UNIVERSITY OF WARMIA AND MAZURY IN OLSZTYN

Faculty of Technical Sciences

Course title: Environment Management and Ecology

ECTS credit allocation (and other scores): 1,5

Semester: autumn

Level of study: ISCED-6 - first-cycle programmes (EQF-6)

Branch of science: Engineering and technology

Language: English

Number of hours per semester: 30

Course coordinator/ Department and e-mail: Jrosław Szuszkiewicz/jerry@uwm.edu.pl

Type of classes: classes and lectures

Substantive content

CLASSES: Classes include: Presentation of plasma pyrolysis technology for decomposition of polymer waste, measurement of mechanical vehicles pollution emission according to state regulations, functioning of recycling systems in several European countries and USA, visit to City of Olsztyn central waste management plant, noise measurements of machine tools and other devices, map of noise accomplishment. Students attain knowledge to carry out measurements of different sources of air pollution. One of the purpose of the classes is to encourage students to participate in recycling programs.

LECTURES: The lectures are composed to familiarise students with the main problems of environmental protection on a basic level, with a special emphasis on the automotive impact on the environment. The topics of the lectures are as follows: basic threats to the environment, Legal organisation of the environmental protection in Poland, Air pollution and its detection methods, waste management in Olsztyn, waste management systems in other countries, polymer waste utilisation, noise pollution, natural oil-derived products pollution of the environment.

Learning purpose: The purpose of is bringing students basic knowledge within environmental protection with special emphasis on threats caused by vehicles.

On completion of the study program, the graduate will gain:

Knowledge: Students obtain knowledge concerning law regulations and the eligibility of control officers.

Skills: Activities will let students use the apparatus to measure basic emissions. Students will be able to interpret measurement results.

Social Competencies: Activities will let students use the knowledge on manager positions. They will be able to counteract environmental pollution.

Basic literature: 1) Kłos Z., Feder S, Ochrona środowiska w budowie maszyn roboczych i transporcie, wyd. Wydawnictwo Politechniki Poznańskiej, Poznań, 1994.,
2) Andrzejewski R., Baranowski M., Stan środowiska w Polsce, wyd. PIOŚ, CLOŚ, GRID, Warszawa, 1993 ; 3) Błędzki A., Recykling materiałów polimerowych, wyd. WNT, Warszawa, 1997,
4) Łuksa A., Ekologia płynów eksploatacyjnych, wyd. MCNENT, Radom, 1991,
5) Borkiewicz J., Gospodarka odpadami przemysłowymi a ekologia, wyd. Fundacja ekologiczna Silesia, Katowice,, 1993,

6)Ciechanowicz W., Energia, środowisko i ekonomia, wyd. Instytut Badań Systemowych PAN, Warszawa, 1997,
7) Górski M., Odpowiedzialność administracyjna w ochronie środowiska, wyd. Wolters Kliwer Polska, 2008,
8) Czasopisma z zakresu ochrony środowiska,
9) Schnelle K.B., Brown Ch. , Air Pollution Control Technology Handbook, wyd. CRC Press, 2002
Supplementary literature:

The allocated number of ECTS points consists of:

Contact hours with an academic teacher: 32

Student's independent work: 6.5