Course title	Controlling (for ERASMUS students)		ECTS code	4.0.2401
			ECTS credits	5
			max. students	15

Name of unit administrating study	KL	Field of study	Economics/MSG**	Field of specialisation	NONE;
Teaching staff	Cezary Mańkowski, Associate Professor				

Number of hours									
Lectures	0	Classes	0	Tutorials	0	Laboratory	30	Seminars	0	Language classes	0

Forma aktywności		Year&Type of studies*	2 SS1, 3 SS1, 1 SS2, 2 SS2,
Hours with the participation of the academic teacher (including office hours, exams, others):		Semester:	4, 6, 2, 4,
Hours without the participation of the academic teacher (student's self-study, homeworks):		Type of course:	optional
Total number of hours:	0	Language of instruction:	English

Teaching form	in-class learning C205
Teaching methods	Work in computer laboratories, Case studies, Individual projects,

Prerequisites (required courses and introductory requirements)	
Required courses	None
Introductory requirements	General knowledge on business processes

Assessment method, forms and criteria	
Assessment method	Course completion (graded)
Assessment criteria	Student is required to perform 3 projects. Project 1: a map of controlling system components/structure, which stands for 1/3 of the assessment Project 2: a report on KPI's as targets to keep or achieve, which stands for 1/3 of the assessment Project 3: a ranking of product segments/divisions profitability, which stands for 1/3 of the assessment The projects are assessed according to their substantive correctness, and the grading scale is consistent with the study regulations.

Course objectives
The objective of this course is to complement the implementation of selected learning objectives in terms of skills and social competence related to controlling.

Learning outcomes		
Knowledge	E1_W06	Student knows at an advanced level selected methods and tools for controlling economic processes
	MSG1_W17	Student has advanced knowledge on how to put a business under control
	E2_W07	Student has in-depth knowledge of the economic and financial operation and management of business entities and organizations according to controlling principles
	MSG2_W09	Student has in-depth knowledge of the controlling functions, methods, and tools of a modern enterprise in the national and international environment

Verification of learning outcomes - Knowledge											
Outcomes	written exam	oral exam	test	essay/paper /portfolio	tasks/ homeworks	individual presentation	group presentation	classroom activities	classroom discussion	individual project	group project

E1_W06											X	
MSG1_W17											X	
E2_W07											X	
MSG2_W09											X	

Skills		
	E1_U08	Student can observe, understand, and analyse economic and social processes, using appropriately selected controlling methods and tools.
	MSG1_U08	Student can use basic controlling methods and computer programmes as well as tools to acquire and analyse data necessary in his/her professional work to diagnose and assess business processes to make adequate economic decisions.
	E2_U08	Student can independently analyse economic and social processes, and can perform an assessment of such processes, using appropriately selected controlling methods and tools.
	MSG2_U10	Student can accurately select and use sources of controlling information to critically analyse and interpret business processes.

Verification of learning outcomes - Skills											
Outcomes	written exam	oral exam	test	essay/paper /portfolio	tasks/ homeworks	individual presentation	group presentation	classroom activities	classroom discussion	individual project	group project
E1_U08										X	
MSG1_U08										X	
E2_U08										X	
MSG2_U10										X	

Attitudes		
	E1_K05	Student correctly identifies, diagnoses and solves dilemmas and alternative solutions related to the profession of business process controller.
	MSG1_K05	Student correctly identifies, diagnoses and solves dilemmas and alternative solutions related to the profession of business process controller.
	E2_K05	Student correctly identifies, diagnoses and solves dilemmas and alternative solutions related to the profession of business process controller.
	MSG2_K06	Student is ready to independly identify, diagnose and responsibly solve dilemmas and alternative solutions related to the profession of business process controller.

Verification of learning outcomes - Attitudes											
Outcomes	written exam	oral exam	test	essay/paper /portfolio	tasks/ homeworks	individual presentation	group presentation	classroom activities	classroom discussion	individual project	group project
E2_K05										X	
MSG1_K05										X	
E2_K05										X	
MSG2_K06										X	

Course contents

1. Controlling system structure
The idea of controlling (definitions, dimensions, applications, cases). Functions of controlling process. Components of the controlling as a cybernetic system.   Attributes and relations between the controlling and the controlled processes. Controlling centers. Case study.
2. Planning key performance indicators (KPI's) as targets to achieve or keep based on flexible budgeting
The idea of KPI's as targets to achieve and to keep. The method of flexible budgeting. The structure of the flexible budget spreadsheet. System of financial and non-financial KPI's. Calculations of KPI's. Case study.
3. Measuring and identifying variance on controlled process including profitability of products or companies based on rolling budgeting
The idea of rolling budgeting. The structure of rolling budgeting spreadsheet. The identification of absolute and relative

variance on controlled indicators. The hierarchy of profitability of products/SBU's. Propositions of corrective decisions based on the hierarchy of products/SBU's profitability. Case study.

4. Variance analysis

Qualitative/quantitative methods and tools to identify the variance significance. The calculation of confidence interval for controlled parameters. The application of statistical test for the identification of variance significance. Case study.

5. Statistical process control (SPC)

Six sigma. Shewhart control charts. Process flow diagram. Ishikawa diagram. Pareto diagram. Check-sheet. Scatter plot. ABC analysis.

Recommended reading lists

Core literature:
1. Shim J.K., Siegel J.G., Dauber N.: *Corporate controller's handbook of financial management*. CCH, Inc., 2008.
2. Mańkowski C.: *Planning key logistics indicators as targets to be achieved or kept*. (pages 141-158) Article is available at http://ekonom.ug.edu.pl/web/download.php?OpenFile=1690.

Additional literature:
1. Drury C.: *Management and cost accounting*. Cengage Learning EMEA, London 2015.
2. Bragg S.M.: *Controllership: the work of the managerial accountant*. John Wiley & Sons, 2009.

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 * SS1- undergraduate studies   * SS2 - graduate studies   * SDang - doctoral studies
** MSG - International Economic Relations