



Univerza v Mariboru

Fakulteta za naravoslovje
in matematiko

UČNI NAČRT PREDMETA / COURSE SYLLABUS

Predmet: Osnove spletnega programiranja
Course title: Fundamentals of Web Programming

Študijski program in stopnja Study programme and level	Študijska smer Study field	Letnik Academic year	Semester Semester
Enovit magistrski študijski program druge stopnje Predmetni učitelj		3	6
Five-year master's degree program Subject Teacher			

Vrsta predmeta / Course type

Obvezni/ Obligatory

Univerzitetna koda predmeta / University course code:

Predavanja Lectures	Seminar Seminar	Sem. vaje Tutorial	Lab. vaje Laboratory work	Teren. vaje Field work	Samost. delo Individ. work	ECTS
30	15		30		105	180/6

Nosilec predmeta / Lecturer:

Aleksander Vesel

Jeziki /

Languages:

Predavanja / Lectures:

slovenski

Slovenian

Vaje / Tutorial:

slovenski/Slovenian

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

Pozitivne ocenje pri kolokvijih in projektu so pogoj
za pristop k pisnemu izpitu.

Prerequisites:

Passing grades for midterm exams and the project
are required for taking the written exam.

Vsebina:

- Osnove in funkcije interneta.
- Najpomembnejše internetne aplikacije: spletni strežniki, odjemalci in protokol HTTP, FTP in elektronska pošta.
- Življenjski cikel spletne strani.
- Razvoj spletnih strani: HTML, XHTML, XML, JavaScript, Ajax, PHP, MySQL.
- Razvoj spletne aplikacije.

Content (Syllabus outline):

- Fundamentals and functions of the Internet.
- Common Internet applications: servers, clients and protocols for web pages, FTP and e-mail.
- The lifecycle of a webpage.
- Development of web pages: HTML, XHTML, XML, JavaScript, Ajax, PHP, MySQL.
- Development of a web application.

Temeljni literatura in viri / Readings:

WHATWG, *HTML standard*, whatwg.org. <https://html.spec.whatwg.org/multipage/> (dostopno marec 2025).

W3C, *CSS Snapshot 2024*, w3.org. <https://www.w3.org/TR/css-2024/> (dostopno marec 2025)

Mozilla Coorporation, JavaScript MDN, mozilla.org, <https://developer.mozilla.org/en-US/docs/Web/JavaScript> (dostopno marec 2025)

The PHP Group, PHP: Hypertext Preprocessor, PHP.net, <https://www.php.net> (dostopno marec 2025)

P. J. Deitel, H. M. Deitel, in A. Deitel, *Internet & World Wide Web: how to program*, 5th ed., International ed. Boston [etc.]: Pearson, 2012, str. 953.

J. R. Levine, C. Baroudi, in M. L. Young, *Internet za telebane*. Ljubljana: Pasadena, 1997, str. XVI, 320.

Cilji in kompetence:

Spoznati najpogostejše storitve interneta, življenjski cikel spletne strani in orodja za razvoj spletnih aplikacij. Razviti spletno stran in/ali aplikacijo.

Objectives and competences:

To know the most common internet services, the lifecycle of a Web page and different development tools for Web applications. To develop a web page and/or a web application.

Predvideni študijski rezultati:

Znanje in razumevanje:

- Spoznati pristope k razvoju spletnih aplikacij in organizaciji spletne strani
- Spoznati različne protokole, strežnike in odjemalce za spletne strani, prenos datotek in elektronsko pošto.
- Razumeti osnovne konstrukte skriptnih jezikov
- Spoznati orodja za razvoj spletnih aplikacij.
- Razviti spletno aplikacijo.

Prenesljive/ključne spretnosti in drugi atributi:

- Pridobljena znanja so podlaga za vse predmete, ki lahko izkoristijo internet.

Intended learning outcomes:

Knowledge and Understanding:

- To know the approaches to Web design and organization of Website content
- To know the protocols, servers and clients for web pages, file transfer and e-mail
- To understand fundamental constructs of scripting languages
- To know the different development tools
- Development of a real world Web application.

Transferable/Key Skills and other attributes:

- The obtained knowledge is a basis for all subjects that can take advantage of Internet.

Metode poučevanja in učenja:

Predavanja
Seminar
Računalniške vaje

Learning and teaching methods:

Lectures
Seminar
Computer exercises

Načini ocenjevanja:**Assessment:**

	Delež (v %) / Weight (in %)	
<u>kolokvij</u>	30 %	<u>midterm exam</u>
<u>projekt</u>	40 %	<u>project</u>
<u>pisni izpit</u>	30 %	<u>written exam</u>

Reference nosilca / Lecturer's references:

1. KORŽE, Danilo, VESEL, Aleksander. Variety of mutual-visibility problems in hypercubes. *Applied mathematics and computation*. 15 April 2025, vol. 491, [article no.] 129218, 10 str.
2. VESEL, Aleksander. Binary coding of resonance graphs of catacondensed polyhexes. *Match : communications in mathematical and in computer chemistry*. 2023, vol. 90, no. 2, str. 429-452.
3. KORŽE, Danilo, VESEL, Aleksander. General Position Sets in Two Families of Cartesian Product Graphs. *Mediterranean journal of mathematics*. 2023, vol. 20, [article no.] 203, 12 str.
4. DENG, Fei, SHAO, Zehui, VESEL, Aleksander. On the packing coloring of base-3 Sierpiński graphs and H-graphs. *Aequationes mathematicae*. 2021, vol. 95, iss. 2, str. 329-341.
5. VESEL, Aleksander. Efficient proper embedding of a daisy cube. *Ars mathematica contemporanea*. [Tiskana izd.]. 2021, vol. 21, no. 2, str. 271-282.