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## Assessment methods of study outcomes

Lectures - students? knowledge is assessed on the basis of a written exam which takes place during last lecture (according to the timetable). The exam consists of 4 questions and lasts 30 minutes. Students are informed about exam?s date, form and time during the first lecture. Grading scale: 16 points - A (very good) 14-15 points - B (good plus) 12-13 points - C (good) 10-11 points - D (satisfactory plus) 8-9 points - E (satisfactory) below 8 points - F (fail) **Course description** Issues related to the use of roads, including the characteristics of road users, traffic, traffic management systems, ITS traffic management, road safety; The impact of exploitation of roads on the environment, traffic noise, air pollution, water pollution and soil, threats to fauna and flora;

Road management,tasks road administration, rules for keeping records of roads, reference systems,road management system elements including road data banks, systems of assessment of road elements, models and analysis, criteria and optimization, analysis of the consequences;

## Basic bibliography:

1. Praca zbiorowa: Eksploatacja dróg, Instytut Badawczy Dróg i Mostów, Warszawa 2011

2. Gaca S., Suchorzewski W., Tracz M.: Inżynieria ruchu drogowego, Wydawnictwa Komunikacji i Łączności, Warszawa 2008

3. Praca zbiorowa: Zasady uspokajania ruchu na drogach za pomocą fizycznych środków technicznych, Biuro Ekspertyz i Projektów Budownictwa Komunikacyjnego ?EKKOM? Sp. z o.o., 2008

4. Praca zbiorowa: Zasady ochrony środowiska w drogownictwie, Generalna Dyrekcja Dróg Publicznych, (opracowanie IBDiM), Warszawa, 1999

5. Praca zbiorowa: Podręcznik dobrych praktyk wykonywania opracowań środowiskowych dla dróg krajowych, EEKOM sp. z o.o., Kraków, 2008

## Additional bibliography:

1. Praca zbiorowa: Zagadnienia utrzymania i modernizacji dróg i ulic, Wydawnictwa Komunikacji i Łączności, Warszawa 1995

Result of average stud	lent's workload	
Activity	Time (working hours)	
1. Participation in lecture		30
2. Participation in consulation	5	
3. Self-improvement of knowledge	15	
4. Preparation for the exam	20	
Student's wo	rkload	
Source of workload	hours	ECTS
Total workload	100	4

35

0

1

0

Contact hours