > October '20 – January '21)

LECTURERS	COURSE TITLE	SEMESTER W = winter sem.; S = summer sem.	ECTS CREDITS	LEVEL OF STUDY
Assoc. Prof. Josip Ćirić, Ph.D.	INTRODUCTION TO LOGIC	W	6	BA
Assist. Prof. Krešimir Zauder, Ph.D.	INTRODUCTION TO PROGRAMMING	W	6	BA
Assoc. Prof. Marijana Tomić, Ph.D. Nevenka Kalebić, Research Assistant Laura Grzunov, Research Assistant	DIGITAL HUMANITIES	W	6	MA
TOTAL ECTS			**18**	

COURSES OFFERED IN A FOREIGN LANGUAGE IN THE ACADEMIC YEAR 2020/2021

Undergraduate and Graduate Courses in English (Academic year 2020/2021 – Summer Semester > March – June '21)

LECTURERS	COURSE TITLE	SEMESTER W = winter sem.; S = summer sem.	ECTS CREDITS	LEVEL OF STUDY
Assist. Prof. Krešimir Zauder, Ph.D.	DATABASE DESIGN	S	6	BA
Assoc. Prof. Marijana Tomić, Ph.D. Laura Grzunov, teaching assistant	OLD BOOKS DESCRIPTION AND ACCESS SYSTEMS	S	6	BA
Assist. Prof. Ante Panjkota, Ph.D.	DATA MINING	S	6	MA
Full Prof. Ivanka Stričević, Ph.D. Mate Juric, Ph.D. Nikolina Peša Pavlović, teaching assistant	HUMAN INFORMATION BEHAVIOR	S	6	MA
TOTAL ECTS			**24**	

COURSES OFFERED IN A FOREIGN LANGUAGE IN THE ACADEMIC YEAR 2020/2021

Department	Department of Information Sciences at the University of Zadar
Description of the courses offered in a foreign language in the academic year 2020/2021	

Name of the course	***Introduction to Logic (BA/W)***			
Name of the teacher	Josip Ćirić, Ph.D., Associate professor			
Number of ECTS credits	6	Semester	☑ autumn/winter	□ spring/summer
Teaching will be organized as	Lectures ☑ yes □ no		Consultations ☑ yes □ no	
The courses will be organized as	Lectures ☑ yes □ no	Seminars □ yes □ no	Exercises ☑ yes □ no	
Description of the course	Students are introduced to classical logic as well as propositional and predicate calculus. Dealing with logic calculus syntax is considered fundamental to acquiring basic topics of scientific methodology, statistical reasoning, computer architecture and programming.			
Learning outcomes of the course	By the end of course, students are expected to: • be acquainted with general history of logic; • be able to read formulas in propositional and predicate calculus; • use methods of *reductio ad absurdum*, *truth tables*, and *derivations* in propositional calculus; • use method of *truth tables* in predicate calculus.			
The course is offered to	Incoming students who choose the above department as a home department	☑ yes □ no		
	All the incoming students regardless of the chosen home department at UNIZD	☑ yes □ no		
	UNIZD students enrolled at the above department as an elective course	□ yes ☑ no		
	All UNIZD students as an elective course	□ yes ☑ no		

COURSES OFFERED IN A FOREIGN LANGUAGE IN THE ACADEMIC YEAR 2020/2021

<table>
<tr><td>Name of the course</td><td colspan="5">Introduction to Programming (BA/W)</td></tr>
<tr><td>Name of the teacher</td><td colspan="5">Krešimir Zauder, Assistant Professor</td></tr>
<tr><td>Number of ECTS credits</td><td>6</td><td>Semester</td><td colspan="2">☑ autumn/winter</td><td>□ spring/summer</td></tr>
<tr><td>Teaching will be organized as</td><td>Lectures</td><td colspan="2">☑ yes □ no</td><td>Consultations</td><td>☑ yes □ no</td></tr>
<tr><td rowspan="2">The courses will be organized as</td><td colspan="2">Lectures</td><td>Seminars</td><td colspan="2">Exercises</td></tr>
<tr><td colspan="2">☑ yes □ no</td><td>□ yes □ no</td><td colspan="2">☑ yes □ no</td></tr>
<tr><td>Description of the course</td><td colspan="5">The goal of the course is to teach fundamental programming skills which are applicable to a wide array of languages and problems.

As the fundamental way of giving instructions to the computer, programming teaches both basic computer knowledge as well as empowers the students to solve many computer-solvable problems in a versatile and adaptable manner. Furthermore, programming teaches critical thinking as related to domain specific problems rather than just the usage of premade solutions.

The language of choice for this course is Python, which is both very popular as the first programming language and as the swiss army knife of programming languages. Python is used in a wide array of computer related problems and is especially popular as relating to data programming which goes well with the broader goal of educating information experts.</td></tr>
<tr><td>Learning outcomes of the course</td><td colspan="5">After successfully passing this course, students will:
understand basic programming concepts: programming, programming language, algorithm, application …
understand and know how to use basic concepts in programming: value, type, variable, operator, function, conditional, loop …
be able to recognise problems that are easily solved by programming
be able to write a simple python script/program</td></tr>
<tr><td rowspan="4">The course is offered to</td><td colspan="3">Incoming students who choose the above department as a home department</td><td colspan="2">☑ yes □ no</td></tr>
<tr><td colspan="3">All the incoming students regardless of the chosen home department at UNIZD</td><td colspan="2">□ yes ☑ no</td></tr>
<tr><td colspan="3">UNIZD students enrolled at the above department as an elective course</td><td colspan="2">□ yes ☑ no</td></tr>
<tr><td colspan="3">All UNIZD students as an elective course</td><td colspan="2">□ yes ☑ no</td></tr>
</table>

COURSES OFFERED IN A FOREIGN LANGUAGE IN THE ACADEMIC YEAR 2020/2021

<table>
<tr><td>Name of the course</td><td colspan="5">Digital Humanities (MA/W)</td></tr>
<tr><td>Name of the teacher</td><td colspan="5">Marijana Tomić, Ph.D., Associate Professor
Nevenka Kalebić, Research Assistant
Laura Grzunov, Research Assistant</td></tr>
<tr><td>Number of ECTS credits</td><td>6</td><td>Semester</td><td colspan="2">□ autumn/winter</td><td>☑ spring/summer</td></tr>
<tr><td>Teaching will be organized as</td><td>Lectures</td><td colspan="2">☑ yes □ no</td><td>Consultations</td><td>☑ yes □ no</td></tr>
<tr><td rowspan="2">The courses will be organized as</td><td colspan="2">Lectures</td><td colspan="2">Seminars</td><td>Exercises</td></tr>
<tr><td colspan="2">☑ yes □ no</td><td colspan="2">☑ yes □ no</td><td>□ yes □ no</td></tr>
<tr><td>Description of the course</td><td colspan="5">The content of this course includes:
• study of basic theoretical literature on digital humanities, its theory and practice
• Concept of institutionalization of a new field, digital humanities.
• Methodologies of research in digital humanities.
• Textual research in digital environment.
• Text encoding (TEI) and visual tagging (TILE, DocMark).
• Digital palaeography and digital codicology.
• Digital archaeology.
• Art history in Digital humanities.
• Classical philology and Digital humanities.
• Digital humanities and information and communication sciences
• Digital humanities and libraries
• Visualization of data in humanities.
• Data, infrastructure for its re-use in humanities.
• Big data in humanities.
• Digitization in humanities.
• Description of projects conducted in the field of digital humanities
Insight at the project of digitization of old and rare material conducted at the Department of information studies
Draft proposal of its own project in DH</td></tr>
<tr><td>Learning outcomes of the course</td><td colspan="5">Students will be able to understand:
● theory and practice of digital humanities
● methodology of research in humanities based on the principles of information technology
● fields of digital humanities (digital palaeography, codicology, art history, archaeology, musicology, etc.)
● relation within Digital humanities and libraries
● Projects conducted in digital humanities fields
● Comparative advantages of research and presentation of linguistic corpus in digital environment
● Bases of textual editing (TEI, visualization)
● Visualization of information</td></tr>
<tr><td>The course is offered to</td><td colspan="3">Incoming students who choose the above department as a home department</td><td colspan="2">☑ yes □ no</td></tr>
</table>

	All the incoming students regardless of the chosen home department at UNIZD	☑ yes □ no
	UNIZD students enrolled at the above department as an elective course	□ yes ☑ no
	All UNIZD students as an elective course	□ yes ☑ no

Name of the course	***Database Design (BA/S)***			
Name of the teacher	Krešimir Zauder, Ph.D., Assistant Professor			
Number of ECTS credits	6	Semester	□ autumn/winter	☑ spring/summer
Teaching will be organized as	Lectures ☑ yes □ no		Consultations ☑ yes □ no	
The courses will be organized as	Lectures ☑ yes □ no	Seminars □ yes □ no	Exercises ☑ yes □ no	
Description of the course	The goal of the course is to teach the fundamentals of structuring digital data for long term management and analysis. The central technology for data in this respect in the computer age are the database management systems and specifically the relational model of data. The main part of the course is dedicated to the concepts and practical considerations of the relational model but it also teaches broader subjects to enable students to recognise various data needs as required for different goals and tasks. During the course, students will primarily work with PostgreSQL, MongoDB and SQLite database systems but other software will also be mentioned.			
Learning outcomes of the course	After successfully passing this course, students will: • understand the basic principles of organization of structured data in the digital environment • understand several models of data organization as well as the difference between types of databases and appropriate use • be able to design an entity relationship data model • be able to implement a relational database • be able to write SQL queries • be able to implement a document oriented database			
The course is offered to	Incoming students who choose the above department as a home department	☑ yes □ no		
	All the incoming students regardless of the chosen home department at UNIZD	□ yes ☑ no		
	UNIZD students enrolled at the above department as an elective course	□ yes ☑ no		
	All UNIZD students as an elective course	□ yes ☑ no		

COURSES OFFERED IN A FOREIGN LANGUAGE IN THE ACADEMIC YEAR 2020/2021

<table>
<tr><td>Name of the course</td><td colspan="6">Old Books Description and Access Systems (BA/W)</td></tr>
<tr><td>Name of the teacher</td><td colspan="6">Marijana Tomić, Ph.D., Associate Professor
Laura Grzunov, teaching assistant</td></tr>
<tr><td>Number of ECTS credits</td><td>6</td><td>Semester</td><td colspan="2">☐ autumn/winter</td><td colspan="2">☑ spring/summer</td></tr>
<tr><td>Teaching will be organized as</td><td>Lectures</td><td colspan="2">☐ yes ☐ no</td><td>Consultations</td><td colspan="2">☐ yes ☐ no</td></tr>
<tr><td rowspan="2">The courses will be organized as</td><td colspan="2">Lectures</td><td colspan="2">Seminars</td><td colspan="2">Exercises</td></tr>
<tr><td colspan="2">☑ yes ☐ no</td><td colspan="2">☑ yes ☐ no</td><td colspan="2">☑ yes ☐ no</td></tr>
<tr><td>Description of the course</td><td colspan="6">- Introduction to manuscript and old and rare material studies
- Introduction to codicology, typography and bibliography
- Analytical bibliography and bibliographical analysis
- Specificities of old and rare material in the context of its description
- Printed and online catalogues and databases of old and rare material
- Projects of describing, digitization and research of old and rare material –introduction to Digital humanities projects
- Content and material description of old and rare material
- Standards and rules for bibliographic description of old and rare material – ISBD
- Authority control in the context of old and rare material
- Machine readable cataloguing of old and rare material using UNIMARC – UNIMARC/B, UNIMARC/A
- Applying conceptual models in bibliographic organization of old and rare material
- Visit to a library with old and rare material collection</td></tr>
<tr><td>Learning outcomes of the course</td><td colspan="6">Students will be able to:
- distinguish old and rare from new material
- define key terms in the field: codicology, bibliography, information organization
- understand specificities of old and rare material
- understand the value of collections of old and rare material, as well as problems of its organization, evaluation, description, registration and preservation
- understand specificities of description of old and rare material, both manuscript and hand press printed
- be competent in searching printed and online catalogues of old and rare material
- apply the knowledge of description of old and rare material in the context of new conceptual models – IFLA - LRM
- master the description of old and rare material in practice</td></tr>
</table>

COURSES OFFERED IN A FOREIGN LANGUAGE IN THE ACADEMIC YEAR 2020/2021

The course is offered to	Incoming students who choose the above department as a home department	☑ yes ☐ no
	All the incoming students regardless of the chosen home department at UNIZD	☑ yes ☐ no
	UNIZD students enrolled at the above department as an elective course	☑ yes ☐ no
	All UNIZD students as an elective course	☐ yes ☑ no

Name of the course	***Human Information Behavior (MA/S)***					
Name of the teacher	Ivanka Stričević, Ph.D., Full Professor Mate Juric, Ph.D., postdoctoral researcher Nikolina Peša Pavlović, teaching assistant					
Number of ECTS credits	6	Semester	□ autumn/winter	☑ spring/summer		
Teaching will be organized as	Lectures	☑ yes □ no	Consultations	☑ yes □ no		
The courses will be organized as	Lectures		Seminars		Exercises	
	☑ yes □ no		☑ yes □ no		□ yes □ no	
Description of the course	The content of this course includes: • Terminology, approaches and models in Human Information Behaviour (HIB) field • Theoretical framework for understanding of user information needs in various contexts • Typology of information users • Information needs of individuals and groups • Special user needs and information needs and behaviour related to particular contexts • The research results and methodology used in HIB research • Implications of HIB on information services and institutions • Possible application of theories and research results in practice • Participation in group discussions about the HIB related issues • Presentation of students' drafts of pilot research studies					
Learning outcomes of the course	Students will be able to: • Recognize concepts and approaches in users' information needs and behaviour theories and studies • Use scholarly works in the field and interpret it to identify, describe and explain some models in human information behaviour field • Describe major theories of information behaviour and identify leading authors • Explain information needs and behaviour related to particular context of information usage • Recognize and explain characteristics of systems and services based on the concept „meeting user needs "					

	• Apply knowledge on HIB to the needs of potentially disadvantaged users • Describe and compare information behaviour connected to information institutions with information seeking for everyday life purposes • Apply appropriate methodology in user needs and behaviour studies • Create and apply research instruments for pilot user studies	
The course is offered to	Incoming students who choose the above department as a home department	☑ yes □ no
	All the incoming students regardless of the chosen home department at UNIZD	□ yes ☑ no
	UNIZD students enrolled at the above department as an elective course	□ yes ☑ no
	All UNIZD students as an elective course	□ yes ☑ no

Name of the course	***Data Mining (MA/S)***			
Name of the teacher	Ante Panjkota, Ph.D., Assistant Professor			
Number of ECTS credits	6	Semester	□ autumn/winter	☑ spring/summer
Teaching will be organized as	Lectures ☑ yes □ no		Consultations ☑ yes □ no	
The courses will be organized as	Lectures	Seminars	Exercises	
	☑ yes □ no	□ yes □ no	☑ yes □ no	
Description of the course	The goal of this course is to acquaint students with basic concepts, tasks, and techniques of Data Mining. Throughout the course activities main intention is on developing fundamental knowledge and skills that pertain to the application of data mining on suitable problems from different domains, e.g., image classification, stock market prediction, customer segmentation, and so on. Besides that, students will learn to set-up problems as data mining experiments with the following phases: data acquisition phase, phase of data understanding, data preparation or preprocessing stage, choosing an appropriate model for the observed task, data visualization, and data interpretation. Writing the reports of the conducted experiments, students are finishing almost the whole cycle of the research process. With this course concept, students are qualified for applying data mining techniques as a complementary research method in their master thesis.			
Learning outcomes of the course	By the end of the course, students will be able to: • Describe basic tasks in the data mining • Explain the principles of the data mining classification algorithms, regression algorithms, clustering algorithms, and association rules algorithms • Choose an appropriate data mining model for the task of interest • Formulate problems suitable for solving by using data mining techniques			

	• Define relevant measure of quality for data mining model evaluation • Plan, design and carry out the data mining experiments • Use WEKA data mining environment to perform data mining experiments • Visualize and interpret results obtained from data mining experiments	
The course is offered to	Incoming students who choose the above department as a home department	☑ yes □ no
	All the incoming students regardless of the chosen home department at UNIZD	□ yes ☑ no
	UNIZD students enrolled at the above department as an elective course	□ yes ☑ no
	All UNIZD students as an elective course	□ yes ☑ no