



## Subject card

Subject name and code	ENTERPRISE INFORMATION SYSTEMS, PG_00040576						
Field of study	Engineering Management						
Date of commencement of studies	October 2020	Academic year of realisation of subject			2021/2022		
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			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: 30.0						
	Address on the e-learning platform: <a href="https://enauczanie.pg.edu.pl/moodle/course/view.php?id=17374">https://enauczanie.pg.edu.pl/moodle/course/view.php?id=17374</a> Adresy na platformie eNauczanie:						
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 strategic goals such as: operational excellence, development of new products and services, improved decision-making, or competitive advantage. Another goal is to answer the question of 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 socio-economic environment.						

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[K6_W12] has a basic knowledge of production management and occupational safety and ergonomics management, as well as information technologies necessary for engineering management	<p>A student is able to recognize the management, organizational and technical aspects of the adoption of information systems in an enterprise.</p> <p>The student is able to plan the activities needed to build and manage IT systems in the company.</p>	[SW1] Assessment of factual knowledge
	[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_U12] can design the process of exploitation of production and IT infrastructure with the use of appropriate methods, techniques and tools	<p>A student is able to determine what technologies and information systems are needed in an enterprise to achieve its goals including increasing productivity.</p> <p>Student is able to point to innovative applications of information systems for the realization of the company objectives.</p>	<p>[SU4] Assessment of ability to use methods and tools</p> <p>[SU1] Assessment of task fulfilment</p>

Subject contents	<p>LECTURES</p> <ul style="list-style-type: none"> <li>• LECTURE 1 - INTRODUCTION <ol style="list-style-type: none"> <li>1. Introductory case</li> <li>2. How does digitalization transform modern enterprises?</li> <li>3. What are the strategic goals of enterprise information systems?</li> <li>4. What is an information system, what are its functions and components?</li> <li>5. How does the information system realize value for the enterprise?</li> <li>6. What disciplines study information systems and what do each of them bring?</li> <li>7. What are the main messages of this lecture?</li> </ol> </li> <li>• LECTURE 2 - TYPOLOGY <ol style="list-style-type: none"> <li>1. Introductory case</li> <li>2. How are business processes related to information systems?</li> <li>3. How are information systems serving management groups in an enterprise?</li> <li>4. How do information systems join and improve the effectiveness of an enterprise?</li> <li>5. How do information systems support cooperation and social business?</li> <li>6. What is the role of information systems function in an enterprise?</li> <li>7. What are the main messages of this lecture?</li> </ol> </li> <li>• LECTURE 3 - ORGANIZATION <ol style="list-style-type: none"> <li>1. Introductory case</li> <li>2. How does organization influence the creation and use of information systems?</li> <li>3. How do information systems affect the operation of the organization?</li> <li>4. What strategies help to compete relying on information systems?</li> <li>5. How do information systems help produce value for an organization?</li> <li>6. What are the challenges facing information systems and how to solve them?</li> <li>7. What are the main messages of this lecture?</li> </ol> </li> <li>• LECTURE 4 - SOCIETY <ol style="list-style-type: none"> <li>1. Introductory case</li> <li>2. What are the ethical, social and political problems related to information systems?</li> <li>3. What rules of conduct can be used to guide ethical decisions?</li> <li>4. What challenges does contemporary technology create for individual privacy?</li> <li>5. What challenges does contemporary technology create for intellectual property?</li> <li>6. How do information systems affect individual rights and obligations?</li> <li>7. What are the main messages of this lecture?</li> </ol> </li> <li>• LECTURE 5 - ECONOMY <ol style="list-style-type: none"> <li>1. Introductory case</li> <li>2. What are the main characteristics of digital commerce?</li> <li>3. What are the digital commerce business and revenue models?</li> <li>4. How does digital commerce transform marketing and transactions?</li> <li>5. What is the role and applications of mobile commerce in business?</li> <li>6. What problems should be solved when building digital commerce?</li> <li>7. What are the main messages of this lecture?</li> </ol> </li> </ul> <p>LABORATORY</p> <ol style="list-style-type: none"> <li>1. Laboratory 1 Fundamentals of the SAP system, Global Bike company in SAP</li> <li>2. Laboratory 2 Sales and distribution process in SAP</li> <li>3. Laboratory 3 Materials management process in SAP</li> <li>4. Laboratory 4 Production planning and implementation process in SAP</li> <li>5. Laboratory 5 Accounting and financial process in SAP</li> <li>6. Laboratory 6 Control process in SAP</li> <li>7. Laboratory 7 Human resources management process in SAP</li> <li>8. Laboratory 8 Colloquium</li> </ol>															
Prerequisites and co-requisites	<ul style="list-style-type: none"> <li>• Foundations of information technology</li> <li>• Information technology in management</li> </ul>															
Assessment methods and criteria	<table border="1"> <thead> <tr> <th>Subject passing criteria</th> <th>Passing threshold</th> <th>Percentage of the final grade</th> </tr> </thead> <tbody> <tr> <td>Project</td> <td>0.0%</td> <td>20.0%</td> </tr> <tr> <td>Activity</td> <td>0.0%</td> <td>10.0%</td> </tr> <tr> <td>Exam</td> <td>60.0%</td> <td>50.0%</td> </tr> <tr> <td>Project</td> <td>60.0%</td> <td>50.0%</td> </tr> </tbody> </table>	Subject passing criteria	Passing threshold	Percentage of the final grade	Project	0.0%	20.0%	Activity	0.0%	10.0%	Exam	60.0%	50.0%	Project	60.0%	50.0%
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Recommended reading	Basic literature	<p>1. Rymarczyk T.: Współczesne trendy technologiczne w informatycznych systemach złożonych. Monografie WSEI, Lublin 2019.</p> <p>2. Kisielnicki J.: Systemy informatyczne zarządzania. Wydawnictwo Placet, Warszawa 2013.</p> <p>3. Gawin B.: Systemy informatyczne w zarządzaniu procesami Workflow. <a href="#">Wydawnictwo Naukowe PWN</a>, Warszawa 2015.</p> <p>4. Szyjewski Z.: Metodyki zarządzania projektami informatycznymi. Wydawnictwo Placet, Warszawa 2013.</p> <p>5. Monnox A., J2EE. Podstawy programowania aplikacji korporacyjnych, Wydawnictwo: Helion, Listopad 2005</p> <p>6. Orłowski C. Model rozmyty zarządzania przedsiębiorstwami informatycznymi, Politechnika Gdańska, 2004</p> <p>7. Orłowski C., Projektowanie hybrydowych systemów informatycznych do wspomaganie zarządzania, Gdańsk 1999</p> <p>8. Phillips Joseph, Zarządzanie projektami IT, Wydawnictwo: One Press, 2004</p> <p>9. Platt D., Podstawy Microsoft NET, Wydawnictwo: Read Me 2005</p> <p>10. Sommerville I., Inżynieria oprogramowania, wydawnictwo: Wydawnictwa Naukowo-Techniczne, 2003</p> <p>11. Szejko S.: (red.) Metody wytwarzania oprogramowania. Warszawa: Mikom 2002</p> <p>12. Szyjewski Z.: Zarządzanie projektami informatycznymi. Metodyka tworzenia systemów informatycznych. Warszawa, Agencja Placet 2001</p>
	Supplementary literature	<p>Kenneth C. Laudon and Jane P. Laudon. Management information systems: Managing the digital firm. 17th edition. Pearson Education. 2022</p> <p>Erik Brynjolfsson, Andrew McAfee. The Second Machine Age - Work, Progress, and Prosperity in a Time of Brilliant Technologies. Norton. 2016</p>
	eResources addresses	
Example issues/ example questions/ tasks being completed	<p>Description of the company and products in terms of the ERP system</p> <p>Implementation of purchases and sales in the ERP system</p> <p>MRP planning</p> <p>Simulation of manufacturing processes</p> <p>Project of the implementation of an integrated process of customer order fulfillment in a selected production company</p>	
Work placement	Not applicable	