UČNI NAČRT PREDMETA / COURSE SYLLABUS	
Predmet:	Spletno programiranje
Course title:	Web Programming

Študijski program in stopnja Study programme and level	Študijska smer Study field	Letnik Academic year	Semester Semester
Informatika v sodobni družbi, visokošolski strokovni in univerzitetni študijski program prve stopnje	-	Drugi	Četrti
Informatics in Contemporary Society, first cycle Professional Study Programme and Academic Study programme	-	Second	Fourth

Vrsta predmeta / Course type	Obvezni / Obligatory
Univerzitetna koda predmeta / University course code:	1-ISD-VS,UN-SP-2019-05-13

Predavanja Lectures	Seminar Seminar	Vaje Tutorial	Klinične vaje work	Druge oblike študija	Samost. delo Individ. work	ECTS
30	-	45	-	-	105	6

Nosilec predmeta / Lecturer:	doc. dr. Pavle Boškoski

Jeziki / Languages:	**Predavanja / Lectures:**	Slovenski, angleški / Slovene, English
	Vaje / Tutorial:	Slovenski, angleški / Slovene, English

Pogoji za vključitev v delo oz. za opravljanje študijskih obveznosti:	**Prerequisits:**
Pogoj za vključitev v delo je vpis v 2. letnik študija. Pogoj za opravljanje študijskih obveznosti je izdelana seminarska naloga.	The condition for attendance is enrolment in the 2nd year of studies. The exam condition is a finished seminar paper.

Vsebina:	**Content (Syllabus outline):**
• Sodobne spletne tehnologije. Osnove spletnega okolja. • Elementi spletne strani. Jezik HTML. Oznake HTML. Formularji in dogodki. • Osnove slogovnih predlog CSS. • Jezik XML. • Osnove DTD. Validacija XML in XHTML. • Spletno programiranje pri klientu. Jezik JavaScript in objektni model DOM.	• Contemporary web technologies. Fundamentals of a web environment. • Web page elements. The HTML language. HTML tags. Forms and events. • Cascading style sheet (CSS) fundamentals. • The XML language. • DTD fundamentals. Validation of XML and XHTML.

• Spletno programiranje na strežniku. Jezik PHP/Django Python. • Osnove relacijskih podatkovnih baz. • Poizvedovalni jezik SQL. Uporaba podatkovnih baz v spletnih aplikacijah. • Spletna ogrodja. Primer ogrodja (Django). • Spletna varnost – osnove SQL varnosti, seje in gesla.	• Client based web. programming. JavaScript programming language and the DOM object model. • Server based web programming. The PHP language/Django Python • Relational database fundamentals. • The SQL query language. Use of databases in web applications. • Web frameworks. Web application development examples (Django). • Basics of internet security – SQL injection, sessions and passwords

Temeljni literatura in viri / Readings:

- Oliver, D., Morrison, M. (2006): HTML and CSS in 24 hours. Indianapolis: Sams.
- Young, M.J. (2002): XML: step by step, 2nd Edition. Redmond: Microsoft Press.
- Disbrow, S.W. (2001): JavaScript Weekend Crash Course. Hungry Minds.
- Goodman, D., Morrison, M. (2004): JavaScript Bible, 5th Edition. Indianapolis : Wiley Publishing.
- Hribar, P. (1998): Spoznajmo JavaScript: programiranje spletnih strani. Nova Gorica: Flamingo.
- Štrancar, M., Klemen, S. (2005): PHP in MySQL na spletnem strežniku Apache, druga izdaja. Založba Pasadena.
- Welling, L., Thomson, L. (2008): PHP and MySQL Web Development. Addison-Wesley Professional.
- Django tutorial https://www.djangoproject.com/start/

Cilji in kompetence:	**Objectives and competences:**
Učna enota prispeva k razvoju naslednjih splošnih in predmetno specifičnih kompetenc: • usposobljenost za samostojno in avtonomno uporabo, nadzor in vzdrževanje informacijsko komunikacijske tehnologije v organizaciji • poznavanje tehnologij za spletno programiranje na strani klienta in strežnika ter razvoj aplikacij • sposobnost zapisati problem v obliki algoritma in pretvorba algoritma v računalniški program z uporabo sodobnih programskih orodij • razumevanje in uporaba računalniških sistemov in arhitektur	*The instructional unit contributes to the development of the following general and subject-specific competences:* • competence for independent and autonomous use, monitoring and maintenance of information communication technology in an institution • knowledge of client and server side web programming technologies and applications development • the ability to write the problem in the form of an algorithm and converting the algorithm into a computer program using modern programming tools • understanding and use of computer systems and architectures

Predvideni študijski rezultati:	**Intended learning outcomes:**

Znanje in razumevanje:	Knowledge and understanding:
Študent/študentka: • razvije logično razmišljanje in sposobnosti načrtovanja programov • razume pomen načrtovanja in testiranja programske opreme • zmore dekompozicijo večjega problema na več manjših in obvladljivih • razume, kako deluje internet • operativno pozna programske jezike za spletno programiranje • spozna razmerja oblika-funkcija • je sposoben izdelati dinamično spletno stran	*Student:* • develops logical thinking and software design abilities • understands the importance of design and testing of software • is able to decompose a large problem into several smaller, controllable problems • understands the basic internet technologies • has operative knowledge of web programming languages • learns about the form-function relationship • is able to produce a dynamic web page

Metode poučevanja in učenja:	**Learning and teaching methods:**
• *predavanja* z aktivno udeležbo študentov (razlaga, diskusija, vprašanja, primeri, reševanje problemov) • *vaje,* kjer bodo študentje na konkretnih problemih ponovili, utrdili in dodatno osvetlili pojme in metode, spoznane na predavanjih • *seminarske naloge:* z njimi bodo študentje stimulirani, da sami preizkusijo snov, ki bo obravnavana na predavanjih in vajah	• *lectures* with active participation of students (explanations, questions, cases, problem solving) • *lab work:* where students will use practical cases to refresh, reinforce and gain addition insight into the ideas and methods they've encountered at lectures • *seminar papers:* will stimulate the students to apply and test the knowledge gained at lectures and lab work

Načini ocenjevanja:	Delež (v %) / Weight (in %)	**Assessment:**
Način (pisni izpit, ustno izpraševanje, naloge, projekt): • pisni/ustni izpit • domače naloge • seminarska naloga Študent lahko pristopi k pisnemu izpitu po opravljenih domačih nalogah in seminarski nalogi, pri katerih mora doseči vsaj 50% uspešnost.	 50 30 20	Type (examination, oral, coursework, project): • written/oral exam • homeworks • seminar paper Student can take part in the written exam, after he/she completes his/her homeworks and the seminar paper with at least 50% success.

Reference nosilca / Lecturer's references:

•
• BOŠKOSKI, Pavle. Towards digital transformation : implementation experience. V: RODIČ, Blaž (ur.). Book of Abstracts. Novo mesto: Faculty of Information Studies. 2017. http://itis.fis.unm.si/. [COBISS.SI-ID 30969895]
• BOŠKOSKI, Pavle, JURIČIĆ, Đani, MUSIZZA, Bojan, ČERNE, Stanislav. Sistem za diagnostiko, prognostiko in podporo e-vzdrževanju industrijske opreme :

tehnična izboljšava. Ljubljana: Institut Jožef Stefan, 2014. 21 str., ilustr. [COBISS.SI-ID 28376103]

- DEBENJAK, Andrej, BOŠKOSKI, Pavle, MUSIZZA, Bojan, KERN, Miha, BIČEK, Andrej. Informacijska arhitektura za proizvodno analitiko : primer Domel = Information architecture for production analytic : with application in Domel company. V: MUŠKINJA, Nenad (ur.), TOVORNIK, Boris (ur.). Zbornik desete konference Avtomatizacija v industriji in gospodarstvu, 6. in 7. april 2017, Maribor, Slovenija. Maribor: Društvo avtomatikov Slovenije. 2017, str. 38-43. [COBISS.SI-ID 30423079]
- DAMIJ, Nadja, BOŠKOSKI, Pavle, BOHANEC, Marko, MILEVA BOSHKOSKA, Biljana. Ranking of business process simulation software tools with DEX/QQ hierarchical decision model. PloS one, ISSN 1932-6203, 2016, vol. 11, no. 2, str. 1-16, doi: 10.1371/journal.pone.0148391. [COBISS.SI-ID 29294119],
- MILEVA BOSHKOSKA, Biljana, BOHANEC, Marko, BOŠKOSKI, Pavle, JURIČIĆ, Đani. Copula-based decision support system for quality ranking in the manufacturing of electronically commutated motors. Journal of intelligent manufacturing, ISSN 0956-5515, 2015, vol. 26, no. 2, str. 281-293, doi: 10.1007/s10845-013-0781-7. [COBISS.SI-ID 26734887]