Course title: PROCESS PERFORMANCE MANAGEMENT

Lecturers	Assoc. Prof. Igor Pihir, Ph. D. Assoc. Prof. Martina Tomičić Furjan, Ph. D. Full Prof. Stjepan Vidačić, Ph.D.
Language of instruction	Croatian and English
Study level	Master
Study programme	Economics of Entrepreneurship
Semester	3rd (winter)
ECTS	4
Goal	Contemporary organizations are constantly striving to achieve their goals and improve their business through the improvement of business processes. Business processes are therefore the focus of business people, IT professionals, practitioners, and scientists involved in the development of information systems with the aim of supporting and managing business processes and increasing their performance. Process performance management is a set of business excellence methods, supported by modern ICT, and includes a wide range of management activities and scientific methods known as business process improvement (BPI), business process reengineering (BPR), or business process modeling (BPM), and strategic planning and measurements such as Balanced Scorecard (BSC) and SWOT. The common features of all these methods are the analysis of business processes, analysis of organizational goals, and setting metrics for measuring and evaluating process performance, which monitors the achievement of not only operational but also strategic goals of the organization. While listening to this course, students will learn how to recognize business processes, which methods and norms are applied in business process modeling, and managing and measuring process and organizational performance. Students will be introduced to new technological trends of business process improvement, business models, and digital transformation of modern organizations. Theoretical insights will be applied to multiple case studies, and practical skills will be complemented by students using modern computer-aided performance measurement tools. The knowledge gained in this course will enable graduate students to work as business analysts, managers, strategic development planners of the organization, development experts, and consultants for business excellence and modern forms of business.
General and specific learning outcomes	
Content	**Part 1. Assoc. Prof. Igor Pihir** **1. Organizational system and its business processes:** Systematic, organizational and functional presentation of the company. Basic transformation process and connection of the company with the environment. Definition of business process. Primary and supporting business processes (Porter's value chain), Priorities of process informatization (McFarlan process matrix). The connection of business processes with data content. Data exchange between processes (input / output analysis) and exchange formats in information systems. (2 hours of lectures + 1 hour of seminars = process puzzle - Porter's value chain and McFarlan / input-output analysis of process sketches of their choice) **2. Business process management life cycle:**

	Process recognition. Discovering knowledge of processes. Process analysis. Process redesign. Process implementation. Supervision and control of the process. IT tools for BPM. (2 hours of lectures + 1 hour of seminars = presentation of tools and examples of processes in tools - introduction to the example of processes that we consider through the course CASE STUDY) **3. Business process modeling and notations for BPMN business process modeling:** Basic terms. Modeling methodologies. Modeling standards: BPMN 2.0, OMG UML, ARIS ePC, etc. BPMN - notation and standard for business process modeling. Analysis and evaluation of existing processes - examples of projects, examples of processes in sales, procurement, logistics, production and service activities. Examples of process support through information systems (ERP; CRM, application software, web store and systems for booking tickets, accommodation, etc.). (2 hours of lectures + 1 hour of seminars = presentation of process examples through several types of tools - process analysis / study of symbols of activity / event norms / switches on examples of discussions / workshops) **4. Basic concepts of process performance management and analysis of process models by simulation:** Process performance management system. Measurement methodologies. Efficiency and effectiveness. Types of effects on the process: direct and indirect; qualitative and quantitative; short-term and long-term. Process simulation with analysis of duration, process time, resource consumption, process costs, etc. Selection of business processes for improvement using information and communication technology (McFarlan matrix, Porter chain). (2 hours of lectures + 1 hour of seminars = demonstration of the process through a complex example with the entire analysis process) **Part 2. Full. Prof. Stjepan Vidačić** **5. Integration and automation of wholesale, retail and web sales systems:** Wholesale as a system of centralized flow management. Retail as a subsystem of the wholesale system. Web sales as a subsystem of wholesale and retail systems. (2 hours of lectures with support for specific software solutions in use) **6. Integration of warehousing and goods subsystem:** Inventory warehouse management model (goods cards). Document warehousing process. The process of commodity conclusion of documents. (1 hour of lectures with a presentation of the support of specific software solutions in use) **7. Integration of the wholesale system and the private customs warehouse system:** Entry of goods into the customs warehouse system (customs receipt). Exit of goods from the customs warehouse (bookkeeping record). Entry of goods from a customs warehouse into a wholesale warehouse (link between customs receipt, accounting record and wholesale receipt). Customs warehouse inventory management model (goods card). (1 hour of lectures with a presentation of the support of specific software solutions in use) **8. System of terms of sale for wholesale customers:** Parameters of sales conditions. Generating contracts from terms of sale. Automate the application of sales conditions. (1 hour of lectures with a presentation of the

	support of specific software solutions in use) **9. Automation of the process of procurement and stock management:** Managing the status of the total, reserved and available quantities in the warehouse. Automated algorithm to generate the required quantities to replenish stock. Integration of documents (Order, Receipt, Delivery note). (1 hour of lectures with a presentation of the support of specific software solutions in use) **10. Automated rebate system management in wholesale.** Applied rebate system models. Automated algorithm of hierarchical control of rebate approval. Integrated documents in the context of automated rebate system management (Terms of sale for customers, Offer, Order, Delivery note). (1 hour of lectures with a presentation of the support of specific software solutions in use) **11. Automatic financial accounting and posting of documents:** Formal financial attributes. Formal rule systems for automatic accounting and financial posting of documents. Foundation as a bookkeeping concept and meta object of automated integration of data from business process documents and financial bookkeeping. (1 hour of lectures with a presentation of the support of specific software solutions in use) **12. Company in the context of eBusiness:** Account fiscalization. Algorithms for generating e-Forms on business (JOPPD, SEPA, OPZ-Stat, PD-IPO ...), Operationalization of eInvoice system. (2 hours of lectures with support for specific software solutions in use) (+ 5 hours of seminars = demonstration of the process through a complex example with the whole analysis procedure performed by Igor Pihir, Ph.D.) **Part 3. Asst. Prof. Martina Tomičić Furjan** **13. New technological trends of business process improvement and new business models:** Currently current business process improvement concepts. Concepts of digitalization of business processes. Business transformation concepts. Selection of technology to improve the selected business process. Business models. Definition of a business model. Elements of the business model. Methodological frameworks for business model development. Business model analysis. Creating a business model to improve the selected business process. (2 hours of lectures + 1 hour of computer exercises = Digitrans.me platform) **14. 14. Digital transformation:** Definition of digital transformation. Methodological frameworks of digital transformation. Drivers of digital transformation. Foundations for the implementation of digital transformation. (2 hours of lectures + 1 hour of computer exercises = Digitrans.me platform) **15. Strategic planning, measurement of organizational performance and basic concepts of performance management at the strategic level:** The concept of strategy and strategic planning. An overview of modern methods of strategic planning. The concept of measuring organizational performance. An overview of modern methods of measuring organizational performance. Measuring the performance of processes and organizations with the use of ICT (ERP, CRM, etc.). Continuum of strategic management. Organizational mission. Mission development.

	Organizational vision. The relationship between vision and strategic goals. Syntax and semantics of strategic goals. Reasons for introducing performance measurement: continuous organization management and focused program evaluation. IT tools for measuring performance. (2 hours of lectures + 1 hour of computer exercises = ADOscore) **16. Development of organizational performance measurement models and measuring instruments of the BSC model:** Basics of the Balanced Scorecard method (BSC). Development of a performance measurement management model according to the BSC method. Analysis of strategic goals. SWOT analysis as a source of strategies. Strategic implementation activities. Objectives of the activity. Strategic goal map. Relationship between goals and measures. The amount of the measure as an indicator of achieving the goal. Structure of the measuring instrument: designation of the measure, name of the measure, type of measure, method of measurement, limit values, coefficients of influence. Calculating the amount of measures. Strategic map of measures. Validation and verification of the BSC model. (2 hours of lectures + 1 hour of computer exercises = ADOscore) **17. Cascading goals and measures:** Decomposition of strategic goals. Strategic goal maps. Tactical target maps. Goals and organizational forms. Objective classification matrix. The process of cascading goals and measures. Chains of cause and effect of tactical goals and measures. (2 hours of lectures + 1 hour of computer exercises = ADOscore) **Assoc. Prof. Igor Pihir** **18. Operational implementation of process performance management:** Recapitulation of the steps of creating and implementing a process performance management system. Introduction of the BSC model as an organization management system. Key roles in the implementation of process performance management. Verification and validation of process performance management systems. (2 hours of lectures + 1 hour of computer exercises)
Exercises	Students solve problems and discuss examples connected to particular lectures in real-life independent assignments combined together into the student team project. Every unit of lectures is accompanied by seminars, enabling the students to apply the acquired knowledge on practical examples and present their ideas through team projects.
Realization and examination	Preliminary exams. Additional activities are conducted within the class. Those activities will be evaluated. Class attendance. Student project. If not solved by up mentioned activities, final exam in form of the written and oral exam.
Related courses	
Literature	Basic: Presentations and other digital materials, available on the e-learning course system Russell, R.S.; Taylor, B.W. (2008) Operations Management. Prentice Hall, Upper Saddle River, USA.

	Brumec, J.; Brumec, S. (2016) Modeliranje poslovnih procesa. Zagreb: Koris d.o.o. Vidačić, S., Pihir, I. (2019) Automatizirana poslovna pravila u funkciji upravljanja poslovnim sustavom (skripta u izradi). Additional: Westerman, G., Bonnet, D., McAfee, A. (2014). Leading Digital – turning technology into business transformation. USA: Harvard business review press. Osterwalder, A., Pigneur, Y., Bernarda, G., Smith, A. (2014). Value proposition design, Hoboken, New Yersey: John Wiley &Sons Tomičić, M., Dobrović, Ž. (2006). Metode oblikovanja strateške mape ciljeva kod izgradnje BSC. Zbornik radova konferencije CASE 18, Opatija. Dobrović, Ž., Tomičić, M., Vrček, N. (2008). Towards an effective government: Implementation of Balanced Scorecard in the public sector, Intellectual economics, No1 (39), p. 7-17. Vidačić, S.: Some Models of the "VISTEL" Program Used to Support the Management of the Business Processes of a Trading Company, Proceedings of the 14th International Conference of Information and Intelligent Systems - IIS'2003, september 24-26, Varaždin, 2003, str. 263-272. Vidačić, S.: The Use of Information System in the Management of Business Rules, Proceedings of the 16h International Conference of Information and Intelligent Systems - IIS'2005, september 21-23, Varaždin, 2005, str. 145-151. Vidačić, S., Brumec, S.: Hybrid Model of the Mobile Information System in a Complex Warehouse System, Proceedings of the 19h International Conference of Information and Intelligent Systems - CECIIS'2008, september 24-26, Varaždin, 2008, str 333-339. Pihir, I., Pihir N., Vidačić, S.: Improvement of warehouse operations through implementationof mobile barcode systems aimed at advancing sales process, Proceedings of the ITI 2011 33rd International Conference on Information Tehnology Interfaces, June 27-30, 2011, Cavtat/Dubrovnik, Croatia, str. 433-438. Vidačić, S., Pihir, I.: Towards e-business in bookkeeping agencies: perceptions, problems and efficiency, Proceedings of the 26th International Conference of Information and Intelligent Systems - CECIIS'2015, september 23-25, Varaždin, 2015, pp. 135-141. Vidačić, S., Tomičić-Pupek, K., Pihir, I.: The orcestration of web-based sales processes – a case study. Proceedings of the 11th International Scientific on Economic and Social Development – Bulding Resilient Society, Zagreb, Croatia, 17 – 18 december, 2015, pp. 336-341. Vidačić, S.: Model i efekti slanja veleprodajnih računa emailom, 3rd International Scientific and Professional Conference (CRODMA 2018), Book of Papers, ISSN 2459-7953, Varaždin, 12.10.2018, pp. 159-167. Vidačić, S.: Model i efekti online web izvještajnog sustava knjigovodstvenog servisa, 3rd International Scientific and Professional Conference (CRODMA 2018), Book of Papers, ISSN 2459-7953, Varaždin, 12.10.2018, str. 169-177. Vidačić, S. (2008). Audio vizualne prezentacije aplikacije TRENIS. Vidačić, S. (2008). Audio vizualne prezentacije aplikacije KISPLACE. Vidačić. S. (2009). Audio vizualne prezentacije aplikacije FINKSQL.