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| Course: | | *Art* | | | | | | | | |
| Course id: | |
| Number of ECTS: 6 | |
| Teacher: | | Lidija Srebotnjak Prišić | | | | | | | | |
| Course status | | Mandatory | | | | | | | | |
| Number of active teaching classes (weekly) | | | | | | | | | | |
| Lectures: **2** | | Practical classes: **2** | | | Other teaching types: | | Study research work: | | Other classes: | |
| Precondition courses | | None/navesti ako ima | | | | | | | | |
| 1. Educational goal   Exploring and understanding the concepts of Fine Arts and Art History. Application of the knowledge acquired through the principles of aesthetic and visual harmonization. Adoption of visual language through the study and analysis of art works, art ideas and the form of artistic expression. Enabling students to identify objective aesthetic values. Developing creative visual thinking through practical work. | | | | | | | | | | |
| 1. Educational outcomes   Students will be able to apply the acquired knowledge and skills in their future independent professional work. | | | | | | | | | | |
| 1. Course content   The content, forms and types of art, architecture, sculpture, painting, applied arts, their development and changes through the artistic creativity of the ancient civilizations, Art of the Middle Ages, the Renaissance and Baroque revival, art of the new century, the artistic tendencies of the 19th and 20th century and contemporary art. Characteristics of artistic styles and their expression in certain types of art. Introduction to leading figures and works of art from an artistic and historical perspective. The development of national art.  Visual elements and composition of the artwork. Composing in a certain shape and space. Line, function, creative gesture, linear form. Position, the ratio of areas, mass and space. Size, the proportion of shapes and surfaces. Texture as an element of form and plastic expression.. Color, composition of colors, contrasts, features, performances and aesthetic values of color. The composition, repetition, harmony, contrast, balance, unity, rhythm, dominant.  Introduction to the means of an aesthetic view of the world, the analysis of art works, specific observations, developing visual thinking through creative practical work and theoretical analysis. Getting to know the media and materials in achieving visual structures. | | | | | | | | | | |
| 1. Teaching methods   Theoretical lectures: verbal presentation of methodical units, demonstrative and illustrative methods using modern digital media. Practical classes: verbal and visual presentation of the material as a motivational factor for the realization of the student’s independent work. The use of modern digital media. | | | | | | | | | | |
| Knowledge evaluation (maximum 100 points) | | | | | | | | | | |
| Pre-examination obligations | | | Mandatory | Points | | Final exam (izabrati) | | Mandatory | | Points |
| Lecture attendance | | | Yes | 10 | | *Oral part of the exam* | | Yes | | 30 |
| Test | | | No |  | | 100 | | | | |
| Exercise attendance | | | Yes | 20 | |
| ***Practice work*** | | | Yes/No | 40 | |
| Literature | | | | | | | | | | |
| Ord. | Author | | Title | | | Publisher | | | | Year |
|  | H,W.Janson and A.F.Janson | | History of Art | | | Harry N.Abrams, INC, New York | | | | 2001 |
|  | H.H.Arnason | | A History of Modern Art | | | Pearson, Boston | | | | 2013 |
| 3 | Herbert Read | | Dictionary of Art and Artists | | | Thames and Hudson, London | | | | 1989 |
| 4 | Edward Lucie-Smith | | Dictionary of Art Terms | | | Thames and Hudson, London | | | | 1988 |
| 5 | Rudolf Arnheim | | Art and Visual Perception | | | University of California Press, Berkeley,USA, | | | | 1954 |

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| Znak univerziteta | UNIVERSITY OF NOVI SAD  FACULTY OF AGRICULTURE 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 8 | Znak fakulteta2 |
| Study Programme Accreditation  UNDERGRADUATE ACADEMIC STUDIES *Landscape Architecture* |
| Table 5.2 Course specification | | |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Course: | | *Free hand drawing* | | | | | | | | |
| Course id: 3ОПА1О02 | |
| Number of ECTS: 6 | |
| Teacher: | | Aleksandra Tišma | | | | | | | | |
| Course status | | Elective | | | | | | | | |
| Number of active teaching classes (weekly) | | | | | | | | | | |
| Lectures: 2 | | Practical classes: 2 | | | Other teaching types: - | | Study research work: - | | Other classes: - | |
| Precondition courses | | None | | | | | | | | |
| 1. Educational goal   Providing the basic skills of drawing and displaying a basis of reality. Developing the ability of presenting three-dimensional features in the plane of the sheet paper as a two-dimensional. The development of perception and maturing sense of space and composition. | | | | | | | | | | |
| 1. Educational outcomes   Giving ability to students to apply the acquired knowledge and skills in their future independent professional work. | | | | | | | | | | |
| 1. Course content   Theoretical classes:  Points, lines, surfaces, directions, angles, cuts. Simple composition according to the viewing and ideas. Structures.  Introduction to the fundamentals of perspective drawing, the visual transposition of simple geometric figures. Cube, the ball as a volume. Space, visual composition, proportion, perspective. Drawing, drawing process, drawing resources, pencil, charcoal, ink-shower, pen, brush. Different types of drawings: sketch, croquis, study. Linear drawing, shading.  Practical classes:  Drawing an abstract composition made of geometric figures: ball, cube, cylinder, cone, pyramid. Drawing on the model of artificial nature, the combination of drapery as a symbol of land field and landscape. Drawing the elements of the furniture: table, chairs, and benches. The organization of space in the drawing. Structures. Volume. The materialization. Introduction to basic drawing techniques. | | | | | | | | | | |
| 1. Teaching methods   Lectures, exercises, graphic works, consultations. | | | | | | | | | | |
| Knowledge evaluation (maximum 100 points) | | | | | | | | | | |
| Pre-examination obligations | | | Mandatory | Points | | Final exam | | Mandatory | | Points |
| Lecture attendance | | | Yes | 5 | | Oral exam | | Yes | | 30 |
| Exercise attendance | | | Yes | 5 | | TOTAL: 100 points | | | | |
| Design project | | | Yes | 60 | |
| Literature | | | | | | | | | | |
| Ord. | Author | | Title | | | Publisher | | | | Year |
|  | Ruskin J. | | The Elements of Drawing | | | CreateSpace | | | | 2010 |

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| Znak univerziteta | UNIVERSITY OF NOVI SAD  FACULTY OF AGRICULTURE 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 8 | Znak fakulteta2 |
| Study Programme Accreditation  UNDERGRADUATE ACADEMIC STUDIES *Landscape Architecture* |
| Table 5.2 Course specification | | |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Course: | | *Active principles of ornamental plants* | | | | | | | | |
| Course id: ЗОПА1О03 | |
| Number of ECTS: 6 | |
| Teacher: | | Prof. dr Đorđe Malenčić | | | | | | | | |
| Course status | | Mandatory | | | | | | | | |
| Number of active teaching classes (weekly) | | | | | | | | | | |
| Lectures: 2 | | Practical classes: 2 | | | Other teaching types: student`s papers (seminar) | | Study research work: - | | Other classes: - | |
| Precondition courses | | None | | | | | | | | |
| 1. Educational goal   To gain knowledge on molecular aspects of aesthetic characteristics of plants. Study on secondary biomolecules in ornamental plants of interest to their visual attractiveness and aromatic and toxic properties. | | | | | | | | | | |
| 1. Educational outcomes   The contribution of new knowledge in the field of plant biomolecules of interest to ornamental plants. | | | | | | | | | | |
| 1. Course content   Theory: Secondary biomolecules (natural products). Secondary metabolism – acetate, shikimate and mevalonate pathways. Plant phenolics – phenolic acids and phenylpropanoids, coumarines, flavonoids (anthocyanins); Terpenoids – iridoids, mono- and sesquiterpenes (essential oils). Physiological and ecological properties of secondary biomolecules in plants. Biological activity and application in landscape engineering, pharmaceutical, wood and food industry. Natural plant antioxidants. Plant photosynthetic pigments – chlorophylls and carotenoids. Photosynthesis. The roles of colors and scents in plants. Plant toxins with nitrogen. Plant toxins without nitrogen.  Practical classes: Determination of essential oil content and composition in different coniferous species. Methods of identification of essential oils. Isolation and determination of total alkaloids in *Mahonia* fruits. Determination of carotenoids using column chromatography. Isolation and determination of total phenolics and tannins in plant material. Determination of flavonoids using metal complex with AlCl3. Separation of chloroplast pigments and spectrophotometrical measurement of content. Anthocyanins content in flowers of ornamental *Salvia* species. Field trip (collection of plant material for experimental work, visit to flower market). | | | | | | | | | | |
| 1. Teaching methods   Lectures, Practical classes, Consultations, field trip, research work (optional) | | | | | | | | | | |
| Knowledge evaluation (maximum 100 points) | | | | | | | | | | |
| Pre-examination obligations | | | Mandatory | Points | | Final exam | | Mandatory | | Points |
| Lecture attendance | | | Yes | 5 | | Written part of the exam-tasks and theory | | Yes | | 60 |
| Exercise attendance | | | Yes | 5 | |  | | | | |
| Test, Term paper | | | Yes | 30 | |
| Literature | | | | | | | | | | |
| Ord. | Author | | Title | | | Publisher | | | | Year |
|  | Dr Đorđe Malenčić, dr Milan Popović | | Praktikum iz Biohemije biljaka (Plant biochemistry handbook) | | | Poljoprivredni fakultet, Novi Sad  (Faculty of agriculture, Novi Sad) | | | | 2011. |
|  | Milan Popović, Đorđe Malenčić | | Aktivni principi ukrasnog bilja (Active principles of ornamental plants) | | | Poljoprivredni fakultet, Novi Sad  (Faculty of agriculture, Novi Sad) | | | | 2006. |
|  | Jeffrey B. Harborne | | Introduction to Ecological biochemistry, 4th edition | | | Elsevier, London | | | | 1994. |

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| Znak univerziteta | UNIVERSITY OF NOVI SAD  FACULTY OF AGRICULTURE 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 8 | Znak fakulteta2 |
| Study Programme Accreditation  UNDERGRADUATE ACADEMIC STUDIES  Landscape architecture |
| Table 5.2 Course specification | | |
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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Course: | | *Plant Physiology* | | | | | | | | |
| Course id: | | 3OPA1O04 | | | | | | | | |
| Number of ECTS: | | 5 | | | | | | | | |
| Teacher: | | Ivana V. Maksimović  Marina I. Putnik- Delić | | | | | | | | |
| Course status | | Mandatory/Elective : Mandatory | | | | | | | | |
| Number of active teaching classes (weekly) | | | | | | | | | | |
| Lectures:  4x15=60 | | Practical classes: 45 | | | Other teaching types | | Study research work: | | Other classes: | |
| Precondition courses | | None | | | | | | | | |
| 1. Educational goal   The aim of the course is to provide students with knowledge about the functioning of the organism of higher plants, as well as on the impact of environmental factors on physiological processes. Also, students will learn how and to what extent certain physiological processes can be controlled, which is important for agricultural production. | | | | | | | | | | |
| 1. Educational outcomes   The outcome is knowledge about physiological processes in higher plants and abiotic and biotic factors affecting them, with the aim to apply this knowledge in practice. | | | | | | | | | | |
| 1. Course content   Lectures  Physiology of plant cells: types, structure, compartimentality. Biomembranes. Organelles, microbodies, cytoskeleton. Chemical and physical properties of plant cells. Tissue culture or cells. Water regime: features, uptake, transport and transpiration. Factors affecting water regime. Plant water requirements, the impact of the lack of water, mineral nutrition: Content, classification and physiological role of essential and useful elements in plants. Mechanism of the uptake and transport of mineral nutrients and organic compounds. Mineral nutrition and yield. Photosynthesis: importance, photosynthetic pigments, absorption and transformation of light. Photophosphorilation. C3, C4 and CAM photosynthetic paths. Photorespiration. Transport of assimilates. Photosynthesis and yield. Respiration: Glycolysis, Krebs cycle, oxidative phosphorylation, energy balance. Alternative pathways and ecology of respiration, growth and differentiation: phytohormones, cell growth and development. Biological rhythms, differentiation, correlations, abscission, senescence and death. Seed physiology: Pollen, pollination, fertilization. Regulation of seed and fruit development. Seed germination and factors affecting it.  Practical work  Contents of practical work accompanies lectures (Physiology of the cell, water regime, mineral nutrition, photosynthesis, respiration and enzymes, growth and development) | | | | | | | | | | |
| 1. Teaching methods: Lectures | | | | | | | | | | |
| Knowledge evaluation (maximum 100 points) | | | | | | | | | | |
| Pre-examination obligations | | | Mandatory | Points | | Final exam (izabrati) | | Mandatory | | Points |
| Written entrance-exam | | | Yes | 20 | | *Theoretical part of the exam/Oral part of the exam* | | Yes | | 40 |
| Test | | | No | 2x15 | |  | | | | |
| Exercise attendance | | | Yes |  | |
| *Term paper* | | | No | 10 | |
| Literature | | | | | | | | | | |
| Ord. | Author | | Title | | | Publisher | | | | Year |
|  | Kastori R, Maksimović I | | Ishrana biljaka | | | Vojvođanska akademija nauka | | | | 2008 |
|  | Maksimović I, Pajević S. | | Praktikum iz fiziologija biljaka | | | Poljoprivredni fakultet i Prirodno-matematički fakultet, Novi Sad | | | | 2002 |
|  | Lincoln Taiz and Eduardo Zeiger | | Plant Physiology, Fifth Edition | | | Sinauer Associates | | | | 2010 |

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| Znak univerziteta | UNIVERSITY OF NOVI SAD  FACULTY OF AGRICULTURE 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 8 | Znak fakulteta2 |
| Study Programme Accreditation  UNDERGRADUATE STUDIES OF Landscape architecture |





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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Course: | | *The basics of architecture* | | | | | | | | |
| Course id: | |
| Number of ECTS: 6 | |
| Teacher: | | Ass. Professor Ksenija Hiel | | | | | | | | |
| Course status | | Mandatory | | | | | | | | |
| Number of active teaching classes (weekly) | | | | | | | | | | |
| Lectures: 3 | | Practical classes: 3 | | | Other teaching types: | | Study research work: | | Other classes: 2 | |
| Precondition courses | | None | | | | | | | | |
| 1. Educational goal   Introducing students to the basics of architecture and principles of making technical drawing as a means and basic tools of engineering expression. Overcoming the sense of dimensional and functional aspects of different spatial levels from a subject to a landscape space. Mastering the theoretical and practical basis of simple functional program of architectural space and introducing students to the issues of architectural typologies. | | | | | | | | | | |
| 1. Educational outcomes   The possibility of adequate application of knowledge acquired in the process of architectural analysis and synthesis of a functional simple technological solutions within the architectural design. | | | | | | | | | | |
| 1. Course content   Theory: Defining the architecture and the built environment from the first historical forms to modern achievements of "smart house". Technical drawing as a primary means of communication and expression in engineering disciplines. Types of facilities and technical drawings from spatial plans to a detail. Dimensions, proportions and scales using in architecture and landscape architecture (anthropology, ergonomics, physicality, module, etc.). Functions and functional processes and programs in the spaces. Influential force in architecture and their importance in the process of creating the built environment.  Practical classes: Through graphics and essays - Mastering the process of measuring and designing a basic functional housing program in architecture. Technical drawings and presentation of certain spatial levels and their components. Implementation of architectural space and functional analysis of the program in order to obtain adequate synthesis, as groundwork for architectural design. | | | | | | | | | | |
| 1. Teaching methods   Lectures, Consultations, Field trip, research work | | | | | | | | | | |
| Knowledge evaluation (maximum 100 points) | | | | | | | | | | |
| Pre-examination obligations | | | Mandatory | Points | | Final exam | | Mandatory | | Points |
| Lecture attendance | | | Yes | 5 | | Written and oral part of the exam-tasks and theory | | Yes | | 50 |
| Exercise attendance | | | Yes | 35 | |  | | | | |
| Test, Term paper | | | Yes | 10 | |
| Literature | | | | | | | | | | |
| Ord. | Author | | Title | | | Publisher | | | | Year |
|  | Lorraine Farrelly | | The Fundamentals of Architecture | | | AVA Book, Lausanne | | | | 2007 |
|  | Le Corbusier | | Towards a new Architecture | | | The Architectural Press, London | | | | 2010 |
|  | Cristian Norberg-Schulc | | Existence, Space and Architecture | | | Praeger Publishers, London | | | | 1971 |
|  | Vitruvius Pollio | | Ten Books on Architecture | | | Cambridge University Press | | | | 2001 |

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| Znak univerziteta | UNIVERSITY OF NOVI SAD  FACULTY OF AGRICULTURE 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 8 | Znak fakulteta2 |
| Study Programme Accreditation  UNDERGRADUATE ACADEMIC STUDIES  Landscape architecture |
| Table 5.2 Course specification | | |
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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Course: | | *The Basis of Spatial Planning* | | | | | | | | |
| Course id: 3ОПА2О08 | |
| Number of ECTS: 6 | |
| Teacher: | | Prof. dr Jasmina S. Đorđević | | | | | | | | |
| Assistant: | | MSc Ivana M. Sentić | | | | | | | | |
| Course status | | Mandatory | | | | | | | | |
| Number of active teaching classes (weekly) | | | | | | | | | | |
| Lectures: 2 | | Practical classes: 3 | | | Other teaching types: - | | Study research work: - | | Other classes: - | |
| Precondition courses | | None | | | | | | | | |
| 1. Educational goal   To introduce students with the basics and principles of the spatial planning and spatial development, with the types of spatial plans in the Republic of Serbia. Defining the contents of the spatial plans from national to local level and introducing students with implementation of legislation in spatial planning. | | | | | | | | | | |
| 1. Educational outcomes   Providing the students a high-quality theoretical and practical knowledge in the field of spatial planning and possibility of potential application of this knowledge in practice, particularly in the creation and development of spatial plans. | | | | | | | | | | |
| 1. Course content   *Theoretical classes:*  1. Basic concepts, definitions of spatial planning, terminology.  2. The essential institutions for spatial planning.  3. Legislation in spatial planning.  4. Types of spatial plans.  5. Structural parts in spatial plans, with a focus on natural features.  6. Implementation.  *Practical classes:*  Drawing a conceptual design project of selected landscapes through the display of graphic plots and plans, but on the basis of conducted analysis of the present state and with the application of adequate principles of spatial planning. | | | | | | | | | | |
| 1. Teaching methods   Frontal, indirect forms, specific types of teaching work. The method of oral presentations, discuss methods, textual methods, illustrative-demonstrative methods, cartographic methods and others. Auto oral presentation of drawn project with control of the subject teacher and assistant. | | | | | | | | | | |
| Knowledge evaluation (maximum 100 points) | | | | | | | | | | |
| Pre-examination obligations | | | Mandatory | Points | | Final exam | | Mandatory | | Points |
| Lecture attendance | | | Yes | 5 | | Oral exam | | Yes | | 45 |
| Exercise attendance | | | Yes | 5 | | TOTAL: 100 points | | | | |
| Design project | | | Yes | 15 | |
| Colloquium | | | Yes | 30 | |
| Literature | | | | | | | | | | |
| Ord. | Author | | Title | | | Publisher | | | | Year |
|  | Mc Laughlin, J.B. | | Urban and Regional Planning | | | London: Faber & Faber | | | | 1960 |
|  | Bengs, C. | | Planning theory for the naïve? | | | European Journal of Spatial Development 3 | | | | 2005 |
|  | Dabinett, G., Richardson, T. | | Strategic European Spatial Planning – Power, Knowledge and Rationality in Policy Evaluation. | | | In: Shaw, D., Roberts, P., Walsh P., editors. Regional Planning and Development in Europe. Aldershot: Ashgate. | | | | 2000 |

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| Znak univerziteta | UNIVERSITY OF NOVI SAD  FACULTY OF AGRICULTURE 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 8 | Znak fakulteta2 |
| Study Programme Accreditation  UNDERGRADUATE ACADEMIC STUDIES *Landscape Architecture* |
| Table 5.2 Course specification | | |
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| Znak univerziteta | UNIVERSITY OF NOVI SAD  FACULTY OF AGRICULTURE 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 8 | Znak fakulteta2 |
| Study Programme Accreditation  UNDERGRADUATE ACADEMIC STUDIES *Landscape Architecture* |
| Table 5.2 Course specification | | |
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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Course: | | *Botany* | | | | | | | | |
| Course id: ЗOПА2О09 | |
| Number of ECTS: 6 | |
| Teacher: | | Aleksa Knežević, Ph.D., Dejana Džigurski, Ph.D., Branka Ljevnaić-Mašić, Ph.D. | | | | | | | | |
| Course status | | Mandatory | | | | | | | | |
| Number of active teaching classes (weekly) | | | | | | | | | | |
| Lectures: 4 | | Practical classes: 3 | | | Other teaching types: - | | Study research work: - | | Other classes: - | |
| Precondition courses | | None | | | | | | | | |
| 1. Educational goal  Acquiring the necessary knowledge concerning the structure of plants, their function, the systematics of plants with emphasis on taxa relevant for students of Agroecology and Environment Protection, as well as the relationships of plants to environmental conditions, which is a prerequisite for the proper and successful cultivation of plants. | | | | | | | | | | |
| 2. Educational outcomes  The knowledge obtained within the course of Botany is the basis for the study of other fundamental and applied scientific disciplines, as well as the basis for a proper understanding of plants and their use for human needs. | | | | | | | | | | |
| 3. Course content  *Lectures*:  Organization of wildlife and the basic characteristics of life. Botany and Agronomy. Plant cell, plant cell components: protoplasm, products of protoplasmic activity, cytoplasmic organelles. Autotrophic based diet. The morphology and anatomy of cormus.Metamorphosis of vegetative organs. Reproduction of plants. Flower, blossom, flowering, pollination, fertilization. Seed. Fruit. Taxonomic categories and their hierarchies.Classification of vascular macrophytes. Phytoecology. Autecology. Synecology.  Practical classes: Exercise, Other modes of teaching, Study research  The microscope and microscopic techniques. Plant cells. Cytoplasmic membranes. The cell organelles. Products of protoplasmic activity. Meristematic tissues. Premanent tissues. Anatomical structure of vegetative organs. Systematics of cormophytes. Field exercise. | | | | | | | | | | |
| 4. Teaching methods  Lectures - verbal-textual and illustrative demonstrative methods  Practical classes - management of students’ individual work and demonstrative-illustrative methods | | | | | | | | | | |
| Knowledge evaluation (maximum 100 points) | | | | | | | | | | |
| Pre-examination obligations | | | Mandatory | Points | | Final exam | | Mandatory | | Points |
| Lecture attendance | | | Yes | 0-5 | | *Oral part of the exam* | | Yes | | 0-50 |
| Exercise attendance | | | Yes | 0-5 | |  | | | | |
| Colloquium | | | Yes | 0-10 | |
| Term paper | | | Yes | 0-5 | |
| Tests | | | Yes | 0-20 | |
| Herbarium | | | Yes | 0-5 | |
| Literature | | | | | | | | | | |
| Ord. | Author | | Title | | | Publisher | | | | Year |
| 1. | Glimm-Lacy Janice and Kaufman B. Peter | | Botany Illustrated – Introduction to Plants, Major Groups, Flowering Plants Families, second edition | | | Springer | | | | 2006 |
| 2. | Kojić M., Pekić S., Dajić Z. | | Botanika | | | Romanov, Banja Luka | | | | 2003 |
| 3. | Janjatović, V. | | Botanika | | | Naučna knjiga, Beograd | | | | 1994 |
| 4. | Knežević, A., Stojanović, S., Lazić, D. | | Botanika – udžbenik za praktičnu nastavu | | | Poljoprivredni fakultet, Univerzitet u Novom Sadu | | | | 2007 |

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| Znak univerziteta | UNIVERSITY OF NOVI SAD  FACULTY OF AGRICULTURE 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 8 | Znak fakulteta2 |
| Study Programme Accreditation  UNDERGRADUATE ACADEMIC STUDIES *LANDSCAPE ARCHITECTURE* |
| Table 5.2 Course specification | | |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Course: | | *Sociology* | | | | | | | | | |
| Course id: 3ОФМ2О05 | |
| Number of ECTS: 5 | |
| Teacher: | | Assistant professor: Dejan R. Janković, Ph.D.  Assitants: M.Sci. Marica D. Petrović, M.A. Marina D. Novakov | | | | | | | | | |
| Course status | | Mandatory | | | | | | | | | |
| Number of active teaching classes (weekly) | | | | | | | | | | | |
| Lectures: 2 | | Practical classes: 1 | | | Other teaching types: | | | Study research work: | | Other classes: | |
| Precondition courses | | None | | | | | | | | | |
| 1. Educational goal   The sociology course will introduce students to the basic theoretical and methodological standpoints in relation to agriculture and rural areas, social changes that affect rural areas, as well as the interaction between rural and urban social phenomena. Changes of traditional social structures and patterns of behaviour are the starting point for the analysis of social change of peasantry and rural areas, agriculture and its functions, as well as various functions and transformations of social groups and institutions in the process of rural development. | | | | | | | | | | | |
| 1. Educational outcomes   This course will provide students with: knowledge of the basic sociological categories and methods of research in (rural) sociology; ability to analyze social phenomena in terms of social (agrarian and rural) structure and social relations; understanding of the basic principles of traditional peasant economy and transformation of traditional structures in relation to social groups, institutions, cultural patterns; understanding of complexity of rural development process. | | | | | | | | | | | |
| 1. Course content   Meaning and tasks of the sociology as a discipline. Development of sociology and rural sociology. Methods in (rural) sociology. Basic theoretical and methodological approaches in rural sociology. Meaning, dimensions and elements of social structure. Meaning and types of social change. Global development processes as agents of change of agrarian and rural structures. Ecological problems of agriculture and rural areas. Peasant economy and changes in the agrarian structure. The old agrarian relations in Europe and Balkans and recent changes in the agrarian structure in Balkans. Family farms and features of rural areas in Serbia in present time. Rural settlements and rural population. Rural development and rural policy. The peasantry as a social class and as a political-historical factor. The social organization of local rural communities. Social groups in rural areas. Social institutions and organizations in rural areas. Rural culture - between tradition and innovation. Diffusion of innovation in agriculture and rural areas. | | | | | | | | | | | |
| 1. Teaching methods:   Lectures, Discussions, Group work, Research work, Consultations | | | | | | | | | | | |
| Knowledge evaluation (maximum 100 points) | | | | | | | | | | | |
| Pre-examination obligations | | | Mandatory | Points | | Final exam | | | Mandatory | | Points |
| Lecture attendance | | | Yes | 10 | | *Theoretical part of the exam/Oral part of the exam/Written part of the exam-tasks and theory* | | | Yes | | 30 |
| Test | | | Yes | 40 | |  | | | | | |
| Exercise attendance | | | Yes | 10 | |
| *Term paper and students’ involvement in classroom activities* | | | Yes | 5 + 5 | |
| Literature | | | | | | | | | | | |
| Ord. | Author | | Title | | | Publisher | | | | | Year |
|  | Шљукић, С и М. Шљукић | | Земља и људи. Сељаштво и друштвена структура. | | | | Mediterran Publishing. Нови Сад | | | | 2012 |
|  | Стојанов М | | Социологија сеоских колектива. | | | | Матица српска. Нови Сад | | | | 2004 |
|  | Митровић, М. | | Социологија села | | | | СДС. Београд | | | | 1998 |
|  | M. Haralambos i M. Holborn. | | Sociologija: teme i perspektive  Internet sources; scientific journals | | | | Golden marketing. Zagreb | | | | 2002 |



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| Course: | | *Soil science* | | | | | | | | |
| Course id: 3ОПА3О12 | |
| Number of ECTS: 6 | |
| Teacher: | | Milivoj Belic, PhD, full professor; Ljiljana Nesic, PhD, associated professor; Vladimir Ciric, PhD, assistant professor | | | | | | | | |
| Course status | | Mandatory | | | | | | | | |
| Number of active teaching classes (weekly) | | | | | | | | | | |
| Lectures: 3 | | Practical classes: 2 | | | Other teaching types: | | Study research work: | | Other classes: | |
| Precondition courses | | None | | | | | | | | |
| 1. **Educational goal** of the course is introducing students with the characteristics of soil processes; genesis, evolution, causes of variability and geographic distribution laws of soil cover and soil classification | | | | | | | | | | |
| 1. **Educational outcomes** - after passing the exam, students will have expanded knowledge that will be enabling to them to understand and solve problems related to soil in the complex process of planning. | | | | | | | | | | |
| 1. Course content   **Theoretical instruction**-Opening lecture, Minerals and rocks as a basis for the genesis of soil, Morphological characteristics, physical properties, soil as a dispersed system, mechanical composition, clay, organic matter, Soil colloids, Organo - mineral complex, structure, porosity, water and water regime, air and air regime, thermal properties and thermal regime, physic-mechanical properties, chemical properties, the elements that constitute the pedosphere, absorptive capacity, soil solution, reaction, acidity and alkalinity of soil pH, buffering and oxidation-reduction potential , biological soil properties, soil genesis, classification and soil classification,  **Practical teaching**-primary-petrogene and secondary minerals, igneous rocks, sedimentary rocks, metamorphic rocks, field research plots, soil density, soil texture, Water permeability and capillary rise, Plasticity soil, Determination of humus in the soil, Determination of CaCO3, Determination of active soil acidity, potential acidity and determine the amount of lime needed funds for the repair of acid soils, Determination of adsorption complex, Determination of total soluble salts in the soil and the required quantity of plaster for the repair of alkaline soils. Field practice - Introducing different parent rocks and profiles of the most frequent types of soil in Vojvodina. | | | | | | | | | | |
| 1. Teaching methods   Lectures, Practice/ Practical classes, Consultations | | | | | | | | | | |
| Knowledge evaluation (maximum 100 points) | | | | | | | | | | |
| Pre-examination obligations | | | Mandatory | Points | | Final exam | | Mandatory | | Points |
| Lecture and exercise attendance | | | Yes | 10 | | *Written part of the exam-tasks and theory* | | Yes | | 30 |
| Test part Agrogeology and practice | | | Yes | 20 | | *Oral part of the exam* | | Yes | | 30 |
| Colloquium | | | Yes | 10 | |  | | | | |
| Literature | | | | | | | | | | |
| Ord. | Author | | Title | | | Publisher | | | | Year |
|  | Aleksandar Kukin, Vladimir Hadžić, Ljiljana Nešić, Milivoj Belić | | Agrogeologija | | | Poljoprivredni fakultet, Novi Sad | | | | 2007 |
|  | Nikola Miljković | | Osnovi Pedologije | | | Prirodno-matematički fakultet, Novi Sad | | | | 1996 |
|  | Nikola Miljković | | Meliorativna Pedologija | | | Poljoprivredni fakultet, Novi Sad | | | | 2005 |
|  | Goran J. Dugalić, Boško A. Gajić | | Pedologija | | | Univerzitet u Kragujevcu, Agronomski fakultet u Čačku | | | | 2012 |
|  | Milivoj Belić, Ljiljana Nešić, Vladimir Ćirić | | Praktikum iz pedologije | | | Poljoprivredni fakultet Novi Sad | | | | 2014 |
|  | Hillel, D. | | Introduction to Environmental Soil Physics | | | Elsevier, Amsterdam, Netherlands. | | | | 2004 |
|  | Robert E. White | | Principles and Practice of Soil Science | | | Blackwell publishing, Fourth edition | | | | 2006 |

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| Znak univerziteta | UNIVERSITY OF NOVI SAD  FACULTY OF AGRICULTURE 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 8 | Znak fakulteta2 |
| Study Programme Accreditation  UNDERGRADUATE ACADEMIC STUDIES *(Landscape architecture)* |
| Table 5.2 Course specification | | |





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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Course: | | *History and Theory of Landscape Architecture* | | | | | | | | |
| Course id: ЗОПА3О15 | |
| Number of ECTS: 6 | |
| Teacher: | | Milena Lakićević PhD | | | | | | | | |
| Course status | | Mandatory | | | | | | | | |
| Number of active teaching classes (weekly) | | | | | | | | | | |
| Lectures:  2 | | Practical classes:  2 | | | Other teaching types: | | Study research work: | | Other classes: | |
| Precondition courses | | None | | | | | | | | |
| 1. Educational goal   Obtaining necessary knowledge concerning history and theory of landscape architecture. Getting an overview of landscape architecture development from 2000 BC until nowadays. | | | | | | | | | | |
| 1. Educational outcomes   Course provides better understanding of principles of theory in landscape architecture throughout history. In addition, it provides a solid foundation for solving specific landscape designing tasks. | | | | | | | | | | |
| 1. Course content   Design philosophy, Ancient gardens, Classical gardens, West Asian and Islamic gardens, Medieval gardens, Renaissance gardens, Baroque gardens, Neoclassical and Romantic gardens, Eclectic gardens, Contemporary gardens and designers. | | | | | | | | | | |
| 1. Teaching methods   Lectures, Practical classes, Consultations | | | | | | | | | | |
| Knowledge evaluation (maximum 100 points) | | | | | | | | | | |
| Pre-examination obligations | | | Mandatory | Points | | Final exam | | Mandatory | | Points |
| Lecture attendance | | | Yes | 5 | | *Written part of the exam* | | Yes | | 25 |
| Practical classes attendence | | | Yes | 5 | | *Oral part of the exam* | | Yes | | 40 |
| Test | | | Yes | 25 | |  | | | | |
| Literature | | | | | | | | | | |
| Ord. | Author | | Title | | | Publisher | | | | Year |
|  | Turner T. | | Garden History, Philosophy and Design 2000 BC–2000 AD | | | Taylor & Francis | | | | 2005 |
|  | Wilson A. | | Influential gardeners – the designers who shaped 20th century garden style | | | Octopus Publishing Group | | | | 2002 |
|  | Richardson T. (ed.) | | The Garden Book | | | Phaidon Press | | | | 2003 |

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| Znak univerziteta | UNIVERSITY OF NOVI SAD  FACULTY OF AGRICULTURE 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 8 | Znak fakulteta2 |
| Study Programme Accreditation  UNDERGRADUATE ACADEMIC STUDIES LANDSCAPE ARCHITECTURE |
| Table 5.2 Course specification | | |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Course: | | *The elements of architectural and landscape design* | | | | | | | | |
| Course id: | |
| Number of ECTS: 6 | |
| Teacher: | | Ass. Professor Ksenija Hiel | | | | | | | | |
| Course status | | Mandatory | | | | | | | | |
| Number of active teaching classes (weekly) | | | | | | | | | | |
| Lectures: 2 | | Practical classes: 3 | | | Other teaching types: | | Study research work: | | Other classes: | |
| Precondition courses | | None | | | | | | | | |
| 1. Educational goal   Introducing students to the basic principles of landscape and architectural design. Mastering the basic elements of design. Detailed and comprehensive forms and materials in shaping the landscape area with all types of spatial levels and architectural typologies. Getting to know the number of possible effects in accordance with the selected elements and their materialization. | | | | | | | | | | |
| 1. Educational outcomes   The possibility of adequate application of knowledge about elements and materials in the process of designing a functional simple technological solutions landscaping within various architectural and urban programs. | | | | | | | | | | |
| 1. Course content   Theory: Defining the basic elements and their materialization. The possibility of an adequate selection and application of elements to achieve diverse forms of landscaping. Functions and functional processes and programs in the space.  Practical classes: Through graphics and essays - Mastering the process of selection and use of elements and their materialization in order to achieve the required effect in the given architectural programs and urban areas. | | | | | | | | | | |
| 1. Teaching methods   Lectures, Consultations, Field trip, research work | | | | | | | | | | |
| Knowledge evaluation (maximum 100 points) | | | | | | | | | | |
| Pre-examination obligations | | | Mandatory | Points | | Final exam | | Mandatory | | Points |
| Lecture attendance | | | Yes | 5 | | Written and oral part of the exam-tasks and theory | | Yes | | 50 |
| Exercise attendance | | | Yes | 35 | |  | | | | |
| Test, seminar paper | | | Yes | 10 | |
| Literature | | | | | | | | | | |
| Ord. | Author | | Title | | | Publisher | | | | Year |
|  | Waterman Tim | | The Fundamentals of Landscape Architecture | | | AVA Book, Lausanne | | | | 2009 |
|  | Bell Simon | | Elements of Visual Design in the Landscape | | | Spon Press, London and New York | | | | 2004 |
|  | Dee Catherine | | Form and Fabric in Landscape Architecture | | | Spon Press, London and New York | | | | 2001 |

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| Znak univerziteta | UNIVERSITY OF NOVI SAD  FACULTY OF AGRICULTURE 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 8 | Znak fakulteta2 |
| Study Programme Accreditation  UNDERGRADUATE ACADEMIC STUDIES  Landscape architecture |
| Table 5.2 Course specification | | |
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| Course: | | *Environment and Sustainable Development* | | | | | | | | |
| Course id: ЗОПА4О17 | |
| Number of ECTS: 5 | |
| Teacher: | | Milena Lakićević PhD | | | | | | | | |
| Course status | | Mandatory | | | | | | | | |
| Number of active teaching classes (weekly) | | | | | | | | | | |
| Lectures:  3 | | Practical classes:  3 | | | Other teaching types: | | Study research work: | | Other classes: | |
| Precondition courses | | None | | | | | | | | |
| 1. Educational goal   Obtaining the knowledge related to theoretical and practical aspects of landscape ecology. Learning how to solve a wide range of landscape ecology issues. Getting the knowledge regarding urban and landscape planning and design by taking into account the ecological perspective. | | | | | | | | | | |
| 1. Educational outcomes   Capability to deal with different landscape planning tasks respecting the concepts of sustainable development and environment protection. | | | | | | | | | | |
| 1. Course content   Introduction to landscape ecology, Concept of scale in landscape ecology, Landscape models, Landscape patterns (abiotic causes, biotic interactions, disturbance and succession), Quantifying landscape pattern (data in landscape analysis, metrics and geostatistics), Landscape models (neutral model, fractal landscapes, etc), Disturbance regime, Concept of landscape equilibrium, Ecology in cities: composition and diversity of urban vegetation, biodiversity in designed landscapes, vegetation of urban hard surfaces, antropogenic ecosystems, processes afecting urban biodiversity, Urban ecological indicators, Urban climate, Patterns of urban biodiversity, Urban ecology and human health, Multifuntional green infrastructure planning to promote ecological services in the city, Building for biodiveristy: Accommodating People and Wildlife in Cities, Urban design, planning and management - lessons from ecology. | | | | | | | | | | |
| 1. Teaching methods   Lectures, Practical classes, Consultations | | | | | | | | | | |
| Knowledge evaluation (maximum 100 points) | | | | | | | | | | |
| Pre-examination obligations | | | Mandatory | Points | | Final exam | | Mandatory | | Points |
| Lecture attendance | | | Yes | 5 | | *Written part of the exam* | | Yes | | 30 |
| Practical classes attendence | | | Yes | 5 | | *Oral part of the exam* | | Yes | | 30 |
| Test I | | | Yes | 15 | |  | | | | |
| Test II | | | Yes | 15 | |  | | | | |
| Literature | | | | | | | | | | |
| Ord. | Author | | Title | | | Publisher | | | | Year |
|  | Turner M.G.  Gardner H.R.  O’Neill R.V. | | Landscape Ecology in Theory and Practice: Pattern and Process | | | Springer | | | | 2001 |
|  | Niemelä J. (ed.) | | Urban Ecology: Patterns, Processes and Applications | | | Oxford Univeristity Press | | | | 2014 |

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| Znak univerziteta | UNIVERSITY OF NOVI SAD  FACULTY OF AGRICULTURE 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 8 | Znak fakulteta2 |
| Study Programme Accreditation  UNDERGRADUATE ACADEMIC STUDIES LANDSCAPE ARCHITECTURE |
| Table 5.2 Course specification | | |

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| Course: | | *Floriculture 2* | | | | | | | | |
| Course id:3OПА4О18 | |
| Number of ECTS:6 | |
| Teacher: | | Doc.dr Emina Mladenović | | | | | | | | |
| Course status | | Mandatory | | | | | | | | |
| Number of active teaching classes (weekly) | | | | | | | | | | |
| Lectures:3 | | Practical classes:3 | | | Other teaching types: | | Study research work: | | Other classes: | |
| Precondition courses | | None | | | | | | | | |
| 1. Educational goal   Developing creative skills of students in order to create environments that allow physical health prosperity, moral psychological mood and optimism. | | | | | | | | | | |
| 1. Educational outcomes   The formation of experts with the ability of creative interior design where the floral material has artistic and figurative value. | | | | | | | | | | |
| 1. Course content   Theory: The plant material used in the interior, decorative leaf and flower pot species. Requests for accommodation and the possibility of their use. Possibility to use cut and dried flowers in the interior. Palms and other subtropical plants as mobile greenery. Care and maintenance of flowers in the interior. The interiors decorating, office and residential space.  Practical classes: Introducing of plant material. Creating a sketch of interior design with appropriate plant material. | | | | | | | | | | |
| 1. Teaching methods   Lectures, Practical classes, Consultations, research work | | | | | | | | | | |
| Knowledge evaluation (maximum 100 points) | | | | | | | | | | |
| Pre-examination obligations | | | Mandatory | Points | | Final exam | | Mandatory | | Points |
| Lecture attendance | | | Yes | 5 | | *Written part of the exam-tasks and theory* | | Yes | | 60 |
| Test | | | Yes | 30 | |  | | | | |
| Exercise attendance | | | Yes | 5 | |
| Literature | | | | | | | | | | |
| Ord. | Author | | Title | | | Publisher | | | | Year |
|  | Larson A. Roy | | Introduction to Floriculture | | | Academic Press | | | | 1992 |
|  | Griner Charles | | Floriculture: Designing and Merchandising | | | Delmar, USA | | | | 2011 |

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| Znak univerziteta | UNIVERSITY OF NOVI SAD  FACULTY OF AGRICULTURE 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 8 | Znak fakulteta2 |
| Study Programme Accreditation  UNDERGRADUATE ACADEMIC STUDIES  Landscape architecture |
| Table 5.2 Course specification | | |

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| Course: | | *Dendrology II* | | | | | | | | |
| Course id:3ОПА4О19 | |
| Number of ECTS: 6 | |
| Teacher: | | Prof. drJelena Ninić-Todorović, Aleksandar Kurjakov, MSc. | | | | | | | | |
| Course status | | Mandatory | | | | | | | | |
| Number of active teaching classes (weekly) | | | | | | | | | | |
| Lectures:3 | | Practical classes:3 | | | Other teaching types: student`s papers (seminar) | | Study research work: - | | Other classes: - | |
| Precondition courses | | None | | | | | | | | |
| 1. Educational goal   To gain knowledge of ecology and production of angiosperms using available literature and working practices in the field | | | | | | | | | | |
| 1. Educational outcomes   Eduction of professionals in biological, ecological and functional value of ornamental angiosperms and monitoring of angiosperms in urban areas. | | | | | | | | | | |
| 1. Course content   Theory: Division of woody species on form and height. Morphological and decorative features of angiosperms (root, stem, leaf, flower). Phenological events (flowering, pollination, fruiting, seed maturation and decline, the length of fruiting periodicity and growth rate). Air pollution and angiosperms. The life forms of plants. Natural distribution ofangiosperms. Autochthonous, introduced species, endemics and relics. Geographic floral elements. Angiosperms and environmental conditions (climatic factors, soil conditions, relief, biotic factors). Basic concepts of the study of plant communities. Taxonomic categories of angiosperms.  Practical classes: Systematics of angiosperms. Overview of fresh material. Determination by key to genera and species. Insight into the herbarium material of genotypes from Mediterranean area. Creating a herbarium. Field trip. | | | | | | | | | | |
| 1. Teaching methods   Lectures, Practical classes, Consultations, field trip, research work (optional) | | | | | | | | | | |
| Knowledge evaluation (maximum 100 points) | | | | | | | | | | |
| Pre-examination obligations | | | Mandatory | Points | | Final exam | | Mandatory | | Points |
| Lecture attendance | | | Yes | 10 | | Written part of the exam-tasks and theory | | Yes | | 50 |
| Exercise attendance | | | Yes | 10 | |  | | | | |
| Test, Term paper | | | Yes | 30 | |
| Literature | | | | | | | | | | |
| Ord. | Author | | Title | | | Publisher | | | | Year |
|  | Owen Johnson | | Collins Tree Guide | | | Collins | | | | 2006. |
|  | Carol Usher, John White, Colin Ridsdale | | Trees | | | Dorling Kindersley Publishers Ltd | | | | 2005. |
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| Znak univerziteta | UNIVERSITY OF NOVI SAD  FACULTY OF AGRICULTURE 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 8 | Znak fakulteta2 |
| Study Programme Accreditation  UNDERGRADUATE ACADEMIC STUDIES  Landscape architecture |
| Table 5.2 Course specification | | |
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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Course: | | *Introduction in landscape architectural design* | | | | | | | | |
| Course id:3ОПА5О21 | |
| Number of ECTS:7 | |
| Teacher: | | Prof. dr Aleksandra D. Tišma, Ana M. Lakić, MSc. | | | | | | | | |
| Course status | | Mandatory | | | | | | | | |
| Number of active teaching classes (weekly) | | | | | | | | | | |
| Lectures:3x15=45 | | Practical classes:3x15=45 | | | Other teaching types: none | | Study research work: none | | Other classes: none | |
| Precondition courses | | None | | | | | | | | |
| 1. Educational goal   Introducing with the process and technique of landscape design, consideration of the elements of spatial form and composition, preparation and ability of students to design the objects of landscape architecture. | | | | | | | | | | |
| 1. Educational outcomes   Graphic works shows the acquired skills of space presentation, an understanding of the elements of space and the process of creating the space. | | | | | | | | | | |
| 1. Course content:   *Lectures*: Landscape architectural design as part of the planning. The process of landscape architectural design. Design phases - research and analysis, conceptualization, compositional design, finalization. Elements of spatial form and composition. Objects of landscape design. Graphics of landscape design. Presentation of design solutions.  *Practical classes*: Students create a project, by going through the process and techniques of landscape design: defining the task, spatial location analysis, conceptualization of the solutions, making master plan, design details, finalization of graphics work, presentation of project solutions. | | | | | | | | | | |
| 1. Teaching methods   Thematic lectures - presentation of the theoretical basis with the discussion teacher - students. In the practical classes is provided individual student work - project design (graphic work), with corrections and suggestions from the teachers. | | | | | | | | | | |
| Knowledge evaluation (maximum 100 points) | | | | | | | | | | |
| Pre-examination obligations | | | Mandatory | Points | | Final exam (izabrati) | | Mandatory | | Points |
| Lecture attendance,  Exercise attendance | | | Yes | 10 | | Oral part of the exam | | Yes | | 10 |
| student`s papers (seminar) | | | Yes | 10 | | Written part of the exam-tasks and theory | | Yes | | 20 |
| graphic work | | | Yes | 50 | |
| Literature | | | | | | | | | | |
| Ord. | Author | | Title | | | Publisher | | | | Year |
|  | Grant W. Reid FASLA | | From Concept to Form in Landscape Architecture | | | John Wiley Sons. Inc, USA | | | | 2007 |
|  | Tony Bertanski | | Plan Graphics for the Landscape Designer with section – elevation and computer graphics | | | Upper Saddle River, New Jersey, Columbus, Ohio | | | | 2007 |
|  | Grant W. Reid FASLA | | Landscape graphics, plan, section and perspective drawing of landscape spaces | | | Watson-Guptill Publications, New York | | | | 2002 |
|  | Catherine Dee | | Form and fabric in Landscape Architecture, a Visual Introduction | | | Spon Press, Taylor Francis Group, London, New York | | | | 2007 |

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| Znak univerziteta | UNIVERSITY OF NOVI SAD  FACULTY OF AGRICULTURE 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 8 | Znak fakulteta2 |
| Study Programme Accreditation  UNDERGRADUATE ACADEMIC STUDIES Landscape architecture |
| Table 5.2 Course specification | | |

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| Course: | | *Universal design principles* | | | | | | | | | |
| Course id:3ОПА5О22 | |
| Number of ECTS: 6 | |
| Teacher: | | Prof. dr Aleksandra D. Tišma, Ana Lakić, MSc. | | | | | | | | | |
| Course status | | Mandatory | | | | | | | | | |
| Number of active teaching classes (weekly) | | | | | | | | | | | |
| Lectures:2x15=30 | | Practical classes:3x15=45 | | | Other teaching types: - | | | Study research work: - | | Other classes: - | |
| Precondition courses | | None | | | | | | | | | |
| 1. Educational goal   Introducing to the concept of accessibility of open spaces, with special focus on people with disabilities and the problems encountered in the use of urban space. The aim of the course is to develop an awareness of the importance of the problem of "access for all", and through the application of basic knowledge about universal design, to point out the ability to enhance open spaces in accordance with the needs of all people regardless to their ability. | | | | | | | | | | | |
| 1. Educational outcomes   Getting knowledge about the basics of accessible planning and design of open space, identification of obstacles and barriers in the built environment, the use of the principles and concepts of universal design in the designing of objects of landscape architecture. | | | | | | | | | | | |
| 1. Course content   Theory: Problem of disability: the position of persons with disabilities; Concept and definition of disability; Classification of persons with disabilities. Free Movement of People with Disabilities - Accessibility: definitions, concept and forms of accessibility; barriers - factors compromising accessibility; the unbreakable chain of movement; importance of accessibility of open space; concept and principles of universal design. Standards and directives related to free movement and accessibility of open space. The role and importance of landscape architecture in the designing the accessible open spaces - landscape architectural design according to the concept of universal design.  Practical classes: Analysis and evaluation of the accessibility of open space from the aspect of availability for the users (check lists, photo analysis, surveys): presentation of the current state of accessibility at the selected location (different categories of open space), identification of present barriers - problems in the use of the urban area, the proposal of possible solutions to improving the accessibility and functionality in order to increase accessibility, primarily for persons with disabilities. | | | | | | | | | | | |
| 1. Teaching methods   Lectures and exercises, consultations, individual research, presentations, fieldwork (field trip). | | | | | | | | | | | |
| Knowledge evaluation (maximum 100 points) | | | | | | | | | | | |
| Pre-examination obligations | | | Mandatory | Points | | Final exam | | | Mandatory | | Points |
| Lecture attendance,  Exercise attendance | | | Yes | 10 | | Oral part of the exam | | | Yes | | 10 |
| student`s papers (seminar) | | | Yes | 10 | | Written part of the exam-tasks and theory | | | Yes | | 20 |
| Practical work | | | Yes | 50 | |
| Literature | | | | | | | | | | | |
| Ord. | Author | | Title | | | | Publisher | | | | Year |
|  | Alexandre Côte | | Free Movement of People with Disabilities in South East Europe: An Inaccessible Right? | | | | Disability Monitor Initiative | | | | 2006 |
|  | Catherine Ward Thompson, Peter Aspinall, Simon Bell | | Innovative Approaches to Researching Landscape and Health,  Open space: People space 2 | | | | Routhledge, Taylor and Francis Group | | | | 2014 |
|  | [Candice A. Shoemaker](http://www.amazon.com/s/ref=dp_byline_sr_book_1?ie=UTF8&field-author=Candice+A.+Shoemaker&search-alias=books&text=Candice+A.+Shoemaker&sort=relevancerank) | | Interaction by Design: Bringing People and Plants Together for Heatlh and Well-Being | | | | Iowa State Press, A Blackwell Publishing Company | | | | 2002 |
|  | Ronald L. Mace, Graeme J. Hardie, Jaine P. Place | | Accessible Environments: Toward Universal Design | | | | The Center for Universal Design, North Carolina State University, USA | | | | 1991 |

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| Znak univerziteta | UNIVERSITY OF NOVI SAD  FACULTY OF AGRICULTURE 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 8 | Znak fakulteta2 |
| Study Programme Accreditation  UNDERGRADUATE ACADEMIC STUDIES |
| Table 5.2 Course specification | | |
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| Znak univerziteta | UNIVERSITY OF NOVI SAD  FACULTY OF AGRICULTURE 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 8 | Znak fakulteta2 |
| Study Programme Accreditation  UNDERGRADUATED ACADEMIC STUDIES Landscape architecture |
| Table 5.2 Course specification | | |

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| Course: | | Fruit species in landscape design | | | | | | | | |
| Course id:3ОПА5О23 | |
| Number of ECTS: 6 | |
| Teacher: | | Professors: Dr Vladislav M. Ognjanov, full time professor  Dr Mirjana Ž. Ljubojević, assistant professor  Assistant: MSc Dušica, R. Bošnjaković | | | | | | | | |
| Course status | | Mandatory | | | | | | | | |
| Number of active teaching classes (weekly) | | | | | | | | | | |
| Lectures: 4 | | Practical classes: 4 | | | Other teaching types: | | Study research work: | | Other classes: | |
| Precondition courses | | None | | | | | | | | |
| 1. Educational goal   The aim of the course is acquisition of knowledge about biological and practical basis of fruit growing and application of achieved knowledge in the planning and designs of small green spaces and gardens, using continental and by introduction of subtropical fruit trees in the context of integral and organic production. | | | | | | | | | | |
| 1. Educational outcomes   Students will learn about the most important aspects of fruit production in the commercial and decorative context. It includes biology and ecology, agro- and pomo-techniques, varieties and rootstocks of fruit species, as well as their interaction, combining productivity and decorativeness of decorative fruit tree forms. | | | | | | | | | | |
| 1. Course content   Theory lessons:  The importance of fruit growing from dendrologic and economic aspects. Adaptability of fruit species, the impact of edaphic and climatic factors, geographical location and fruit districts. Biological basis of propagation and production of fruit planting material. Growth and development of fruit species and the biological basis of their fertility. Classification, design and raise of fruit garden in relation to its purpose. Aagro- and pomo-techniques of fruit trees. Integrated and organic production concept of fruit growing. Harvest, preservation and fruit packaging.  Practical classes:  Preparation and development of amateur fruit garden project, gradually through practical classes where students are introduced to: pomologic classification of fruit trees; Recognition of fruit species and fruit bearing branches; Recognition of vegetative and generative organs in a function of decorative tree formation; Propagation of fruit trees; Pomologic description of varieties with genetic resistance to parasites and pests; Dwarf and wild fruit species. Raise and care of fruit trees. Determination of harvesting moment and fruit storing. | | | | | | | | | | |
| 1. Teaching methods   Lectures, Practical classes, Consultations | | | | | | | | | | |
| Knowledge evaluation (maximum 100 points) | | | | | | | | | | |
| Pre-examination obligations | | | Mandatory | Points | | Final exam (izabrati) | | Mandatory | | Points |
| Lecture attendance | | | Yes | 10 | | *Theoretical part of the exam/Oral part of the exam/Written part of the exam-tasks and theory* | | Yes | | 40 |
| Test | | | Yes | 20 | |  | | | | |
| Exercise attendance | | | Yes | 10 | |
| Term paper | | | Yes | 20 | |
| Literature | | | | | | | | | | |
| Ord. | Author | | Title | | | Publisher | | | | Year |
|  | David Jackson | | Temperate and Subtropical Fruit Production | | | CABI International | | | | 1999 |

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| Course: | | *Landscape Design – studio I* | | | | | | | | |
| Course id: 3OPA6O24 | |
| Number of ECTS: 6 | |
| Teacher: | | Mirjana Sekulic, Ph.D., Assistant Professor | | | | | | | | |
| Course status | | Mandatory | | | | | | | | |
| Number of active teaching classes (weekly) | | | | | | | | | | |
| Lectures: 3 | | Practical classes: 4 | | | Other teaching types: seminars project work | | Study research work: | | Other classes: | |
| Precondition courses | | None/navesti ako ima | | | | | | | | |
| 1. Educational goal   Training students for designing open spaces (middle scale) through elaboration of bigger number of conceptual solutions, evaluation of alternatives and the final proposal. | | | | | | | | | | |
| 1. Educational outcomes   Student is becoming familiar with design methods through mastering the basic spatial problems. Student is gaining the opportunity for an adequate application of the obtained knowledge in given situations. | | | | | | | | | | |
| 1. Course content   *Lectures*  Typology of open spaces and their functional-forming definition, the question of independence and reciprocal connections to other spatial structures. Designing of small, urban, open, public spaces (greening of streets, urban pocket parks). Designing open spaces that belong to public buildings. Designing common open public spaces as part of the residential areas. Planning of sports and recreational areas and children playgrounds - the role and importance of space for the development of children`s psycho-physical and social skills.  *Practical classes: exercises, other forms of teaching, study research*  Through graphical and research work: ability of developing a project task in a given scale. Use of graphic and other visual techniques of presentation, development of working models and consciousness of the importance of their use in the project process, written and oral presentation of the project. | | | | | | | | | | |
| 1. Teaching methods   Individual work with students-correction of the student works, lectures about specific problems on the seminar. Collecting material (including terrain work), conversations with corresponding administrative authorities, studio work, presentations in front of a group, defence of suggested solutions, public defence in front of the interested audience. | | | | | | | | | | |
| Knowledge evaluation (maximum 100 points) | | | | | | | | | | |
| Pre-examination obligations | | | Mandatory | Points | | Final exam | | Mandatory | | Points |
| Activity during lectures | | | Yes | 10 | | Oral part of the exam | | Yes | | 30 |
| Seminars project work | | | Yes | 60 | |  | | | | |
| Literature | | | | | | | | | | |
| Ord. | Author | | Title | | | Publisher | | | | Year |
|  | Thomas D. Church, T.D., Grace Hall, G. and , Laurie, M. | | Gardens are for People | | | University of California Press | | | | 1995 |
|  | Harris, C., and N. Dines. | | Timesaver Standards for Landscape Architecture | | | McGraw-Hill | | | | 1997 |
|  | Ormsbee, S. J. and  Starke, W.B. | | LANDSCAPE ARCHITECTURE, A manual of environmental planning and design | | | McGraw-Hill | | | | 2006 |
|  | Turner, T., | | City as Landscape: A Post Post-Modern View of Design and Planning | | | Taylor & Francis | | | | 1995 |
|  | Jellicoe, G. | | Studies in Landscape Design, I-III, p. 121, p. 142, p. 250 | | | Oxford University Press | | | | 1970 |
|  | Spens, M. | | Modern Landscape | | | Phaidon | | | |  |
|  | Zevi, Bruno | | The Modern Landscape Dimenzions of Landscape Architecture | | | [Sylvia Crowe & Zvi Miller](http://www.amazon.com/s/ref=dp_byline_sr_book_1?ie=UTF8&field-author=EDITORS%3A+SYLVIA+CROWE+%26+ZVI+MILLER&search-alias=books&text=EDITORS%3A+SYLVIA+CROWE+%26+ZVI+MILLER&sort=relevancerank) (editors), Shaping Tomorrow's Landscape: Volume 1 the Landscape Architect's Role in Conservation Volume, Djambatan, pp.16-19 | | | | 1964 |

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| Znak univerziteta | UNIVERSITY OF NOVI SAD  FACULTY OF AGRICULTURE 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 8 | Znak fakulteta2 |
| Study Programme Accreditation  UNDERGRADUATE ACADEMIC STUDIES LANDSCAPE ARCHITECTURE |
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| Course: | | *Landscape Planning I* | | | | | | | | |
| Course id: 3ОПА6О25 | |
| Number of ECTS: 6 | |
| Teacher: | | Prof. dr Aleksandra Tišma | | | | | | | | |
| Assistant: | | MSc Ivana M. Sentić | | | | | | | | |
| Course status | | Mandatory | | | | | | | | |
| Number of active teaching classes (weekly) | | | | | | | | | | |
| Lectures: 3 | | Practical classes: 4 | | | Other teaching types: - | | Study research work: - | | Other classes: - | |
| Precondition courses | | None | | | | | | | | |
| 1. Educational goal   To provide students the necessary knowledge about the landscapes, basic types of the landscapes, their values and the natural processes within them. Raising general awareness about the importance of planning and developing various types of the landscapes and their protection from further degradation. Introduction to the basic methodology of improving landscapes and character of vegetation in the whole process. | | | | | | | | | | |
| 1. Educational outcomes   Students will gain theoretical and practical knowledge in the field of the landscape planning. Students will learn a technique of analyzing the landscape (reading aerial maps, making the list of assessment, implementation of the SWOT analysis, identification and interpretation of historical layers and physical development of a landscape). After passing the exam, students will be able to move into the next phase of planning - the preparation to the future landscape plane of the certain area. | | | | | | | | | | |
| 1. Course content   *Theoretical classes:*  Definition of basic terms (space and landscape), classification of landscapes. The characteristics of the landscape as a whole. Terms, tasks and goals of landscape planning. History of landscape planning in the world and in Serbia. Natural processes in the development and functioning of the landscapes. Natural resources, their ranking. The importance of nature protection. Natural complex with emphasis on vegetation. "The architecture of the forest." The role of man in the development of landscapes. Ecological analysis of the impact on the environment. The planning stage scenery. The methodology of the analysis of landscapes. Methods and techniques of landscape evaluation. Types of landscape evaluation (evaluation of natural resources, evaluation of tourism potential, evaluation of infrastructure and social factors).  *Practical classes:*  Practical work on the analysis of an urban or rural landscape fragment with the adequate methodology for analysis and evaluation of the landscape and a proposal for improvement of the analyzed area. Preparation and submission of semester project. | | | | | | | | | | |
| 1. Teaching methods   Classes are held in the form of lectures, practical work and consultations, as well as in the form of field work. There is frontal, indirect and interactive form of the work. By using technical means (computer control, video bim). There are applied textual and illustrative-demonstrative methods. Above mentioned in the practical work, it is applied a cartographic method as well. Auto oral presentation of drawn project with control of the subject teacher and assistant. | | | | | | | | | | |
| Knowledge evaluation (maximum 100 points) | | | | | | | | | | |
| Pre-examination obligations | | | Mandatory | Points | | Final exam | | Mandatory | | Points |
| Lecture attendance | | | Yes | 5 | | Oral exam | | Yes | | 45 |
| Exercise attendance | | | Yes | 5 | | TOTAL: 100 points | | | | |
| Design project | | | Yes | 40 | |
| Seminar work paper | | | Yes | 5 | |
| Literature | | | | | | | | | | |
| Ord. | Author | | Title | | | Publisher | | | | Year |
|  | Forman, R., Godron, M. | | Landscape Ecology | | | New York, USA: John Wiley&Sons | | | | 1976 |
|  | Monica, G. T., Robert H. G., Robert V. O'Neill | | Landscape ecology in theory and practice, pattern and process | | | Springer Science+Business media, LLC. | | | | 2001 |
|  | Steiner, F. | | The Living Landscape, an Ecological Approach to Landscape Planning | | | New York, USA: McGraw - Hill. Inc. | | | | 1991 |
|  | Marsh, W. | | Landscape planning Environmental applications, fourth edition. | | | USA: John Wiley & Sons, Inc. | | | | 2005 |

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| Znak univerziteta | UNIVERSITY OF NOVI SAD  FACULTY OF AGRICULTURE 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 8 | Znak fakulteta2 |
| Study Programme Accreditation  UNDERGRADUATE ACADEMIC STUDIES *Landscape Architecture* |
| Table 5.2 Course specification | | |
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| Course: | | *The basics of urban planning* | | | | | | | | |
| Course id: | |
| Number of ECTS: 7 | |
| Teacher: | | Ass. Professor Ksenija Hiel | | | | | | | | |
| Course status | | Mandatory | | | | | | | | |
| Number of active teaching classes (weekly) | | | | | | | | | | |
| Lectures: 2 | | Practical classes: 2 | | | Other teaching types: | | Study research work: | | Other classes: | |
| Precondition courses | | None | | | | | | | | |
| 1. Educational goal   Introducing students to the basic principles of urban design. Mastering the basic elements of urban and rural areas (plot, street, square and block). Traffic in settlements. Analysis of the basic elements of the urban / rural landscape and its fragments. | | | | | | | | | | |
| 1. Educational outcomes   The possibility of adequate application of knowledge acquired in the process of analysis and synthesis in urban planning and design. | | | | | | | | | | |
| 1. Course content   Theory: Defining the basic concepts and elements in urban planning. The study of the theoretical and practical aspects of various basic elements in urban / rural area. Sizing and structuring functional process and programs in urban and rural areas.  Practical classes: Through graphics and essays - Mastering the process of analysis and synthesis of the basic elements of the urban / rural area in order to define the appropriate sizing of the programme in urban / rural areas. | | | | | | | | | | |
| 1. Teaching methods   Lectures, Consultations, Field trip, research work | | | | | | | | | | |
| Knowledge evaluation (maximum 100 points) | | | | | | | | | | |
| Pre-examination obligations | | | Mandatory | Points | | Final exam | | Mandatory | | Points |
| Lecture attendance | | | Yes | 5 | | Written and oral part of the exam-tasks and theory | | Yes | | 50 |
| Exercise attendance | | | Yes | 35 | |  | | | | |
| Test, Term paper | | | Yes | 10 | |
| Literature | | | | | | | | | | |
| Ord. | Author | | Title | | | Publisher | | | | Year |
|  | Wall E., Waterman T. | | Urban Design | | | AVA Book, Lausanne | | | | 2010 |
|  | Krier Rob | | Urban Space | | | Rizzoli International Publication, New York | | | | 1979 |
|  | Cullen Gordon | | The Concise Towscape | | | Architectural Press. New York | | | | 2010 |
|  | Moughtin Cliff | | Urban Design Street and Square | | | Architectural Press. New York | | | | 2003 |

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| Znak univerziteta | UNIVERSITY OF NOVI SAD  FACULTY OF AGRICULTURE 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 8 | Znak fakulteta2 |
| Study Programme Accreditation  UNDERGRADUATE ACADEMIC STUDIES  Landscape architecture |
| Table 5.2 Course specification | | |
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| Course: | | *Turfgrasses* | | | | | | | | |
| Course id: | |
| Number of ECTS: | |
| Teacher: | | Prof. Dr Branko Ćupina, Dr Djordje Krstić | | | | | | | | |
| Course status | | Mandatory | | | | | | | | |
| Number of active teaching classes (weekly) | | | | | | | | | | |
| Lectures: 3(45) | | Practical classes: 2(30) | | | Other teaching types: | | Study research work: | | Other classes: | |
| Precondition courses | | None | | | | | | | | |
| 1. Educational goal   Theoretical and practical aspects of turfgrass establishment and maintaining | | | | | | | | | | |
| 1. Educational outcomes   Acquiring knowledge in order to establish and maintain turfgrass in accordance with ecological principles | | | | | | | | | | |
| 1. Course content   *Lectures*  Turfgrass basic principles. Significance and prevalence (distribution). General and agroecological importance. Grass taxonomy.  Natural grasslands basic terms and melioration measures. Anthropological grasslands basic terms and establishment. Species ratio in mixtures. Turfgrass maintenance. Turfgrass evaluation. *Research work*  Laboratory, field and practical exercises of students. Work with fresh and herbarium material. | | | | | | | | | | |
| 1. Teaching methods   Lectures, Practice/ Practical classes, Consultations, study, Seminar | | | | | | | | | | |
| Knowledge evaluation (maximum 100 points) | | | | | | | | | | |
| Pre-examination obligations | | | Mandatory | Points | | Final exam | | Mandatory | | Points |
| Lecture attendance | | | Yes | 5 | | *Oral part of the exam* | | Yes | | 55 |
| Test | | | Yes | 2x10=20 | |  | | | | |
| Exercise attendance | | | Yes |  | |
| *Colloquium, Seminar* | | | Yes | 20 | |
| Literature | | | | | | | | | | |
| Ord. | Author | | Title | | | Publisher | | | | Year |
|  | Turgeon, A. J. | | Turf grass management (sixth edition) | | | Copyright by Pearson Education, Inc. Uppere Saddle River, New Jersey 07458 (USA) | | | | 2002 |
|  | Beard, J. B. | | Turf Management for Golf Courses, 2nd Ed. | | | Ann Arbor Press,  Chelsea, MI. | | | | 2002 |

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| Znak univerziteta | UNIVERSITY OF NOVI SAD  FACULTY OF AGRICULTURE 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 8 | Znak fakulteta2 |
| Study Programme Accreditation  BACHELOR STUDIES *(Landscape architecture)* |
| Table 5.2 Course specification | | |

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| Course: | | *Landscape Design – studio II* | | | | | | | | |
| Course id: 3OPA7O29 | |
| Number of ECTS: 7 | |
| Teacher: | | Mirjana Sekulic, Ph.D., Assistant Professor | | | | | | | | |
| Course status | | Mandatory | | | | | | | | |
| Number of active teaching classes (weekly) | | | | | | | | | | |
| Lectures: 3 | | Practical classes: 3 | | | Other teaching types: seminars project work | | Study research work: | | Other classes: | |
| Precondition courses | | None/navesti ako ima | | | | | | | | |
| 1. Educational goal   Possibility of adequate application of the acquired knowledge in landscape architecture design projects. | | | | | | | | | | |
| 1. Educational outcomes   Upgrade of the previous design engineering knowledge through tasks in the bigger areas, bigger scales and dealing with spatial problems that have a higher social complexity. | | | | | | | | | | |
| 1. Course content   *Lectures*  Designing of bigger open public spaces: term, social role and importance of park; contemporary movements and dilemmas in park designing. Spatial and social conditions in designing cemeteries, traditional and modern systems of entombment and their reflection on creating cemeteries.Green urban system - term, theories and models(examples).  *Practical classes: exercises, other forms of teaching, study research*  The focus of the subject is on the term project work consisting of projects high content and structural complexity. Technical / graphical interpretation of landscape architecture projects, development of a 3D model, individual project presentation. | | | | | | | | | | |
| 1. Teaching methods   Individual work with students-correction of the student works, lectures about specific problems on the seminar. Collecting material (including terrain work), conversations with corresponding administrative authorities, studio work, presentations in front of a group, defence of suggested solutions, public defence in front of the interested audience. | | | | | | | | | | |
| Knowledge evaluation (maximum 100 points) | | | | | | | | | | |
| Pre-examination obligations | | | Mandatory | Points | | Final exam | | Mandatory | | Points |
| Activity during lectures | | | Yes | 10 | | Oral part of the exam | | Yes | | 30 |
| Seminars project work | | | Yes | 60 | |  | | | | |
| Literature | | | | | | | | | | |
| Ord. | Author | | Title | | | Publisher | | | | Year |
|  | Waymark, Janet | | Modern Gardens design, innovateion since 1900 | | | Thames & Hudson | | | | 2003 |
|  | Harris, C., and N. Dines. | | Timesaver Standards for Landscape Architecture | | | McGraw-Hill | | | | 1997 |
|  | Ormsbee, S. J. and  Starke, W.B. | | LANDSCAPE ARCHITECTURE, A manual of environmental planning and design | | | McGraw-Hill | | | | 2006 |
|  | Dunnett, N. and [Kingsbury](http://www.amazon.com/s/ref=ntt_athr_dp_sr_2?_encoding=UTF8&sort=relevancerank&search-alias=books&field-author=No%C3%ABl%20Kingsbury), N. | | Planting Green Roofs and Living Walls. | | | Timber Press | | | | 2010 |
|  |  | |  | | |  | | | |  |
|  | Spens, M. | | Modern Landscape | | | Phaidon | | | | 2003 |
|  | McDonough, W. | | A field of dreams: Green roof, ecological design and the future of urbanism. | | | Green Roofs: Ecological Design & Construction. Atglen: Schiffer Books, pp.10-15 | | | | 2005 |

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| Znak univerziteta | UNIVERSITY OF NOVI SAD  FACULTY OF AGRICULTURE 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 8 | Znak fakulteta2 |
| Study Programme Accreditation  UNDERGRADUATE ACADEMIC STUDIES Landscape Architecture |
| Table 5.2 Course specification | | |
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| Course: | | *Landscape Planning II* | | | | | | | | |
| Course id: 3ОПА7О30 | |
| Number of ECTS: 6 | |
| Teacher: | | Prof. dr Aleksandra Tišma | | | | | | | | |
| Assistant: | | MSc Ivana M. Sentić | | | | | | | | |
| Course status | | Mandatory | | | | | | | | |
| Number of active teaching classes (weekly) | | | | | | | | | | |
| Lectures: 3 | | Practical classes: 3 | | | Other teaching types: - | | Study research work: - | | Other classes: - | |
| Precondition courses | | None | | | | | | | | |
| 1. Educational goal   To provide students the necessary knowledge for improving, developing, organizing and protecting the landscapes. Introducing students with main goals of sustainable landscape planning (social, economic and environmental aspects) and to direct their application in each planning concept, whether it is about landscape planning protection or its contemporary advancement. Understanding the approach of landscape shaping. Displaying elements of landscape planning in the world, with the aim of applying global practice on the planned areas of this region. | | | | | | | | | | |
| 1. Educational outcomes   Training students for involvement in the process of planning solutions for the certain spatial entities in further professional career. | | | | | | | | | | |
| 1. Course content   *Theoretical classes:*  Tourism and Recreation - importance, functions, needs, forms, types of tourism and recreation. Negative and positive impacts on the landscape. Tourism and recreational areas, their planning and improving. Planning the different types of trails (pedestrian, bicycle, riding, paths of knowledge etc). Planning and designing area of the park forest, camping area, garden colony, zoos, archaeological, industrial and agricultural parks. Greenery in the landscape. Green corridors.  *Practical classes:*  Practical work is based on an analysis of the present state of the selected landscape and creating landscape concept for the research area. Preparation and submission of semester project. | | | | | | | | | | |
| 1. Teaching methods   Classes are held in the form of lectures, practical work and consultations, as well as in the form of field work. There is frontal, indirect and interactive form of work. By using technical means (computer control, video bim). There are applied textual and illustrative-demonstrative methods. Above mentioned in the practical work, it is applied a cartographic method as well. Auto oral presentation of drawn project with control of the subject teacher and assistant. | | | | | | | | | | |
| Knowledge evaluation (maximum 100 points) | | | | | | | | | | |
| Pre-examination obligations | | | Mandatory | Points | | Final exam | | Mandatory | | Points |
| Lecture attendance | | | Yes | 5 | | Oral exam | | Yes | | 45 |
| Exercise attendance | | | Yes | 5 | | TOTAL: 100 points | | | | |
| Design project | | | Yes | 40 | |
| Seminar work paper | | | Yes | 5 | |
| Literature | | | | | | | | | | |
| Ord. | Author | | Title | | | Publisher | | | | Year |
|  | Steiner, F. | | The Living Landscape, an Ecological Approach to Landscape Planning | | | New York, USA: McGraw - Hill. Inc. | | | | 1991 |
|  | Hough, M. | | Cities and natural processes, a basis for sustainability | | | New York: Routledge | | | | 2004 |
|  | Bell, S. | | Landscape, pattern, perception and process. | | | London: E&FN SPON, Taylor&Francis Group | | | | 1999 |
|  | Turner, T. | | Landscape planning and environmental impact design | | | New York, London: Routledge, Taylor&Francis Group | | | | 2003 |

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| Znak univerziteta | UNIVERSITY OF NOVI SAD  FACULTY OF AGRICULTURE 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 8 | Znak fakulteta2 |
| Study Programme Accreditation  UNDERGRADUATE ACADEMIC STUDIES *Landscape Architecture* |
| Table 5.2 Course specification | | |
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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Course: | | Agroforestry systems | | | | | | | | | |
| Course id:3ОПА7О31 | |
| Number of ECTS:7 | |
| Teacher: | | Sasa Orlovic, PhD, full professor; Lazar Pavlovic, MSc | | | | | | | | | |
| Course status | | Mandatory | | | | | | | | | |
| Number of active teaching classes (weekly) | | | | | | | | | | | |
| Lectures: 3 | | Practical classes:4 | | | Other teaching types: | | Study research work: | | | Other classes: | |
| Precondition courses | | None | | | | | | | | | |
| 1. **Educational goal**of the course is to introduce students to acquire knowledge in the field of agroforestry systems in order to successfully design and perform work on establishing windbreaks, ecological networks, for the time being beekeeping and plantation for energy production. In addition to this objective it is important for students to learn how to use the advantage of growing agricultural and forest species in the same place. | | | | | | | | | | | |
| 1. **Educational outcomes**   Student is able to further upgrade through the masterand doctoral studies for scientific work in the field of agroforestry. | | | | | | | | | | | |
| 1. **Course content**   Theory lessons  The importance of agroforestry in agriculture and forestry in the lowland part of Serbia. Alley planted forest and agricultural plants. Definition. The choice of species. Design. Spaces and technology foundation planting. Farming forestry. Other forest products. Planning and design. The economic and social importance. The protective forest plantations along the rivers. Planning and design. Functions and importance. Remediation of soil and water. The impact on water and air regime. Forest plantations and pastures. Planning and design. The choice of species. Forest management. The economic benefits. The importance of the environment. Windbreaks. Planning and design. The functioning. The importance of rural development. Windbreaks and diversity. The importance of sustainable development in agriculture. Importance of Animal Husbandry. The impact on microclimate. The impact on crop yield. Plants for a specific purpose. Planning and design. Plant a short cycles to obtain raw materials for the production of energy and raw materials for chemical processing. The choice of species. Appropriate cultivars.Eco network. Eco corridor. Buffer zones. The core of diversity. Surfaces of the restoration. The diversity of forest ecosystems. Options restoration of native woody species. Conservation of forest trees and ex and insitu. The dynamics of the ecosystem floodplain forest and conservation opportunities.  Vegetation of the hills, windbreaks, Criteria adequate choice of trees. Payment and technological procedures of establishment, planting and maintenance of greenery. Specifics restoration of landscape greenery and procedures for its implementation. Problems connected to revitalization of landscapes by vegetation. Technologies and procedures for revitalization areas affected by agricultural and industrial activities, re-cultivation.  Practical teaching:  Development of practical work related design agroforestry windbreaks, Alley plantations, forest plantations and pastures, protective plantations along watercourses, plantations for energy production, project development of local eco corridors. | | | | | | | | | | | |
| 1. Teaching methods   Lectures, Practice/ Practical classes | | | | | | | | | | | |
| Knowledge evaluation (maximum 100 points) | | | | | | | | | | | |
| Pre-examination obligations | | | Mandatory | Points | | Final exam (izabrati) | | | Mandatory | | Points |
| Lecture attendance | | | Yes | 5 | | *Written part of the exam-tasks and theory* | | | Yes | | 45 |
| Exercise attendance | | | Yes | 10 | | *Oral part of the exam* | | Yes | | | 20 |
| Colloquium | | | Yes | 10 | |  | | | | | |
| Seminar paper | | | Yes | 10 | |
| Literature | | | | | | | | | | | |
| Ord. | Author | | Title | | | Publisher | | | | | Year |
|  | P.K.Ramachandran | | An Introduction to Agroforestry | | | Kluwer Academic Publishers (in cooperation with ICRAF). 496 p | | | | | 1993 |
|  | Edited by H. E. Garrett, W. J. Rietveld, and R.F. Fisher | | North American Agroforestry: An IntegratedScience and Practice | | |  | | | | | 2000 |
|  | Edited by Florencia Montagini | | Environmental Services of Agroforestry Systems | | | Food Product Press | | | | | 1999 |

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| Znak univerziteta | UNIVERSITY OF NOVI SAD  FACULTY OF AGRICULTURE 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 8 | Znak fakulteta2 |
| Study Programme Accreditation  UNDERGRADUATE ACADEMIC STUDIES *(Landscape architecture)* |
| Table 5.2 Course specification | | |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Course: | | *Design of urban public spaces* | | | | | | | | |
| Course id:3ОПА8О32 | |
| Number of ECTS:3 | |
| Teacher: | | Prof. dr Aleksandra D. Tišma, Ana M. Lakić, MSc. | | | | | | | | |
| Course status | | Mandatory | | | | | | | | |
| Number of active teaching classes (weekly) | | | | | | | | | | |
| Lectures:2x15=30 | | Practical classes:4x15=60 | | | Other teaching types: none | | Study research work: none | | Other classes: none | |
| Precondition courses | | None | | | | | | | | |
| 1. Educational goal   Enabling students to research and design work in shaping urban structure through mastering the basic methods and techniques related to the analysis, planning and design of open public spaces of the city, as well as the ways in which urban spaces are produced and used. | | | | | | | | | | |
| 1. Educational outcomes   Created projects show the acquired skills of analysis, knowledge and understanding of the functioning of public urban spaces and environments, and the process of their design, renewal and transformation. | | | | | | | | | | |
| 1. Course content:   *Lectures*:  The process of creating, using and valorisation of urban space, quality analysis (safety, aesthetics, accessibility, readability, functionality ... ), the classification of urban open space (street corridors , passageways, plazas, squares... ) based on size, forms, character, dynamics, homogeneity, attractiveness, symbolism.  *Practical classes*:  Working in groups (3-5 students) on the project of reconstruction of the urban public spaces: the definition of the task; determining the conditions and processes within the given (assigned) urban situation - historical analysis, surveys, collecting and editing data (location, natural and built structures, transport links ...); description of the situation, problems and potentials in the development of urban structures; defining objectives; compositional design - making master plan, design details, 3d interpretation of space; recommendations for further development of urban structures; graphics, oral and multimedia presentations project solutions. | | | | | | | | | | |
| 1. Teaching methods   Interactive and multimedia lectures, presentations of the theoretical basis and examples of international and domestic practice with conversation and discussion with students, students group work on the project of reconstruction of the urban fabric, fieldwork, consultation and suggestions with the teachers. | | | | | | | | | | |
| Knowledge evaluation (maximum 100 points) | | | | | | | | | | |
| Pre-examination obligations | | | Mandatory | Points | | Final exam (izabrati) | | Mandatory | | Points |
| Lecture attendance,  Exercise attendance | | | Yes | 10 | | Oral part of the exam | | Yes | | 30 |
| student`s papers (seminar) | | | Yes | 20 | |  | |  | |  |
| graphic work | | | Yes | 40 | |
| Literature | | | | | | | | | | |
| Ord. | Author | | Title | | | Publisher | | | | Year |
|  | Ryoko Ueyama | | Landscape Design | | | Bijutsu Shuppan-Sha, Ltd. | | | | 2007 |
|  | Kevin Lynch | | The Image of the City | | | Joint Center for Urban Studies, Massachusetts Institute of Technology and Harvard University | | | | 1960 |
|  | Gordon Cullen | | The Concise of Townscape | | | Architectural Press | | | | 1961 |
|  | Kevin Lynch | | Good City Form | | | Massachusetts Institute of Technology | | | | 1984 |

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| Znak univerziteta | UNIVERSITY OF NOVI SAD  FACULTY OF AGRICULTURE 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 8 | Znak fakulteta2 |
| Study Programme Accreditation  UNDERGRADUATE ACADEMIC STUDIES Landscape architecture |
| Table 5.2 Course specification | | |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Course: | | *Establishing and maintaining of urban green areas* | | | | | | | | |
| Course id:3ОПА8О33 | |
| Number of ECTS: 6 | |
| Teacher: | | Prof. drJelena Ninić-Todorović, Aleksandar Kurjakov, MSc. | | | | | | | | |
| Course status | | Mandatory | | | | | | | | |
| Number of active teaching classes (weekly) | | | | | | | | | | |
| Lectures:3 | | Practical classes:4 | | | Other teaching types: student`s papers (seminar) | | Study research work: - | | Other classes: - | |
| Precondition courses | | None | | | | | | | | |
| 1. Educational goal   To gain knowledge of establishing and maintaining of urban green areas using available literature and working practices in the field | | | | | | | | | | |
| 1. Educational outcomes   Education of professionals in establishing and maintaining of urban green areas. | | | | | | | | | | |
| 1. Course content   Theory: Historical development of horticultural architectural practice. Ornamental plants - a major element of green areas. Secondary elements of green areas. Functions of green areas. Plants and their environment. Categories of green areas. Urban green space systems. Preliminary work on establishing of green areas. Soil cultivation. Planting and sowing - trees, shrubs and climbers, lawn establishment. Construction of the building elements on a green surface. Tools and accessories for green space maintenance. Cultivating plants. Field trips  Practical classes: Practical work on the maintenance of green areas. Field trip. | | | | | | | | | | |
| 1. Teaching methods   Lectures, Practical classes, Consultations, field trip, research work (optional) | | | | | | | | | | |
| Knowledge evaluation (maximum 100 points) | | | | | | | | | | |
| Pre-examination obligations | | | Mandatory | Points | | Final exam | | Mandatory | | Points |
| Lecture attendance | | | Yes | 10 | | Written part of the exam-tasks and theory | | Yes | | 50 |
| Exercise attendance | | | Yes | 10 | |  | | | | |
| Test, Term paper | | | Yes | 30 | |
| Literature | | | | | | | | | | |
| Ord. | Author | | Title | | | Publisher | | | | Year |
|  | Harris Professor Emeritus, Richard W.; Clark, James R.; Matheny, Nelda P. | | Arboriculture: Integrated Management of Landscape Trees, Shrubs, and Vines (4th Edition) | | | Prentice hall, New Jersey, USA | | | | 2003. |

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| Znak univerziteta | UNIVERSITY OF NOVI SAD  FACULTY OF AGRICULTURE 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 8 | Znak fakulteta2 |
| Study Programme Accreditation  UNDERGRADUATE ACADEMIC STUDIES  Landscape architecture |
| Table 5.2 Course specification | | |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Course: | | *Urban design* | | | | | | | | |
| Course id: | |
| Number of ECTS: 7 | |
| Teacher: | | Ass. Professor Ksenija Hiel | | | | | | | | |
| Course status | | Mandatory | | | | | | | | |
| Number of active teaching classes (weekly) | | | | | | | | | | |
| Lectures: 2 | | Practical classes: 4 | | | Other teaching types: | | Study research work: | | Other classes: | |
| Precondition courses | | None | | | | | | | | |
| 1. Educational goal   Introducing students to the complex principles of urban design. Mastering the use of the basic elements of urban and rural areas for the purpose of planning and design of urban / rural settlements and their fragments. | | | | | | | | | | |
| 1. Educational outcomes   The possibility of adequate application of knowledge acquired in the process of urban planning and design. | | | | | | | | | | |
| 1. Course content   Theory: Defining the main urban sections. The study of the theoretical and practical aspects of different urban morphology interacts with architectural typologies. Spaces of social integration and their landscaping.  Practical classes: Through graphics and essays - The formation of urban fragments at specific locations of the city and rural settlements as well as empty spaces modeling and designing based on the set of architectural typologies and functional urban processes in space. | | | | | | | | | | |
| 1. Teaching methods   Lectures, Consultations, Field trip, research work | | | | | | | | | | |
| Knowledge evaluation (maximum 100 points) | | | | | | | | | | |
| Pre-examination obligations | | | Mandatory | Points | | Final exam | | Mandatory | | Points |
| Lecture attendance | | | Yes | 5 | | Written and oral part of the exam-tasks and theory | | Yes | | 50 |
| Exercise attendance | | | Yes | 35 | |  | | | | |
| Test, Term paper | | | Yes | 10 | |
| Literature | | | | | | | | | | |
| Ord. | Author | | Title | | | Publisher | | | | Year |
|  | Sitte Camilo | | City Planning According to Artistic Principles | | | Phaidon press, London | | | | 1980 |
|  | Kostof Spiro | | The City Shape | | | Thames and Hudson, London | | | | 1991 |
|  | Rosi Aldo | | The architecture of the city | | | The MIT Press, Cambridge | | | | 1982 |
|  | Castex J., Depaule J.CH., Panerai P. | | Urban Forme | | | Architectural Press, New York | | | | 2004 |
|  | Moughtin C., Taner O., Tiesdell S. | | Urban design ornament and decoration | | | Architectural Press, Oxford | | | | 1999 |

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| Study Programme Accreditation  UNDERGRADUATE ACADEMIC STUDIES  Landscape architecture |
| Table 5.2 Course specification | | |
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