GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	ENTERPRISE INFORMATION SYSTEMS, PG_00040576		
Field of study	Engineering Management		
Date of commencement of studies	October 2021	Academic year of realisation of subject	2022/2023
Education level	first-cycle studies	Subject group	Obligatory subject group in the field of study Subject group related to scientific research in the field of study
Mode of study	Full-time studies	Mode of delivery	blended-learning
Year of study	2	Language of instruction	English Lectures are in English, lecture materials are available in both languages, activity and exam in English or Polish (student's choice), laboratory is conducted in Polish.
Semester of study	4	ECTS credits	5.0
Learning profile	general academic profile	Assessment form	exam
Conducting unit	Department of Informatics in Management -> Faculty of Management and Economics		
Name and surname of lecturer (lecturers)	Subject supervisor	dr Tomasz Janowski	
	Teachers	dr Tomasz Janowski dr inż. Radosław Drozd	

Lesson types and methods of instruction							
	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	30.0	0.0	30.0	0.0	0.0	60
	E-learning hours included: 8.0						
	Additional information: https://enauczanie.pg.edu.pl/moodle/course/view.php?id=22625						

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	60	8.0	57.0	125

Subject objectives	The aim of the course is introduction to the modern practice of the use of information systems by enterprises for achieving operational excellence, developing new products and services, improving decision-making, and gaining competitive advantage. Another goal is to answer the question how the use of information systems and technologies transforms a traditional enterprise into a modern digital enterprise, and what is the impact of such transformation on the socioeconomic environment.

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[K6_U09] obtains data for analysis and interpretation of results using information technology	The student is able to classify and describe information technology environments used to build information systems, and knows the concepts and practice of IT project management.	[SU2] Assessment of ability to analyse information
	[K6_W12] has a basic knowledge of production management and occupational safety and ergonomics management, as well as information technologies necessary for engineering management	A student is able to recognize the management, organizational and technical aspects of the adoption of information systems in an enterprise. The student is able to plan the activities needed to build and manage IT systems in the company.	[SW1] Assessment of factual knowledge
	[K6_U12] can design the process of exploitation of production and IT infrastructure with the use of appropriate methods, techniques and tools	A student is able to determine what technologies and information systems are needed in an enterprise to achieve its goals including increasing productivity. Student is able to point to innovative applications of information systems for the realization of the company objectives.	[SU4] Assessment of ability to use methods and tools [SU1] Assessment of task fulfilment

Subject contents	LECTURES LECTURE 1 - INTRODUCTION • Introductory case • How does digitalization transform modern enterprises? • What are the strategic goals of enterprise information systems? • What is an information system, what are its functions and components? • How does the information system realize value for the enterprise? • What disciplines study information systems and what do each of them bring? • What are the main messages of this lecture? LECTURE 2 - TYPOLOGY • Introductory case • How are business processes related to information systems? • How are information systems serving management groups in an enterprise? • How do information systems join and improve the effectiveness of an enterprise? • How do information systems support cooperation and social business? • What is the role of information systems function in an enterprise? • What are the main messages of this lecture? LECTURE 3 - ORGANIZATION • Introductory case • How does organization influence the creation and use of information systems? • How do information systems affect the operation of the organization? • What strategies help to compete relying on information systems? • How do information systems help produce value for an organization? • What are the challenges facing information systems and how to solve them? • What are the main messages of this lecture? LECTURE 4 - SOCIETY • Introductory case • What are the ethical, social and political problems related to information systems? • What rules of conduct can be used to guide ethical decisions? • What challenges does contemporary technology create for individual privacy? • What challenges does contemporary technology create for intellectual property? • How do information systems affect individual rights and obligations? • What are the main messages of this lecture? LECTURE 5 - ECONOMY • Introductory case • What are the main characteristics of digital commerce? • What are the digital commerce business and revenue models? • How does digital commerce transform marketing and transactions? • What is the role and applications of mobile commerce in business? • What problems should be solved when building digital commerce? • What are the main messages of this lecture? LABORATORY • Laboratory 1 Fundamentals of the SAP system, Global Bike company in SAP • Laboratory 2 Sales and distribution process in SAP • Laboratory 3 Materials management process in SAP • Laboratory 4 Production planning and implementation process in SAP • Laboratory 5 Accounting and financial process in SAP • Laboratory 6 Control process in SAP • Laboratory 7 Human resources management process in SAP • Laboratory 8 Colloquium
Prerequisites and co-requisites	• Foundations of information technology • Information technology in management

Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	Project	0.0%	20.0%
	Exam	60.0%	45.0%
	Activity	0.0%	10.0%
	Colloquium	60.0%	25.0%
Recommended reading	Basic literature	• Kenneth C. Laudon and Jane P. Laudon. Management information systems: Managing the digital firm. 17th edition. Pearson Education. 2022	
	Supplementary literature	• HBR, Michael E. Porter, Rita Gunther McGrath, Thomas H. Davenport, Marco Iansiti, On Leading Digital Transformation, Harvard Business Review, 2021 • Andrew Chen. The Cold Start Problem: How to Start and Scale Network Effects. HarperAudio. 2021 • Shoshana Zuboff. The Age of Surveillance Capitalism: The Fight for a Human Future at the New Frontier of Power. Public Affairs. 2020. • Thomas M. Siebel, Digital Transformation: Survive and Thrive in an Era of Mass Extinction, Rodin Books. 2019. • HBR, Michael E. Porter, Thomas H. Davenport, Paul Daugherty, H. James Wilson. On AI, Analytics, and the New Machine Age. Harvard Business Review, 2019 • David L. Rogers. The Digital Transformation Playbook: Rethink Your Business for the Digital Age. Columbia Business School Publishing. 2016 • Erik Brynjolfsson, Andrew McAfee. The Second Machine Age - Work, Progress, and Prosperity in a Time of Brilliant Technologies. Norton. 2016	
	eResources addresses	Adresy na platformie eNauczanie: 2022/2023 Enterprise Information Systems - Moodle ID: 22625 https://enauczanie.pg.edu.pl/moodle/course/view.php?id=22625	
Example issues/ example questions/ tasks being completed	1. What are the management, organizational and technological components of information systems? 2. How do information systems serve different management groups in an enterprise? 3. What is the impact of information systems on organizations? 4. What ethical, social and political issues are addressed by information systems? 5. What are the current trends in computer software platforms? 6. What are the problems with managing data resources in a traditional file environment? 7. How does the Internet and Internet technology work and how do they support communication and e-business? 8. What are the most important tools and technologies for protecting IT resources? 9. How do supply chain management systems coordinate planning, production and logistics with suppliers? 10. What is the role of m-commerce in business and what are the most important m-commerce applications? 11. What are the main types of knowledge-based work processes and how do they serve a company? 12. How do information systems support managers' decision-making? 13. What are the new approaches to building systems in the digital age? 14. What are the main risk factors in IT system projects and how can they be managed? 15. What are the challenges facing global IT systems and management solutions to these challenges?		
Work placement	Not applicable		