

	UČNI NAČRT PREDMETA/COURSE SYLLABUS
Predmet	Informacijski in komunikacijski sistemi
Course title	Information and Communication Systems

Študijski program in stopnja Study programme and level	Študijska smer Study field	Letnik Academic year	Semester Semester
Upravljanje poslovnih in informacijskih sistemov / 2. stopnja	Upravljanje in razvoj informacijskih sistemov	1. letnik	2.
Business and Information Systems Management / 2 nd Cycle	Management and Development of Information Systems	1 st year	2 nd

Vrsta predmeta/Course type

obvezni/obligatory

Univerzitetna koda predmeta/University course code

2_URIS_1_UN8

Predavanja	Seminar	Sem. vaje	Lab. vaje	Teren. vaje	Samost. delo	ECTS
Lectures	Seminar	Tutorial	Laboratory work	Field work	Individ. work	
20			10		210	8

Nosilec predmeta/Lecturer:

doc. dr. Alenka Rožanec

Jeziki/ Predavanja/Lectures:
Languages:

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 prvi letnik študijskega programa. Študent mora pred izpitom pripraviti in predstaviti ter zagovarjati projektno/raziskovalno nalogo. 	<ul style="list-style-type: none"> The prerequisite for inclusion is enrolment in the first year of study. Student has to prepare, present and defend a project/research paper before the exam.
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Vsebina:

Content (Syllabus outline):

<ul style="list-style-type: none"> <i>Uvod v informacijske sisteme (IS):</i> o podatku, informaciji in znanju, vrednost informacij, kakovost informacij, pomen kakovostnih informacij za odločanje. <i>Uvod v komunikacijske sisteme:</i> vrste komunikacijskih sistemov, osnove računalniških omrežij, osnove 	<ul style="list-style-type: none"> <i>Introduction to information systems:</i> about data, information and knowledge, value of information, quality of information, the importance of quality information for decision-making. <i>Introduction to communication systems:</i> types of communication systems, network fundamentals,
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<p>interneta in njegovih storitev, internet stvari, računalništvo v oblaku.</p> <ul style="list-style-type: none"> • <i>Digitalno poslovanje:</i> zgodovina digitalnega poslovanja, vrste digitalnega poslovanja (e-trgovanje, e-bančništvo, e-uprava...), prednosti za organizacijo in posameznika, varnostni in drugi izzivi, zakonodajni vidiki. • <i>Informacijski sistem:</i> kaj je informacijski sistem, vloga IS v organizaciji. • <i>Vrste IS:</i> transakcijski sistemi, sistemi za sodelovanje, odločitveni sistemi, ekspertni sistemi, sistemi za upravljanje znanja, umetna inteligenca, multimedijski sistemi, sistemi za avtomatizacijo poslovnih procesov. • <i>Poslovni IS:</i> funkcijski IS (npr. prodajni, kadrovski, finančni), celovite programske rešitve (ERP), sistemi za upravljanje odnosov s strankami (CRM), sistemi za upravljanje produktnega cikla (PLM), sistemi za upravljanje oskrbovalne verige (SCM), sistemi za upravljanje poslovnih vsebin (ECM). • <i>Osnove podatkovnih tehnologij:</i> sistemi za upravljanje z bazami podatkov, relacijske podatkovne baze, podatkovna skladišča, baze obsežnih podatkov. Koristi uporabe navedenih podatkovnih tehnologij v informacijskem sistemu organizacije. • <i>Orodja za poslovno obveščanje:</i> preglednice, orodja za poročila in poizvedbe, OLAP, podatkovno rudarjenje, nadzorna plošča. • <i>Osnove menedžmenta IS:</i> pomen uskladitve poslovne in IT domene, pridobivanje virov (notranje, zunanje izvajanje IT storitev), upravljanje projektnega portfelja in projektov, IT procesi in njihovo izboljševanje, upravljanje IT storitev, digitalna strategija in digitalna transformacija, upravljanje tveganj. • <i>Novi pristopi in trendi na področju menedžmenta informacijskih in komunikacijskih sistemov.</i> 	<p>internet and its services, internet of things, cloud computing.</p> <ul style="list-style-type: none"> • <i>Digital business:</i> history of digital business, types of digital business (e-commerce, e-banking, e-government), benefits for organisations and individuals, security and other challenges, legislative aspects. • <i>Information system:</i> what is an information system, the role of IS in an organisation. • <i>Types of IS:</i> Transaction processing systems, Collaborative systems, Decision support systems, Expert systems, Knowledge management systems, artificial intelligence, Business process management suites. • <i>Business IS:</i> functional IS (Marketing system, Human resource management system, Finance system), Enterprise resource planning systems (ERP), Customer relationship management systems (CRM), Product lifecycle management systems (PLM) Supply Chain Management systems (SCM), Enterprise Content Management (ECM). • <i>Database technologies fundamentals:</i> database management systems (DBMS), relational databases, data warehouses, big data. Benefits of using the above data technologies in the organization's IS. • <i>Business intelligence tools:</i> spreadsheets, querying and reporting tools, OLAP, data mining, dashboards. • <i>IS management basics:</i> business-IT alignment, resource management, IT sourcing (insourcing, outsourcing), program and project management, IT processes and its improvements, IT service management, digital strategy and digital transformation, risk management. • <i>New approaches and trends in management of information and communication systems.</i> • <i>IS Security:</i> the basics of information security, threats and vulnerabilities, measures for confidentiality, integrity
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<ul style="list-style-type: none"> • <i>Varnost IS</i>: osnovne informacijske varnosti, grožnje in ranljivosti, ukrepi za zagotavljanje zaupnosti, integritete in razpoložljivosti informacij in informacijskih sredstev. • <i>Etični in zakonodajni vidiki uporabe IS</i>: etične dileme in etični kodeksi, splošna evropska uredba o varstvu podatkov, varstvo osebnih podatkov, varstvo avtorskih pravic, varstvo zdravja pri delu z računalniškimi sistemi. • <i>Študije primerov iz prakse</i>. 	<p>and availability of information and information assets.</p> <ul style="list-style-type: none"> • <i>Ethical and legislative issues using IS</i>: ethical dilemmas and ethical codex, general EU data protection regulation, personal data protection, copyrights, protection of health when working with computer systems. • <i>Case studies from practice</i>.
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Temeljna literatura in viri/Readings:

Temeljna literatura/Basic literature

- Stair, R. M. in Reynolds, G. W. (2018). *Fundamentals of Information Systems*. Boston: Cengage Learning.
- O'Brien, J. A. in Marakas, G.M. (2011). *Management Information Systems 10g*. New York: McGraw-Hill/Irwin.
- Gradišar, M. et al. (2012). *Osnove poslovne informatike*. Ljubljana: Ekonomska fakulteta Univerze v Ljubljani.

Priporočljiva literatura/Recommended literature

- Beynon, P. D. (2013). *Business Information Systems*. Hampshire-New York: Palgrave Macmillan.
- Rožanec, A. (2019). *Elektronsko poslovanje*. Novo mesto: Fakulteta za ekonomijo in informatiko.

Cilji in kompetence:

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

- usposobljenost za poglobljeno razumevanje naj sodobnejših področij računalništva in informatike,
- usposobljenost za uporabo pridobljenih znanj za samostojno reševanje strokovnih in znanstvenih problemov računalništva in informatike,
- usposobljenost sodelovanja, dela v skupini in dela na projektih,
- razumeti in razvijati zakonitosti delovanja informacijskih sistemov,
- sposobnost poglobljenega razumevanja informacijskih in komunikacijskih sistemov,
- sposobnost definiranja, razumevanja in ustvarjalnega reševanja strokovnih izzivov na področjih informacijskih in komunikacijskih sistemov,

Objectives and competences:

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

- being qualified for in-depth understanding of the most contemporary areas of computer science and informatics,
- being qualified for using the acquired knowledge to independently solve professional and scientific problems in computer science and informatics,
- being qualified for cooperation, group work and work on projects,
- understanding and developing the laws of the information systems operation,
- the ability for in-depth understanding of information and communication systems,
- the ability to define, understand and creatively solve professional challenges

<ul style="list-style-type: none"> • razumevanje vloge in pomena informacijskih in komunikacijskih sistemov v konkurenčnem poslovnem okolju, • razumevanje pristopov in trendov na področju informacijskih in komunikacijskih sistemov, • sposobnost kreativnega sodelovanja v projektih prenove in informatizacije poslovanja, • sposobnost uporabe sodobnih znanj na področju informacijskih in komunikacijskih sistemov v gospodarstvu in negospodarstvu. 	<ul style="list-style-type: none"> • in the areas of information and communication systems, • understanding the role and importance of information and communication systems in a competitive business environment, • understanding approaches and trends in information and communication systems, • the ability to creatively participate in projects of business process renovation and informatisation, • the ability to use modern knowledge in the field of information and communication systems in the economy and public sector.
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Predvideni študijski rezultati:

Študent/študentka:

- razume pomen povezovanja strategije informatike s strategijo podjetja,
- razume pomen in vlogo informacijskih tehnologij v gospodarstvu in negospodarstvu,
- razume in pozna principe delovanja informacijskih in komunikacijskih sistemov,
- se usposobi za kreativno sodelovanje v projektih prenove in informatizacije poslovanja ter digitalne transformacije,
- se usposobi za uporabo sodobnih znanj, pristopov in trendov na področju informacijskih in komunikacijskih sistemov.

Intended learning outcomes:

Students:

- understand the importance of integrating the IT strategy with the enterprise strategy,
- understand the importance and role of information technology in the private and public sector,
- understand and know the principles of the operation of information and communication systems,
- develop skills for creative participation in projects of business process renovation, informatisation and digital transformation,
- develop skills to use modern knowledge, approaches and trends in information and communication system.

Metode poučevanja in učenja:

- *predavanja* z aktivno udeležbo študentov (razlaga, diskusija, vprašanja, primeri, reševanje problemov),
- *laboratorijske vaje:* v povezavi s predmetom (reševanje praktičnih problemov, uporaba računalniških orodij),
- *projektna/raziskovalna naloga,*
- *samostojni študij.*

Learning and teaching methods:

- *lectures* with active participation of students (explanation, discussion, questions, examples, problem solving),
- *laboratory work:* in connection with the course (solving practical problems, use of computer tools),
- *project/research paper,*
- *independent study.*

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