

| | | | |
|--|----------------------|-----------------------|---------------------------------|
| Study program: Civil Engineering | | | |
| Course: Construction Software | | | |
| Professor/assistant: Aleksandra T. Marinković / Nemanja Petrović | | | |
| Status of course: elective | | | |
| ECTS credits: 5 | | | |
| Pre-requisites: none | | | |
| Aims of the course: The aim of the course is to present students with the advanced level of software and teach them to apply it to design projects in the field of civil engineering, civil engineering and hydraulic engineering: <ul style="list-style-type: none"> - in case of building construction with CAD / BIM software architectures, the basic, longitudinal sections, dimensioning and calculation of the required material are made, and the definition of constructive assemblies is given, etc.; - with the help of Survey software in civil engineering and hydraulic engineering, a TIN (digital terrain model), the elements of horizontal and vertical axis of the road, or a linear hydraulic construction object, as well as other elements defining transversal profiles and details of the object are defined. | | | |
| Learning outcomes: <ul style="list-style-type: none"> - outcome of the course is to enable students to work in 2D and 3D environments and make drawings (basics, longitudinal sections, cross sections, details) for high-rise, low-rise and hydraulic structures; - create the basis for calculating works for construction of buildings, roads or liner hydrographic objects. | | | |
| Syllabus: <i>Theoretical part</i> CAD / BIM software for designing high-rise buildings. Application and use. Designing buildings for civil engineering and hydraulic engineering, using the Survey software package. Application and use. <i>Practical part</i> Using ArchiCAD, for work on drawing bases, longitudinal sections, stairs, roofs to execute calculations of surfaces and rooms, finishing, measurements and quantities of measurements, animation. Using Survey for mapping captured detailed points, creating TIN, defining horizontal and vertical axes of liner objects with all elements, drawing cross-section profiles and details with work calculation. | | | |
| Literature: <ol style="list-style-type: none"> 1. V. Aleksić, M. Vuković: <i>ArchiCad</i>, Visoka građevinsko-geodetskaškola. 2010. 2. M. Janić: <i>Programski sistem za digitalnu topografiju – Survey – uputstvo za korišćenje</i>, Šumarski fakultet, Beograd 2003 3. GraphiSoft: <i>ArchiCad 19</i>, Kompjuter biblioteka, Beograd, 2015. | | | |
| Number of active classes | | | Other forms of teaching: |
| Lectures: 2 | Practical classes: 2 | Laboratory classes: 0 | |
| Teaching methods: Combination of interactive approach with practical problems solving. | | | |
| Grading system (maximum 100 points), grading scale from 5 to 10: below 51 points grade 5, grade 6 from 51-60 points, grade 7 from 61-70 points, grade 8 from 71-80 points, grade 9 from 81-90 points, grade 10 from 91-100 points. | | | |
| Pre-commitments | points | Final exam | points |
| activity during lectures | 10 | written exam | 30 |
| colloquium(s) | 30 + 30 | oral exam | - |
| Sum | 70 | Sum | 30 |