

Course title: KNOWLEDGE MANAGEMENT

Lecturers	Full Prof. Sandra Lovrenčić, Ph.D. Vlatka Sekovanić, mag. educ. inf.
Language of instruction	Croatian and English
Study level	Bachelor
Study programme	Information and Business Systems
Semester	5 th (winter)
ECTS	4
Goal	<p>The goals of the course are to familiarise students with the field and elements of knowledge management in organisation and to train them to apply the learned knowledge in practice. Students will learn the entire cycle of knowledge conversion in organisation and the mechanisms, technologies (with a focus on artificial intelligence) and the infrastructure that underpins it. They will be able to use the acquired knowledge for analysis and assessment of the situation and the disposition and design of knowledge management solutions, as well as for semantic modeling and reasoning. After the completion of the course, the students should be able to:</p> <ol style="list-style-type: none">1. Connect types of knowledge, knowledge locations and infrastructure for knowledge management in organization.2. Connect processes and subprocesses for knowledge discovery, knowledge acquisition and storing, knowledge sharing and knowledge application, and pertinent mechanisms and technologies.3. Interpret the state of knowledge management in an organization based on the impact of knowledge management on different elements of the organization.4. Create a proposal of a priority order of knowledge management processes and subprocesses in an organization based on the value of factors determining the.5. Formulate the possibility of support, automation and improvement on the basis of implementation of ICT in a knowledge management system in a particular business domain.6. Devise a knowledge management system of a particular problem domain by linking all the elements of the knowledge management infrastructure in an organization in accordance with requirements specification.7. Develop a model of knowledge management system in cooperation with users, for scenarios and requirements related to a field of application being developed.8. Design a relatively simple conceptual and semantic model of knowledge in an organization for a given business field.9. Solve a simple knowledge reasoning problem.
General and specific learning outcomes	<ol style="list-style-type: none">1. Analyze the state, identify opportunities and define problems faced by organizations and individuals in implementing ICT, and formulate solutions with the use of ICT.2. Keep track of professional literature in Croatian and a foreign language, prepare and independently deliver presentations in Croatian and a foreign language to professional and general public, and critically evaluate a presented professional topic.3. Understand and apply study skills needed for lifelong learning and continuation of education at the graduate level.4. Understand contemporary organizational concepts and manage organizational culture.

Content	<ol style="list-style-type: none"> 1. Knowledge management - the concept, scope and importance of knowledge management, development of knowledge management. 2. Knowledge - Pyramid of Knowledge (DIKW), alternative views on knowledge, types of knowledge, locations of knowledge, characteristics of knowledge, knowledge and belief. 3. Knowledge management processes - the importance of the knowledge management process for the organization, the knowledge conversion cycle, significant approaches to the knowledge conversion cycle, processes and subprocesses, integrated approach to knowledge conversion. 4. Knowledge management pyramid - processes, systems, mechanisms, technologies and infrastructure, interconnectedness. 5. Knowledge management models - comprehensive approach to knowledge management, significant theoretical models, connection of models with elements of organization. 6. Knowledge management technologies - support for processes and mechanisms, standard technologies for knowledge discovery, knowledge acquisition and storage, knowledge sharing and knowledge application, artificial intelligence in knowledge management (data mining, knowledge representation and reasoning, analytics and visualization of large datasets, machine learning, natural language processing, conversational agents, expert systems, neural networks, cognitive computing, augmented reality, Internet of Things, semantic technologies...), examples of technology application, knowledge management tools. 7. Mutual influence of knowledge management and organisation - the impact of knowledge management on employees, processes, products and performance; the influence of contextual factors on the importance of knowledge management processes and sub-processes: characteristics of tasks, knowledge and environment; determining the appropriate knowledge management processes and sub-processes and the overall solution; assessment of knowledge management in the organization: types and method of assessment. 8. Semantic modeling - the need for formalization of knowledge, concept, conceptual network, associations, modeling problem, possible worlds, metamodeling, elements of logical reasoning, operators of knowledge and belief, reasoning about knowledge, conceptual and semantic model of knowledge in the organization. 9. Continuity of knowledge management - knowledge management strategy and planning, knowledge management maturity model, organizational learning and organizational memory, knowledge continuity management.
Exercises	In the course of the exercises students use program tools to work on structuring and representation of information and knowledge of a certain domain and present their work.
Realization and examination	<p>Classes: Lectures, exercises</p> <p>Exam: Preliminary exam, seminar paper, practical work</p>
Related courses	<ol style="list-style-type: none"> Organizational Knowledge Management, Massey University, https://www.massey.ac.nz/study/courses/organisational-knowledge-management-157340/ ICT and Knowledge Management, Maastricht University, https://www.maastrichtuniversity.nl/meta/415880/ict-and-knowledge-management Knowledge Management, University of Southampton, https://www.southampton.ac.uk/courses/modules/mang3010

	4. Knowledge Management Systems, The University of Sydney, https://www.sydney.edu.au/units/ISYS5050/2022-S1C-NE-CC
Literature	<p>Basic:</p> <p>Dalkir, K. (2017.) Knowledge Management in Theory and Practice, Third Edition, MIT Press</p> <p>Becerra-Fernandez, I.; Sabherval, R. (2014) Knowledge Management: Systems and Processes, Second Edition, Routledge</p> <p>Additional:</p> <p>Rhem, A. J. (2017) Knowledge Management in Practice, CRC Press, Boca Raton</p>