|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 1. Course title: Web Programming I. | | | | | |
|  | | | | |
| 2. Code: | | 3. Type (lecture, practice etc.): seminar | | | |
|  | | | | |
| 4. Contact hours: 2+2 hoursper week | | 5. Number of credits (ECTS): 5 | | | |
|  | | | | |
| 6. Preliminary conditions (max. 3): Programming II. | | | | | |
|  | | | | |
| 7. Announced:fall semester, spring semester, both | | | | | |
|  | | | | |
| 8. Limit for participants: 24 | | | | | |
|  | | | | |
| 10. Responsible teacher (faculty, institute and department):  Viktor Rébay (Faculty of Science, Institute of Mathematics and Informatics, Department of Informatics) | | | | | |
|  | | | | |
| 11. Teacher(s) and percentage: | | Viktor RÉBAY | | 100% | |
|  | |  | |
|  | |  | |
|  | |  | |
|  | |  | |
|  | | | | |
| 12. Language:English | | | | | |
|  | | | | |
| 13. Course objectives and/or learning outcomes:  The seminar intends to introduce students to the basics of web programming, using HTML5, CSS3, and PHP. Students completing the course will have the necessary knowledge to create personal websites, and to set up the first web presence for micro and small enterprises. They will be able to create dynamic, standard website with modern outlook individually. | | | | | |
|  | | | | |
| 14. Course outline   1. Designing web pages, web ergonomics. Testing websites from user perspective. Basic standards and their importance in web design. Displaying web pages using different devices and browsers. Good and bad example pages. Selecting the proper web hosting service. Uploading and publishing web content. Web development using localhost. 2. Basics of HTML. Structure and components of a standard webpage. Main parts of the HTML structure. Understanding and using basic HTML tags. Validating HTML files. 3. Importance of separating style and content. Basic structure and the general syntax of CSS. A basic style sheet. Internal style sheets and inline styles. Style classes and selectors. Cascading order and inheritance in CSS. Validating Cascading Style Sheets. 4. Formatting letters, words, and paragraphs with CSS. Aligning text. Styling lists, tables, and hyperlinks. Adding colours, graphics, and multimedia elements to web pages. Understanding the CSS box model and positioning. Working with margins and padding. 5. Creating web pages using CSS templates. The typical terms of use of CSS templates. Finding, downloading, and customizing templates. Formatting and cleaning the code. 6. Basic elements and syntax of PHP, Combining HTML and PHP. Using variables. Data types, operators and expressions. Different types of variables, changing data types. Controlling flow with conditions and loops. 7. Using arrays in PHP. Understanding the most common array functions and tools. Associative and multidimensional arrays. 8. Creating forms with HTML5. HTML5 form elements and their properties. 9. Processing forms with PHP. Using the GET and POST methods. Striping out HTML tags and special characters from the input. Security issues. 10. Creating and managing relational databases using command line and graphical user interfaces. Reviewing the data types of the selected database management system. Creating, modifying and deleting tables. Making queries from single and joined tables. 11. Connecting to databases using PHP. Formatting and displaying query results in web pages. Processing and storing user inputs in databases. Manipulating data values using web resources. 12. Embedding external components (e.g. Google Maps, Social plugins, YouTube videos, etc) into websites. The risks of using third party modules. 13. Final exam. | | | | | |
|  | | | | |
| 15. Mid-semester works  Each student develops a web page for a real or fictive company, using the tools and techniques learned in the semester. The evaluation is based on the content, design, functionality, implementation (source code, compliance with web standards), and also depends on the individual presentation of the work. | | | | | |
|  | | | | |
| 16. Course requirements and grading  The final grade is based on the individual mid-semester assignment (30%) and the result of the final exam (70%). After the deadline, mid-term assignment cannot be improved, corrected or (re)submitted. Final exam can be repeated in the first and second weeks (1-1 times) of the exam period. Based on the results of mid-semester assignment and final exam, grades will be calculated according to the following: 0–50% - fail (1), 50–60% - acceptable (2), 60–70% - average (3), 70–80% - good (4), 80–100% - excellent (5). | | | | | |
|  | | | | |
| 17. List of readings   1. Julie C. Meloni: HTML, CSS and JavaScript All in One, Sams Teach Yourself: Covering HTML5, CSS3, and jQuery (2nd Edition). Sams Publishing, 2014. ISBN: 9780672337147 2. Matt Zandstra: Teach Yourself PHP in 24 Hours (3rd Edition). Sams, 2003. ISBN: 9780672326196 | | | | | |
|  | | | | |
| 18. Recommended texts, further readings   1. Jennifer Niederst Robbins: HTML5 Pocket Reference: Quick, Comprehensive, Indispensable 5th Edition. O'Reilly Media, 2013. ISBN: 9781449363352 2. Eric A. Meyer: CSS Pocket Reference: Visual Presentation for the Web, 4th Edition. O'Reilly Media, 2011. ISBN: 9781449399030 | | | | | |
|  | | | | |
| **Date** | 10 May, 2017 | **Prepared by** |  | | |
| Viktor RÉBAY  responsible teacher | | |
|  | | | | |
| **Endorsed by** | | |  | | |
| program supervisor | | |