

Course Unit Descriptor

| | | | |
|--|--------------|--------------------|----|
| Study Programme: Civil Engineering | | | |
| Course Unit Title: Maintenance and management of roads | | | |
| Course Unit Code: M31 | | | |
| Name of Lecturer(s): Igor Jokanović | | | |
| Type and Level of Studies: Master Academic Degree | | | |
| Course Status (compulsory/elective): compulsory | | | |
| Semester (winter/summer): winter | | | |
| Language of instruction: English | | | |
| Mode of course unit delivery (face-to-face/distance learning): face-to-face | | | |
| Number of ECTS Allocated: 6 | | | |
| Prerequisites: N/A | | | |
| Course Aims: Acquiring knowledge about the maintenance and management of roads and facilities on them through detailed processing of the methodology of road condition assessment, road maintenance techniques and strategies, decision making models and management systems. Training for systematic approach to the problems of road maintenance and management and the application of modern methods and models in practice. | | | |
| Learning Outcomes: Systematic approach to problems and organization of road maintenance. Identifying, analyzing and proposing solutions to eliminate damage. Application of modern maintenance methods. Designing organizations and managing the development and use of the road information system. Analysis of the economic effects of road network management. | | | |
| Syllabus: <i>Theory</i> Road maintenance; Carriageway condition and types of distresses; Maintenance of flexible and rigid pavement structures; Maintenance of unpaved roads; Maintenance of drainage system; Maintenance of structures; Maintenance of road equipment; Winter maintenance; Impact of maintenance on traffic safety; Rehabilitation and reconstruction of pavement structures; Alternative measures in road maintenance; Measures to increase pavement bearing capacity; Road management systems; Road database; Distresses definition and their progress; Road asset management systems; Road network valuation; Organization and financial aspects of road management. <i>Practice</i> Condition assessment; Analysis of bearing capacity and measures for increase; Strategy and program analysis; Road network valuation; Preparation of seminar paper. | | | |
| Required Reading: 1. Robinson, R., Danielson, U., Snaith, M., Road Maintenance Management, Concepts and Systems, Palgrave, Houdmills/New York, 1998. 2. Pavement Management Guide, American Association of State Highway Officials, Washington, D.C., 2001. 3. The Highway Development and Management Model HDM 4, manual, World Bank/PIARC, 2002. 4. Cvetanović, A., Banić, B., Održavanje puteva, Srbijaput, Beograd, 2005. | | | |
| Weekly Contact Hours: 4 | | Lectures: 2 | |
| Practical work: 2 | | | |
| Teaching Methods: lectures, exercises, practical works, seminar paper, colloquium, consultations | | | |
| Knowledge Assessment (maximum of 100 points): | | | |
| Pre-exam obligations | points | Final exam | - |
| Active class participation | 5 | written exam | - |
| Practical work | 15 | oral exam | 25 |
| Seminar paper | 15 | | |
| Colloquium | 40 (20 + 20) | | |
| Seminar(s) | | | |