

FACULTY:	Department of Mechanical Engineering
FIELD OF STUDY:	Food Technology and Human Nutrition
ERASMUS COORDINATOR OF THE FACULTY:	Krzysztof Rokosz, PhD, DSc, Eng. Małgorzata Smuga-Kogut, PhD
E-MAIL ADDRESS OF THE COORDINATOR:	<ul style="list-style-type: none"> • krzysztof.rokosz@tu.koszalin.pl • malgorzata.smuga-kogut@tu.koszalin.pl (Food Technology and Human Nutrition)
COURSE TITLE:	Biotechnological Operations and Processes
LECTURER'S NAME:	Małgorzata Smuga-Kogut PhD
E-MAIL ADDRESS OF THE LECTURER:	malgorzata.smuga-kogut @tu.koszalin.pl
ECTS POINTS FOR THE COURSE:	5
ACADEMIC YEAR:	2020/2021
SEMESTER: (W – winter, S – summer)	W
HOURS IN SEMESTER:	15/15
LEVEL OF THE COURSE: (2 nd cycle, 3 rd cycle)	1 st cycle,
TEACHING METHOD: (lecture, laboratory, group tutorials, seminar, other-what type?)	lecture
LANGUAGE OF INSTRUCTION:	English
ASSESSMENT METOD: (written exam, oral exam, class test, written reports, project work, presentation, continuous assessment, other – what type?)	Written exam
COURSE CONTENT:	Isolation, preservation and improvement of industrial microorganisms. Preparation of media for fermentation processes. Design and utilization of bioreactors, instrumentation and control devices. Agitation, aeration, recovery of biomass and secreted metabolites. Separation of fermentation products by sedimentation, filtration, ultrafiltration, centrifugation, extraction, chromatographic processes, ion-exchange. Purification and formulation of end products by crystallization, precipitation, freeze-drying
ADDITIONAL INFORMATION:	-

Małgorzata Smuga-Kogut, 22.02.2019

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