

	UČNI NAČRT PREDMETA/COURSE SYLLABUS
Predmet	Poslovne analize in modeliranje informacijskih sistemov
Course title	Business Analysis and Information Systems Modelling

Študijski program in stopnja Study programme and level	Študijska smer Study field	Letnik Academic year	Semester Semester
Poslovna informatika / 1. stopnja	Računalništvo informatika	3. letnik	5.
Business Informatics / 1 st Cycle	Computer and Information Science	3 rd year	5 th

Vrsta predmeta/Course type modularni / module

Univerzitetna koda predmeta/University course code I_RI_3_MI_UN2

Predavanja Lectures	Seminar Seminar	Sem. vaje Tutorial	Lab. vaje Laboratory work	Teren. vaje Field work	Samost. delo Individ. work	ECTS
30		30			90	6

Nosilec predmeta/Lecturer: doc. dr. Sebastian Lahajnar

Jeziki/ Languages:	Predavanja/Lectures:	slovenski/Slovenian
	Vaje/Tutorial:	slovenski/Slovenian

Pogoji za vključitev v delo oz. za opravljanje študijskih obveznosti: **Prerequisites:**

<ul style="list-style-type: none"> • Vpis v tretji letnik študijskega programa. • Študent mora pred izpitom pripraviti in predstaviti seminarsko nalogo. 	<ul style="list-style-type: none"> • The prerequisite for inclusion is enrolment in the third year of study. • Students have to successfully prepare and present a seminar paper before the examination.
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Vsebina:

Content (Syllabus outline):

<ul style="list-style-type: none"> • <i>Uvod:</i> Osnove, namen in vloga poslovnega modeliranja pri zagotavljanju učinkovitega poslovnega procesa v poslovnem sistemu. • <i>Poslovna strategija in cilji:</i> Analiza poslovne strategije (zunanja in notranja), opredelitev strategije, implementacija, merjenje performans strategije (analiza 	<ul style="list-style-type: none"> • <i>Introduction:</i> The basics, purpose and role of business modelling in ensuring an efficient business process in the business system. • <i>Business strategy and objectives:</i> Business strategy analysis (external and internal), strategy definition, implementation, performance measurement strategy
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<p>PESTLE, Porterjev model tekmovalnih sil, Bostonsko okno, analiza MOST, analiza SWOT, ključni dejavniki uspeha, uravnoteženi sistem kazalnikov).</p> <ul style="list-style-type: none"> • <i>Analiza obstoječega stanja:</i> Kvalitativna (intervjuji, delavnice, opazovanje) in kvantitativna analiza (vprašalniki, vzorčenje), predstavitev in dokumentiranje rezultatov (kontekstni diagram, bogate slike). • <i>Opredelitev alternativ:</i> Določitev, analiza in upravljanje z deležniki (kolo deležnikov, modeliranje poslovnih aktivnosti, grafikon RASCI). • <i>Analiza potreb:</i> Modeliranje organizacije, modeliranje poslovnih procesov, identifikacija sprememb v poslovanju (analiza vrednostne verige, diagram organizacije, notacija BPMN, analiza vrzeli, odločitvena drevesa, odločitvene tabele). • <i>Evalvacija alternativ:</i> Identifikacija in evalvacija alternativ, priprava in predstavitev poslovnega primera (analiza izvedljivosti, analiza stroškov in koristi, analiza vpliva, analiza tveganja). • <i>Specifikacija zahtev:</i> Zbiranje, analiza, razvoj in modeliranje zahtev (scenariji, prototipiranje, MoSCoW, diagrami primerov uporabe, model ER, razredni diagram jezika UML, matrika CRUD,). • <i>Upravljanje sprememb:</i> Spremembe organizacijske oblike, spremembe pri ljudeh, upravljanje koristi (analiza kulture, cikel učenja). • <i>Modeliranje poslovanja z jezikom UML:</i> Predstavitev jezika UML, modeliranje poslovanja z uporabo osnovnih diagramskih tehnik UML, modeliranje z uporabo razširitve jezika UML za poslovno modeliranje. 	<p>(PESTLE analysis, Porter's 5 forces framework, Boston box, MOST analysis, SWOT analysis, key performance indicators, balanced scorecards).</p> <ul style="list-style-type: none"> • <i>Analysis of the existing situation:</i> Qualitative (interviews, workshops, observations) and quantitative analysis (questionnaires, sampling), presentation and documenting results (contextual diagram, rich images). • <i>Definition of alternatives:</i> Identifying, analyzing and managing stakeholders (stakeholder wheel, business activity modelling, RASCI chart). • <i>Needs analysis:</i> Organization modelling, business process modelling, business change identification (value chain analysis, organizational diagram, BPMN notation, gaps analysis, decision trees and tables). • <i>Alternatives evaluation:</i> Identification and evaluation of alternatives, preparation and presentation of a business case (feasibility analysis, cost-benefit analysis, impact analysis, risk analysis). • <i>Requirements specification:</i> Collection, analysis, requirements development and modelling (scenarios, prototyping, MoSCoW, use case diagrams, ER model, UML class diagram, CRUD matrix). • <i>Change management:</i> Changes in organizational form, human changes, benefits management (culture analysis, learning cycle). • <i>Business modelling with UML:</i> UML language presentation, business modelling using basic UML diagrams, business modelling using UML specialized profiles.
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Temeljna literatura in viri/Readings:

Temeljna literatura/Basic literature

- Paul, D., Cadle, J. (2020). *Business Analysis, Fourth Edition*. BCS, The Chartered Institute for IT.

Priporočljiva literatura/Recommended literature

- Silver, B. (2011). *Bpmn Method and Style, 2nd Edition, with Bpmn Implementer's Guide*. Cody-Cassidy Press.
- Eriksson, H. E. in Penke, M. (2000). *Business Modeling With UML: Business Patterns at Work*. Wiley&Sons.

Cilji in kompetence:

Učna enota prispeva predvsem k razvoju naslednjih splošnih in specifičnih kompetenc:

- poznavanje in razumevanje procesov v tehniško-tehnološkem ter poslovnem okolju in sposobnost za njihovo analizo, sintezo in predvidevanje rešitev ter njihovih posledic,
- sposobnost definiranja, razumevanja in ustvarjalnega reševanja strokovnih izzivov na področjih računalništva in informatike,
- usposobljenost za pridobivanje novih in poglobljanje pridobljenih strokovnih znanj računalništva in informatike,
- usposobljenost za analizo in načrtovanje sistemov,
- zmožnost opisati dano situacijo s pravilno uporabo matematičnih in računalniških simbolov ter zapisov,
- poznavanje načinov predstavitve, zapisa in modeliranja informacij,
- usposobljenost za timsko in projektno delo,
- poznavanje zmožnosti in omejitev informacijskih tehnologij.

Objectives and competences:

The learning unit mainly contributes to the development of the following general and specific competences:

- knowledge and understanding of processes in the technical-technological and business environment, as well as the ability for their analysis, synthesis and prediction of the solutions and their consequences,
- the ability to define, understand and creatively solve professional challenges in the fields of computer science and informatics,
- the ability to acquire new and deepen the acquired professional knowledge of computer science and informatics,
- being qualified to analyze and design systems,
- the ability to describe the given situation with a proper use of mathematical and computer symbols and records,
- knowing the ways of presenting, recording and modeling information,
- being qualified for team work and project work,
- knowing the capabilities and limitations of information technologies.

Predvideni študijski rezultati:

Študent/študentka:

- razume osnove, namen in vlogo poslovnega modeliranja pri zagotavljanju učinkovitega poslovnega procesa v poslovnem sistemu,

Intended learning outcomes:

Students:

- understand the basics, purpose and role of business modelling in ensuring an efficient business process in the business system,

<ul style="list-style-type: none"> • razume pomen strategije organizacije in zna uporabljati tehnike za njeno analizo • pozna in uporablja tehnike za modeliranje poslovnih procesov, • zna analizirati obstoječo stanje poslovnega sistema in identificirati možne izboljšave, • pozna in uporablja tehnike za specifikacijo poslovnih in informacijskih potreb organizacije, • zna izdelati poslovni model in ga predstaviti v jeziku UML, • zna uporabljati računalniška orodja za poslovno modeliranje, • razume pomen in zna uporabljati poslovne modele pri razvoju informacijskih sistemov, • razume pomen optimizacije in avtomatizacije poslovnih procesov z uporabo računalniško podprtih informacijskih sistemov. 	<ul style="list-style-type: none"> • understand the importance of an organization's strategy and use techniques to analyze it, • know and use business processes modelling techniques, • are able to analyse the existing state of the business and to identify possible improvements, • know and use techniques for specifying the organization's business and information needs, • are able to create a business model and present it in the UML language, • use computer tools for business modelling, • understand the meaning and know how to use business models in the development of information systems, • understand the importance of optimizing and automating business processes using computer-based information systems.
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Metode poučevanja in učenja:

- *predavanja* z aktivno udeležbo študentov (razlaga, diskusija, vprašanja, primeri, reševanje problemov),
- *seminarske vaje*: priprava, predstavitev in uspešen zagovor seminarske naloge, portfolio (reševanje problemov, študije primera, kritično presojanje, diskusija, refleksija izkušenj, vrednotenje, projektno delo, timsko delo).

Learning and teaching methods:

- *lectures* with active student participation (explanation, discussion, questions, examples, problem solving),
- *seminar tutorial*: preparation, presentation and a successful defence of a seminar paper, portfolio (problem solving, case studies, methods of critical thinking, discussion, reflection of experience, evaluation, project work, team work).

Načini ocenjevanja:	Delež (v %) Weight (in %)	Assessment:
Načini: <ul style="list-style-type: none"> • izpit • izdelava, predstavitev in zagovor seminarske naloge Ocenjevalna lestvica: ECTS.	60 % 40 %	Types: <ul style="list-style-type: none"> • exam • preparation, presentation and defence of the seminar paper Grading scheme: ECTS.