



Subject card

Subject name and code	Technology of colloids , PG_00038550						
Field of study	Chemical Technology						
Date of commencement of studies	February 2022	Academic year of realisation of subject			2021/2022		
Education level	second-cycle studies	Subject group			Optional subject group Subject group related to scientific research in the field of study		
Mode of study	Full-time studies	Mode of delivery			at the university		
Year of study	1	Language of instruction			Polish		
Semester of study	1	ECTS credits			3.0		
Learning profile	general academic profile	Assessment form			exam		
Conducting unit	Department of Colloid and Lipid Science -> Faculty of Chemistry						
Name and surname of lecturer (lecturers)	Subject supervisor	dr hab. inż. Adam Macierzanka					
	Teachers	dr inż. Patrycja Szumała dr hab. inż. Adam Macierzanka					
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	15.0	0.0	15.0	0.0	0.0	30
	E-learning hours included: 0.0						
Learning activity and number of study hours	Learning activity	Participation in didactic classes included in study plan	Participation in consultation hours		Self-study		SUM
	Number of study hours	30	5.0		40.0		75
Subject objectives	-						
Learning outcomes	Course outcome		Subject outcome		Method of verification		
Subject contents	-						
Prerequisites and co-requisites	-						
Assessment methods and criteria	Subject passing criteria		Passing threshold		Percentage of the final grade		
	laboratory exercises		100.0%		40.0%		
	written exam		50.0%		60.0%		
Recommended reading	Basic literature	M. Fanun, <i>Colloids in biotechnology</i> , CRC Press 2011; I.D. Morrison, <i>Colloidal dispersions</i> , Wiley 2002; J. Sjöblom, <i>Emulsions and emulsion stability</i> , CRC Press 2006; L.D. Rhein, <i>Surfactants in personal products and decorative cosmetics</i> , CRC Press 2007; B.P. Binks, <i>Modern aspects of emulsion science</i> , RCS 1998; S.E. Friberg, <i>Food emulsions</i> , Marcel Dekker 1997; J.J. Wille, <i>Skin delivery systems</i> , Blackwell 2006; IFSCC, <i>Introduction to cosmetic emulsions and emulsification</i> , Micelle Press 1997; R. Zana, <i>Dynamics of surfactant self-assemblies</i> , Taylor & Francis 2005; G.L. Hasenhuettl, <i>Food emulsifiers and their applications</i> , Chapman & Hall 1997; K. Holmberg, <i>Applied surfaces and colloid chemistry</i> , Wiley 2002; D. Myers, <i>Surfaces, interfaces, and colloids</i> , Wiley-VCH 1999; M.J. Rosen, <i>Industrial utilization of surfactants</i> , AOCs 2000; N. Garti, <i>Thermal behaviour of dispersed systems</i> , Marcel Dekker 2001; L.H. Tan Tai, <i>Formulating detergents and personal care products</i> , AOCs Press 2000; P. Ghosh, <i>Colloid and interface science</i> , PHI Learning Private Ltd., New Delhi, 2009; E.S. Hedges , <i>Colloids</i> , Hedges Press, 2007; <i>Aktualne artykuły przeglądowe w czasopiśmie naukowych</i> .					
	Supplementary literature	C.E. Stauffer, <i>Emulgatory</i> , WNT, Warszawa 2001; H. Sonntag, <i>Koloidy</i> , PWN, 1982; E.T. Dutkiewicz, <i>Fizykochemia powierzchni</i> , WNT, Warszawa 1998; R. Zieliński, <i>Surfaktanty</i> , WAEP, Poznań 2000; G. Schramm, <i>Reologia – podstawy i zastosowania</i> , OWN, Poznań 1998; L. Sobczyk, A. Kiszka, <i>Chemia fizyczna dla przyrodników</i> , PWN, Warszawa 1977; P. W. Atkins, <i>Podstawy chemii fizycznej</i> , PWN, Warszawa 1999; H. Buchowski, W. Ufnalski, <i>Roztwory</i> , WNT, Warszawa 1995.					

	eResources addresses	
Example issues/ example questions/ tasks being completed	-	
Work placement	Not applicable	