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| O imagine care conține siglă, simbol, Font, Grafică  Descriere generată automat | MINISTERUL EDUCAŢIEI **UNIVERSITATEA „AUREL VLAICU“ DIN ARAD**310130 Arad, B-dul Revolutiei nr. 77, P.O. BOX 2/158 AR *Tel.: 0040-257- 283010; fax. 0040-257- 280070*  [http://www.uav.ro](http://www.uav-arad.go.ro)*;* e-mail: rectorat@uav.ro |

**Operator de date cu caracter personal nr. 2929**

**SYLLABUS**

1. **Study programme**

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| 1.1. Higher education institution | **„Aurel Vlaicu” University of Arad** |
| 1.2. Faculty | **of Exact Sciences** |
| 1.3. Department | **Department of Mathematics and Computer Science** |
| 1.4. Field of study | **Mathematics** |
| 1.5. Study level | **2024-2025** |
| 1.6. Study cycle | **Bachelor** |
| 1.7. Study programme / Qualification | **Mathematics Computer Science** |
| 1.8. Form of education | **Full – Time study** |

1. **Course details**

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| 2.1. Name of the course | **GlCS2O09 WEB Programming** |
| 2.2. Course coordinator | **PhD Crăciun Mihaela-Daciana** |
| 2.3. Seminar/laboratory/project coordinator | **PhD Crăciun Mihaela-Daciana** |
| 2.4. Study year | **1** |
| 2.5. Semester | **2** |
| 2.6. Evaluation type | **ES** |
| 2.7. Course type | **Ob** |

1. **Estimated total time (hours per semester)**

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| 3.1. Hours per week | **4** |
| 3.2. Lecture hours per week | **2** |
| 3.3. Seminar/laboratory/project hours per week | **2** |
| 3.4. Total hours per curriculum | **56** |
| 3.5. Lecture hours per semester | **28** |
| 3.6. Seminar/laboratory/project hours per semester | **28** |
| Time division [hrs] | |
| 3.4.1. Independent study from textbooks, course support, bibliography and notes | **20** |
| 3.4.2. Additional reading (libraries, specialized electronic platforms and field research) | **20** |
| 3.4.3. Preparing of seminars/laboratories/projects, homework, papers, portfolios and essays | **20** |
| 3.4.4. Tutorial coaching | **5** |
| 3.4.5. Examinations | **4** |
| 3.4.6. Other activities | **0** |
| 3.7. Total individual study hours | **69** |
| 3.8. Total hours per semester | **125** |
| 3.9. Number of ECTS credits | **5** |

1. **Prerequisites** (if applicable)

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| 4.1. Curriculum related |  |
| 4.2. Competence related |  |

1. **Conditions** (if applicable)

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| 5.1. for the lecture | Classroom equipped with laptop, projector, Internet connection and adapted software - Power Point, Word, database and programming software. |
| 5.2. for the seminar | Classroom equipped with laptop, projector, Internet connection and adapted software - Power Point, Word, database and programming software. |
| 5.3. for the laboratory |  |
| 5.4. for the project |  |

1. **Specific educational objectives (competences to be acquired)**

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| 6.1. Professional competencies | C4. Thinks abstractly  C15. Use mathematical and computer tools |
| 6.2. Transversal competencies | TC1. Shows initiative  TC3. Takes responsibility  TC4. Works in teams |

1. **Course outcomes (resulting from the specific educational objectives to be acquired)**

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| 7.1. General outcomes | Students will learn general concepts of web design. To develop students' ability to correctly apply the knowledge they have acquired and to develop their analytical skills. |
| 7.2. Specific outcomes | Students will be able to demonstrate that they have acquired sufficient knowledge to understand concepts such as HTML/XHTML language syntax, CSS, Java Script and PHP. |

1. **Outline** (if applicable)

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| 8.1 Lecture Outline | Teaching methods | Remarks |
| Internet - History of the Internet - Data transmission - Communication protocols - Internet services - WWW | interactive presentation, heuristic conversation, exemplification | 2 h |
| HTML - structure of an HTML document - markup for text and paragraph formatting - unordered, ordered and definition lists - internal and external references - images, image maps - tables - forms | interactive presentation, exemplification, web documentation, problem solving | 8 h |
| Cascading Style Sheets - CSS3 - formatting styles - CSS selectors - meaning, selector types - CSS properties - structure, property categories | interactive presentation, exemplification, web documentation, problem solving, debate | 6 h |
| PHP - PHP script structure - simple data types, constants, variables, operators and expressions - control structures - PHP statements - defining functions - character strings - arrays | interactive presentation, exemplification, web documentation, problem solving, debate | 10 h |
| JavaScript JavaScript Syntax - Variables and Constants -Operators - Instructions - Functions - Alert Prompt and Confirm Windows | interactive presentation, exemplification, web documentation, problem solving, debate | 2 h |
| 8.2 Lecture References  [1] Luke Welling, Laura Thomson, PHP and MySQL Web Development, Fifth Edition,aPearson Education Inc.,USA, 2016  [2] Marijn Haverbeke, Eloquent JavaScript 3rd edition; 2018  [3]. V. Chiş, Tehnologii web, Editura Universităţii „Aurel Vlaicu” Arad, 2009  [4]. John Duckett, Web Design with HTML, CSS, JavaScript and jQuery Set; 2014  [5]. Luke Welling, Laura Thomson, PHP and MySQL Web Development, Fifth Edition, Pearson Education Inc.,USA, 2016.  [6].\*\* https://www.tutorialspoint.com/ | | |

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| 8.3 Seminar Outline | Teaching methods | Remarks |
| 8.4 Seminar References | | |
| 8.5 Laboratory Outline | Teaching methods | Remarks |
| HTML - structure of an HTML document - markup for text and paragraph formatting - unordered, ordered and definition lists | exercise, application, problem solving, web documentation | 4 h |
| HTML - internal and external links - images, image maps | exercise, application, problem solving, web documentation | 4 h |
| HTML tables | exercise, application, problem solving, web documentation | 2 h |
| HTML forms | exercise, application, problem solving, web documentation | 4 h |
| In-line and header styles | exercise, application, problem solving, web documentation | 2 h |
| External style sheets | exercise, application, problem solving, web documentation | 4 h |
| PHP Scripts | exercise, application, problem solving, web documentation | 8 h |
| 8.6 Laboratory References  [1]. Jeremy Keith, Rachel Andrew , HTML5 for Web Designers, Second Edition, 2nd Edition, 2018  [2]. Antonio Lopez, Learning PHP 7, Packt Publishing Ltd., 2016, ISBN 9781785880544.  [3]. Jennifer Niederst Robbins, HTML5 Pocket Reference, 5th Edition, 2018  [4]. https://www.w3schools.com/ | | |
| 8.7 Project Outline | Teaching methods | Remarks |
| 8.8 Project References | | |

1. Correlation of course outline with the expectations of the epistemic community, professional associations and representative employers within the field of the program

The subject content is in line with the content of similar subjects in other university centers in the country and abroad. In order to better adapt the content of the subject to the requirements of the labor market, meetings were held with both employers - representatives of the business environment and mathematics and computer science teachers from the pre-university education in Arad.

1. **Evaluation / Grading** (if applicable)

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| Activity type | Evaluation criteria | Evaluation methods | Percentage of the final grade |
| 10.1. Lecture | - accuracy and completeness of knowledge  - logical coherence  - degree of assimilation of specific language  - conscientiousness, interest in study | - Oral assessment (final in the exam session): presentation of a final project through free student presentation and conversation assessment through oral questionnaires  - Active participation in lectures | 40%  10% |
| 10.2.  Seminar |  |  |  |
| 10.3.  Laboratory | - the ability to operate with the assimilated knowledge;  - ability to apply in practice  -conscientiousness, interest in study | - Oral assessment (final in the exam session): completion and presentation of the final project  - Homework, projects completed during the course  - Active participation in laboratory classes | 20%  20%  10% |
| 10.4. Project |  |  |  |
| 10.5 Minimal performance standard  Learning fundamental concepts, using specialized language, making a simple application. | | | |

Course coordinator

Lect.univ.dr. Mihaela-Daciana CRĂCIUN Seminar/laboratory/project coordinator

Lect.univ.dr. Mihaela-Daciana CRĂCIUN

Head of the Department

Lect.univ.dr. Lorena Camelia POPA

Dean

Prof.univ.dr. Sorin-Florin NĂDĂBAN