

| Course Name : User Interface |                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                      |                      |                   |         |      |
|------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|----------------------|-------------------|---------|------|
| Course Code                  | Course Type                                                                                                                                                                                                                       | Regular Semester                                                                                                                                                                                                                                                                                                                                                                                                                                        | Lecture (hours/week) | Seminar (hours/week) | Lab. (hours/week) | Credits | ECTS |
| CMP 317                      | B                                                                                                                                                                                                                                 | Fall                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 2.00                 | 0.00                 | 2.00              | 3.00    | 6.00 |
|                              |                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                      |                      |                   |         |      |
| Lecturer                     |                                                                                                                                                                                                                                   | Ksandra Xhukellari, Msc                                                                                                                                                                                                                                                                                                                                                                                                                                 |                      |                      |                   |         |      |
| Assistant                    |                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                      |                      |                   |         |      |
| Course language              |                                                                                                                                                                                                                                   | Albanian                                                                                                                                                                                                                                                                                                                                                                                                                                                |                      |                      |                   |         |      |
| Course level                 |                                                                                                                                                                                                                                   | Bachelor                                                                                                                                                                                                                                                                                                                                                                                                                                                |                      |                      |                   |         |      |
| Description                  |                                                                                                                                                                                                                                   | In this injury will be addressed the topic that will include methods as well as the importance of human factors, sensitive human, conjectural and physical characteristics as well as the implementation of known practice. If you use the topic that will address the students you will get acquainted with the cycle and life of the product that needs to be designed, implemented and evaluated focusing on its user.                               |                      |                      |                   |         |      |
| Objectives                   |                                                                                                                                                                                                                                   | In this injury will be addressed the topic that will include methods as well as the importance of human factors, sensitive human, conjectural and physical characteristics as well as the implementation of known practice. If you use the topic that will address the students you will get acquainted with the cycle and life of the product that needs to be designed, implemented and evaluated focusing on its user.                               |                      |                      |                   |         |      |
| Core Concepts                |                                                                                                                                                                                                                                   | 1. The user interface is the hardware-software combination that facilitates communication between the user and the computer. 2. Human-computer interaction (HCI) is a discipline that deals with the design, evaluation and implementation of iterative systems used by humans and studies the key aspects that surround them. 3. HCI originates in two very different disciplines: - Ergonomics (ergon: work; nomos: law) - Computer science. ... etc. |                      |                      |                   |         |      |
| Course Outline               |                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                      |                      |                   |         |      |
| Week                         | Topic                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                      |                      |                   |         |      |
| 1                            | 1 Login to the user interface History • A brief history and general knowledge of the subject. • Different concepts on the user interface.                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                      |                      |                   |         |      |
| 2                            | 2 Applied User Interface and Iterative Systems • Human-computer interaction in the interdisciplinary environment • Problems related to the user interface • Architecture and Software tools • User interface in iterative systems |                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                      |                      |                   |         |      |
| 3                            | 3 Processing of human information • Perception • Motor skills • Memory • Decision making • Attention • Visions                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                      |                      |                   |         |      |
| 4                            | 4 Get to know the user • User description levels                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                      |                      |                   |         |      |
| 5                            | 5 Conceptual models and metaphors • Patterns in user interface design • Danger of the user model • Interactive style comparisons • Suggestions for direct manipulation • Modeling human error                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                      |                      |                   |         |      |
| 6                            | 6 User-centric design • User interface design with waterfall model • Iterative design • Spiral model • How user analysis is done                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                      |                      |                   |         |      |
| 7                            | 7 Design Principles • Heuristics • 10 Nielsen rules • 16 principles of Bruce Tognazzin • 8 Schneiderman Golden Rules • 7 principles of dialogue according to ISO 9241-110: 2006                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                      |                      |                   |         |      |
| 8                            | 8 Semi-final exam                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                      |                      |                   |         |      |
| 9                            | 9 Engineering and creativity • Creation processes                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                      |                      |                   |         |      |
| 10                           | 10 Graphic Design • Simplicity • Contrasts • Space • Balance • Color                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                      |                      |                   |         |      |

|                       |                                                                                                                                                                                                                                                          |
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| <b>11</b>             | 11 Prototypes • Reasons for building prototypes • Classification of prototypes • Prototype fidelity • Prototype on paper • Hypertesthetic prototypes                                                                                                     |
| <b>12</b>             | 12 Usability assessment • Heuristic Assessment • Usability tests                                                                                                                                                                                         |
| <b>13</b>             | 13 Design for the user • To design and realize • Traditional design • Human-based design • Universal design                                                                                                                                              |
| <b>14</b>             | 14 Input data models and results presentation models • Types of input events • Elements that are considered when choosing a presentation model • Drawing on component model                                                                              |
| <b>15</b>             | 15 Accessibility • Types of injuries • Assistive technology • Accessibility directive                                                                                                                                                                    |
| <b>16</b>             | Final Exam                                                                                                                                                                                                                                               |
| <b>Prerequisites</b>  | The student must attend the course at a minimum rate of 75%.                                                                                                                                                                                             |
| <b>Literature</b>     | • Designing the User Interface: Strategies for Effective Human-Computer Interaction, 5/E Ben Shneiderman, Catherine Plaisant, Maxine Cohen, Steven Jacobs ISBN-13: 9780321537355                                                                         |
| <b>References</b>     | • Human-computer Interaction By Alan Dix, Alan John Dix, Janet Finlay, Gregory D. Abowd, Russell Beale                                                                                                                                                   |
| <b>Course Outcome</b> |                                                                                                                                                                                                                                                          |
| <b>1</b>              | By the end of this course, students will be able to understand that human-computer interaction is the study of people, information technologies, and how they interact with each other to determine how technologies can be made more usable for people. |
| <b>2</b>              | To create a hardware-software combination that facilitates communication between the user and the computer.                                                                                                                                              |
| <b>3</b>              | To design, evaluate, and implement iterative systems used by people and study the key aspects surrounding them.                                                                                                                                          |
| <b>4</b>              | Achieve the construction of effective Human-Computer interfaces.                                                                                                                                                                                         |

| Course Evaluation                                                        |          |                  |               |
|--------------------------------------------------------------------------|----------|------------------|---------------|
| In-term Studies                                                          | Quantity | Percentage       |               |
| Midterms                                                                 | 1        | 30               |               |
| Quizzes                                                                  | 0        | 0                |               |
| Projects                                                                 | 0        | 0                |               |
| Term Projects                                                            | 0        | 0                |               |
| Laboratory                                                               | 3        | 15               |               |
| Class Participation                                                      | 1        | 10               |               |
| Total in-term evaluation percent                                         |          |                  | 55            |
| Final exam percent                                                       |          |                  | 45            |
| Total                                                                    |          |                  | 100           |
| ECTS Workload (Based on Student Workload)                                |          |                  |               |
| Activities                                                               | Quantity | Duration (hours) | Total (hours) |
| Course duration (Including the exam week: 16x Total hours of the course) | 16       | 4                | 64            |
| Study hours outside the classroom (Preparation, Practice, etc.)          | 14       | 3                | 42            |
| Duties                                                                   | 0        | 10               | 0             |
| Midterms                                                                 | 1        | 15               | 15            |
| Final Exam                                                               | 1        | 20               | 20            |
| Other                                                                    | 0        | 0                | 0             |
| Total Work Load                                                          |          |                  | 141           |
| Total Work Load / 25 (hours)                                             |          |                  | 5.64          |
| ECTS                                                                     |          |                  | 6.00          |