Study Programme	Interior Architecture
Qualifications awarded	First degree
Professional title	Bachelor (appl.) in Interior Architecture
Number of ECTS credits	180
Level of qualification according to the National Qualification Framework and the European Qualifications Framework	VS-1 (NQF) First cycle (EQF)
Field of study	Engineering and technology
Mode of study	Full-time
Language of instruction	Serbian
Head of the study programme	Đorđe Đuričič, PhD

Programme objectives

The main objective of this course is to provide students with competencies and professional skills necessary for successful work in real-world settings, as well as with the knowledge about interior architecture. It develops students' creativity and problem-solving skills and enables them to perform a wide range of tasks in the field of interior architecture.

Programme outcomes

General outcomes:

- planning and design;
- monitoring and coordinating the construction and maintenance of different size and different purpose interior spaces, as well as the adaptation and reconstruction of existing ones;
- students develop creativity and problem-solving skills enabling them to find optimal solutions for practical problems in the field of interior architecture;

Specific outcomes:

- students learn how to perform different complexity tasks relating to planning, designing, construction and maintenance of different size and purpose interior spaces;
- students learn how to perform different complexity tasks relating to the reconstruction and adaptation of different size and purpose interior spaces;
- students learn how to reach the optimal interior functionality through the proper selection of materials and equipment, as well as to create a unity of aesthetics and functionality in interior spaces;
- students learn how to prepare project documentation (the graphical part, textual attachments and equipment specification) at the level of a preliminary design, expanded preliminary design and main project while complying with valid standards and norms;
- students learn how to recognize objective artistic values;
- students become familiar with different kinds of materials that can be used in the design process;
- students develop the understanding of and a creative approach to problem solving;
- students are aware of the importance and purpose of environmentally friendly designing,

environmental rehabilitation and improvement;
- students develop the understanding of fine arts and their importance for the quality of architectural solutions;
- students develop professional responsibility and teamwork skills.

COURSE SPECIFICATIONS
Undergraduate Study Programme: INTERIOR DESIGN

No.	Code	Course title	Semester	Course status	Active teaching classes			Other classes	ECTS
					Lectures	Practical classes	Other forms of instruction		
I Year									
1	91101	Building Construction	1	C	2	2	0		6
2	91102	Elements of Art in Space	1	C	2	3	0		6
3	91103	Stereometry	1	C	2	1	0		6
4	91104	Technical Drawing and Descriptive Geometry	1	C	2	3	0		6
5	91105	Visual Presentation Techniques 1	1	C	2	3	0		6
6	91201	Composition and Space Design	2	C	1	3	0		6
7	91202	History of Art	2	C	2	0	0		6
8	91203	Informatics Fundamentals	2	C	2	2	0		6
9	91204	Installations in Buildings	2	C	3	3	0		6
10	E191205	**Elective Course 1**	2	E	2	0	0		6
	912051	English 1							
	912052	Russian 1							
II Year									
11	91301	Construction Materials	3	C	2	2	0		6
12	91302	Finishing Works	3	C	2	2	0		6
13	91303	Constructive Systems	3	C	2	2	0		6
14	91304	Design Fundamentals	3	C	2	2	0		6
15	E2 91305	**Elective Course 2**	3	E	2	2	0		6
	913051	English 2							
	913052	Russian 2							
16	91401	Interior Design 1	4	C	2	3	0		6
17	91402	Interior Architecture	4	C	2	3	0		7
18	91403	Development of Architecture and Settlements	4	C	2	0	0		6
19	91404	**Elective Course 3**	4	E	2	2	0		5
	914041	Construction Project Management							
	914042	Energy Efficiency							
20	E4 91405	**Elective Course 4**	5	E	2	2	0		6
	914051	Technology of							

		Finishing Works							
	914052	Environmental Protection							
III Year									
21	91501	Constructive Elements in Interior Space	5	C	2	1	0		5
22	91502	Interior Design Styles	5	C	2	3	0		6
23	91503	Interior Design 2	5	C	3	3	0		6
24	91504	Scenography Fundamentals	5	C	2	3	0		5
25	E5 91505	**Elective Course 5**	5	E	2	1	0		5
	915051	Materials in Modern Interior Design							
	915052	Eco Design							
26	91601	Interior Design 3	6	C	3	3	0		6
27	91602	Reconstruction, Addition and Adaptation of Space	6	C	2	2	0		5
28	91603	Interior Acoustics and Lighting	6	C	2	1	0		5
29	91604	Visual Presentation Techniques 2	6	C	2	3	0		6
30	91605	Professional Practice	6	C				6	2
31	91606	Final Thesis	6	C					8

Study programme: Interior Architecture

Type and Level of Studies: Undergraduate Vocational Studies

Course code and title: Building Construction

Teacher: Milivojević Lj. Dejan, Teaching Associate: Papić V. Miloš

Course status: Compulsory

Number of ECTS credits: 6

Prerequisites: none

Course aims: Acquiring knowledge on structure systems, separate structural assembly elements, their role, materials. Developing skills for the proper selection of materials, the most suitable structural assembly for the adopted concept design. Learning about modern methods of processing structural assemblies, their joints, sealing and insulation, traditional timber roofs, eave covers and gutters, roof ridge details, aired and unaired roofs, building physics elements.

Learning outcomes: The ability to analyse/systematise elements and assemblies in building construction and to find optimal solutions to structural assembly issues.

Syllabus

Theoretical instruction:

General introduction – history of structural systems and building construction materials. Foundations, soil types, foundation types. Sealing buildings, main impacts of water and moisture, sealing materials and methods. Structural assembly elements of a building: columns, beams, arches. Structural assembly elements of a building: floor joists, walls and flat roofs; massive and skeletal building structures; designing openings: windows, doors; ventilation and smoke exhaust systems. Vertical transportation systems: escalators, elevators, stais, reinforced concrete staircase. Tradional timber roof structures: single roofs, double roofs, trussed roofs. Traditional and modern timber roof structures: glued laminated timber, timber truss, curved truss, trigonit girder truss, etc. Roof covers and insullation. Building physics elements. Fundamentals of ecological and bioclimatic architecture. Fundamentals of prefabrication.

Practical teaching:

structural assemblies: massive, skeletal and mixed; selecting structural layout of buildings for the given base; variations of the selected layouts; selecting massive structures; graphical assignment; foundations; designing a projects/graphical presentation of the selected layout; sealing; the impact of water under pressure; the impact of moisture; sealing methods; graphical assignment; openings – external and internal; windows, shades, project-graphical assignment using the given data; reinforced concrete staircase: calculating stair parametres; tread and riser processing, railings; static schemes; reinforced concrete staircase: designing interior staircase with two flights of stairs and a landing; graphical assignment; traditional timber roofs; designing roof structures – project – base - cross-sections using the given base and data; traditional timber roofs: eave details – covering and gutters; ridge details; aired and unaired roofs, details.

Literature:

1. Mittag Martin, Građevinske konstrucije, 18. izdanje, Građevinska knjiga, Beograd, 2003.
2. Grupa autora: Atlas krovnih konstrukcija – kosi krovovi, Građevinska knjiga, Beograd, 1990.
3. Nestorović Miodrag, Konstruktivni sistemi, Arhitektonski faklultet, Beograd, 2000.
4. Milivojević Dejan, Zgradarstvo 1, Akademska misao, Beograd, 2014.

Number of active teaching classes: 60				Other classes:
Lectures: 30	Practical classes: 30	Other teaching forms:	Study research work:	

Teaching methods: Auditory exercises, dialogue, consultations, fieldwork, mentorship, literature review

Knowledge evaluation (maximum 100 points)

Pre-exam obligations	**Points**	**Final exam**	**Points**
Activity during lectures	10	Exam	40
Practical classes	10		

Colloquia	15+15		
Seminar papers			
Assessment methods:			

Study programme: Interior Architecture

Type and level of studies: Undergraduate Vocational Studies

Course title: Composition and Space Design

Teacher: Dimitirijević S. Aleksandar; Teaching associate: Stefanović R. Katarina

Course status: Compulsory

Number of ECTS: 6

Prerequisites: none

Course aim:

Introducing students to fundamentals of composition in architecture and architectural space design. Developing skills to recognize objective artistic values and developing visual thinking skills through creative and practical work. Developing deliberation skills, aesthetic evaluation, articulation and space design skills for different types of less complex architectural facilities.

Course outcomes:

Students will use the acquired knowledge in further education and other courses. Creative use of the acquired knowledge on elements of composition and composition principles in the process of creating architectural compositions, starting from conceptual designs and solutions to their materialization.

Syllabus:

Theoretical instruction:

Form and design in architecture. Elements of composition. Principles of composition. Harmony. Unity. Rhythm. Gradation. Dominant. Contrast. Creation process. Achieving unity in diversity. Architectural form dynamics. Architectural from and its meaning. Form expressiveness. Concept of style. Style and unity.

Practical instruction:

Place and role of geometry in architecture. Basic elements (conceptual and visual): point, line, area, volume. Basic visual characteristics of forms: shape, size, colour, texture, position, direction, visual stability. Form perception: perspective, distance, lighting conditions, visual characteristics of the environment. Regular and irregular forms. Form transformation. Subtractive forms. Additive forms: central, linear, radial, group, raster. Theory of comparative analysis of architectural compositions using relevant examples of architectural accomplishments in national and international practice.

Preparation of a seminar paper on a given topic, according to a given model and conceptual solution for an interior.

Literature:

1. Milenković, B., Jezik arhitekture, Beograd, Arhitektonski fakultet Univerziteta u Beogradu, 2003.
2. Kloc, H., Umetnost u XX veku, moderna-postmoderna-druga moderna, Novi Sad, Svetovi, 1994.
3. Mitrović, M., Forma i oblikovanje, Naučna knjiga, Beograd, 1990.
4. Joedicke, J., Oblik i prostor u arhitekturi. Beograd: Orion Art, 2009.
5. Gidion, S., Prostor, vreme i arhitektura, Građevinska knjiga, Beograd, 2001.
6. Focht, I., Uvod u estetiku. Sarajevo: Svjetlost, 1984.
7. Arnhajm, R., Dinamika arhitektonske forme. Beograd: Univerzitet umetnosti u Beogradu, 1977.
8. Arnhajm, R., Umetnost i vizuelno opažanje. Beograd: Univerzitet umetnosti u Beogradu, 1954.
9. Krier, R., Architectural Composition. London: Academy Editions, 1995.
10. William, L., Univerzalna načela dizajna. Zagreb: Mate, 2016.
11. Ching, F.D.K., Arshitecture: Form, Space & Order. New York: International Thomson Publishing, 1979.
12. Periodika: Architectural design, Domus, The Architectural Review

Number of active teaching classes: 60	Lectures: **15x2=30**	Practical classes: **15x2=30**

Teaching methods: Methods of complex interdisciplinary merging of complex theoretical concepts and reading with the immediate analysis of selected examples of art forms, which actively engages the students. Lectures with ample visual illustrations ensuring direct interaction between students and specific examples of art forms, which is necessary for their understanding and use of complex concepts, and analytic-synthetic procedures. The teacher and students together analyse art phenomena. Individual research on a given topic. Preparing a conceptual design of an interior, with the teacher's help provided through individual consultations and corrections. Discussion, evaluation and assessment of students' work with their active participation.

Knowledge evaluation (maximum number of points: 100)			
Pre-exam obligations	**Points**	**Final exam**	**Points**
Activity during lectures	Up to 5	Written exam	Up to 55
Practical classes	Up to 10	Oral exam	-
Semestral assignment	Up to 20		
Seminar paper	Up to 10		

Study programme: Interior Architecture

Type and level of studies: Undergraduate Vocational Studies – first level studies

Course title: Construction Materials

Teacher: Markićević M. Jelena; Teaching associate: Arsović D. Dragoslav

Course status: Compulsory

Number of ECTS: 6

Prerequisites: none

Course aim:
Acquiring fundamental knowledge about construction materials, i.e. knowledge about: material properties, testing methods, quality criteria they are supposed to satisfy. Learning about raw materials, technological processes of producing construction materials and their usage.

Course outcomes:
Developing the ability to apply the acquired knowledge to practice through proper selection and use of construction materials aimed at improving the quality, efficacy and duration of facilities.

Syllabus:

Theoretical instruction:
Introduction. Structure of materials. Basic properties of construction materials. Testing materials. Non-destructive testing methods. Defining characteristics of metals. Building stone. Ceramic materials. Aggregate. Inorganic (mineral) binding agents (construction plaster, construction lime, calcined lime, cement). Mortar (properties of fresh and hardened mortar, defining their composition and types). Metals (iron and its alloys, ferrous metals, metal corrosion). Polymers and plastic mass. Special-purpose materials.

Practical instruction:
Auditory exercises. Computational tasks and analyses of results of laboratory testing in compliance with the subject matter delivered through lectures.
Laboratory exercises: testing and control of specific properties of construction materials in compliance both with valid standards and subject matter delivered through lectures.

Literature:

1. Mihailo Murovljev, Građevinski materijali, Naučna knjiga, Građevinski fakultet, Beograd, 2000.
2. Mihailo Murovljev, Građevinski materijali, zbirka rešenih ispitnih zadataka, GROS knjiga, Beograd, 1994.
3. Sekula Živković, Građevinski materijali, zbirka rešenih testova, GROS knjiga, Beograd, 1994.
4. M. Murovljev, I. Stoiljković, S. Živković, D. Jevtić, T. Kovačević, M. Krasulja, Praktikum za vežbe iz građevinskih materijala, Građevinski fakultet, Beograd, 2003.

Number of active teaching classes: 60	Lectures: **15x2=30**	Practical classes: **15x2=30**

Teaching methods: dialogue, monologue, practical work demonstrations

Knowledge evaluation (maximum number of points: 100)

Pre-exam obligations	**Points**	**Final exam**	**Points**
Activity during lectures	5	Exam	55
Practical classes	15		
Colloquium 1	15		
Colloquium 2	15		

Study programme: Interior Architecture

Type and level of studies: Undergraduate Vocational Studies – first level studies

Course title: Construction Project Management

Teacher: Markićević M. Jelena; Teaching associate: Papić V. Miloš

Course status: Compulsory

Number of ECTS: 5

Prerequisites: none

Course aim:
Acquiring knowledge about basic categories and concepts of construction project management.

Course outcomes:
Developing skills necessary for applying the acquired knowledge in order to find optimal solutions in modern construction practice.

Syllabus:

Theoretical instruction:
Introduction. Investment projects, specificities and classification of construction projects, participants in project implementation, different approaches to project management, consulting services, defining a project (preparing technical documentation), construction project implementation management, trial production management, organizing project management, construction company organization model, construction regulations, computer-aided project management (MS Project).

Practical instruction:
Auditory exercises include the analysis of practical examples relating to the theoretical subject matter in this field and providing students with skills required for independent participation in construction project management.

Literature:

1. Branislav Ivković, Željko Popović, Upravljanje projektima u građevinarstvu, Beograd, Nauka, 1994.
2. Petar Đuranović, Upravljanje građevinskim projektima, NJP Pobjeda, Podgorica, 1995.
3. Petar Đuranović, Menadžment u građevinarstvu, NJP Pobjeda, Podgorica, 1996.
4. Law on planning and construction in the Republic of Serbia and other regulations relating to the subject matter of this course

Number of active teaching classes: 60	Lectures: **15x2=30**	Practical classes: **15x2=30**

Teaching methods: dialogue, monologue

Knowledge evaluation (maximum number of points: 100)

Pre-exam obligations	**Points**	**Final exam**	**Points**
Activity during lectures and practical classes	10	Final exam	50
Seminar paper	20		
Colloquium 1	10		
Colloquium 2	10		

Study programme: Interior Architecture

Type and Level of Studies: Undergraduate Vocational Studies

Course code and title: Constructive Elements of Interior Design

Teacher: Furtula B. Boško, Teaching associate: Papić V. Miloš

Course status: Compulsory

Number of ECTS credits: 5

Prerequisites: none

Course aims: Introducing students to basic elements of constructive systems of facilities and their relations, as well as to regulations, construction methods, standards, finishing works and other factors that might serve as determining or limiting factors, but which are common in the process of interior design. Teaching students how to recognize prospective aesthetic value of constructive elements in interior space. Long-span roof structures, natural concrete, lattice structures, arches.
Providing students with knowledge about different methods of architectural drawing and marking of constructive elements in project documentation

Learning outcomes: Students are familiar with basic types and elements of constructive systems. They are familiar with and able to use different constructive elements as aesthetic details in the process of interior design: stairs, railings, timber roofs, galleries, long-span roofs. They understand the conditions and limitations imposed by constructive elements on interior design processes.

Syllabus

Theoretical instruction:

Types and elements of constructive systems of buildings. Vertical and horisontal supporting elements in buildings with massive and skeleton frame structures. Interior construction and materialisation. Finishing works. Space partitioning elements. Openings on interior and exterior walls.
Floors, walls, ceilings, dropped ceilings. Interior staircase, railings, galleries and platforms. Structural analysis of constructive elements and how to present it. Visible joints and connections. Movable constructive elements. Interior long-span roof structures.
Concrete structures. Concrete columns and beams in interior space. Concrete flat and curved wall and floor surfaces. Natural concrete in interior space. Choosing panelling: visible joints, anchor bolts, and texture. Long-span concrete structures, concrete lattices, concrete shells.
Timber structures. Traditional timber roofs, attics, lofts. Long-span timber support structures. Timber lattice framework. Lamellated timber structures. Latticed domes, grating, long-span consoles.
Metal structures: latticed support structures, gratings, roof and wall sandwich panels.

Practical teaching:

Comparative theoretical analysis of interior constructive elements using relevant examples of architectural achievements in national and international practice. Preparing a seminar paper on a given topic, according to a given model and final design of a long-span roof structure (sports hall, stadium, theatre, opera house, traffic terminal).

Literature:

1. Trbojević, R., Arhitektonske konstrukcije – konstruktivni masivni sklop, Orion, Beograd, 2001.
2. Krstić, P., Arhitektonske konstrukcije 1 i 2, Naučna knjiga, Beograd, 1990.
3. Ilić, S. Klasični drveni krovovi, Građevinska knjiga, Beograd, 2003.
4. Martinković, K., Osnovi zgradarstva 1-7, Beograd, 1985.
5. Blagojević, B., Građevinske konstrukcije za građevinske škole, Zavod za udžbenike, 1996.
6. Sobek, V., Šulic, C.H., Haberman, J.K., Atlas čeličnih konstrukcija. Beograd: Građevinska knjiga, Beograd, 2010.
7. Muravljov, M., Stevanović, B., Zidane i drvene konstrukcije zgrada, Građevinski fakultet u Beogradu, 1999.
8. Grupa autora, Građevinski tehničar 3, Građevinska knjiga, Beograd, 2007.
9. Grupa autora, Metalne konstrukcije, Građevinska knjiga, Beograd, 2015.

Number of active teaching classes: 60				Other classes:
Lectures: 30	Practical classes: 30	Other teaching forms:	Study research work:	
Teaching methods: Lectures with visual illustrations, individual research work on a given, workshops, discussion, final design of a long-span roof structure created with the teacher's help provided through individual consultations and corrections. Students are actively involved in the evaluation of their work.				
Knowledge evaluation (maximum 100 points)				
Pre-exam obligations	**Points**	**Final exam**	**Points**	
Activity during lectures and practical classes	Up to 5	Written exam	Up to 55	
Practical classes	Up to 10			
Semetral project	Up to 20			
Seminar paper	Up to 10			
Assessment methods:				

Study programme: Interior Architecture

Type and Level of Studies: Undergraduate Vocational Studies

Course code and title: Constructive Systems

Teacher (Surname, middle initial, name): Furtula B. Boško, Teaching associate: Stojanović B. Trifko

Course status: Elective

Number of ECTS credits: 6

Prerequisites: none

Course aims: Acquiring knowledge necessary for selecting, designing, constructing and maintaining constructive systems in architecture.

Learning outcomes: The ability to select, design, construct and maintain constructive systems depending on the materials used. Mastering a systematic approach to the selection of constructive systems and construction technology under the given conditions.

Syllabus

Theoretical instruction:

Introduction. Concept of constructive systems. Overview of evolution of constructive systems. Classification of constructive systems. Fundamental designing principles. Load-bearing capacity. Stability. Usability. Durability. Constructive system selection principles. Facility- constructive system relationship. Linear and surface systems – force transfer. Construction methods. Building constructive systems. Industrial facilities. Long-span structure supports. Presentation of specific facilities. Calculation principles.

Practical teaching:

Auditory exercises, tasks relating to theroretical subject matter, and preparation of a survey. Visiting construction sites.

Literature:

1. Nestorović, M., Konstruktivni sistemi – principi konstruisanja i oblikovanja, Arhitektonski fakultet u Beogradu, Plato, Beograd, 2000.
2. Zloković, Ć. Konstruktivni sistemi, Tehničar 3, Građevinska knjiga, Beograd, 1984.
3. Balgč, E., Prostorne krovne konstrukcije – njihove pojedinosti – njihovo izvođenje, prvi deo, Građevinska knjiga, Beograd, 1979.
4. Dančević, D., Konstruktivni sistemi u visokogradnji, Niš, 1978.

Number of active teaching classes: 60				Other classes:
Lectures: 30	Practical classes: 30	Other teaching forms:	Study research work:	

Teaching methods: Dialogue, monologue, demonstration of practical work

Knowledge evaluation (maximum 100 points)

Pre-exam obligations	**Points**	**Final exam**	**Points**
Activity during lectures and practical classes	5	Exam	50
Survey defense	15		
Colloquia	15+15		
Seminar papers			

Assessment methods:

Study programme: Interior Architecture

Type and Level of Studies: Undergraduate Vocational Studies

Course code and title: Design Fundamentals

Teacher: Milivojević Lj. Dejan; Teaching assistant: Stojanović B. Trifko

Course status: Elective

Number of ECTS credits: 6

Prerequisites: none

Course aims: Site analysis: man-made and natural factors, solar insolation, caloric values, topography, wind rose, traffic, infrastructure, urban design parametres, conceptual design of a building based on the site analysis results and urban design parametres.
Developing students' competency to perform the structural, dimensional and construction analysis of residential facilities; workplace concept, typical units, typical organization. Typology of residential facilities: collective, multi-family and single-family buildings. Different ways of grouping separate spatial units, starting from an apartment organization to a whole building design: basic façade composition principles – shape and materials.

Learning outcomes: Preparation of a conceptual design for a single-family residential facility, starting from urban design conditions to producing an architectural solution including all plans and a spatial model.

Syllabus

Theoretical instruction:

Introduction to architectural design: phases of producing technical documentation. Site analysis: morphological and climatic. Urban design parametres. Concept of HOUSING, and its sociological, psychological, historical and medical implications. Concepts of collective and individual housing. Individual housing typology: courtyard houses, terraced houses, detached houses, semi-detached houses. Architectural apartment layout analysis. Workplace; typical units. Typical organizations. Apartment: two-dimensional analysis of hygienic zone. Apartment: dimensional analysis; food preparation, dining, services. Apartment: dimensional analysis, leisure, rest, daily activities.
Grouping residential units - shape parameter, urban design and other parametres.
Presenting national and international architectural documentation.

Practical teaching:

Inroducing students to the task: a rest house project design. Introducing students to the site – site analysis. Conceptual design of the house on the site, orientation, traffic, etc. Conceptual design of the house: circulation diagram and interior organisation. Sketches: bases, cross-sections, etc. Sketches: form coordination – all plans. Adopting conceptual design. Elaboration of conceptual design. Discussion and assessment of the project.

Literature:

1. Milenković, Branislav, Uvod u arhitektonsku analizu, Građevinska knjiga, Beograd, 1990.
2. Rakočević Milan, 24 časa arhitekture – uvod u arhitektonsko projektovanje, Orion Art, Beograd, 2003.
3. Grupa autora, Tehničar-4 – deo o projektnom elaboratu, Građevinska knjiga, Beograd, 1990.
4. Uslovi i tehnička normativa za projektovanje stambenih zgrada i stanova.
5. Neufrert, E., Arhitektonsko projektovanje, Građevinska knjiga, beograd, 1990.

Number of active teaching classes: 60				Other classes:
Lectures: 30	Practical classes: 30	Other teaching forms:	Study research work:	

Teaching methods: Auditory exercises, dialogue, consultations, fieldwork, mentorship, literature review

Knowledge evaluation (maximum 100 points)

Pre-exam obligations	**Points**	**Final exam**	**Points**
Activity during lectures	10	Exam	30
Practical classes	40		

Colloquia	20		
Seminar papers			
Assessment methods:			

Study programme: Interior Architecture

Type and level of studies: Undergraduate Vocational Studies

Course title: Development of Architecture and Settlements

Teacher: Lazić M. Gordana

Course status: Compulsory

Number of ECTS: 6

Prerequisites: none

Course aim:

Introducing students to the organization of space, styles and construction techniques, as well as to the most important construction achievements in the development of architecture and settlements, from pre-historic times to the present. Students will understand the development and continuity of architectural creation. The selection of archetypes as universal ideas that can be transformed in different programme solutions, structures, and spatial-historical contexts.

Course outcomes:

Students understand the process of the emergence and development of settlements and cities, as well as the development of architectural ideas and practice, which helps them to recognize the basic principles of architectural design and apply the acquired knowledge to other courses.

Syllabus:

Theoretical instruction:

The organization of space is analysed through different periods of time, from pre-historic times to the present, together with the most important style characteristics, meaning, materials, structures and construction techniques in architecture and urbanism. Special attention is paid to the selected examples of public architecture (sacred and profane) and public city areas dating back to the beginnings of certain civilization and style groups, as well as on their influence on the establishment of schools and so-called 'provincial' architecture.

The Pre-historic architecture comprises the emerging forms and archetypes of architectural wholes, elements and forms in the Stone Age, Bronze Age and Iron Age. The Ancient Architecture comprises the architecture of ancient Egypt, Near East, ancient Greece, Etruria and Rome.

The concept of Medieval Architecture comprises the early Christian, Byzantine, Pre-Roman, Gothic and Islamic architecture. The programme also includes the medieval architecture of the countries which suffered the Byzantine influence, as well as medieval cities and fortifications. As for the medieval architecture in our country, the Raška, Byzantine and Morava styles will be studied. As for the modern architecture, students will be introduced to the most popular architects and theoreticians from the period of Renaissance and Baroque from Italy, France, England and other parts of Europe.

Providing students with knowledge on general trends of historical development of architecture and building from the end of XIX century to the present. Introducing students to the most prominent authors and their work and providing them with insight into the relationship between different styles and expressions in the field of architectural design.

The teacher and students together analyse the most important examples of public architecture and public, urban areas.

Literature:

1. Stupar, A., Grad: forme i procesi, Orionart, Beograd, 2016.
2. Nestorović, B., Arhitektura starog veka, Naučna knjiga, Beograd, 1952.
3. Nestorović, B., Arhitektura novog veka, Naučna knjiga, Beograd, 1964.
4. Deroko, A., Arhitekture starog veka, Beograd, 1962.
5. Bošković, Đ., Arhitektura srednjeg veka, Naučna knjiga, Beograd, 1957.
6. Radović, R., Savremena arhitektura, Fakultet tehničkih nauka Univerziteta u Novom Sadu, 1998.
7. Perović, M., Savremena arhitektura, Beograd, 2000.
8. Janson, H.V., Istorija umetnosti, više izdanja.
9. Gombrih, E., Umetnost i njena istorija, više izdanja.
10. Nestorović, B., Arhitektura Srbije u 19. veku, Beograd, Art-press
11. Pevsner, N., Izvori moderne arhitekture i dizajna, Beograd, Građevinska knjiga, 2005.
12. Šterner, G., Jugendstil, Beograd Izdavački zavod Jugoslavija, 1978.

13. Masini, L.-V., Liberty, Firenze, Giunti, 2006.
14. Dženks, Č, Moderni pokreti u arhitekturi, Građevinska knjiga, Beograd, 1990.
15. Perović, M., Istorija moderne arhitekture, IDEA, Beograd, 1997.
16. Howard, J., Art Nouveau, Manchester-New York, 1996.

Number of active teaching classes: 30	Lectures: **15x2=30**	Practical classes:

Teaching methods: Interdisciplinary intertwining of complex theoretical concepts and reading while analyzing selected examples of public architecture and public, urban areas. Lectures with ample visual illustrations ensuring direct interaction between students and specific examples of architectural and urban forms, thus providing students with the basis for understanding and using complex concepts and analytical and synthetic processes. The teacher and students together analyse architecture and city phenomena. Individual research on a given topic with the teacher's help provided through individual consultations and corrections, discussion, evaluation and assessment of students' work with active participation of students.

Knowledge evaluation (maximum number of points: 100)

Pre-exam obligations	**Points**	**Final exam**	**Points**
Activity during lectures	Up to 15	Written exam	Up to 60
Practical classes		Oral exam	-
Colloquium			
Seminar paper	Up to 25		

Study programme: Interior Architecture

Type and level of studies: Undergraduate Vocational Studies – first degree studies

Course title: Eco Design

Teacher: Trumbulović-Bujić M. Ljiljana, Techning associate: Tomić D. Milena

Course status: Elective

Number of ECTS: 5

Prerequisites: None

Course aim: The main aim is to develop student competencies and academic skills relating to the field of eco design and sustainable product development concept. The aim is to help students master the methodology of designing strategies for improving products in order to reduce their negative impact on the environment, as well as to help them realize the impact of a product on the environment throughout its life cycle. Thus they would develop innovative approaches to producing eco-friendly products.

Course outcomes: By mastering eco design strategies, students will become able to come up with innovative ideas about how to improve products to make them eco-friendly. Students master knowledge, tools and practical skills necessary for the development of a sustainable product, and can keep pace with environmental directives and communicate with organisations in charge of environmental protection.

Syllabus:

Theoretical instruction:

Introduction to eco design, basic concepts and terminology; environmental impacts of products. Eco design strategies, product modelling, recommendations for selection of materials with low environmental impact, the impact of production technologies, transport and packaging, as well as environmental impacts of different stages of using a product and its shelf life. Determining product shelf life, environmental impact methodology, practical examples. Characteristics of eco design products, using recycled materials, using materials from immediate surroundings, increased durability of products, reduced waste amounts, possibility of recycling recycled packages. Sustainable development pronciples.

Environmental communication and EU environmental protection measures, directives, eco labels, and declarations. Using eco design to improve existing products. Eco design aimed at disposal and recycling of products after their expiration date, design aimed at waste minimisation, design aimed at disassembly of overused devices.

Preparing seminar papers – work with text, literature review (Internet, library) methods.

P**ractical instruction:**

Eco design terminology. Examples of environmental impact of products. How to use eco design strategies. Examples of shelf life analysis from the eco design perspective. Examples of improving existing products. Examples of recycling overused products. Eco design software tools, improving products through several stages which comprise: product identification, eco design strategies and specific improvement measures.

Literature:

1. Lj. Trumbulović, Pisana predavanja, VPTŠ Užice, 2016.
2. Lj. Trumbulović, Materijali, polimeri, keramika, kompoziti, Udžbenik, VPTŠ Užice, 2015.
3. Lj. Trumbulović Bujić, Izvori zagađenja životne i radne sredine, monografija, Savez inženjera metalurgije Srbije, Beograd, 2011.
4. Slavko Arsovski, Sonja Grubor, Postupak ocenjivanja životnog ciklusa proizvoda, 2011.
5. Evropska komisija, Directive Eko dizajna.
6. Snežana Pavićević, Vladimir Savić, Unapređenje eko dizajna, serija standarda IDO 14001.

Number of active teaching classes: 60				Other classes:
Lectures: 2*15=30	Practical classes: 2*15=30	Other forms of instruction:	Research study:	

Teaching methods: Dialogue, monologue, practical work demonstration, work with text, literature review.

Knowledge evaluation (maximum number of points: 100)

Pre-exam obligations	**Points**	**Final exam**	**Points**

Activity during lectures	5	Written exam	50
Practical classes	5	Oral exam	
Colloquia	30		
Seminar papers	10		

Study programme: Interior Architecture

Type and level of studies: Undergraduate Vocational Studies

Course title: Elements of Art in Space

Teacher: Dimitirijević S. Aleksandar; Teaching associate: Stanojčić B. Ana

Course status: Compulsory

Number of ECTS: 6

Prerequisites: none

Course aim:
Introducing students to basic concepts and approaches to studying art forms as material expressions of artists' ideas and artistic content. Developing aesthetic perception and evaluation skills, as well as creative thinking and expression through the articulation of ideas and their materialisation.

Course outcomes:
Creative use of acquired knowledge on elements of art and principles of their arrangement to create art forms, starting from conceptual designs and solutions to their materialisation.

Syllabus:

Theoretical instruction:
Visual art as world of shapes and space. Space-time relationship in piece of art. Space in piece of art: space around, space within and positive space. Visual field structure. Figure-background relationship. Elements of composition. Line. Direction. Form. Texture. Size. Colour. Value. Elements of art and their relationships in composition. Repetition. Harmony. Discord. Gradation as gradual transitions. Unity. Unity with variations. Idea and unity. Style and unity. Unity and dominance. Unity and harmony. Form dynamics. Rhythm. Interval. Meaning of form. Form and content. Form expressiveness. Creation process. Artistic ideas in artistic expression. Natural forms. Geometric forms.

Practical instruction:
Students experiment with elements of artistic expression according to basic principles of composition, and develop skills required for the practical application of the acquired knowledge, and its correlation with knowledge and skills acquired in other fields.

Literature:

1. Mitrović, M., Forma i oblikovanje, Naučna knjiga, Beograd, 1987.
2. Graves, M., The Art of Color And Design. New York and London: McGraw-Hill Book Company , 1941.
3. Ljubojević, D., Boja i njena primena, Arhitektonski fakultet, Beograd, 1982.
4. Jakubin, M., Likovni jezik i likovne tehnike, Zagreb, Eduka, 1999.
5. Focht, I., Uvod u estetiku. Sarajevo: Svjetlost, 1984.
6. Arnhajm, R., Umetnost i vizuelno opažanje. Beograd: Univerzitet umetnosti u Beogradu, 1987.
7. Vasić, P., Uvod u likovne umjetnosti. Beograd: Univerzitet umetnosti u Beogradu, 1981.
8. Bogdanović, K., Burić, B., Teorija forme, Zavod za udžbenike i nastavna sredstva, Beograd, 1999.
9. Mišević, R., Izbor tekstova za izučavanje predmeta teorija forme, Beograd, Univerzitet umetnosti u Beogradu, 1989.
10. Krier, R., Architectural Composition. London: Academy Editions, 1995.
11. Ching, F.D.K., Architecture: Form, Space & Order. New York: International Thomson Publishing, 1979.
12. Hartman, N., Estetika. Beograd: Beogradski izdavačko-grafički zavod, 1979.
13. Ball, P., Shapes: Nature's Patterns, A Tepestry in Three Parts, Pattern Formation in Nature. Oxford University Press

Number of active teaching classes: 75	Lectures: **15x2=30**	Practical classes: **15x3=45**

Teaching methods: Methods of complex interdisciplinary merging of complex theoretical concepts and reading with the immediate analysis of selected examples of art forms, which actively engages the students. Lectures with ample visual illustrations ensuring direct interaction between students and specific examples of art forms, which is necessary for their understanding and use of complex concepts, and analytic-synthetic procedures. The teacher and students together analyse art phenomena. Individual research on a given topic.

Performing graphic assignments, with the teacher's help provided through individual consultations and corrections. Discussion, evaluation and assessment of students' work with their active participation.			
Knowledge evaluation (maximum number of points: 100)			
Pre-exam obligations	**Points**	**Final exam**	**Points**
Activity during lectures	Up to 5	Written exam	Up to 55
Practical classes	Up to 10	Oral exam	-
Colloquium	Up to 20		
Seminar paper	Up to 10		

Study programme: Interior Architecture

Type and level of studies: Undergraduate Vocational Studies – first degree studies

Course title: Energy Efficiency

Teacher: Damnjan D. Radosavljević and Dragomir M. Aćimović

Course status: Compulsory

Number of ECTS: 5

Prerequisites: None

Course aim: **S**tudents learn about the basic principles, thermodynamic conditions and limitations of the processes of energy generation, transmission and transformation, as well as about environmental benefits of efficient energy use. They learn about the possibilities of improving energy processes, technological operations, thermo-physical properties of residential and business facilities, by increasing their energy efficiency.

Course outcomes: Students will have acquired knowledge on the necessity and importance of efficient energy use, principles and possibilities of increasing process quality and saving energy by improving the energy efficiency of industrial operations, processes and devices, as well as by improving thermo-physical properties and energy efficiency of residential and business facilities. Students will be able to understand and analyse the observed energy processes and apply the acquired knowledge independently and in a creative manner in their scientific research.

Syllabus:

Theoretical instruction:

Basic definitions and the possibility of calculating the efficiency of processes and devices. Thermomechanical equations of state, and energy equations. The principles of material and energy balance of thermomechanical systems. The energy and exergy degerees of usefulness of processes and devices. The efficiency of heating equipment. The efficiency and environmental impact of power plants. The efficiency of cooling processes and equipment. Modern technologies for increasing energy efficiency. Energy efficiency of buildings and facilities. The possibilities of saving heating and air-conditioning energy, new technology, using energy from renewable resources, green buildings. Introducing students to basic principles of cost effectiveness analysis and defining environmental benefits of energy efficient processes. The situation and perspectives in the country and abroad.

Practical instruction:

The processes of calculating the thermodynamic degree of usefulness and efficiency of basic heating processes. The analysis of the potential increase in energy efficiency using specific thermo-energetic and thermo-technical processes and plants. Heat loss analysis methods and energy saving measures in the construction of buildings. Studying the energy efficiency issues of high importance for the scientific-research work of each student.

Literature:

1. LDK Conutants SA, Agencija za energetsku efikasnost Republike Srbije, Materijal za obuku za gazdovanje energijom u opštinama, Beograd 2005.
2. Karamarković V., Ramić, B., Gordić, D., et al. Uputstvo za izradu energetskih bilansa u opštinama, http://www.mfkg.kg.ac.yu/component/option,com_docman/task,cat_view/gid,125/Itemid,27/
3. Capehart V., W. Turner, W. Kennedy, Guide to Energy Management, Fourth ed., The Fairmont Press, 2003.
4. Jasmina Radosavljević, Tomislav Pavlović, Miroslav Lambić, Solarna energetika i održivi razvoj, Građevinska knjiga, Beograd, 2004.
5. Boris Labudović, Frano Barbir, Julije Domac, et.al., Obnovljivi izvori energije, energetika marketing, Zagreb, 2002.

Number of active teaching classes: 90				Other classes:
Lectures: 3*15=45	Practical classes: 3*15=45	Other forms of instruction:	Research study:	

Teaching methods: Theoretical and practical instruction, audio-visual exercises, 2 colloquia, written and oral exam. Analytical methods of assessing the efficiency of heating processes and introducing students to the existing software packages. Visiting the laboratory of the Materials testing institute of Serbia and practical

introduction to the processes and methodology of assessing energy efficiency in the construction of buildings.			
Knowledge evaluation (maximum number of points: 100)			
Pre-exam obligations	**Points**	**Final exam**	**Points**
Activity during lectures	10	Written exam	20
Practical classes	30	Oral exam	20
Colloquia (2x10)	20		
Seminar papers	-		

Study programme: Interior Architecture

Type and level of studies: Undergraduate Vocational Studies

Course title: English 1

Teacher: Ivana M. Marinković

Course status: Elective

Number of ECTS: 6

Prerequisites: None

Course aim: Acquiring the necessary knowledge of English for General Purposes, as well as of English for Specific Purposes; further development of all language skills, development of reading comprehension skill, speaking about profession-specific topics. Providing students with skills required for written communication in English about topics relating to interior architecture and civil engineering, and development of business communication skills.

Course outcomes: Using the acquired knowledge and skills in specific situations; providing continuous studying of English language upon high school completion; obtaining the satisfactory level of the foreign language knowledge.

Syllabus:

Theoretical instruction:

Nouns (plural). Pronouns (personal, possessive, relative, reflexive). Relative clauses. Articles (types and use). Adjectives and adverbs (comparison). Verbs (types, tenses).

English for Specific Purposes – introducing students to vocation-specific vocabulary.

Business English – mastering business correspondence rules and formal expressions.

Practical instruction:

Grammar exercises, listening and speaking exercises aimed at the integration of lexical and grammatical knowledge; oral and written translation; writing business letters, CVs, etc.

1. Čavić, E., English in Architecture, Naučna knjiga, Beograd, 1992.
2. Naunton, J., ProFile 2, Oxford, Oxford University Press, 2005.
3. Horvatovic, M., Vuletić, M., English for Civil Engineers, Naučna knjiga, Beograd, 1991.
4. Murphy, R., English Grammar in Use, Cambridge University Press, 1990.
5. Thompson A.J., Martinet, A.V., A Practical English Grammar, Oxford, OUP, 1994.
6. Advanced Learner's Dictionary of Current English, OUP, 1998.

Number of active teaching classes: 30				Other classes:
Lectures: 2x15=30	Practical classes: 0	Other forms of instruction:	Research study:	

Teaching methods: Monologue, dialogue, combined teaching methods, work with text.

Knowledge evaluation (maximum number of points: 100)

Pre-exam obligations	**Points:**	**Final exam**	**Points:**
Activity during lectures	20	Written exam	15
Practical classes		Oral exam	15
Colloquia	50		
Seminar papers			

Study programme: Interior Architecture

Type and level of studies: Undergraduate Vocational Studies

Course title: English 2

Teacher: Ivana M. Marinković

Course status: Elective

Number of ECTS: 6

Prerequisites: Passed examination in English 1.

Course aim:
Acquiring the necessary knowledge of English for General Purposes, as well as of English for Specific Purposes; further development of all language skills, development of reading comprehension skill, speaking about profession-specific topics. Providing students with skills required for written communication in English about topics relating to interior architecture and civil engineering, and development of business communication skills.

Course outcomes:
Using the acquired knowledge and skills in specific situations; providing continuous studying of English language upon high school completion; obtaining the satisfactory level of the foreign language knowledge.

Syllabus:

Theoretical instruction:
Verbs (auxiliary and modal). Conditional sentences. Numbers. Passive. Reported speech (sequence of tenses). Future forms.
English for Specific Purposes – introducing students to vocation-specific vocabulary through work with specialised texts.
Business English – mastering business correspondence rules and formal expressions.

Practical instruction:
Grammar exercises, listening and speaking exercises aimed at the integration of lexical and grammatical knowledge; oral and written translation; writing business letters.

1. Čavić, E., English in Architecture, Naučna knjiga, Beograd, 1992.
2. Naunton, J., ProFile 2, Oxford, Oxford University Press, 2005.
3. Horvatovic, M., Vuletić, M., English for Civil Engineers, Naučna knjiga, Beograd, 1991.
4. Murphy, R., English Grammar in Use, Cambridge University Press, 1990.
5. Thompson A.J., Martinet, A.V., A Practical English Grammar, Oxford, OUP, 1994.
6. Advanced Learner's Dictionary of Current English, OUP, 1998.

Number of active teaching classes: 60				Other classes:
Lectures: 30	Practical classes: 30	Other forms of instruction:	Research study:	

Teaching methods: Monologue, dialogue, combined teaching methods, work with text.

Knowledge evaluation (maximum number of points: 100)

Pre-exam obligations	**Points:**	**Final exam**	**Points:**
Activity during lectures	10	Written exam	15
Practical classes	10	Oral exam	15
Colloquia	40		
Seminar papers	10		

Study programme: Interior Architecture

Type and Level of Studies: Undergraduate Vocational Studies

Course code and title: ENVIRONMENTAL PROTECTION

Teacher (Surname, middle initial, name): Aksentijević M. Snezana; Teachnig associate: Tomić D. Milena

Course status: Elective

Number of ECTS credits: 6

Prerequisites: no

Course aims: to introduce students to the concept and content of the environment, the causes and consequences of pollution, the environmental protection system, terminology, legal regulations and environmental standards.

Learning outcomes: Training students for preventive and operational action, multidisciplinary approach to environmental issues, which will enable them to comprehensively, specifically and independently solve problems in their field of expertise.

Syllabus

Theoretical instruction: Environment - concept, content, ecosystem. Ecological factors. Water, air, soil, living world. Endangering and pollution of living and working environment - global pollution, water pollution, air pollution, soil degradation. Waste, types of waste. Construction works (rough construction and craft works) and materials (natural, artificial, constuction, decorative). Specific types of pollution and hazards (noise, vibration, dust, physical hazards, hazardous substances, low/high temperature – waste management (planning, organisation, waste classification, waste minimisation options), management of chemical substances, waste water. Emergency situations and how to cope with them. Tools for improving environmental protection - cleaner production, energy efficiency. Importance of healthy living and working environment. Legislation, international and national standards.

Practical teaching: Practical examples that support theoretical subject matter in this field. Working on their own, students prepare an elaborate which includes solving specific problems.

Literature:

1) A. Kostić, Inženjering zaštite životne sredine, Hemijski fakultet, Beograd, 2007.
2) D. Marković, Š. Đarmati, I. Gržetić, D. Veselinović: Fizičko-hemijski osnovi zaštite životne sredine, Knjiga
3) Izvori zagađivanja, posledice i zaštita, Univerzitet u Beogradu, 1996.
4) D. Pešić, Rečnik ekologije i zaštite životne sredine, Građevinska knjiga, Beograd, 2006.
5) P. Jovanović, Zaštita životne sredine, VTŠ, Aranđelovac, 2006.

Number of active teaching classes: 60				Other classes:
Lectures: 30	Practical classes: 30	Other teaching forms:	Study research work:	

Teaching methods: Dialogue, monologue, practical work demonstrations

Knowledge evaluation (maximum 100 points)

Pre-exam obligations	**Points**	**Final exam**	**Points**
Activity during lectures	10	Witten exam	50
Practical classes	10		
Colloquia	2x10		
Seminar papers	10		

Assessment methods:

Study programme: Interior Architecture

Type and Level of Studies: Undergraduate Vocational Studies

Course code and title: Finishing Works

Teacher (Surname, middle initial, name): Milivojević Lj. Dejan; Teaching associate: Papić V. Miloš

Course status: Compulsory

Number of ECTS credits: 6

Prerequisites: none

Course aims: Basic systematization of finishing works, solving tasks relating to designing details, preparing descriptions for priced bills of quantity, norms, regulations and construction methods.

Learning outcomes: The ability to design details, prepare priced bills of quantity. Introduction to procedures and dynamics of finishing works.

Syllabus

Theoretical instruction:

Rough works, craftworks; earthworks and masonry; concrete and reinforced concrete works + underground insullation; carpentry + light prefabricated structures – covering; insullation + sheet-metal works; carpentry + doors and windows + sunshade installation; locksmith works; review of learnt material; facade works + covering with stone + plastering-painting works; terrazzo works + flooring; sanitary rooms and fittings; introducing students to semestral assignments; mounting structural assemblies – selection of structural system; staircase design, roof structures.

Adjusting structural and architectural solutions, defining openings; elaboration of main project; designing specific facade details, covering details, inter-floor structures.

Literature:

1. Đorđević Dušanka, Izvođenje radova u visokogradnji, Izgradnja, Beograd, 2001.
2. Milivojević Dejan, Zgradarstvo 1, Akademska misao, Beograd, 2014.

Number of active teaching classes: 60				Other classes:
Lectures: 30	Practical classes: 30	Other teaching forms:	Study research work:	

Teaching methods: Auditory exercises/dialogue, consultations, fieldwork, mentorship, literature review

Knowledge evaluation (maximum 100 points)

Pre-exam obligations	**Points**	**Final exam**	**Points**
Activity during lectures	10	Exam	40
Practical classes	20		
Colloquia	15+15		
Seminar papers			

Assessment methods:

Study programme: Interior Architecture

Type and level of studies: Undergraduate Vocational Studies

Course title: History of Art

Teacher: Lazić M. Gordana

Course status: Compulsory

Number of ECTS: 6

Prerequisites: none

Course aim:

Introducing students to general history of European art and a brief overview of the history of art of other nations and on other continents, including their mutual connections and impacts on European art in certain periods. The course is aimed at providing students with knowledge on the history of art in order to ensure their successful further education and mastering of profession-specific courses necessary for developing competencies required for the chosen profession.

Course outcomes:

Students can understand the continuous development of art through different styles and periods, as well as the development of artistic ideas and practice, and the use of different topics, techniques and materials in different epochs. Introducing students to famous artists, concepts and locations that will help them recognize fundamental principles of artwork and apply the acquired knowledge to other courses and in their future jobs.

Syllabus:

Theoretical instruction:

Pre-historic art (Venus of Willendorf, Stonehenge, Carts of Duplja, etc.). Art of Near East (Egyptian tombs and temples, painting, sculpture. Art of Mesopotamia (Ishtar Gate, Persepolis, depictions of animals). Aegean art: Crete (Knossos), Mycenae (lion Gate, treasury of Atreus). Art of Ancient Greece: doric, ionic and corinthian styles. Greek temples (Parthenon, Erechtheum). Theatre of Epidaurus. Mausoleum at Halicarnassus. Greek sculptures from 4^{th} and 5^{th} century BC. Art of Ancient Rome (Pantheon, Colosseum, basilicas), Roman sculpture and painting (Pompeii and Herculaneum). Early Christian art, Byzantine art (Hagia Sophia in Istanbul, St. Marko's Basilica in Venice). Serbian medieval art (Raška school: Studenica, Žiča, Mileševa, Sopoćani, etc.). Serbo-Byzantine school (Gračanica, Hilanadar, etc.) and Morava school (lazarica, Ljubstinja, Manasija, Kalenić, etc.). Roman art (architecture, sculpture, painting). Gothic art (architecture, sculpture, painting). Islamic art, Far East art and art of pre-Columbus America. Renaissance: architecture (Bernini, Brunelleschi, Bramante), sculpture (Donatello, Michelangelo, etc.) and paining (Giotto, Masaccio, Botticelli, Leonardo, Raphael, Titian). Northern European Renaissance: van Eyck brothers, Durer. Manirism (El Greco). Baroque art: architecture (Bernini, Borromini, Palace of Versailles), sculpture (Bernini), painting (Caravaggio, Velazquez, Rubens, Rembrandt, Vermeer). Rococo style. 19^{th} century art (Neoclassicism, Romanticism, Realism); Impressionism (Monet, Renoir, Manet, Roden) and Post-Impressionism (Cezanne, Gauguin, Van Gogh, Seurat). Modern 20^{th} century movements (Fauvism, Expressionism, Cubism, Futurism). Constructivism, abstract painting (Kandinski, Maljevič, Mondrian). Dada, Surrealism, Fantasy: architecture (breaking away from historical styles, secession, organic architecture). Le Corbusier, Wright, Gropius, Gaudi, Alto, Kalatrava), sculpture (Moore, Boccioni, Brankusi, Arp, Kinder, Meštrović) and new tendencies in art (art of new visual research, kinetic art, performance, pop-art, body-art, neo-dada). Acquiring knowledge on general historical processes of development of art, introduction to most popular authors and their work. providing insight into interrelations between different styles and wider social context.

Together with the teacher, students interpret the most significant pieces of art from pre-historic times to the present.

Literature:

1. Vujović, B., Istorija umetnosti, Beograd, 2006.
2. Renak, S., Apolo. Opšta istorija likovnih umetnosti, Beograd, SKZ, 1977.
3. Janson, H.V., Istorija umetnosti, više izdanja.
4. Gombrih, E., Umetnost i njena istorija, više izdanja.
5. Mihailović, R., Zapadnoevropska umetnost 17. i 18. veka, Beograd, 1965.
6. Gavela, B., Istorija umetnosti anticke Grcke, Beograd, Naucna knjiga, 1969.
7. Gavela, B., Etrurci, Beograd, Jugoslavija, 1978.

8. Medaković, D., Srpska umetnost u 19. veku, Beograd, SKZ, 1981.
9. Nestorović, B., Arhitektura Srbije u 19. veku, Beograd, Art-press
10. Pevsner, N., Izvori moderne arhitekture i dizajna, Beograd, Građevinska knjiga, 2005.
11. Perović, M., Savremena arhitektura, Beograd, 2000.
12. Sembach, K-J., Art Nouveau, Köln, Taschen, 2007.
13. Celner, F., Leonardo, Köln, Taschen, 2002.
14. Nere, Z., Mikelanđelo, Köln, Taschen, 2001.
15. Cerbst, R., Antoni Gaudi, Köln, Taschen, 2001.
16. Šterner, G., Jugendstil, Beograd Izdavački zavod Jugoslavija, 1978.
17. Masini, L.-V., Liberty, Firenze, Giunti, 2006.

Number of active teaching classes: 30	Lectures: **15x2=30**	Practical classes:

Teaching methods: Combination of monologue, dialogue and demonstrations while analyzing selected examples of artwork. Lectures with ample visual illustrations ensuring direct interaction between students and specific examples of architecture, sculpture and painting. The teacher and students together analyse pieces of art. Individual research on a given topic and seminar paper writing.

Knowledge evaluation (maximum number of points: 100)

Pre-exam obligations	**Points**	**Final exam**	**Points**
Activity during lectures	Up to 10	Written exam	Up to 65
Practical classes		Oral exam	-
Colloquium			
Seminar paper	Up to 25		

Study programme: Interior Architecture

Type and level of studies: Undergraduate Vocational Studies

Course title: Informatics Fundamentals

Teacher: Ivković V. Nebojša, Teaching associate:Knežević M. Dragana, Forst J. Đorđe

Course status: Compulsory

Number of ECTS: 6

Prerequisites: None

Course aim:

- Students will acquire advanced knowledge and will be trained to use:
- MS Word
- Adobe Photoshop
- MS Excel
- MS Power Point

Course outcomes:

- Students are trained to create and edit complex forms of written documents using MS Word programme:
  - Using sections (creating sections, working with sections, section properties)
  - Using section breaks in documents, together with header and footer
  - Changing the orientation of certain pages of a document
  - Using different number of columns on a single page and in a document as a whole
  - Designing styles (adding and removing text styles, saving and using them…)
  - Multilevel lists
  - Creating content (automatically and manually, adjusting text using TAB key)
  - Indexing
  - Bookmarks
  - Hyperlinks
  - Electronic forms
  - Circular letters
  - Preparing documents for double-sided printed (margins, page numbers)…
- Digital image processing using Adobe Photoshop, for documents prepared using MS Word.
- Spreadsheet design and different ways of automatic data processing applied to complex practical examples using nested functions in MS Excel programme. Advanced forms of graphic illustration of data processed using MS Excel. Using macros to create reports based on the processed data, imported from another information system.
- Creating advanced presentations in MS PowerPoint by inserting different forms of animations on slides.

Syllabus:

Theoretical instruction:	**Practical instruction:**
1. MS Word	1. MS Word
2. Adobe Photoshop	2. Adobe Photoshop
3. MS Excel	3. MS Excel
4. MS Power Point	4. MS Power Point

Literature:

1. Alati grafičkog dizajna, Damnjan Radosavljević, Visoka poslovno-tehnička škola, Užice, 2014.
2. Excel 2007 Biblija, John Walkenbach, Mikro knjiga
3. Word 2016, Korak po korak, Joan Lambert, CET
4. PowerPoint 2010, Zvonko Aleksić, Kompjuter biblioteka

Number of active teaching classes: 60				Other classes:
Lectures: 30	Practical classes: 30	Other forms of instruction:	Research study:	

Teaching methods::

During lectures, the theoretical part of the subject matter is illustrated by examples from practice. In the computer laboratory, students perform tasks relating to the theoretical instruction.			
Knowledge evaluation (maximum number of points: 100)			
Pre-exam obligations	**Points:**	**Final exam**	**Points:**
Lecture attendance	10	Written exam	45
Attendance at practical classes and active participation	25	Oral exam	0
Seminar paper	20		

Study programme: Interior Architecture

Type and Level of Studies: Undergraduate Vocational Studies

Course code and title: Installations in Buildings

Teacher: Milivojević Lj. Dejan, Aćimović M. Dragomir, Milovanović N. Vidoje
Teaching Associate: Stojanović B. Trifko, Stanojčić B. Ana

Course status: Compulsory

Number of ECTS credits: 6

Prerequisites: none

Course aims: Acquiring fundamental knowledge on installations in buildings: installation types and characteristics, quality and comfort, principles of designing, using project documentation, assembly methods and proper use of water supply system, sewage system, heating, air-conditioning and electrical installation.

Learning outcomes: Developing competencies to use the acquired knowledge in practice through the proper selection and adequate use of water supply system, sewage system, heating, air-conditioning and electrical installation.

Syllabus

Theoretical instruction:

1. Planning and designing water supply and sewage network installation: base, cross-section, isometry. Project reading (designations, schemes). Separation design of water distribution and sewage pipework using bathroom as example. Calculations. Installation components and assembly.
2. Heating and air-conditioning: planning and designing heating and air-conditioning network installation: base, cross-section, isometry. Project reading (designations, drawings, schemes). Pipework separation design in apartments or offices. Installation components and assembly.
3. Effects of electric currents on human body. Contact voltage and protection from it. Protection by automatic turn off. Electrical fire causes. Electrical installation components, electrical installation project. Technical regulations. Electric light.

Practical teaching:

Task: students select a type of installation and plan equipment layout within a defined space.

Laboratory exercises: preventive testing of electrical installations using a themal imaging camera. Measuring. Fault loop impendance, expected contact voltage, turn-off time, magnetic induction.

Literature:

1. Blagojević, Biljana, Kućne instalacije, Zavod za udžbenike i nastavna sredstva, Beograd, 1996.
2. Martinković, Krešimir, Snabdevanje zgrada vodom i odvod otpadnih voda iz njih, Građevinska knjiga, Beograd, 1988.
3. B. Todorović, Projektoanje postrojenja za centralno grejanje, Mašinski fakultet, Beograd, 2002.
4. B. Todorović, Klimatizacija, Savez mašinskih i elektrotehničkih inženjera i tehničara Srbije, Beograd, 2002.
5. D. Petrović, Električne instalacije, Tehnička knjiga, Beograd, 1997.
6. V. Milovanović, Opasnosti i zaštita od električne struje, VPTŠ Užice, 2015.

Number of active teaching classes: 90				Other classes:
Lectures: 45	Practical classes: 45	Other teaching forms:	Study research work:	

Teaching methods: Lectures, practical classes, written exam.

Knowledge evaluation (maximum 100 points)

Pre-exam obligations	**Points**	**Final exam**	**Points**
Activity during lectures	5+5+5=15	Written exam	40
Practical classes			
Colloquia	15+15=30		
Laboratory work	15		

Assessment methods:

Study programme: Interior Architecture

Type and level of studies: Undergraduate Vocational Studies – first degree studies

Course title: Interior Acoustics and Lighting

Teacher: Ćetković S. Miloje

Course status: Compulsory

Number of ECTS: 5

Prerequisites: None

Course aim: Introducing students to acoustic properties of rooms, constructive elements and materials. Introducing them to characteristics of noise, ways of reducing it and regulations about noise control. Introducing students to light as a physical and optical phenomenon. Introducing students to factors of good-quality interior lighting. Introducing students to photometry of interior lighting.

Course outcomes: Students master knowledge which they can apply to examples of soundproof insulation, acoustic processing and adaptation of different types of rooms. Students master knowledge which can help them obtain quality and efficient lighting in a room.

Syllabus:

Theoretical instruction:

Introductory lecture, subject matter, plan of activities. Spectral analysis of sound. Noise - characteristics, harmful effects, measuring, protection measures. Acoustic characteristics of partitions and inter-floor structures. Noise produced by installations and noise supressors. Acoustic fields, size and shape of rooms, reverberation time. Sound absorbents. Sound diffusers. Room impulse response. Room acoustics and speech. Room acoustics and music. Acoustics of small rooms (studios, classrooms). Church acoustics. Acoustics of deaf and reverberation rooms. Room acoustics measurements. Light as a physical and optical phenomenon. Electric sources of light. Classification and functioning principles. Lamps. Classification, parts and photometric information. LED lighting. Physical principles and technologies. Factors of interior light quality. Interior light photometry. Scenery lighting. Emergency and anti-panic lighting.

P**ractical instruction:**

Exercises in compliance with theoretical instruction.

Literature:

1. Mijić, M., Akustika u arhitekturi, Nauka, Beograd, 2001.
2. M. Kostić, Vodič kroz svet tehnike osvetljenja, Minel-Schreder, Beograd, 2000.
3. H. Kurtović, Akustika za arhitekte, Akademska misao, Beograd, 2002.
4. M. Long, Architectural Acoustics, Elsevier Academic Press, 2006.
5. M. Barron, Auditorium Acoustics and Architectural Design, Spon Press, 2010.

Number of active teaching classes:				Other classes:
Lectures: 2	Practical classes: 1	Other forms of instruction:	Research study:	

Teaching methods: Lectures accompanied by graphic and multimedia presentations, seminar papers. Ex cathedra, group and individual work.

Knowledge evaluation (maximum number of points: 100)

Pre-exam obligations	**Points**	**Final exam**	**Points**
Activity during lectures	10	Written exam	
Practical classes	10	Oral exam	40
Colloquia	20		
Seminar papers	20		

Study programme: Interior Architecture

Type and Level of Studies: Undergraduate Vocational Studies

Course code and title: Interior Architecture

Teacher: Ćirović M. Ivana, Teaching associate: Stefanović R. Katarina

Course status: Compulsory

Number of ECTS credits: 7

Prerequisites: none

Course aims: Introducing students to fundamentals of interior design. Acquiring professional knowledge about theories, principles and processes, such as evaluation and critical thinking, relating to interior design. Developing deliberation skills, aesthetic evaluation, articulation and interior design skills.

Learning outcomes: Students can work on their own and design interior spaces of different size and complexity. They can use the acquired communication skills for successful interaction with other professionals during planning, designing and project implementation.

Syllabus

Theoretical instruction:

Relationship between man and interior space. Interior space and its purpose. Interior space structure and organisation. Architectural composition of interior space: composition elements and principles.

Materialisation of interior space. Ergonomy, humane engineering: synthesis of psychology, anthropology, physiology, medicine and engineering.

Architectural programme. Functional-technological processes. Anthropological measures, modularity, measurements and space dimensioning. Problems of space dimensioning for persons with disabilities.

Elementary classification of interior space into floors, walls and ceilings, and appropriate sistematisation of materials. Shaping, physical characteristics, properties and behaviour of materials under different conditions and treatment. Classification into decorative and constructive materials. Classification and systematisation into natural and artificial materials. Maintenance of materials. Horisontal elements of space. Vertical elements. Openings. Organisation of space. Circulare surface. Interior details (counters, bars, partitions, etc.).

Organisation of interior elements. Interior relations: full-empty, light-shade, grouping–circulating. Workplace analysis. Standards and norms regulating space for different purposes: residential and public space. Interior architecture and other types of art. Space within space, transformation and multiplication. Polyfunctionality and adaptating interior spaces to different purposes and user groups. Movable and immovable lements of interior.

Practical instruction:

Comparative theoretical analysis of interior spaces of different size and complexity using relevant examples of architectural achievements in national and international practice. Preparing a seminar paper on a given topic, according to a given model and final interior design project.

Literature:

1. Panero, J., Zelnik, M., Antroploške mere i enterijer, Građevinska knjiga, Beograd, 2009.
2. Neufert, E., Arhitektonsko projektovanje, Građevinska knjiga, Beograd, 1988.
3. Kojić, Đ., Oblikovanje unutrašnjeg prostora, Novi Sad, 2002.
4. Massey, A., Interior design of the 20th Century. London: Thames and Hudson, 1990.
5. Pile, J., A History of Interior Design. London: Laurence King, 2000.
6. Gibs, Dž., Dizajn enterijera, Don Vas, Beograd, 2010.
7. Pevsner, N., Izvori moderne arhitekture i dizajna, Prinston, 2005.
8. Pitulić, N., Berić, B., Uvod u projektovanje enterijera, Službeni glasnik, Beograd, 2012.
9. Joedicke, J., Oblik i prostor u arhitekturi. Beograd: Orion Art, 2009.

Number of active teaching classes: 75				Other classes:
Lectures: 30	Practical classes: 45	Other teaching forms:	Study research work:	

Teaching methods: Lectures with visual illustrations, individual research work on a given topic and according

to a given model, workshops, discussion, final interior design project created with the teacher's help provided through individual consultations and error corrections. Students are actively involved in the evaluation of their work.			
Knowledge evaluation (maximum 100 points)			
Pre-exam obligations	**Points**	**Final exam**	**Points**
Activity during lectures	Up to 5	Written exam	Up to 55
Practical classes	Up to 10		
Semestral project	Up to 20		
Seminar papers	Up to 10		
Assessment methods:			

Study programme: Interior Architecture

Type and Level of Studies: Undergraduate Vocational Studies

Course code and title: Interior Design 1

Teacher: Milivojević Lj. Dejan; Teaching associate: Cvijović R. Slavka

Course status: Compulsory

Number of ECTS credits: 6

Prerequisites: none

Course aims: Introducing students to residential interior design. Acquiring professional knowledge about theories, principles and processes, such as evaluation and critical thinking, relating to residential interior design. Developing deliberation skills, aesthetic evaluation, articulation and residential interior design skills.

Learning outcomes: Students can work on their own and design residential interior of different size and complexity. They can solve complex problems in the field of residential interior design faced in non-typical situations. They can use the acquired communication skills for successful interaction with other professionals during planning, designing and project implementation. They know how to use relevant equipment, instruments and devices. They are competent enough to manage the implementation of medium-complexity projects on their own and assume overall responsibility for it.

Syllabus

Theoretical instruction:

Introduction to residential architecture issues through the analysis of significant achievements in this field. Students develop skills necessary for independent aesthetic and spatial design and graphical representation. They are introduced to interior design methodology through a carefully guided designing process, from the concept to the final project.

Residential architecture, types of residential facilities. Position of facility, exterior-interior relationship. Movement and space. Elements of space: floor, wall, ceiling. Coulors and materials. Lighting. Installations in residential buildings. Residential zones. Daytime zone of apartment. Nighttime zone of apartment. Entrance and ancillary zone. Transportation, staircase position, processing. Interior details. Development of residential facilities from smaller to larger ones. Function and dimensioning. Facility grouping. Adaptation issues (residential area, facilities for other purposes, additions, connections with outer world, function and materialisation). Individual residential facilities (components, functions, location, interpolations in built structures). Specific residential facilities: nursing homes, dormitories, hotels and hostels, rural households, etc.).

Practical instruction:

Comparative theoretical analysis of residential interior space designs of different size and complexity using relevant examples of architectural achievements in national and international practice. Preparing a seminar paper on a given topic, according to a given model and final residential interior project.

Literature:

1. Panero, J., Zelnik, M., Antroploške mere i enterijer, Građevinska knjiga, Beograd, 2009.
2. Neufert, E., Arhitektonsko projektovanje, Građevinska knjiga, Beograd, 1988.
3. Kojić, Đ., Oblikovanje unutrašnjeg prostora, Novi Sad, 2002.
4. Massey, A., Interior design of the 20th Century. London: Thames and Hudson, 1990.
5. Pile, J., A History of Interior Design. London: Laurence King, 2000.
6. Gibs, Dž., Dizajn enterijera, Don Vas, Beograd, 2010.
7. Pevsner, N., Izvori moderne arhitekture i dizajna, Prinston, 2005.
8. Pitulić, N., Berić, B., Uvod u projektovanje enterijera, Službeni glasnik, Beograd, 2012.
9. Periodika, Architectural Design, Domus, The Architectural Review

Number of active teaching classes: 75				Other classes:
Lectures: 30	Practical classes: 45	Other teaching forms:	Study research work:	

Teaching methods: Lectures with visual illustrations, individual research work on a given topic and according

to a given model, workshops, discussion, final design of residential interior created with the teacher's help provided through individual consultations and error corrections. Students are actively involved in the evaluation of their work.			
Knowledge evaluation (maximum 100 points)			
Pre-exam obligations	**Points**	**Final exam**	**Points**
Activity during lectures	Up to 5	Written exam	Up to 55
Practical classes	Up to 10		
Semestral assignment	Up to 20		
Seminar papers	Up to 10		
Assessment methods:			

Study programme: Interior Architecture

Type and Level of Studies: Undergraduate Vocational Studies

Course code and title: Interior Design 2

Teacher: Ćirović M. Ivana, Teaching associate: Cvijović R. Slavka

Course status: Compulsory

Number of ECTS credits: 6

Prerequisites: none

Course aims: Introducing students to fundamentals of interior design of the following types of public buildings: administrative-business buildings, commercial buildings, pre-school and school buildings. Acquiring professional knowledge about theories, principles and processes, such as evaluation and critical thinking, relating to residential interior design. Developing deliberation skills, aesthetic evaluation, articulation and interior design of public buildings.

Learning outcomes: Students can work on their own and design interior of public buildings of different purpose, size and complexity. They can solve complex problems in the field of interior design of public buildings in non-typical situations. They can use the acquired communication skills for successful interaction with other professionals during planning, designing and project implementation. They know how to use relevant equipment, instruments and devices. They are competent enough to manage the implementation of medium-complexity projects on their own and assume overall responsibility for it.

Syllabus

Theoretical instruction:

Introduction to issues of interior design of public buildings (administrative-business buildings, commercial buildings, pre-school and school buildings) through the analysis of significant achievements in this field. Students develop skills necessary for independent aesthetic and spatial design and graphical representation. They are introduced to interior design methodology through a carefully guided designing process, from the concept to the final project.

Relationship between architecture and other types of art (fundamental visual arts in interior architecture). Architectural heritage, concept, stimulus, additions, concepts of national and international. Architectural language as art phenomenon (analysis, association, application). Historical development of architectural language. Architectural details and assemblies as artistic expressions in architecture. Artistic-functional. Concept of author authenticity. Personal expression, poetics and handwriting as seals of author interior vs. historical contexts – epochs. Working, active and service zone that determines purpose and character of interior. Technical-logistic zone; typology of space functions. Sanitary-hygienic and ancillary zone. Communication zone and mutual relationships.

Practical instruction:

Comparative theoretical analysis of interior space designs of different size and complexity using relevant examples of architectural achievements in national and international practice. Preparing a seminar paper on a given topic, according to a given model and final interior design of public buildings (administrative-business buildings, commercial buildings, pre-school and school buildings).

Literature:

1. Panero, J., Zelnik, M., Antroploške mere i enterijer, Građevinska knjiga, Beograd, 2009.
2. Neufert, E., Arhitektonsko projektovanje, Građevinska knjiga, Beograd, 1988.
3. Kojić, Đ., Oblikovanje unutrašnjeg prostora, Novi Sad, 2002.
4. Bajbutović, Z., Arhitektura školske zgrade, Svjetlost, Sarajevo, 1983.
5. Gibs, Dž., Dizajn enterijera, Don Vas, Beograd, 2010.
6. Pevsner, N., Izvori moderne arhitekture i dizajna, Prinston, 2005.
7. Pitulić, N., Berić, B., Uvod u projektovanje enterijera, Službeni glasnik, Beograd, 2012.
8. Periodika, Architectural Design, Domus, The Architectural Review

Number of active teaching classes: 90	Other classes:

Lectures: 45	Practical classes: 45	Other teaching forms:	Study research work:	
Teaching methods: Lectures with visual illustrations, individual research work on a given topic and according to a given model, workshops, discussion, final interior design of public buildings created with the teacher's help provided through individual consultations and error corrections. Students are actively involved in the evaluation of their work.				
Knowledge evaluation (maximum 100 points)				
Pre-exam obligations	**Points**	**Final exam**	**Points**	
Activity during lectures	Up to 5	Written exam	Up to 55	
Practical classes	Up to 10			
Semestral project	Up to 20			
Seminar papers	Up to 10			
Assessment methods:				

Study programme: Interior Architecture

Type and Level of Studies: Undergraduate Vocational Studies

Course code and title: Interior Design 3

Teacher: Ćirović M. Ivana, Teaching associate: Cvijović R. Slavka

Course status: Compulsory

Number of ECTS credits: 6

Prerequisites: none

Course aims: Introducing students to fundamentals of interior design of the following types of public buildings: museums, theatres, tourism-hospitality facilities, sports facilities, traffic facilities. Acquiring professional knowledge about theories, principles and processes, such as evaluation and critical thinking, relating to residential interior design. Developing deliberation skills, aesthetic evaluation, articulation and interior design of public buildings.

Learning outcomes: Students can work on their own and design interior of public buildings of different purpose, size and complexity. They can solve complex problems in the field of interior design of public buildings in non-typical situations. They can use the acquired communication skills for successful interaction with other professionals during planning, designing and project implementation. They know how to use relevant equipment, instruments and devices. They are competent enough to manage the implementation of medium-complexity projects on their own and assume overall responsibility for it.

Syllabus

Theoretical instruction:

Introduction to issues of interior design of public buildings (museums, theatres, tourism-hospitality facilities, sports facilities, traffic facilities) through the analysis of significant achievements in this field. Students develop skills necessary for independent aesthetic and spatial design and graphical representation. They are introduced to interior design methodology through a carefully guided designing process, from the concept to the final project.

Scenographic and literary elements of interior. Technical and functional aspects of architectural solutions from artistic viewpoint. Modern technologies and materials as aesthetic factors of interior. Fasion and interior aesthetics. Investors' affinities vs. Creative independence. Relations: purchaser – social moment, author's seal, technical and financial possibilities. Finishing works as aesthetic factor of interior. Personal expression, artistic, technical and expression affinities, their recognition and searching for new ones. Aesthetics as prospective essence of interior. Classical interor and its influences on modern attitudes towards interior and its design. Relationship between classical and modern technologies anf materials. Interior-exterior relationship. Interrelatedness of interior design and other art diciplines.

Practical instruction:

Comparative theoretical analysis of interior space designs of different size and complexity using relevant examples of architectural achievements in national and international practice. Preparing a seminar paper on a given topic, according to a given model and final interior design of public buildings (museums, theatres, tourism-hospitality facilities, sports facilities, traffic facilities).

Literature:

1. Panero, J., Zelnik, M., Antroploške mere i enterijer, Građevinska knjiga, Beograd, 2009.
2. Juračić, D., Zdravstvene zgrade, Tehnička knjiga, Zagreb, 2004.
3. Slobodan, I., Sportski objekti, Arhigram, Beograd, 1998.
4. Bajbutović, Z., Arhitektura školske zgrade, Svjetlost, Sarajevo, 1983.
5. Radović, G., Turističko-ugostiteljski objekti, Principiprojektovanja hotela i restorana,, 2007.
6. Dinulović, R., Arhitektura pozorišta 20. veka, Klio, Beograd, 2009.
7. Kamin, Đ., Muzeji, Pravoslavna reč, Novi Sad, 2008.
8. Grupa autora, Tehničar 4, Građevinska knjiga, Beograd, 1984.
9. Periodika, Architectural Design, Domus, The Architectural Review

Number of active teaching classes: 90				Other classes:
Lectures: 45	Practical classes: 45	Other teaching forms:	Study research work:	
Teaching methods: Lectures with visual illustrations, individual research work on a given topic and according to a given model, workshops, discussion, final interior design of public buildings created with the teacher's help provided through individual consultations and error corrections. Students are actively involved in the evaluation of their work.				
Knowledge evaluation (maximum 100 points)				
Pre-exam obligations	**Points**	**Final exam**	**Points**	
Activity during lectures	Up to 5	Written exam	Up to 55	
Practical classes	Up to 10			
Semestral project	Up to 20			
Seminar papers	Up to 10			
Assessment methods:				

Study programme: Interior Architecture

Type and level of studies: Undergraduate Vocational Studies

Course title: Interior Design Styles

Teacher: Ćirović M. Ivana, Lazić M. Gordana , Teaching Associate: Stanojčić B. Ana

Course status: Compulsory

Number of ECTS: 6

Prerequisites: none

Course aim:
An overview of historical development of different types of interior design styles. Introducing students to the characteristics of the most significant achievements of different styles and epochs (architecture, interior and furniture), from ancient civilizations to the present. Teaching students how to recognize the characteristics of different interior and furniture design styles. Developing their ability to evaluate historic interior spaces.

Course outcomes:
Students are familiar with the characteristics of important historic styles in architecture, interior and furniture design during different periods of style development, starting from antique times until the post-modern period.
Students can understand the contexts in which different styles emerged and changed, as well as the geographic, historical and other influences that contributed to their emergence and development. Therefore, they can use them either in their original form or as an inspiration in a professional manner in order to meet the requirements of modern interior spaces, as well as combine the elements of different styles in a coherent and functional whole.

Syllabus:
Theoretical instruction:
Lectures accompanied by with visual presentations and analyses of numerous examples of authentic and modern style periods.
Analyses of space organization, style characteristics, meaning, materials and techniques od construction of elements of interior design in different periods (antique times, Renaissance, Baroque, Classicism, Victorian Era, Secession, Modern and Post-Modern Age).
Emergence of interior design; pre-historic interior design; antique interior design styles. Greece. Rome. Byzantine and early Christian interior design. Interior design in Islamic and Asian cultures. Interior design in Medieval Europe. Renaissance interior design. Baroque and Rococo interior design. Colonial style. Georgian Era. Kent. Chippendale. Classicism. Directorial style. Adam. Happlewight. Sheraton. Biedermeier. Secession. Beginnings of modern interior and furniture design. Art-Deco.

Theoretical instruction:
Individual research on a given topic and with the teacher's help provided through individual consultations and error corrections. Discussion. Evaluation and assessment of work with active participation of students. Preparation of a seminar paper on a given topic, according to a given model and final interior design.

Literature:

1. Ajzinberg, A. Sovilj, B., Stilovi od praistorije do secesije – arhitektura, enterijer, nameštaj, Građevinska knjiga, Beograd, 2010.
2. Kojić, Ž., Oblikovanje unutrašnjeg prostora, Novi Sad, 2002.
3. Massey, A., Interior design of the 20th Century. London: Thames and Hudson, 1990.
4. Pile, J., A History of Interior Design. London: Laurence King, 2000.
5. Gibs, Dž., Dizajn eneterijera, Don Vas, Beograd, 2010.
6. Pevsner, N., Izvori moderne arhitekture i dizajna, Građevinska knjiga, Beograd, 2005.
7. Pitulić, N., Berić, B., Uvod u projektovanje enterijera, Građevinska knjiga, Beograd, 2005.
8. Janson, H.V., Istorija umetnosti, više izdanja.
9. Gombrih, E., Umetnost i njena istorija, više izdanja.

Number of active teaching classes: 75	Lectures: 15x2=30	Practical classes: 15x3=45

Teaching methods: Interdisciplinary intertwining of complex theoretical concepts and reading while analyzing selected examples of specific interior design styles. Lectures with ample visual illustrations ensuring direct interaction between students and specific examples of interior spaces representing different styles, thus

providing students with the basis for understanding and using complex concepts, as well as analytical and synthetic processes.			
Knowledge evaluation (maximum number of points: 100)			
Pre-exam obligations	**Points**	**Final exam**	**Points**
Activity during lectures	Up to 5	Written exam	Up to 55
Practical classes	Up to 10	Oral exam	-
Semestral project	Up to 20		
Seminar paper	Up to 10		

Study programme: Interior Architecture

Type and level of studies: Undergraduate Vocational Studies – first level studies

Course title: Materials in Modern Interior Design

Teacher: Markićević M. Jelena; Teaching associate: Arsović D. Dragoslav

Course status: Elective

Number of ECTS: 5

Prerequisites: none

Course aim:

Improving and deepening students' knowledge about construction materials, i.e. knowledge about material properties, testing methods, quality criteria they are supposed to satisfy, raw materials, technological processes of producing construction materials and their usage, and about finishing works in interior architecture. The emphasis is placed on the importance of the proper selection and use of construction materials aimed at achieving necessary characteristics in compliance with the final purpose (e.g. strength, elasticity, transparency, reflectivity, texture), as well as achieving desired efficacy and durability

Course outcomes:

Developing the ability to use the acquired knowledge in order to find optimal solutions when using materials in modern interior design.

Syllabus:

Theoretical instruction:

Fine ceramics (component materials, glaze, production technology, ceramic tiles, sanitary and technical materials, chamotte, terracotta); stone and its usage , wood (types, properties, processing, wooden products, wood-based products, applications in interior architecture); glass and other mineral-based materials (glass processing and production, common and special glass, tiles, full and hollow objects, profiled cast glass); silicate material and products, special concrete and mortar (concrete with modified surface layers, high-strength concrete, concrete with special aggregates, micro-reinforced concrete, polymer-modified concrete and polymer concrete and mortar, special purpose mortar – for decoration, insulation and other purposes); ferrous metals and alloys (aluminum, copper, zink, lead; plastic mass (types of polymers, processing and production procedures, products used in interior architecture), anti-corrosion materials and systems, varnishes, enamels, glue, textile materials (floor covering and other uses), leather, etc.

Practical instruction:

Auditory and demonstration exercises include the analysis of practical examples of standard testing of materials aimed at determining their quality; computational tasks for designing recipes and defining the composition of modern composite materials, testing optimal possibilities of using materials in modern construction.

Literature:

1. Mihailo Murovljev, Dragica Jevtić, Građevinski materijali 2, Građevinski fakultet Univerziteta u Beogradu, Beograd, 1999.
2. Mihailo Murovljev, Monografija, Specijalni betoni i malteri, Građevinski fakultet Univerziteta u Beogradu, IMK, Beograd, 1999.
3. Znornik radova, Građevinski materijali u savremenom graditeljstvu, 2015, IMK Beograd.
4. PowerPoint presentations of lectures

Number of active teaching classes: 45	Lectures: **15x2=30**	Practical classes: **15x1=15**

Teaching methods: dialogue, monologue, practical work demonstration

Knowledge evaluation (maximum number of points: 100)

Pre-exam obligations	**Points**	**Final exam**	**Points**
Activity during lectures	10	Exam	50
Practical classes	20		
Colloquium	20		

Study programme: Interior Architecture

Type and level of studies: Undergraduate Vocational Studies

Course title: Reconstruction, Addition and Adaptation of Space

Teacher: Ćirović Ivana; Markićević M. Jelena **Teaching associate:** Stojanović B. Trifko, Stefanović R. Katarina

Course status: Compulsory

Number of ECTS: 6

Prerequisites: none

Course aim:
Introducing students to main issues faced in reconstruction, addition and adaptation of a space. Providing them with skills required for minor and major interventions in already built facilities.

Course outcomes:
Students will be able to work on their own and design reconstruction, addition and adaptation of facilities used for different purposes, and of construction systems. Students will be familiar and able to use different materials and techniques during the process of reconstruction, addition and adaptation. They will understand the complex nature of minor and major interventions in existing facilities while changing or not changing the purpose of their use.

Syllabus:

Theoretical instruction:
Defining structural and non-structural components of existing facilities. Survey of existing conditions and project design. Reconstruction aimed at changing use of facility, as well as to solving problems caused by different influences: uneven soil compaction, earthquake effects, inadequate building or maintenance, fire or age of building itself, its structure.
Adaptation: demolition and rebuilding of partition walls; replacement of devices, equipment and installations with same-capacity ones. Treatment of floor, wall and ceiling surfaces during space adaptation. Changing structure and oraganisation of space. Adapting existing space to new standards and regulations. Adapting existing space to persons with disabilities.
Reconstruction of floors, walls and ceilings. Treatment of structural and non-structural components during reconstruction. Changing dimensions of existing openings and making new openings. Replacing installations, equipment and devices with higher-capacity ones. Installing elevators in buildings. Making roof windows. Changing structural components. Making or closing openings in structural elements. Changing use of interior and its adjustment to standards and regulations governing new use: changing residential space into public one, public into residential or public into public changing its use (e.g. changing production plant into showroom, etc.).
Standards and norms for spaces used for different purposes: residential and public facilities (hospitality, sports, business, education facilities, showrooms, traffic terminals, etc.). Minor interventions in facilities: regular interior maintenance works: painting, replacing sanitary fittings, radiators, etc.
Adding new space outside existing one, or adding new space to existing one so that they make structural, functional and aesthetic whole.

Practical instruction:
Performing a comparative theoretical analysis of architectural solutions in the processes of reconstruction, addition and adaptation of a space using relevant examples from national and international architectural practice.
Preparing a seminar paper on a given topic, as well as a conceptual design for reconstruction or addition.

Literature:

1. Neufert, E., Arhitektonsko projektovanje, Graševinska knjiga, Beograd, 1988.
2. Douglas, J. Building Adaptation, Heriot-Watt University, Edinbourgh, UK, 2006.
3. Trbojević, R., Arhitektonske konstrukcije – konstruktivni masivni sklop, Orion, Beograd, 2001.
4. Kostić, P, Arhitektonske konstrukcije 1-2, Naučna knjiga, Beograd, 1990.
5. Ilić, S., Klasični drveni krovovi, Građevinska knjiga, Beograd, 2003.
6. Martinković, K., Osnovi zgradarstva 1-7, Beograd, 1985

7. Krunić, S., Adaptacija i sanacija, AGM knjiga, Beograd, 2015.
8. Periodika, Architectural Design, Domus, The Architectural Review

Number of active teaching classes: 60	Lectures: **15x2=30**	Practical classes: **15x2=30**

Teaching methods: Lectures with visual illustrations, individual research on a given topic, workshops, discussion, conceptual design for reconstruction or addition, individual consultations and corrections, design assessment with active participation of students.

Knowledge evaluation (maximum number of points: 100)

Pre-exam obligations	**Points**	**Final exam**	**Points**
Activity during lectures	Up to 5	Written exam	Up to 55
Practical classes	Up to 10	Oral exam	-
Semestral assignment	Up to 20		
Seminar paper	Up to 10		

Study programme: Interior Architecture

Type and level of studies: Undergraduate Vocational Studies

Course title: Russian 1

Teacher: Terzić V. Svetlana

Course status: Elective

Number of ECTS: 6

Prerequisites: None

Course aim: Teaching students how to use specialized literature relating to a specific vocational area; developing students' language skills (reading, translation, conversation); combining lexical and grammatical structures. Developing reading comprehension skills and teaching students how to use bilingual technical dictionaries. Developing text analysis skills, as well as precise and concise communication skills. Increasing public awareness of the importance of being familiar with fundamental concepts of interior architecture using specialised texts.

Course outcomes: Providing continuous foreign language education upon high school completion. Developing communication skills and the skills that will enable students to cooperate with the immediate social and international environment. Acquiring knowledge and developing skills necessary for the successful use of the Russian language for the purpose of keeping pace with latest innovations and using them in practice. Students master vocabulary for specific purposes, can use specialized literature and can communicate successfully in Russian. Special emphasis is placed on using the information available on the Internet. Students use specialized literature to prepare final theses.
Students use Russian successfully in oral and written communication in everyday situations.

Syllabus:

Theoretical instruction:
The syllabus is divided into two, mutually interrelated parts. The first one comprises LSP texts, which will introduce students to specific vocabulary relating to interior architecture. They will use this vocabulary in speaking activities about vocation-related topics. The other part comprises phonetics and grammar, necessary for developing reading comprehension skills, as well as listening comprehension skills. As for phonetics, special attention is paid to the correct pronunciation of soft consonants and iotified vowels. As for grammar, students will learn types of nouns, comparison of adjectives, numbers, and verbs of movement.

Practical instruction:
Students master language for specific purposes though translation of texts and conversation about topics relating to interior architecture.

Literature:

1. Marojević, Radmilo, 1983, Gramatika ruskog jezika, Beograd, Zavod za udžbenike i nastavna sredstva, Beograd, 1983.
2. Piper, Predrag, Gramatika ruskog jeyika, Yavet, Beograd, 2005.
3. Partina A.S. Архитектурные термины, Стройиздат, Moskva, 1994.

Number of active teaching classes: 30				Other classes:
Lectures: 2x15=30	Practical classes:	Other forms of instruction:	Research study:	

Teaching methods: Monologue and dialogue.

Knowledge evaluation (maximum number of points: 100)

Pre-exam obligations	**Points: 70**	**Final exam**	**Points: 30**
Activity during lectures	10	-	-
Practical classes	-	Oral exam	30
Colloquia	60	-	-
Seminar papers	-	-	-

Study programme: Interior Architecture

Type and level of studies: Undergraduate Vocational Studies

Course title: Russian 2

Teacher: Terzić V. Svetlana

Course status: Elective

Number of ECTS: 6

Prerequisites: Passed examination in Russian 1.

Course aim: Teaching students how to use specialized literature relating to a specific scientific discipline; developing students' language skills (reading, translation, conversation); combining lexical and grammatical structures. Increasing public awareness of the importance of interior architecture using specialized texts.

Course outcomes: Students can use the Russian language successfully. They will develop communication skills that will enable them to cooperate with the immediate social and international environment.

Syllabus:

Theoretical instruction:

The syllabus is divided into two, mutually interrelated parts. The first one comprises LSP texts, which will introduce students to specific vocabulary relating to mechanical engineering They will use this vocabulary in speaking activities about vocation-related topics. The other part comprises phonetics and grammar, necessary for developing reading comprehension skills, as well as listening comprehension skills. As for phonetics, special attention is paid to the correct pronunciation of soft consonants and iotified vowels. As for grammar, students will learn about adverbs, imperative, participles.

Practical classes:

Listening exercises to practise coping with unfamiliar situations, using specific vocabulary relating to interior architecture. Talking about topics relating to interior architecture.

Literature:

1. Marojević, Radmilo, 1983, Gramatika ruskog jezika, Beograd, Zavod za udžbenike i nastavna sredstva, Beograd, 1983.
2. Piper, Predrag, Gramatika ruskog jezika, Zavet, Beograd, 2005.
3. Столяровский С.: Arhicad 11,Учебный курс, Питер (изд.) 2008

Number of active teaching classes: 60				Other classes:
Lectures: 2x15=30	Practical classes: 2x15=30	Other forms of instruction:	Research study:	

Teaching methods: Monologue and dialogue.

Knowledge evaluation (maximum number of points: 100)

Pre-exam obligations	**Points: 70**	**Final exam**	**Points: 30**
Active participation during lectures	10		-
Practical classes		Oral exam	30
Colloquia	60	-	-
Seminar papers		-	-

Study programme: Interior Architecture

Type and level of studies: Undergraduate Vocational Studies

Course title: Scenography Fundamentals

Teacher: Ćirović M. Ivana, Popović J. Branko; Teaching associate: Cvijović R. Slavka

Course status: Elective

Number of ECTS: 5

Prerequisites: None

Course aim: Introducing students to the fundamental principles, tasks, and roles of scenography. Through the scenographic interpretation of a specific space, students become familiar with the possibility of intervention, not only in theatres, film or TV studios, but also in any other space which is expected to provide or which provides the opportunity for different interpretations of a particular text or idea. The course covers different aspects of scenography – conceptual, technical and organizational. Providing students with fundamental knowledge necessary for the selection, design, execution and maintenance of constructive elements of a scene. Introducing students to basic elements of working on a project assignment, from the draft, through preliminary and technical solution to the implementation.

Learning outcome: Students will be able to discover, interpret and understand the fundamentals of different spaces, to note them down using different artistic techniques, to draw and interpret, to make technical drawings in certain proportion, which is necessary for further scenography intervention, to use the available basic elements of stage decoration boldly. Getting introduced to the possibilities and specific characteristics of different spaces, students develop the feeling for dimension, relation of elements in a space and their adjustments to fit the stage requirements. The tasks are designed so that, based on the given elements and through creative research, students develop the feeling for shape and space. Students are taught how to select, design, execute and maintain constructive elements of a scene.

Course content:

Theoretical instruction:

Fundamental principles, tasks and roles of scenography in theatrical performances, films and TV programmes, and scene events in general. The importance of scenography important in a work of art. The critical history of the development of architectural elements of a scene. Cooperation between production designers and other authors (directors, costume designers, choreographers, lighting designers, sound designers, etc.). Cooperation between production designers and technical team for scenography design. Famous production designers and their work. Types of decoration. Stage perspective. Lighting plan. Importance of selection and use of materials for scenography. Visual aspects and properties of materials – colour, texture, reflection, etc.

Practical instruction:

The tasks are aimed at motivating students to achieve the greatest possible effects using a reduced number of decoration elements, to notice and accurately depict the characteristics of a certain space using the basic stage décor elements. The alternative stage spaces are analyzed: creating the preconditions for raising a stage in a place with no such purpose; open spaces (streets, squares, meadows, forests, water), as well as inner spaces (factories, warehouses, halls, etc.); determining the current state of a space; combining stage and natural materials; the influence of external factors; unpredictable factors; lighting in alternative spaces. Interventions in alternative spaces: integration or confrontation. In this course the students are expected to prepare a seminar paper on a given topic, as well as a preliminary design of a scene.

Literature:

1. Howard, P. (2002). Šta je scenografija? Belgrade: Clio
2. Popović V.G., Subotić, I. (2004). Miodrag Tabački. Belgrade: Clio
3. Harwood, R. (1998). Istorija pozorišta – ceo svet je pozornica. Belgrade Clio
4. Brockett, O.G., Mitchell, M., Hardberger, L. (2010). Making the Scene: A History of Stage Design and Technology in Europe and the United States. Austin: University of Texas Press
5. Tabački, M. (2012). Automonografija. Kragujevac: Knjaževsko srpski teatar. Dinulović, R. (2009). Arhitektura pozorišta 20. veka. Beograd: Klio Drašković, B., (2012). Rečnik profesije. Kragujevac:

Knjaževsko srpski teatarHannah, D. & Harslof, O. eds. (2008). Performance Design. Denmark: Museum Tusculanum Press
6. Oddey, A. & White, C., eds. (2006). The Potentials of Spaces: The Theory and Practice of Scenography and Performance . UK: Intellect Books

Number of active teaching classes: 60				Other classes:
Lectures: 2x15=30	Practical classes: 2x15=30	Other forms of instruction:	Research study:	

Teaching methods::
Lectures with visual illustrations, individual research work about a given topic and based on a given model, workshops, discussion, preliminary design for a scenography through individual consultations and corrections, project assessment with active participation of students.

Knowledge evaluation (maximum number of points: 100)

Pre-exam obligations	**Points:**	**Final exam**	**Points:**
Activity during lectures	up to 5	Written exam	up to 55
Practical classes	up to 10	Oral exam	-
Project assignment	up to 20		
Seminar paper	up to 10		

Study programme: Interior Architecture

Type and Level of Studies: Undergraduate Vocational Studies

Course code and title: Stereometry

Teacher (Surname, middle initial, name): Diković Ž. Ljubica Teaching Associate: Gavrilović M. Branko

Course status: Compulsory

Number of ECTS credits: 6

Prerequisites: none

Course aims: Acquiring mathematical knowledge in the field of stereometry for the purpose of performing measurements and studying the properties of objects in space. Mathematical notion of space as the basis for studying other courses.

Learning outcomes: Developing skills necessary for students' independent application of the acquired knowledge on geometry in their future jobs; providing them with both theoretical and practical foundation.

Syllabus

Theoretical instruction:

Surface area of plygon. Cavalieri's principle.
Golden ratio. Golden rectangle. Their applications in architecture.
Polyhedral surfaces and polyhedron. Prism and Pyramid. Flat cross-sections. Surface area and volume.
Truncated pyramid. Flat cross-sections. Surface area and volume
Circle, circle arc, circuar segments.
Rotating bodies. Cyllindrical surface and cyllinder.
Cone-shaped surface, cone, truncated cone.
Rotating surface, sphere and ball. Rotating bodies and their flat cross-sections. Surface area of sphere, kalotte. Volume of sphere.
Mutual positions of spheres and other bodies.
Simpson's formula for volume calculation.
Plato's polyhedra (regular polyhedra – tetrahedron, octahedron, hexahedron, dodecahedron, icosahedron
Plato's polyhedra in art and architecture.
Fractal geoemtry. Applications in architecture.

Practical teaching:

Examples of theoretical instruction are analysed, theory is used in order to solve practical problems and tasks.

Literature:

1. Geometrija, D. Lopandic, ISBN 978-86-17-17249-5, Izdavač: Zavod za udžbenike – Beograd, 2011
2. Linearna algebra igeometrija, G. Kalajdžić, ISBN 978-86-17-17654-7, Izdavač: Zavod za udžbenike – Beograd, 2011.
3. Stereometrija: izabrani problemi, P. Mladenovic, V. Petrovic, ISBN: 86-7076-009-6, Izdavač: Matematiskop, 2002.
4. Repetitorij elementarne matematike, B. Apsen, Izdavač: Tehnička knjiga - Zagreb, 1965.
5. Kiselev's Geometry / Book II. Stereometry by A. P. Kiselev, A. Givental, ISBN-10: 0977985210, ISBN13: 978-0977985210, Publisher: Samizdat, 2008.
6. Kiselev's Geometry, Book I. Planimetry by A. P. Kiselev, A. Givental, ISBN-10: 0977985202 ISBN-13: 978-0977985203, Publisher: Samizdat, 2006.

Number of active teaching classes: 60				Other classes:
Lectures: 30	Practical classes: 30	Other teaching forms:	Study research work:	

Teaching methods: Auditory exercises, dialogue, consultations, fieldwork, mentorship, literature review

Knowledge evaluation (maximum 100 points)

Pre-exam obligations	**Points**	**Final exam**	**Points**
Class attendance	Up to 20	Written exam	Up to 30

Colloquia	Up to 50		
Seminar papers			
Assessment methods:			

Study programme: Interior Architecture

Type and level of studies: Undergraduate Vocational Studies

Course title: Technical Drawing and Descriptive Geometry

Teacher: Ćirović Ivana; Teaching associate: Stojanović Trifko

Course status: Compulsory

Number of ECTS: 6

Prerequisites: none

Course aim:

Introducing students to basic methods and rules of technical drawing. Providing students with necessary knowledge about graphical solutions to geometry problems. Developing students' ability of reading 2D technical drawings. Improving their perceptions of space and proportion. Providing knowledge in different fields of descriptive geometry: parallel projection (orthogonal, oblique and isometric). Developing spatial visualization and spatial imagination skills, as well as the ability to solve problems of different spatial relationships between three-dimensional geometric objects projected onto a two-dimensional plane, which is the basis of spatial analysis of any two-dimensional representation.

Course outcomes:

Students will be able to perceive space and objects, representations of orthogonal and oblique projection, as well as to select the appropriate technique for the required technical documentation. Students will have developed skills to identify and interpret spatial relationships of spatial shapes in two-dimensional representations, and will be familiar with their geometric structure. Students will be able to provide optimal graphical representation of spatial configurations in characteristic perspectives and views.

Syllabus:

Theoretical instruction:

Introducing students to basic methods of technical drawing. Types of lines and their use. Technical script. Graphical representation of objects in space. Developing 2D technical drawing reading skills. Basic geometric structures. Projections, views and types of basic geometric shapes (point, line, plane). Criteria for obtaining characteristic views and positions of objects aimed at direct detection of metrical properties and identification of spatial relationships between objects. The concept of visibility. Orthogonal projection. Orthogonal projection of flat shapes. Orthogonal projection of objects. Transformation. Rotation. Affinity and collineation. Rotation of plane. Orthogonal projection of objects in general positions. Flat cross-sections of objects. Penetration of two objects. Oblique projection. Isometric projection. Fundamentals of object visualization in isometric projection. Actual terrain, topographic surfaces, constant decline surfaces. Facility embankments. Cross-sections of roof structures.

Practical instruction:

Construction of regular polygons. Construction of straight lines. Orthogonal projection of point. Projection of plane. Traces of plane. Cross-section of two planes. Line-lane intersection. Inclined trihedron. Orthogonal projection of flat shapes. Orthogonal projection of objects, Transformation. Rotation. Affinity and collineation. Metrical tasks: angle of inclined straight line, actual length of straight line, distance between point and plane, actual angle between two straight lines, rotation of plane. Orthogonal projection of objects in general positions. Flat cross-sections of objects. Penetration of straight lines through objects. Penetration of two objects. Oblique projection. Isometric projection. Terrain presentation. Roofing solutions.

Literature:

1. Dulić, G., (2001). Tehničko crtanje sa čitanjem planova. Beograd. Zavod za udžbenike.
2. Rajner, T. (1994). Perspektiva i aksonometrija. Beograd. Evropsko slovo.
3. Ninčić, M. (1996). Nacrtna geometrija. Užice. Viša tehnička škola.
4. Anagnosti, P. (1976). Nacrtna geometrija. Beograd. Naučna knjiga.
5. Gagić, Lj. (2002). Nacrtna geometrija. Beograd. Građevinski fakultet.
6. Đurović, V. (1963). Nacrtna geometrija. Beograd. Naučna knjiga.
7. Pantelić, T. (1985). Tehničko crtanje. Beograd. Građevisnka knjiga.

Number of active teaching classes: 75	Lectures: **15x2=30**	Practical classes: **15x3=45**

Teaching methods: Lectures with visual illustrations, graphical drawing, individual consultations and

corrections.			
Knowledge evaluation (maximum number of points: 100)			
Pre-exam obligations	**Points**	**Final exam**	**Points**
Activity during lectures	Up to 5	Written exam	Up to 55
Practical classes	Up to 15	Oral exam	-
Colloquium	Up to 25		
Seminar paper	-		

Study programme: Interior Architecture

Type and Level of Studies: Undergraduate Vocational Studies

Course code and title: Technology of Finishing Works

Teacher (Surname, middle initial, name): Furtula B. Boško, Teaching associate: Đuričić Đorđe

Course status: Elective

Number of ECTS credits: 6

Prerequisites: none

Course aims: Acquiring knowledge on materials and technology of using different materials for finishing works. Mastering knowledge on how certain materials affect each other, placing special emphasis on the materials used for interior design processes.

Learning outcomes: Students are competent enough to work on their own and make decisions about which materials to use based on their properties and criteria of use for the interior design of different architectural facilities. Introducing students to properties of materials and their use depending on the place and manner of installation.

Syllabus

Theoretical instruction:

Introduction. Modular coordination, types of finishing works. Carpentry, sunshades, glass-cutting works, terrazzo and ceramic tiles installation, coverings using stone and floor coverings, parquet and insulation works, façade works, light partitions and dropped ceiling, mortar works, whitewashing and painting, wallpapering.
Technical regulations and norms governing finishing works. Preparation of priced bills of quantities. Cost calculation of finishing works. Visiting facilities.

Practical teaching:

Auditory exercises, tasks relating to theoretical subject matter, and preparation of a survey. Visiting different attractive facilities.

Literature:

1. Petrović, M., Arhitektonske konstrukcije 1 i 2, Arhitektonski fakultet u Beogradu, 1985.
2. Martinković, K:, Osnovi zgradarstva, Beograd, 1985.
3. Đorđević, D., Izvođenje radova u visokogradnji, Beograd, 2007.
4. Fasadni zidovi od opekarskih proizvoda, IMC, Beograd
5. Krunić, S., Sanacija i rekonstrukcija objekata, Beograd.
6. Tehnički uslovi za izvođenje završnih radova u građevinarstvu, 1. i 2. deo, Beograd.
7. Norme i standardi rada u građevinarstvu, Beograd.

Number of active teaching classes: 45				Other classes:
Lectures: 30	Practical classes: 15	Other teaching forms:	Study research work:	

Teaching methods: Dialogue, monologue, demonstration of practical work

Knowledge evaluation (maximum 100 points)

Pre-exam obligations	**Points**	**Final exam**	**Points**
Activity during lectures and practical classes	5	Final Exam	50
Survey defense	15		
Colloquia	15+15		
Seminar papers			

Assessment methods:

Study programme: Interior Architecture

Type and level of studies: Undergraduate Vocational Studies

Course title: Visual Presentation Techniques 1

Teacher: Ćirović Ivana; Teaching associate: Đuričić V. Đorđe

Course status: Elective

Number of ECTS: 6

Prerequisites: none

Course aim:

Introducing students to basic methods of technical drawing used in the preparation of conceptual and final designs (bases, cross-sections, appearance, details). Developing and cherishing art and visual culture. Improving students' perceptions of space and proportion. Refining students' understanding of composition. Developing skills to create architectural presentations using basic computer techniques. Providing students with necessary knowledge about graphical solutions to geometry-related problems. Developing students' 2D technical drawing reading skills.

Course outcomes:

Students will be able to realize the complexity of an object or a space and select the appropriate method of representing spatial data. Students will be able to perceive space and objects, and to represent them using orthogonal projection. Students will be familiar with basic methods of technical drawing used in the preparation of a conceptual and final design (bases, cross-sections, appearance, details). Students will have acquired knowledge necessary for graphical representation of civil engineering facilities on a plane, as well as for the preparation of proper technical documentation. Students will be familiar with computer graphics basics and will know how to use input and output devices. Students will use computers to organize and process raster and vector graphics obtained by means of input devices.

Students are able to use appropriate conceptual design presentation techniques on their own.

Syllabus:

Theoretical instruction:

Introducing students to basic methods of technical drawing used in the preparation of conceptual and final designs (bases, cross-sections, appearance, details). Architectural presentations. Drawing spatial shapes.

Students simultaneously explore technical and expressive possibilities of both traditional techniques and computer graphics. The role of computers in engineering design.

Practical instruction:

Students master theoretical subject matter through graphical representations of conceptual and final designs, i.e. by preparing conceptual and final design projects of civil engineering facilities using traditional drawing techniques and computers. Students are trained how to prepare the graphical part of technical documentation working on their own. Graphical representation of spatial shapes on a two-dimensional plane of a drawing. Graphical representation of objects in a space. Developing 2D technical drawing reading skills. Computer applications used for architectural presentations. Introducing students to basic software packages for drafting, designing and spatial modeling. Basic tools and methods for 2D drawing and representation of architectural structures. Software packages for the preparation of technical documentation and architectural presentations. 3D modelling tools for architectural forms. Fundamentals of the actual representation of architectural facilities.

Literature:

1. Onstott, S. (2015). AutoCAD 2014 i AutoCAD LT 2014 Osnove. Beograd
2. Dulić, G. (2001). Tehničko crtanje sa čitanjem planova, Beograd, Zavod za udžbenike
3. Rajner, T. (1994). Perspektiva i aksonometrija, Beograd, Evropsko slovo
4. Duggal, V. (2000). Cadd Primer: A General Guide to Computer Aided Design and Drafting-Cadd, CAD.
5. Yarwood, A., Palm B. S. (2016). Introduction To Autocad 2016: 2d And 3d Design. Autodesk
6. Petković, N. (2014). Master Class 1. Step by step guidebook: Learn how to design professionally ArchiCAD 18. Graphisoft.
7. Petković, N. (2014). Master Class 2. Step by step guidebook: Learn how to design professionally ArchiCAD 18. Graphisoft.

Number of active teaching classes: 60	Lectures: **15x2=30**	Practical classes: **15x2=30**

Teaching methods: Lectures with visual illustrations, workshops, presentations of conceptual designs for

given topics, individual consultations and corrections.			
Knowledge evaluation (maximum number of points: 100)			
Pre-exam obligations	**Points**	**Final exam**	**Points**
Activity during lectures	Up to 5	Written exam	Up to 55
Practical classes	Up to 15	Oral exam	-
Colloquium	Up to 25		
Seminar paper	-		

Study programme: Interior Architecture

Type and level of studies: Undergraduate Vocational Studies

Course title: Visual Presentation Techniques 2

Teacher: Dimitrijević S. Aleksandar Teaching associate: Stanojčić B. Ana

Course status: Compulsory

Number of ECTS: 6

Prerequisites: none

Course aim:

Introducing students to basic methods of visual representation of artistic ideas. Mastering methods of three-dimensional presentations of spatial data on two-dimensional drawings. Developing skills for spatial visualization, spatial imagination and graphical representation of a three-dimensional space on a perspective image. Developing skills for object and space representation using traditional presentation techniques. Introducing students to presentation materials and their characteristics. Mastering basic drawing techniques. Mastering techniques of light, shadow, texture and material presentation. Introducing students to presentation software and fundamentals of 3D modeling and rendering.

Course outcomes:

Students will master axonometric and perspective methods. They will acquire knowledge required for graphical representation of facilities in space and for the preparation of relevant technical documentation. Students are familiar with traditional presentation techniques and can use them. Students can use modeling and rendering software. They can express themselves using the language of art and different drawing tools and techniques; can solve the problem of illusion of 3D objects and space and successfully use the acquired knowledge on elements of art and principles of spatial forms and their mutual relationships in interior spaces. Through methodically designed stimulations of graphical and artistic predispositions of students, they will develop skills necessary for drawing objects and representing different relations in space, and they will be able to use the acquired knowledge on architectural presentation in their further education and work.

Syllabus:

Theoretical instruction:

Introducing students to basic methods of visual representation of artistic ideas. Drawings as visualization of thoughts. Composition and visualization of perspective images. Simple and complex composition of volume. Visual relationships. Point, line, volume, direction, angle, reduction. Theoretical introduction to visual composition issues, with special emphasis on surface area, value and texture. Specific artistic architectural motifs. Space, composition, proportion.

Practical instruction:

During practical classes students prepare drawings for technical documentation using traditional techniques and proper application software tools. Drafts, croquis, small-format drawings, all representing rough illustrations. Creative drawing, gesture. Wide range of possibilities of drafting, designing and 3D modeling software. Developing skills required to use traditional techniques of representing space, texture, materials and lighting in interior spaces. Advanced techniques of realistic representation of architectural facilities.

Literature:

1. Rajner, T., Perspektiva i aksonometrija, Beograd, Evropsko slovo, 1994.
2. Jakubin, M., Likovni jezik i likovne tehnike, Eduka, Zagreb.
3. Arnhajm, R., Umetnost i vizuelno opažanje, Univerzitet umetnosti, Beograd, 1981.
4. Petković, N., Master Class 2. Step by step guidebook: Learn how to design professionally ArchiCAD 18, Graphisoft, 2014.
5. Mitton, M., Interior Design Visual Presentation: A Guide to Graphics, Models, and Presentation Techniques, Wiley, 2008.
6. Doyle, M. E., Color Drawing: Design Drawing Skills and Techniques for Architects, Landscape Architects, and Interior Designers, 3rd Edition, Wiley, 2006

Number of active teaching classes: 75	Lectures: **15x2=30**	Practical classes: **15x3=45**

Teaching methods: Lectures with visual illustrations, individual research work on a given topic, workshops, discussion, presentation of final interior design project created with teacher's help provided through individual consultations and error corrections. Students are actively involved in the evaluation of their work.			
Knowledge evaluation (maximum number of points: 100)			
Pre-exam obligations	**Points**	**Final exam**	**Points**
Activity during lectures	Up to 5	Written exam	Up to 55
Practical classes	Up to 15	Oral exam	-
Project	Up to 25		
Seminar paper	-		