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| Study program: | Civil Engineering | | |
| Level of study: | Undergraduate academic studies | | |
| Course title: | ROAD DESIGN | | |
| Teacher: | Igor Jokanović | | |
| Course Status: | Core | | |
| Credits (ECTS): | 6 | | |
| Prerequisite: | Basics of Traffic Infrastructure | | |
| Course objective(s): | Acquiring basic knowledge in road design. | | |
| Course outcome(s): | The realization of the planned objectives. | | |
| Course Content: | | | |
| 1 st week | Road and traffic (development of road traffic, classification of roads). | | |
| 2 nd week | Operation indicators, representative speeds, representative vehicle. | | |
| 3 rd week | Cross sections of road (cross section elements, dimensioning of carriageway profile, standard cross-sections). | | |
| 4 th week | The system driver-vehicle-environment (psycho-physical factors of the driver, vehicle movement, slipping resistance). | | |
| 5 th week | Braking, vehicle stability in curves. | | |
| 6 th week | Elements of design geometry (layout plan, straights, circular curves, transition curves). | | |
| 7 th week | Leveling plan, longitudinal gradients. | | |
| 8 th week | Vertical bends, carriageway superelevation. | | |
| 9 th week | Layout and composition (principles of route alignment, design techniques). | | |
| 10 th week | Road composition. | | |
| 11 th week | Intersections and supporting facilities (at grade intersections, grade separated intersections). | | |
| 12 th week | Typical types, geometric design and dimensioning, road service facilities. | | |
| 13 th week | Dynamic and geometric analysis of the roadway: the importance of dynamic analysis. | | |
| 14 th week | Traffic analysis and geometric analysis. Methodology and technology of road design: process and structure of design work, evaluation of alternative solutions. | | |
| 15 th week | Submission of designs and preparation for the final exam. | | |
| Literature: | | | |
| | 1. Katanić, J., Anđus, V., Maletin, M., Projektovanje puteva, Građvinski fakultet, Beograd, 1983. | | |
| | 2. Anđus, V., Maletin, M., Metodologija projektovanja puteva; Građevinski fakultet, Beograd, 1993. | | |
| | 3. Damjanović, D., Milićević, A., Cvetković, D., Usklađivanje konstruktivnih elemenata puta prema očekivanoj brzini u slobodnom toku, Građevinski fakultet, Niš, 2002. | | |
| Number of hours: | | | |
| Lectures: 3 | Exercises: 3 | Other forms of teaching: 0 | Individual research work: 0 |
| | | | Other classes: 0 |
| Teaching methods: | lectures, exercises, design, colloquiums, consultations | | |
| Evaluation of knowledge (maximum 100 points) | | | |
| Pre-exam activities | points | Final exam | points |
| Activity during the lectures | 5 | Written exam | - |
| Activity during the exercises | | Oral exam | 25 |
| Design | 20 | - | - |
| Colloquia | 50 (2 x 25) | - | - |