

Course title: Designing of information systems

Course code	Course status	Semester	Number of ECTS credits	Lecture hours
132005190	Mandatory	V	6	3+0+2

Study program: Basic applied studies, ELECTRICAL ENGINEERING, study program: Computer engineering (studies last for 6 semesters, 180 ECTS credits).

Prerequisites: No prerequisites required.

Course aims:

Course aim is to introduce students with basic techniques which are implemented during designing of information systems (BSP, SSA) as well as with basics of object oriented analysis, design and software design in information systems (IS).

Teacher(s) and assistant(s): Ph.D. Igor Đurović, assistant professor – teacher, Mr Snežana Vujošević - assistant, Dipl. ing. Željko Vujović – assistant.

Teaching method: Lectures and laboratory exercises organized in computer classroom/laboratory. Studying and individual doing home exercises. Consultations.

Course synopsis:

Preliminary weeks	Preparation and semester enrolment.
I week	Introducing lecture. Basic concepts and definitions of IS. IS life cycles types.
II week	BSP methodology for development planning of IS.
III week	SSA. Graphical notation and analysis of business processes.
IV week	SSA. Process logic description. SSA textual documentation – data dictionary.
V week	Structural designing and software performance determination. DSM.
VI week	First test
VII week	Free week
VIII week	Introduction to object oriented analysis. UML reasons for implementation.
IX week	Class. Class interface. Entity-class relation. Relation types in UML. Class diagram.
X week	UML expanding concept. Stereotypes. Indicated value. Remarks.
XI week	Associate societies. Packages. Interfaces. Interface realization. Components. Nodes.
XII week	Second test
XIII week	User functions. Actors. User functions diagrams. Analysis of implementation cases.
XIV week	Diagrams for IS dynamics description.
XV week	Case study. IS design analysis, starting from the practical implementation case.
XVI week	Final exam
Final week	Administrative procedures.
XVIII-XXI week	Additional lessons, correction of the final exam and administrative procedures.

STUDENT WORKLOAD

per week	per semester
6 credits x 40/30 = 8 hours	Teaching and the final exam: (8 h) x 16 = 128 h
Working hours structure:	Necessary preparation (before semester): 2 x (8 h) = 16 h
3 hours for teaching	Total work hours for the course: 6 x 30 hours = 180 hours
2 hours for laboratory exercises	Additional hours for preparing correction of the final exam, including the exam taking: up to 36 hours (the rest of the time from the first two items, up to the total work hours for the course, 180 hours).
3 hours for individual work, including consultations.	Work hours structure:
	128 h (lectures) + 16 h (preparation) + 36 hours (additional work)

Lessons attendance is mandatory for students, as well as doing home and laboratory exercises and both tests.

Literature: Book: A. V. Veljović: Projektovanje informacionih sistema, Kompjuter biblioteka.
Book: G. Booch, J. Rumbaugh, I. Jacobson: UML Vodič za korisnike, CET.

The forms of knowledge testing and grading:

- 5 home exercises carry 5 points total (1 point each).
- Each test carries 25 points (50 points total).
- Final exam carries 45 points.

Student gets the passing grade by collecting 50 points at least.

Special remarks for the course: The teaching is organized for student groups of about 40 students, and laboratory exercises for student groups with 40 students. If needed, the course can also be taught in English.

Teacher(s) who provided the information: Ph.D. Igor Đurović, assistant professor

Remark: