

<i>Course title:</i> Roads II	<i>Code:</i> ErasmusFCEE-EM
<i>Field of study:</i> Civil engineering	<i>Year / semester:</i> II
<i>Specialty:</i>	<i>Course:</i> compulsory
<i>Hours / week:</i> Lectures: 1 Tutorials: 0 Laboratories: 1 Project / Seminars: 1	<i>Number of credits:</i> 6

Lecturer: Andrzej Pożarycki, PhD Civil Eng.
Tel. +48 61 647 5816
e-mail: andrzej.pozarycki@put.poznan.pl

Institute / Faculty: Institute of Civil Engineering, Faculty of Civil and Environmental Engineering,
ul. Piotrowo 3a, 60 965 Poznań
tel. +48 61 665 2433, fax +48 61 665 2432
e-mail: office_ce@put.poznan.pl

Status of the course in the study program:
Core course for students of Civil Engineering

Course description:

The course is designed to introduce the students to the fundamentals of practical usage of road design computer tools. By using numerical software students are prepared to design the geometry and road pavements according to world engineering standards.

Teaching outcomes:

The techniques and practical applications of Digital Terrain Model in numerical road design software. Geometric design of roads facilities using 3D modeling techniques in CAD applications. Overview of basic mechanistic methods for dimensioning rigid and flexible road pavements. Introduction to practical laboratory methods of estimation the parameters of mechanistic road pavement models.

Prerequisites:

Basic knowledge of mathematics and physics and soil mechanics.

Teaching method:

Lectures
Pictorial exercises in road laboratory.
Practical exercises using the chosen CAD application and pavement calculation software.

Assessment method:

Project grade
Oral examination

Bibliography:

1. Department of Transportation in State of South Dakota, Road Design Manual, South Dakota 1997-2007,
2. Firlej S., Road pavements mechanics, Lublin University of Technology, Lublin 1997 (in polish),
3. Ministry of Transport and Maritime Economy Regulation Journal of Laws No.43, item 430, On the terms of technical conditions which the public roads and their location should meet, Poland, March 1999 (in polish),
4. Working Group IBDiM, Typical polish flexible and semi rigid pavement structures guidelines, GDDKiA, Warsaw 1997 (in polish),
5. Yang H. Huang, Pavement analysis and design (second edition), University of Kentucky, Pearson Prentice Hall, USA 2004.