

UČNI NAČRT PREDMETA / COURSE SYLLABUS

| | |
|----------------------|-------------------------|
| Predmet: | Spletno programiranje 1 |
| Course title: | Web Programming 1 |

| Študijski program in stopnja Study programme and level | Študijska smer Study field | Letnik Academic year | Semester Semester |
|---|-------------------------------|-------------------------|----------------------|
| Računalništvo in spletne tehnologije, visokošolski strokovni študijski program prve stopnje | - | Prvi | Drugi |
| Computer Science and Web Technologies, first cycle Professional Study Programme | - | First | Second |

Vrsta predmeta / Course type Obvezni / Obligatory

Univerzitetna koda predmeta / University course code: 2-RST-VS-SP1-2016-10-01

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

Nosilec predmeta / Lecturer:

| | | |
|----------------------------|-------------------------------|---|
| Jeziki / Languages: | Predavanja / Lectures: | Slovenski / Slovenian, Angleški / English |
| | Vaje / Tutorial: | Slovenski / Slovenian, Angleški / English |

Pogoji za vključitev v delo oz. za opravljanje študijskih obveznosti:
 Pogoj za vključitev v delo je vpis v 1. letnik študija. Pogoj za pristop k izpitu so opravljene obveznosti na vajah.

Prerequisites:
 The prerequisite is enrolment into the first year of the study. Student has to pass the requirements given at the exercises before examination.

Vsebina:

- Opisni jeziki.
 - Jezik in oznake HTML (HyperText Markup Language).
 - XML (Extensible Markup Language).
 - Osnove grafičnih formatov in njihove uporabe v Spletu.
 - Rastrski formati.

Content (Syllabus outline):

- Markup languages.
 - HTML (HyperText Markup Language) language and tags.
 - XML (Extensible Markup Language).
 - Basics of graphical formats and their use on the Web.
 - Raster formats.
 - SVG (Scalable Vector Graphics) vector format.

| | |
|---|--|
| <ul style="list-style-type: none"> <ul style="list-style-type: none"> ▪ Vektorski format SVG (Scalable Vector Graphics). • HTML 5. • Osnove semantičnega spleta. • Osnove spletnega okolja in komunikacije v njem. Uvod v HTTP (Hypertext Transfer Protocol) protokol. • Elementi spletne strani. Formularji in dogodki. • Slogovne predloge CSS (Cascading Style Sheets). Uporaba plasti. • Principi oblikovanja spletnih strani. • Spletno programiranje na strani klienta. <ul style="list-style-type: none"> • Jezik JavaScript. • Objektni model DOM (Document Object Model). • Tehnologija asinhronega JavaScripta. • Podatkovni format JSON (JavaScript Object Notation). • Osnove spletnega programiranja na strežniku z jezikom PHP (PHP: Hypertext Preprocessor). • Izdelava delujoče spletne aplikacije (poudarek na programiranju na strani klienta). | <ul style="list-style-type: none"> • HTML 5. • Basics of the Semantic Web. • Web environment and communication. Introduction to the http (Hypertext Transfer Protocol) protocol. • Web page elements. Forms and events. • CSS (Cascading Style Sheets) style sheets. Use of layers. • Web page design principles. • Client-side Web programming. <ul style="list-style-type: none"> • JavaScript language. • DOM (Document Object Model) object model. • Asynchronous JavaScript technology. • JSON (JavaScript Object Notation) data format. • Basics of server-side Web programming with the PHP (PHP: Hypertext Preprocessor) language. • Development of a functional Web application (focus on the client-side programming). |
|---|--|

Temeljni literatura in viri / Readings:

| |
|--|
| <ul style="list-style-type: none"> • NIXON, ROBIN (2009) <i>Learning PHP, MySQL & JavaScript</i>. O'Reilly Media. • OLIVER, DICK in MORRISON, MICHAEL (2006) <i>Sams Teach Yourself HTML And CSS in 24 Hours</i>. Sams Pub. • YOUNG, MICHAEL J. (2002) <i>XML: step by step</i>. Microsoft Press. • DISBROW, STEVEN W. (2001) <i>JavaScript Weekend Crash Course</i>. Wiley. • HRIBAR, PETER (1998) <i>Spoznajmo JavaScript: programiranje spletnih strani</i>. Flamingo. |
|--|

Cilji in kompetence:

| |
|---|
| <p><i>Učna enota prispeva k razvoju naslednjih splošnih in predmetno-specifičnih kompetenc:</i></p> <p><i>Splošne kompetence:</i></p> <ul style="list-style-type: none"> • usposobljenost za izvajanje vseh faz razvoja spletnih in mobilnih aplikacij: načrtovanje, razvoj, zagon, prodaja, vzdrževanje • poznavanje osnov računalništva in informacijske tehnologije • zmožnost skupinskega dela v vseh fazah razvoja spletnih in mobilnih rešitev • obvladovanje postopkov zagotavljanja varnega in stabilnega delovanja |
|---|

Objectives and competences:

| |
|--|
| <p><i>The instructional unit contributes to the development of the following general and subject-specific competences:</i></p> <p><i>General competences:</i></p> <ul style="list-style-type: none"> • competence to carry out all phases in the development of web and mobile applications: planning, development, start-up, sales, maintenance • familiarity with the basics of computer science and information technology • ability to operate within a team during all phases of development of web and mobile solutions |
|--|

| |
|---|
| <p>spletnih in mobilnih aplikacij in sprotnega odpravljanja napak</p> <p><i>Predmetno-specifične kompetence:</i></p> <ul style="list-style-type: none"> • poznavanje opisnih jezikov • poznavanje delovanja interneta in svetovnega spleta • poznavanje tehnologij za spletno programiranje na strani klienta in sposobnost razvoja dinamičnih aplikacij |
|---|

| |
|---|
| <ul style="list-style-type: none"> • mastering procedures of ensuring safe and stable functioning of web and mobile applications, and elimination of errors <p><i>Subject-specific competences:</i></p> <ul style="list-style-type: none"> • knowledge of markup languages • knowledge of the internet and the web • knowledge of client-side web technologies and capability of developing dynamical Web pages |
|---|

Predvideni študijski rezultati:

| |
|--|
| <p>Znanje in razumevanje:</p> <p><i>Študent/študentka:</i></p> <ul style="list-style-type: none"> • razume, kako deluje Internet in svetovni splet • operativno pozna označevalne in programske jezike za spletno programiranje na strani klienta • pozna razmerje oblika-funkcija in zna to upoštevati pri načrtovanju spletnih aplikacij • je sposoben izdelovati dinamične spletne strani |
|--|

Intended learning outcomes:

| |
|--|
| <p>Knowledge and understanding:</p> <p><i>The student:</i></p> <ul style="list-style-type: none"> • understands the workings of the Internet and the Web • gains operative knowledge of markup and client-side programming languages • is aware of the design-function relationship and able to design Web applications accordingly • is capable of developing dynamical Web pages |
|--|

Metode poučevanja in učenja:

| |
|--|
| <ul style="list-style-type: none"> • predavanja z aktivno udeležbo študentov (<i>razlaga, diskusija, vprašanja, primeri, reševanje problemov</i>) • vaje, kjer bodo študentje na konkretnih problemih ponovili, utrdili in dodatno osvetlili pojme in metode, spoznane na predavanjih • domače naloge: s katerimi bodo študentje stimulirani, da sproti študirajo snov, ki bo obravnavana na predavanjih in vajah • seminarska naloga bo študente naučila samostojnega reševanja praktičnih problemov z uporabo standardnih podatkovnih struktur in algoritmov |
|--|

Learning and teaching methods:

| |
|--|
| <ul style="list-style-type: none"> • lectures with active student participation (<i>explanation, discussion, questions, examples, problem solving</i>) • lab work, during which the students will use practical problems to repeat and strengthen the topics and methods presented at the lectures • homeworks will stimulate the students to study concurrently with lectures and lab work • student project will prepare the students to autonomously solve practical problems with the use of standard data structures and algorithms |
|--|

Načini ocenjevanja:

Delež (v %) /
Weight (in %)

Assessment:

| | | |
|--|-------------------------------|---|
| <p>Način (pisni izpit, ustno izpraševanje, naloge, projekt):</p> <ul style="list-style-type: none"> • Pisni/ustni izpit • Domače naloge • Seminarska naloga | <p>50</p> <p>30</p> <p>20</p> | <p>Type (examination, oral, coursework, project):</p> <ul style="list-style-type: none"> • Written/oral exam • Homeworks • Seminar paper |
|--|-------------------------------|---|

| | | |
|---|--|---|
| <p>Študent lahko pristopi k pisnemu izpitu po opravljenih domačih nalogah in seminarški nalogi, pri katerih mora doseči vsaj 50% uspešnost.</p> | | <p>Student can take part in the written exam, after he/she completes his/her homeworks and the seminar paper with at least 50% success.</p> |
|---|--|---|