

General data

Course ID:	B26302
Course name:	Basis of technology of the road materials and of the road pavements
Department:	Faculty of Civil and Environmental Engineering
Course type:	(in Polish) Przedmioty- kier. BUD stac. I-ego stopnia 3 rok 6 sem.
ECTS	5.00 (depends on study program)
Language:	(unknown)

Classes in period Summer Semester 2012/13

Time span:	6
Coordinator:	dr inż. Andrzej Plewa
Group instructors:	mgr inż. Paweł Gierasimiuk, dr inż. Andrzej Plewa

Type, requirements, objectives and goals of course

Course type: Compulsory

Prerequisites: Building materials. Foundations of engineering communication. Road building.

Assessment: Final test

Aims and objectives: Acquainting Students with the problems of road construction in the performance of road pavements.

Teaching methods: Lectures, activities, laboratory activities

Course content

Lectures:

Road materials - classification, requirements. Aggregates - technical characteristics, manufacturing techniques. Asphalt Binders - characteristics, test methods. Road subgrade - characteristics, types. Sub construction of road construction technology. Bituminous mixtures - characteristics, types. Characteristics of asphalt concrete, cast asphalt, SMA, BBTM, asphalt concrete WMS. Technology of production of mineral-bituminous. Technology building bitumen pavements and cement concrete pavements.

Designing activities:

Project of the mineral-asphalt mixes SMA. Project of the stiff pavement design

Laboratory activities:

Implementation of laboratory studies related to: natural and crushed aggregates, mineral fillers, asphalt binders. Implementation of laboratory tests related to asphalt mix SMA.

Learning outcomes:

- The student describes the technologies of road construction
- Student correctly characterized machinery and equipment in the construction of the road
- The student knows the patterns of technological performance of layers of road pavement structure
- The student is able to design pavement structures by methods catalog

Bibliography

a) basic references:

1. Piłat J., Radziszewski P.: Nawierzchnie asfaltowe; WKiŁ, Warszawa 2010.
2. Kalabińska M., Piłat J., Radziszewski P.: "Technologia materiałów i nawierzchni drogowych", Warszawa 2003.
3. Rozporządzenie z dnia 3 marca 1999r. MTiGM, DU nr 43 RP z dnia 14 maja 1999r.
4. Datka St. Lenczewski St.: "Drogowe roboty ziemne", WKiŁ, Warszawa 1980.
5. Bracha I.: "Maszyny budowlane", Arkady, Warszawa, 1981.
6. Ministerstwo Infrastruktury, IBDiM: "WT-2 - Nawierzchnie asfaltowe na drogach publicznych", Warszawa 2008.
7. Gawel I., Kalabińska M., Piłat J.: "Asfalty drogowe", WKiŁ, Warszawa 2001.

8. Normy i wytyczne dotyczące badań materiałów drogowych.

b) supplementary references:

1. Ministerstwo Infrastruktury, IBDiM: WT-2 - Nawierzchnie asfaltowe na drogach publicznych. Warszawa 2008.
2. Lay M.G.: The handbook of road technology, 2009.