

## Karta przedmiotu / Course description

Informacje ogólne o przedmiocie / General information about the course	
<b>1. Kierunek studiów / Major of study:</b> Pharmacy	<b>2. Poziom kształcenia / Study level:</b> Uniform Master's Program
<b>4. Rok / Year:</b> IV	<b>3. Forma studiów / Form of study:</b> full-time studies <b>5. Semestr / Semester:</b> VIII
<b>6. Nazwa przedmiotu / Course name:</b> Biotransformation and drug metabolism	
<b>7. Status przedmiotu / Course status:</b> obligatory	
<b>8. Jednostka realizująca przedmiot, adres, e-mail:</b> <b>Name of Department, mailing address, e-mail:</b> Department of Biopharmacy, 8 Jedności Str., 41-200 Sosnowiec, 32 364 12 48, e-mail: azajdel@sum.edu.pl	
<b>9. Treści programowe przedmiotu Course contents:</b> Acquainting students with the chemical and biochemical processes that medicinal substances are subject to in the human body. Evaluation of the influence of chosen factors on the activity of enzymes involved in the drug metabolism. Getting to know the methods enabling the detection of metabolites of selected medicinal compounds.	
<b>10. liczba godzin z przedmiotu / Number of hours for the course</b>	30
<b>11. liczba punktów ECTS dla przedmiotu / Number of ECTS points for the course</b>	4
<b>12. Formy i tematy zajęć / Forms and topics of classes</b> <b>12.1. Laboratory classes</b> 1. Evaluation of glutathione transferase (GST) activity in liver homogenate. 2. Assay of P450 inhibitors influence on O-demethylase activity. 3. Assessment of microsomal fraction activity - detection of products of aminopyrine N-demethylation. 4. Spectrophotometrical determination of cytochrome P450 reductase activity using 3-(4,5-Dimethylthiazol-2-yl)-2,5-diphenyltetrazolium bromide (MTT). 5. Determination of paracetamol metabolites. 6. Evaluation of glutathione content in liver samples.	
<b>13. Literatura / Readings</b> 1. Testa, B., Krämer, S. D. The biochemistry of drug metabolism--an introduction: part 1. Principles and overview. Chem Biodivers. 2006; 3(10): 1053–1101. 2. Testa, B., Krämer, S. D. The biochemistry of drug metabolism--an introduction: Part 2. Redox reactions and their enzymes. Chem Biodivers. 2007; 4(3): 257–405. 3. Coleman, M. D. Human Drug Metabolism: An Introduction. 2nd ed., Wiley, 2010.	
<b>14. Kryteria oceny – szczegóły / Detail evaluation criteria</b> Zgodnie z zaleceniami organów kontrolujących / In accordance with the recommendations of the inspection bodies Zaliczenie przedmiotu - student osiągnął zakładane efekty uczenia się / Completion of the course – student has achieved the assumed learning outcomes Szczegółowe kryteria zaliczenia i oceny z przedmiotu są zamieszczone w regulaminie przedmiotu / Detail criteria for completion and evaluation of the course are specified in the course regulations	