

Title <b>(Powtórne przetwarzanie tworzyw sztucznych)</b>	Code <b>1010702311010720723</b>
Field <b>Technologie ochrony środowiska - stacjonarne II stopnia</b>	Year / Semester <b>1 / 1</b>
Specjalty <b>Ecotechnology</b>	Course <b>core</b>
Hours Lectures: <b>2</b> Classes: -    Laboratory: <b>3</b> Projects / seminars: <b>1</b>	Number of credits <b>6</b>
	Language <b>polish</b>

**Lecturer:**

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**Status of the course in the study program:**

fundamental

**Assumptions and objectives of the course:**

Plastics are the main concern because of a large increase of their application in many fields. Rapidly growing number of plastic containers and packages as well as construction and automobile industries has resulted in a considerable increase of the volume of communal and industrial waste. Actually plastic recycling and recovery has become an economic and legitimate problem in highly developed countries. Therefore another reason is to show to the students the material recycling of polymers and chemical or energy recovery.

**Contents of the course (course description):**

Basic of rightful functioning of recycling and recovery systems. The importance of the recycling and recovery of plastics. Identification and sorting of plastic waste; analytical methods in recycling of polymers. Recycling of polymers from automobile industry, electronics and appliances; recycling of rubber. Agglomeration as a method used in material recycling of polymer foils. Recycling and recovery of thermoplastics (PP, PE, PET, PVC, PS and others), of thermohardening plastics. Law aspects of material recycling and recovery of sources and energy of polymers. Design of technology of processing of polymers and also in recycling.

**Introductory courses and the required pre-knowledge:**

The fundamental knowledge about polymer chemistry and processing.

**Courses form and teaching methods:**

The course consists lectures, laboratory activities and project classes.

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

Laboratory trainings - theoretical preparation, performance and reporting

Project classes - test and grading of the project

Examination in written and oral

**Basic Bibliography:**

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**Additional Bibliography:**

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