

Title Maintenance and operating of roads	Code 1010101161010120311
Field Civil Engineering First-cycle Studies	Year / Semester 3 / 6
Specialty Road and Railroad Engineering	Course core
Hours Lectures: 2 Classes: - Laboratory: - Projects / seminars: 1	Number of credits 3
	Language polish

Lecturer:

-Prof. nadzw. dr hab. inż. Romuald Sztukiewicz
Institute of Civil Engineering,
60-965 Poznań
ul. Piotrowo 5
tel. 61-665-24-33
e-mail: romuald.sztukiewicz@put.poznan.pl

Faculty:

Faculty of Civil and Environmental Engineering
ul. Piotrowo 5
60-965 Poznań
tel. (061) 665-2413, fax. (061) 665-2444
e-mail: office_dceef@put.poznan.pl

Status of the course in the study program:

-The core (special and obligatory) course for students of Civil Engineering First-cycle Studies, faculty of Civil and Environmental Engineering, speciality: Road and Railroad Engineering.

Assumptions and objectives of the course:

-Objective of the course is to get students acquainted with the problems concerning maintenance and operating of roads including current and system maintenance. Tasks of administrations of public roads and components of pavement maintenance systems will be presented with special regard to pavement management system acting in Poznan city and realizing by Institute of Civil Engineering of Poznan University of Technology.

Contents of the course (course description):

-Bases of maintenance of roads-definitions. Tasks of administration of public roads. Current maintenance. Spring, summer, autumnal and winter maintenance. Pavement management systems (PMS), level of network and level of road section. Components of pavement management system. Stock-taking and data bank concerning pavement. Assessment of technical condition. Models of pavement life. Types of structures of the pavement for the sake of different models of degradation. Long-lasting road test sections. Reference system. Principle of planning and optimization of maintenance works. Pavement maintenance systems in Europe. Strategies of maintenance of roads, preferences, standards. Estimation system of pavement condition SOSN 2002. Pavement maintenance system in informatics system of road network management. Geographic (spatial) information systems (SIT and SIG). Roads management systems in cities. Presentation of the street network management system for Poznan city. System of highway design and maintenance effects HDM-III. System highway design and road management HDM-4. Economic analysis in HDM-4 system.

Introductory courses and the required pre-knowledge:

-Basic knowledge of the Roads and streets, the technology of road works and the Motorways in accordance with study programme.

Courses form and teaching methods:

-Lectures illustrated by audiovisual method. Exercises-presentation of the Technical General Specifications within the scope of current maintenance. SOSN 2002 (enclosures from A to D). Examples in HDM-4 system. Explaining of results of measurements.

Form and terms of complete the course - requirements and assessment methods:

-Written attestation of lectures. Attestation of exercises regarding selected measuring devices.

Basic Bibliography:

Additional Bibliography: