

Course name: Basics of medical biotechnology (USOS Code: B-BMED.2015Eng)

ECTS: 2

No. of hours: 30 (30 lectures + 0 classes)

Course coordinator: Prof. dr hab. Jerzy Rogalski

Prerequisites: General knowledge of microbiology, biochemistry and organic chemistry

Course description: The nature of biotechnology, patenting inventions in biotechnology, safety in biotechnology, organisms involved in biotechnology processes, bioprocess/fermentation technology, homogenisation, concentration and purification techniques in biotechnology, biocatalysers and enzyme technology, single cell protein, immobilization techniques for live cells, enzymes and small weight substances, biotechnology and medicine, bioremediation, biofuels, nanobiotechnology.

Recommended literature: Smith J.E. (2004) Biotechnology studies in biology, 4th ed., Cambridge Univ. Press, UK; Kun L.Y. (2004) Microbial biotechnology – principles and applications, World Scientific Publishing Co. Pte. Ltd., UK; Bagchi D., Bagchi M., Moriyama H., Shahidi F. (2013) Bio-nanotechnology – a revolution in food, biomedical and health sciences, Wiley-Blackwell, UK.