**ESOGU SİVRİHİSAR VOCATIONAL SCHOOL**

**COMPUTER PROGRAMMING PROGRAM**

**COURSE INFORMATION FORM**

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| **Course Name** | **Course Code** |
| TURKISH LANGUAGE I | 221011006 |

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| **Semester** | **Number of Course Hours per Week** | | **Credit** | **ECTS** |
| **Theory** | **Practice** |
| 1 | 2 | 0 | 2 | 2 |

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| **Course Category (Credit)** | | | | |
| **Basic Sciences** | **Engineering Sciences** | **Design** | **General Education** | **Social** |
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| **Course Language** | **Course Level** | **Course Type** |
| Turkish | Associate degree | Compulsory |

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| **Prerequisite(s) if any** | - |
| **Objectives of the Course** | To show the richness of Turkish by informing students about the development and current situation of Turkish, to gain a national language awareness, to ensure that they can speak and write Turkish correctly. To compare Turkish language with major languages in the world. To compare the language policies of major languages with the language policy of Turkish language. To give speech training. |
| **Short Course Content** | Definition and properties of language; languages of the world and the place of Turkish among the world languages; historical development of Turkish language and the development of Western Turkish; Atatürk's studies and views on Turkish language; phonetics; spelling rules and punctuation; language policies. |

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| **Learning Outcomes of the Course** | | **Contributed PO(s)** | **Teaching Methods \*** | **Measuring Methods \*\*** |
| **1** | The student explains the language families of the world and the place of Turkish among the world languages. | 6,7 | 1 | A |
| **2** | Defines the rules of Turkish. | 6,7 | 1, 5 | A |
| **3** | Recognizes sound events. | 6,7 | 1, 5, 11 | A |
| **4** | Applies spelling rules. | 6,7 | 5, 6 | A |
| **5** | Compose written and oral compositions. | 6,7 | 6 | A |
| **6** | Uses Turkish correctly. | 6,7 | 6, 11 | A |

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| **Main Textbook** | *Türk Dili I-II*, ed. Ferruh Ağca, Eskişehir Osmangazi Üniversitesi Yayınları, 2022**.** |
| **Supporting References** | *Üniversiteler İçin Türk Dili*, Bayrak Yayınları, İstanbul, 1997. |
| **Necessary Course Material** |  |

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| **Course Schedule** | |
| **1** | Definition of Language |
| **2** | Language-Nationality-Culture Relationship |
| **3** | World Languages and Turkish Language |
| **4** | Age of Turkish Language |
| **5** | Historical Development of Turkish Language |
| **6** | Alphabets Used in Turkish Writing |
| **7** | Writing Revolution |
| **8** | Mid-Term Exam |
| **9** | Phonetics of Turkish Language |
| **10** | Phonetics of Turkish Language |
| **11** | Morphology of Turkish Language |
| **12** | Morphology of Turkish Language |
| **13** | Word Groups |
| **14** | Word Groups |
| **15** | Word Groups |
| **16,17** | Final Exam |

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| **Calculation of Course Workload** | | | |
| **Activities** | **Number** | **Time (Hour)** | **Total Workload (Hour)** |
| Course Time (number of course hours per week) | 14 | 2 | 28 |
| Classroom Studying Time (review, reinforcing, prestudy,….) | 4 | 4 | 16 |
| Homework |  |  |  |
| Quiz Exam |  |  |  |
| Studying for Quiz Exam |  |  |  |
| Oral exam |  |  |  |
| Studying for Oral Exam |  |  |  |
| Report (Preparation and presentation time included) |  |  |  |
| Project (Preparation and presentation time included) |  |  |  |
| Presentation (Preparation time included) |  |  |  |
| Mid-Term Exam | 1 | 2 | 2 |
| Studying for Mid-Term Exam | 1 | 4 | 4 |
| Final Exam | 1 | 2 | 2 |
| Studying for Final Exam | 1 | 4 | 4 |
|  | **Total workload** | | **56** |
|  | **Total workload / 30** | | **1,86** |
|  | **Course ECTS Credit** | | **2** |

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| **Evaluation** | |
| **Activity Type** | **%** |
| Mid-term | 40 |
| **Final Exam** | 60 |
| **Total** | 100 |

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| **RELATIONSHIP BETWEEN THE COURSE LEARNING OUTCOMES AND THE PROGRAM OUTCOMES (PO)** (5: Very high, 4: High, 3: Middle, 2: Low, 1: Very low) | | |
| **NO** | **PROGRAM OUTCOME** | **Contribution** |
| **1** | Adequate knowledge in basic sciences (mathematics, science) and the ability to apply theoretical and practical knowledge in these areas in problem solving | 1 |
| **2** | Ability to identify, define, formulate and solve complex problems; ability to select and apply appropriate analytical and modeling methods for this purpose | 2 |
| **3** | The ability to understand a complex system, system component or process and to solve system or process failures under certain realistic constraints. | 2 |
| **4** | Ability to develop, select and use modern techniques and tools required for practice; ability to use information technologies effectively | 1 |
| **5** | Ability to collect data for the investigation of problems, analyze and interpret the results | 1 |
| **6** | Ability to work effectively in disciplinary and multidisciplinary teams; ability to work individually | 3 |
| **7** | Ability to communicate effectively in oral and written Turkish; knowledge of at least one foreign language. | 5 |
| **8** | Awareness of the necessity of lifelong learning; the ability to access information, to follow developments in science and technology and to constantly renew oneself | 1 |
| **9** | Awareness of professional and ethical responsibility | 1 |
| **10** | Knowledge about business life practices such as project management, risk management and change management; awareness of entrepreneurship, innovation and sustainable development | 1 |
| **11** | Knowledge about the effects of technical applications on health, environment and safety in universal and social dimensions and contemporary issues; awareness of the legal consequences of problem-oriented solutions | 1 |

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**COMPUTER PROGRAMMING PROGRAM**

**COURSE INFORMATION FORM**

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| **Course Name** | **Course Code** |
| THE HISTORY OF THE PRINCIPLES AND THE REVOLUTIONS OF ATATURK I | 221011001 |

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| **Semester** | **Number of Course Hours per Week** | | **Credit** | **ECTS** |
| **Theory** | **Practice** |
| 1 | 2 | 0 | 2 | 2 |

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| **Course Category (Credit)** | | | | |
| **Basic Sciences** | **Engineering Sciences** | **Design** | **General Education** | **Social** |
|  |  |  |  | X |

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| **Course Language** | **Course Level** | **Course Type** |
| Turkish | Associate degree | Compulsory |

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| **Prerequisite(s) if any** | None |
| **Objectives of the Course** | Students can understand the Liberation War under the leadership of Atatürk and the foundation of the young Turkish Republic. In addition to that the students will learn the processes of the liberation war and the conditions before the foundation of the Republic. |
| **Short Course Content** | The description of the revolution; the history of the Ottoman Empire up to the beginning of the Great War; Great War; The Treaty of Mudros; The Life of Mustafa Kemal Pasha; Civil Organizations for the liberation; Mustafa Kemal’s arrival to Samsun; Congresses; National Oath and the Opening of Turkish Grand National Assembly; Liberation War till the Battle of Sakarya; Büyük Taarruz. |

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| **Learning Outcomes of the Course** | | **Contributed PO(s)** | **Teaching Methods \*** | **Measuring Methods \*\*** |
| **1** | STUDENTS,  understand the main concepts of the course like reform, revolution | 7 | 1 | A,K |
| **2** | learn the short history of the Ottoman Empire up to the Great War | 7 | 1 | A,K |
| **3** | understand the join of the Ottoman Empire to the Great War and the fronts in which the Ottoman Empire fought | 7 | 1 | A,K |
| **4** | learn the Treaty of Mudros and the invasion of the Ottoman lands | 7 | 1 | A,K |
| **5** | understand the life of Mustafa Kemal Pasha (Atatürk) | 7 | 1 | A,K |
| **6** | learn Mustafa Kemal’s arrival to Samsun and the beginning of the Liberation War | 7 | 1 | A,K |
| **7** | understand the opening of Turkish Grand National Assembly and the foundation of national army | 7 | 1 | A,K |
| **8** | learn the victories of İnonü, Sakarya and Büyük Taarruz | 7 | 1 | A,K |

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| **Main Textbook** | Turan Şerafettin, *Türk Devrim Tarihi, C.I-II*, İstanbul, 1991–1995 |
| **Supporting References** | Ateş, Toktamış, *Türk Devrim Tarihi*, İstanbul: Der Yayınları, 2001.  Aybars, Ergün, *Türkiye Cumhuriyeti Tarihi*, İzmir: Ercan Kitabevi, 2000.  Eroğlu, Hamza, *Türk İnkılap Tarihi*, Ankara: Savaş Yayınları, 1990.  Kongar, Emre, *Devrim Tarihi ve Toplumbilim Açısından Atatürk*, İstanbul: Remzi Kitabevi, 1999.  Selek, Sebahattin, *Anadolu İhtilali,* İstanbul: Kastaç Yayınları, 1987.  Timur, Taner, *Türk Devrimi ve Sonrası*, Ankara: İmge Kitabevi, 1997. |
| **Necessary Course Material** |  |

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| **Course Schedule** | |
| **1** | The teaching of the concepts of Revolution, Evolution, Uprising etc. |
| **2** | The attempts for the modernisation of the Ottoman Empire and the political thoughts |
| **3** | The Wars of Trablusgarp and the Balkans |
| **4** | The Beginning of the Great War and the join of the Ottoman Empire |
| **5** | The fronts in which the Ottoman Empire fought |
| **6** | The end of the war and the partition of the Ottoman |
| **7** | The Treaty of Mudros and the invasion of the Ottoman lands |
| **8** | Mid-Term Exam |
| **9** | The trip of Mustafa Kemal to Samsun and the beginning National Struggle |
| **10** | National Oath and the opening of Turkish Grand National Assembly |
| **11** | National Assembly and the direction of liberation war |
| **12** | National Forces and the foundation of the national army |
| **13** | First and Second Victories of İnönü; The battles of Kütahya-Eskişehir |
| **14** | The Battle of Sakarya |
| **15** | Great Attack of 30th August |
| **16,17** | Final Exam |

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| **Calculation of Course Workload** | | | |
| **Activities** | **Number** | **Time (Hour)** | **Total Workload (Hour)** |
| Course Time (number of course hours per week) | 14 | 2 | 28 |
| Classroom Studying Time (review, reinforcing, prestudy,….) | 14 | 1 | 14 |
| Homework |  |  |  |
| Quiz Exam |  |  |  |
| Studying for Quiz Exam |  |  |  |
| Oral exam |  |  |  |
| Studying for Oral Exam |  |  |  |
| Report (Preparation and presentation time included) |  |  |  |
| Project (Preparation and presentation time included) |  |  |  |
| Presentation (Preparation time included) | 1 | 1 | 1 |
| Mid-Term Exam | 1 | 8 | 8 |
| Studying for Mid-Term Exam | 1 | 1 | 1 |
| Final Exam | 1 | 8 | 8 |
| Studying for Final Exam | 14 | 2 | 28 |
|  | **Total workload** | | **60** |
|  | **Total workload / 30** | | **2** |
|  | **Course ECTS Credit** | | **2** |

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| **Evaluation** | |
| **Activity Type** | **%** |
| Mid-term | 40 |
| Quiz |  |
| Homework |  |
| **Final Exam** | 60 |
| **Total** | 100 |

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| --- | --- | --- |
| **RELATIONSHIP BETWEEN THE COURSE LEARNING OUTCOMES AND THE PROGRAM OUTCOMES (PO)** (5: Very high, 4: High, 3: Middle, 2: Low, 1: Very low) | | |
| **NO** | **PROGRAM OUTCOME** | **Contribution** |
| **1** | Adequate knowledge in basic sciences (mathematics, science) and the ability to apply theoretical and practical knowledge in these areas in problem solving | 1 |
| **2** | Ability to identify, define, formulate and solve complex problems; ability to select and apply appropriate analytical and modeling methods for this purpose | 1 |
| **3** | The ability to understand a complex system, system component or process and to solve system or process failures under certain realistic constraints. | 2 |
| **4** | Ability to develop, select and use modern techniques and tools required for practice; ability to use information technologies effectively | 1 |
| **5** | Ability to collect data for the investigation of problems, analyze and interpret the results | 2 |
| **6** | Ability to work effectively in disciplinary and multidisciplinary teams; ability to work individually | 2 |
| **7** | Ability to communicate effectively in oral and written Turkish; knowledge of at least one foreign language. | 5 |
| **8** | Awareness of the necessity of lifelong learning; the ability to access information, to follow developments in science and technology and to constantly renew oneself | 1 |
| **9** | Awareness of professional and ethical responsibility | 2 |
| **10** | Knowledge about business life practices such as project management, risk management and change management; awareness of entrepreneurship, innovation and sustainable development | 1 |
| **11** | Knowledge about the effects of technical applications on health, environment and safety in universal and social dimensions and contemporary issues; awareness of the legal consequences of problem-oriented solutions | 1 |

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**COMPUTER PROGRAMMING PROGRAM**

**COURSE INFORMATION FORM**

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| **Course Name** | **Course Code** |
| ENGLISH I | 221011007 |

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| **Semester** | **Number of Course Hours per Week** | | **Credit** | **ECTS** |
| **Theory** | **Practice** |
| 1 | 3 | 0 | 3 | 2 |

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| --- | --- | --- | --- | --- |
| **Course Category (Credit)** | | | | |
| **Basic Sciences** | **Engineering Sciences** | **Design** | **General Education** | **Social** |
|  |  |  | X |  |

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| **Course Language** | **Course Level** | **Course Type** |
| English | Associate degree / Undergraduate | Compulsory |

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| **Prerequisite(s) if any** | NONE |
| **Objectives of the Course** | Students at this level can understand sentences and frequently-used expressions related to areas of most immediate relevance (e.g. very basic personal and family information, shopping, local geography, employment).  Students can understand clear, slow, standard speech related to areas of most immediate personal relevance (e.g. very basic personal and family information, shopping, local geography and employment) and can catch the main point in short, clear, simple messages and announcements.  Students are able to read and understand short, simple texts containing high frequency vocabulary and shared international expressions.  Students can communicate in simple and routine tasks requiring a simple and direct exchange of information on familiar topics and activities.  They can write short, simple notes and messages relating to matters in areas of immediate need, linking a series of simple phrases and sentences with simple connectors like ‘and’ , ‘but’ and ‘because’. |
| **Short Course Content** | The aim of the course is to teach students basic grammar rules in elementary level, give them speaking, writing, reading and listening knowledge of English. It consists of content and activities aimed at having students acquire Beginner Level English language skills according to evaluation and reference system of The Common European Framework. |

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| **Learning Outcomes of the Course** | **Contributed PO(s)** | **Teaching Methods \*** | **Measuring Methods \*\*** |
| **1** The student becomes familiar with basic grammar rules in  English. | 7 | 1, 5, 11 | A |
| **2** Analyzes English dialogues. | 7 | 1, 4, 5, 11 | A |
| **3** Understands and explains an English text at the level. | 7 | 1, 4, 5, 11 | A |
| **4** Communicates in written and spoken English. | 7 | 1, 4, 5, 11 | A |

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| **Main Textbook** | Warwick L., Williams D. (2020). *Roadmap A2 Students’ Book & Workbook*. Pearson Education Limited. |
| **Supporting References** | Murphy, R., (2004). *English Grammar in Use*, Cambridge University Press, |
| **Necessary Course Material** | Computer, Webcam, Speakers; or Smart phone |

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| **Course Schedule** | |
| **1** | 1A: verb be – positive and negative - countries and nationalities  contractions with be introduce yourself - write an online message - using capital letters and full stops |
| **2** | 1B: questions with *be* question words intonation in questions ask and answer questions - understand a simple conversation understanding question words |
| **3** | 1C: *this, that, these* and those everyday objects - *this*, *these* talk about things for sale - understand adverts identifying specific information  1D: tell the time |
| **4** | 2A: possessive adjectives and possessive ’*s* family members possessive *’s* describe your family - understand a conversation about family - and, too and but  2B: *whose* and possessive pronouns - everyday objects 2 - possessive pronouns say who things belong to - understand online posts - understanding the important words |
| **5** | *2C: have got -* adjectives describing objects *have*/*has* describe objects English in action buy things in a shop buy things in a shop - write a review of a product using and, but and so  2D: buy things in a shop |
| **6** | 3A present simple with *I, you, we* and *they*; adverbs of frequency and time expressions - free-time activities  - talk about free-time Activities - write an online profile - using commas and apostrophes |
| **7** | 3B present simple with *he, she* and *it -* everyday activities - present simple with *he, she* and *it-* describe daily routines - understand a factual text - using headings to find information |
| **8** | Mid-Term Exam |
| **9** | 3C present simple questions free-time activities 2 *do*/*does* ask about free-time activities – understand short talks - understanding key words  3D buy tickets |
| **10** | 4A there is/are - places in a city - linking - talk about your city - write a description - using word order correctly  4B articles - things in a home - the - describe your home - understand social media posts - guessing new words |
| **11** | 4C need + noun, need + infinitive with to - equipment - weak forms - discuss what to take on a trip - understand a short radio programme - understanding weak forms  4D ask for information |
| **12** | 5A position of adjectives - appearance - tonic stress on adjectives - describe people’s appearance - write a description of a person - using paragraphs |
| **13** | 5B was/were - adjectives to describe experiences - weak forms of was/were - describe an experience - understand a story - linking between words |
| **14** | 5C can/can’t for ability - skills - can/can’t - describe your skills - understand information in a brochure - understanding it, they and them |
| **15** | 5D make and respond to requests |
| **16,17** | Final Exam |

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| **Calculation of Course Workload** | | | |
| **Activities** | **Number** | **Time (Hour)** | **Total Workload (Hour)** |
| Course Time (number of course hours per week) | 14 | 3 | 42 |
| Classroom Studying Time (review, reinforcing, prestudy,….) | 14 | 1 | 14 |
| Homework | 1 | 2 | 2 |
| Quiz Exam |  |  |  |
| Studying for Quiz Exam |  |  |  |
| Oral exam |  |  |  |
| Studying for Oral Exam |  |  |  |
| Report (Preparation and presentation time included) |  |  |  |
| Project (Preparation and presentation time included) |  |  |  |
| Presentation (Preparation time included) |  |  |  |
|  |  |  |  |
|  |  |  |  |
| Mid-Term Exam | 1 | 2 | 2 |
| Studying for Mid-Term Exam | 1 | 4 | 4 |
| Final Exam | 1 | 2 | 2 |
| Studying for Final Exam | 1 | 6 | 6 |
|  | **Total workload** | | **72** |
| **Total workload / 30** | | **2,4** |
| **Course ECTS Credit** | | **2** |

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| --- | --- |
| **Evaluation** | |
| **Activity Type** | **%** |
| Mid-term | 40 |
| Quiz |  |
| Homework |  |
|  |  |
|  |  |
| **Final Exam** | 60 |
| **Total** | 100 |

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| **RELATIONSHIP BETWEEN THE COURSE LEARNING OUTCOMES AND THE PROGRAM**  **OUTCOMES (PO)** (5: Very high, 4: High, 3: Middle, 2: Low, 1: Very low) | | |
| **NO** | **PROGRAM OUTCOME** | **Contribution** |
| **1** | Adequate knowledge in basic sciences (mathematics, science) and the ability to apply theoretical and practical knowledge in these areas in problem solving | 1 |
| **2** | Ability to identify, define, formulate and solve complex problems; ability to select and apply appropriate analytical and modeling methods for this purpose | 1 |
| **3** | The ability to understand a complex system, system component or process and to solve system or process failures under certain realistic constraints. | 1 |
| **4** | Ability to develop, select and use modern techniques and tools required for practice; ability to use information technologies effectively | 2 |
| **5** | Ability to collect data for the investigation of problems, analyze and interpret the results | 1 |
| **6** | Ability to work effectively in disciplinary and multidisciplinary teams; ability to work individually | 2 |
| **7** | Ability to communicate effectively in oral and written Turkish; knowledge of at least one foreign language. | 5 |
| **8** | Awareness of the necessity of lifelong learning; the ability to access information, to follow developments in science and technology and to constantly renew oneself | 2 |
| **9** | Awareness of professional and ethical responsibility | 1 |
| **10** | Knowledge about business life practices such as project management, risk management and change management; awareness of entrepreneurship, innovation and sustainable development | 1 |
| **11** | Knowledge about the effects of technical applications on health, environment and safety in universal and social dimensions and contemporary issues; awareness of the legal consequences of problem-oriented solutions | 1 |

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**COMPUTER PROGRAMMING PROGRAM**

**COURSE INFORMATION FORM**

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| --- | --- |
| **Course Name** | **Course Code** |
| CALCULUS I | 221111162 |

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| **Semester** | **Number of Course Hours per Week** | | **Credit** | **ECTS** |
| **Theory** | **Practice** |
| 1 | 3 | 0 | 3 | 3 |

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| **Course Category (Credit)** | | | | |
| **Basic Sciences** | **Engineering Sciences** | **Design** | **General Education** | **Social** |
| X |  |  |  |  |

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| --- | --- | --- |
| **Course Language** | **Course Level** | **Course Type** |
| Turkish | Associate degree | Compulsory |

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| **Prerequisite(s) if any** | NONE |
| **Objectives of the Course** | Perform arithmetic and algebraic operations. To be able to calculate the exponent, the root of a real number. Solving equations and inequalities. Draw line and parabola. To be able to use trigonometric ratios. Comprehension of complex numbers. To be able to comprehend the properties of exponential and logarithmic functions. |
| **Short Course Content** | Numbers, Algebra, Equations and Inequalities, Functions, Trigonometry, Complex Numbers, Logarithms |

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| **Learning Outcomes of the Course** | | **Contributed PO(s)** | **Teaching Methods \*** | **Measuring Methods \*\*** |
| **1** | To use numbers, algebra, equations and inequalities, functions, trigonometry, complex numbers, logarithms in their profession. | PO1  PO3 | 1,5,10 | A |
| **2** | To practice on these issues in the profession. | PO1  PO3 | 1, 5, 8, 10,11 | A |

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| **Main Textbook** | 1. Anadolu Üniversitesi Yayınları Genel Matematik. Eskişehir  2. Görgülü., A. (2000) Genel Matematik. Eskişehir  3. Şenel, M. , Orhun N. , Tüzemen Ş. ( 2003) Genel Matematik. Eskişehir  4. Yıldız E. (2004) Genel Matematik. Trabzon  5. Argün Z. (2001) Temel Matematik. Ankara : Seçkin Yayınevi |
| **Supporting References** |  |
| **Necessary Course Material** | Miter, protractor, compass and calculator. |

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| **Course Schedule** | |
| **1** | Number Sets, Operations, Process Priority |
| **2** | Exponents, Radical Numbers, Absolute Value |
| **3** | Identities, 1 Equations |
| **4** | 2nd Degree Equations and Inequalities |
| **5** | Function, Numerical Functions |
| **6** | Linear Functions and their graphs |
| **7** | Polynomial Functions and their graphs |
| **8** | Mid-term exam |
| **9** | Rational and Algebraic Functions |
| **10** | Rational and Algebraic Functions |
| **11** | Trigonometry Functions |
| **12** | Complex Numbers |
| **13** | Numbers Complex Applications |
| **14** | Funtions Exponential and Logarithms |
| **15** | Funtions Exponential and Logarithms |
| **16,17** | Final Exam |

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| **Calculation of Course Workload** | | | |
| **Activities** | **Number** | **Time (Hour)** | **Total Workload (Hour)** |
| Course Time (number of course hours per week) | 14 | 3 | 42 |
| Classroom Studying Time (review, reinforcing, prestudy,….) | 14 | 1 | 14 |
| Homework |  |  |  |
| Quiz Exam |  |  |  |
| Studying for Quiz Exam |  |  |  |
| Oral exam |  |  |  |
| Studying for Oral Exam |  |  |  |
| Report (Preparation and presentation time included) |  |  |  |
| Project (Preparation and presentation time included) |  |  |  |
| Presentation (Preparation time included) |  |  |  |
| Mid-Term Exam | 1 | 1 | 1 |
| Studying for Mid-Term Exam | 2 | 5 | 10 |
| Final Exam | 1 | 1 | 1 |
| Studying for Final Exam | 2 | 6 | 12 |
|  | **Total workload** | | **80** |
|  | **Total workload / 30** | | **2,666666667** |
|  | **Course ECTS Credit** | | **3** |

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| --- | --- |
| **Evaluation** | |
| **Activity Type** | **%** |
| Mid-term | 40 |
| Quiz |  |
| Homework |  |
| **Final Exam** | 60 |
| **Total** | 100 |

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| **RELATIONSHIP BETWEEN THE COURSE LEARNING OUTCOMES AND THE PROGRAM OUTCOMES (PO)** (5: Very high, 4: High, 3: Middle, 2: Low, 1: Very low) | | |
| **NO** | **PROGRAM OUTCOME** | **Contribution** |
| **1** | Adequate knowledge in basic sciences (mathematics, science) and the ability to apply theoretical and practical knowledge in these areas in problem solving | 5 |
| **2** | Ability to identify, define, formulate and solve complex problems; ability to select and apply appropriate analytical and modeling methods for this purpose | 3 |
| **3** | The ability to understand a complex system, system component or process and to solve system or process failures under certain realistic constraints. | 3 |
| **4** | Ability to develop, select and use modern techniques and tools required for practice; ability to use information technologies effectively | 1 |
| **5** | Ability to collect data for the investigation of problems, analyze and interpret the results | 1 |
| **6** | Ability to work effectively in disciplinary and multidisciplinary teams; ability to work individually | 1 |
| **7** | Ability to communicate effectively in oral and written Turkish; knowledge of at least one foreign language. | 1 |
| **8** | Awareness of the necessity of lifelong learning; the ability to access information, to follow developments in science and technology and to constantly renew oneself | 1 |
| **9** | Awareness of professional and ethical responsibility | 1 |
| **10** | Knowledge about business life practices such as project management, risk management and change management; awareness of entrepreneurship, innovation and sustainable development | 1 |
| **11** | Knowledge about the effects of technical applications on health, environment and safety in universal and social dimensions and contemporary issues; awareness of the legal consequences of problem-oriented solutions | 1 |
| **12** |  |  |

**ESOGU SİVRİHİSAR VOCATIONAL SCHOOL**

**COMPUTER PROGRAMMING PROGRAM**

**COURSE INFORMATION FORM**

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| **Course Name** | **Course Code** |
| INTRODUCTION TO ALGORITHMS AND PROGRAMMİNG | 221111143 |

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| **Semester** | **Number of Course Hours per Week** | | **Credit** | **ECTS** |
| **Theory** | **Practice** |
| 1 | 2 | 2 | 3 | 5 |

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| **Course Category (Credit)** | | | | |
| **Basic Sciences** | **Engineering Sciences** | **Design** | **General Education** | **Social** |
|  | X |  |  |  |

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| **Course Language** | **Course Level** | **Course Type** |
| Turkish | Associate degree | Compulsory |

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| **Prerequisite(s) if any** | - |
| **Objectives of the Course** | Explain the interaction between data structures and algorithms |
| **Short Course Content** | Arrays, matrices, discrete matrices, stacks, functions, subroutines, graphs, various lists, various branches are covered. Detailed algorithms for all data structures are covered, with in-depth analysis for each algorithm. |

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| **Learning Outcomes of the Course** | | **Contributed PO(s)** | **Teaching Methods \*** | **Measuring Methods \*\*** |
| **1** | To be able to comprehend the principles and phases necessary for the solution of a problem | 4,10 | 1, 6, 10  11, 12, 14 | A, D, J |
| **2** | To be able to make algorithms and flowcharts necessary for solving a problem | 2,4 | 1, 6, 10  11, 12, 14 | A, D, J |
| **3** | To be able to understand and use the structure of a programming language by using the programming language | 3,8 | 1, 6, 10  11, 12, 14 | A, D, J |
| **4** | To be able to write code for problems for which algorithms and flowcharts are prepared | 2,4,10 | 1, 6, 10  11, 12, 14 | A, D, J |
| **5** | Ability to understand and use concepts such as variables, control statements, loops, arrays, subroutines | 3,8 | 1, 6, 10  11, 12, 14 | A, D, J |

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| **Main Textbook** | 1-Fahri VATANSEVER-Algoritma Geliştirme ve Programlamaya Giriş- Seçkin yayıncılık  2.- Dr. Çölkesen Rifat, 'Programlama Algoritmalar', Papatya Yayıncılık |
| **Supporting References** | Sefer Algan -Her yönüyle C# , Pusula Yayıncılık |
| **Necessary Course Material** | Lecture, Computer lab work, homework |

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| **Course Schedule** | |
| **1** | General Concepts |
| **2** | Algorithms and flow diagrams |
| **3** | Algortima Flow Diagram and Pseudo Code |
| **4** | Operators and special characters, Representation of mathematical expressions in algorithms |
| **5** | General structure of the language used, introduction of the main function and editor, data, data type, variable, constant |
| **6** | Input - Output objects and their usage |
| **7** | Compile and Debug |
| **8** | Mid-Term Exam |
| **9** | if and switch-case structure |
| **10** | Loops, while and do while loop, counter method - for and foreach loops |
| **11** | One-dimensional and two-dimensional arrays |
| **12** | Ready-made functions and their usage |
| **13** | User-defined Functions |
| **14** | Graphical environment and graphic commands |
| **15** | Graphical environment and graphic commands |
| **16,17** | Final Exam |

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| **Calculation of Course Workload** | | | |
| **Activities** | **Number** | **Time (Hour)** | **Total Workload (Hour)** |
| Course Time (number of course hours per week) | 14 | 4 | 56 |
| Classroom Studying Time (review, reinforcing, prestudy,….) | 2 | 2 | 4 |
| Homework |  |  |  |
| Quiz Exam |  |  |  |
| Studying for Quiz Exam |  |  |  |
| Oral exam |  |  |  |
| Studying for Oral Exam |  |  |  |
| Report (Preparation and presentation time included) |  |  |  |
| Project (Preparation and presentation time included) | 4 | 5 | 20 |
| Presentation (Preparation time included) |  |  |  |
|  |  |  |  |
|  |  |  |  |
| Mid-Term Exam | 1 | 1 | 1 |
| Studying for Mid-Term Exam | 14 | 2 | 28 |
| Final Exam | 1 | 1 | 1 |
| Studying for Final Exam | 14 | 2 | 28 |
|  | **Total workload** | | **138** |
|  | **Total workload / 30** | | **4.6** |
|  | **Course ECTS Credit** | | **5** |

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| **Evaluation** | |
| **Activity Type** | **%** |
| Mid-term | 40 |
|  |  |
|  |  |
|  |  |
|  |  |
| **Final Exam** | 60 |
| **Total** | 100 |

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| **RELATIONSHIP BETWEEN THE COURSE LEARNING OUTCOMES AND THE PROGRAM OUTCOMES (PO)** (5: Very high, 4: High, 3: Middle, 2: Low, 1: Very low) | | |
| **NO** | **PROGRAM OUTCOME** | **Contribution** |
| **1** | Adequate knowledge in basic sciences (mathematics, science) and the ability to apply theoretical and practical knowledge in these areas in problem solving | 2 |
| **2** | Ability to identify, define, formulate and solve complex problems; ability to select and apply appropriate analytical and modeling methods for this purpose | 4 |
| **3** | The ability to understand a complex system, system component or process and to solve system or process failures under certain realistic constraints. | 3 |
| **4** | Ability to develop, select and use modern techniques and tools required for practice; ability to use information technologies effectively | 5 |
| **5** | Ability to collect data for the investigation of problems, analyze and interpret the results | 3 |
| **6** | Ability to work effectively in disciplinary and multidisciplinary teams; ability to work individually | 2 |
| **7** | Ability to communicate effectively in oral and written Turkish; knowledge of at least one foreign language. | 1 |
| **8** | Awareness of the necessity of lifelong learning; the ability to access information, to follow developments in science and technology and to constantly renew oneself | 4 |
| **9** | Awareness of professional and ethical responsibility | 1 |
| **10** | Knowledge about business life practices such as project management, risk management and change management; awareness of entrepreneurship, innovation and sustainable development | 3 |
| **11** | Knowledge about the effects of technical applications on health, environment and safety in universal and social dimensions and contemporary issues; awareness of the legal consequences of problem-oriented solutions | 4 |

**ESOGU SİVRİHİSAR VOCATIONAL SCHOOL**

**COMPUTER PROGRAMMING PROGRAM**

**COURSE INFORMATION FORM**

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| **Course Name** | **Course Code** |
| SOFTWARE PATTENN DESSGN AND ARCHITECTURE | 221111163 |

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| **Semester** | **Number of Course Hours per Week** | | **Credit** | **ECTS** |
| **Theory** | **Practice** |
| 1 | 2 | 0 | 2 | 2 |

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| **Course Category (Credit)** | | | | |
| **Basic Sciences** | **Engineering Sciences** | **Design** | **General Education** | **Social** |
|  | X |  |  |  |

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| --- | --- | --- |
| **Course Language** | **Course Level** | **Course Type** |
| Turkish | Associate degree | Compulsory |

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| **Prerequisite(s) if any** |  |
| **Objectives of the Course** | The aim of this course is to provide the modeling, design and development of software projects with software engineering discipline. For this purpose, the basic principles of software engineering, the steps of the software process, the standards of software design and standardized design patterns are taught. |
| **Short Course Content** | Bu ders yazılım mimarisi ve tasarımı için temel tasarım prensipleri ve stratejilerini kapsamaktadır. Mimari stiller, kalite nitelikleri, notasyonlar ve dokümantasyon, referans mimari, mimari süreçte etkiye özel mimari ve desen odaklı tasarım, detay tasarım sürecinde bileşen tabanlı tasarım, görünüş odaklı tasarım ve arayüz tasarımı konuları ele alınmaktadır. |

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| **Learning Outcomes of the Course** | | **Contributed PO(s)** | **Teaching Methods \*** | **Measuring Methods \*\*** |
| **1** | Define the basic elements of Software Engineering. | 3,4,10 | 1, 10   11, 12, 14 | A, D, J |
| **2** | Understand the fundamentals of Software Design and Architecture. | 3,4,10 | 1, 10   11, 12, 14 | A, D, J |
| **3** | Understand, research and compare architectural design methods. | 3,4,10 | 1, 10   11, 12, 14 | A, D, J |

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| **Main Textbook** | Tasarım Desenleri ve Mimarileri, Ali Kaya - Engin Bulut, PUSULA yayınevi |
| **Supporting References** |  |
| **Necessary Course Material** | Personel Computer |

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| **Course Schedule** | |
| **1** | What is Software Architecture |
| **2** | Why is Software Architecture Important? Why Software Architecture Matters |
| **3** | Quality Requirements Part I |
| **4** | Software Architecture in Agile Projects |
| **5** | Architecture and Requirements |
| **6** | Designing architecture |
| **7** | Software Architecture Documentation |
| **8** | Mid-Term Exam |
| **9** | Software Architecture Case Study I |
| **10** | Software Architecture Case Study II |
| **11** | Software Methodologies |
| **12** | Software Methodologies |
| **13** | Software Methodologies |
| **14** | Software Methodologies |
| **15** | Software Methodologies |
| **16,17** | Final Exam |

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| --- | --- | --- | --- |
| **Calculation of Course Workload** | | | |
| **Activities** | **Number** | **Time (Hour)** | **Total Workload (Hour)** |
| Course Time (number of course hours per week) | 14 | 2 | 28 |
| Classroom Studying Time (review, reinforcing, prestudy,….) |  |  |  |
| Homework |  |  |  |
| Quiz Exam | 1 | 1 | 1 |
| Studying for Quiz Exam |  |  |  |
| Oral exam |  |  |  |
| Studying for Oral Exam |  |  |  |
| Report (Preparation and presentation time included) |  |  |  |
| Project (Preparation and presentation time included) |  |  |  |
| Presentation (Preparation time included) |  |  |  |
|  |  |  |  |
|  |  |  |  |
| Mid-Term Exam | 1 | 1 | 1 |
| Studying for Mid-Term Exam | 5 | 3 | 15 |
| Final Exam | 1 | 1 | 1 |
| Studying for Final Exam | 14 | 1 | 14 |
|  | **Toplam iş yükü** | | **60** |
|  | **Toplam iş yükü / 30** | | **2** |
|  | **Dersin AKTS Kredisi** | | **2** |

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| **Evaluation** | |
| **Activity Type** | **%** |
| Mid-term | 40 |
| Quiz |  |
| Homework |  |
|  |  |
|  |  |
| **Final Exam** | 60 |
| **Total** | 100 |

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| **RELATIONSHIP BETWEEN THE COURSE LEARNING OUTCOMES AND THE PROGRAM OUTCOMES (PO)** (5: Very high, 4: High, 3: Middle, 2: Low, 1: Very low) | | |
| **NO** | **PROGRAM OUTCOME** | **Contribution** |
| **1** | Adequate knowledge in basic sciences (mathematics, science) and the ability to apply theoretical and practical knowledge in these areas in problem solving | 3 |
| **2** | Ability to identify, define, formulate and solve complex problems; ability to select and apply appropriate analytical and modeling methods for this purpose | 3 |
| **3** | The ability to understand a complex system, system component or process and to solve system or process failures under certain realistic constraints. | 5 |
| **4** | Ability to develop, select and use modern techniques and tools required for practice; ability to use information technologies effectively | 5 |
| **5** | Ability to collect data for the investigation of problems, analyze and interpret the results | 4 |
| **6** | Ability to work effectively in disciplinary and multidisciplinary teams; ability to work individually | 3 |
| **7** | Ability to communicate effectively in oral and written Turkish; knowledge of at least one foreign language. | 3 |
| **8** | Awareness of the necessity of lifelong learning; the ability to access information, to follow developments in science and technology and to constantly renew oneself | 3 |
| **9** | Awareness of professional and ethical responsibility | 3 |
| **10** | Knowledge about business life practices such as project management, risk management and change management; awareness of entrepreneurship, innovation and sustainable development | 4 |
| **11** | Knowledge about the effects of technical applications on health, environment and safety in universal and social dimensions and contemporary issues; awareness of the legal consequences of problem-oriented solutions | 3 |

**ESOGU SİVRİHİSAR VOCATIONAL SCHOOL**

**COMPUTER PROGRAMMING PROGRAM**

**COURSE INFORMATION FORM**

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| --- | --- |
| **Course Name** | **Course Code** |
| OFFICE SOFTWARE | 221111145 |

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| **Semester** | **Number of Course Hours per Week** | | **Credit** | **ECTS** |
| **Theory** | **Practice** |
| 1 | 2 | 2 | 3 | 4 |

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| **Course Category (Credit)** | | | | |
| **Basic Sciences** | **Engineering Sciences** | **Design** | **General Education** | **Social** |
|  | X |  |  |  |

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| **Course Language** | **Course Level** | **Course Type** |
| Turkish | Associate degree | Compulsory |

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| **Prerequisite(s) if any** | - |
| **Objectives of the Course** | To give all the necessary components for Microsoft Word, Excel and Powerpoint programs and to explain the use of office programs with clear and practical examples that students can adapt to their own needs. |
| **Short Course Content** | All necessary components for Microsoft Word, Excel and Powerpoint programs |

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| **Learning Outcomes of the Course** | | **Contributed PO(s)** | **Teaching Methods \*** | **Measuring Methods \*\*** |
| **1** | Know the definition of computer and recognize the hardware parts | 2,8 | 1, 6 | A |
| **2** | Knows the tasks and operations of computer hardware components | 2,8 | 1, 6 | A |
| **3** | Can use the Windows Operating system and make control settings | 2,8 | 1, 6 | A |
| **4** | Familiar with internet services and can do research on the internet | 2,8 | 1, 6 | A |

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| **Main Textbook** | Üçüncü,H.(2004),Uygulamalı Microsoft Office 2003.İstanbul:Alfa  Karagülle,İ.Pala,Z.(2000).Microsoft Access İstanbul:Türkmen |
| **Supporting References** | Windows ve Entegre Ofis, Zehra Alakoç Burma, Eylül 2005, Seçkin Yayıncılık |
| **Necessary Course Material** | Lecture, Computer lab work, homework |

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| **Course Schedule** | |
| **1** | Windows Operating system, Office concept |
| **2** | Word processing concept, File operations |
| **3** | Text formatting, icons, find-and-replace, Tables, border and shading |
| **4** | Page structure, AutoCorrect, drawing objects, toolbars, macro |
| **5** | Working with slides and presentations (Powerpoint) |
| **6** | Spreadsheet (Excel) introduction, tables, values |
| **7** | File operations, page structure |
| **8** | Mid-Term Exam |
| **9** | Formatting, working with data and lists, file operations, page structure |
| **10** | Functions, Graphics, Macros |
| **11** | Database concept, Introduction to Access |
| **12** | Data Fields, Form creation, Relationship building, querying |
| **13** | Reporting |
| **14** | Macros and project implementation |
| **15** | Macros and project implementation |
| **16,17** | Final Exam |

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| **Calculation of Course Workload** | | | |
| **Activities** | **Number** | **Time (Hour)** | **Total Workload (Hour)** |
| Course Time (number of course hours per week) | 14 | 3 | 42 |
| Classroom Studying Time (review, reinforcing, prestudy,….) | 2 | 2 | 4 |
| Homework | 5 | 6 | 30 |
| Quiz Exam |  |  |  |
| Studying for Quiz Exam |  |  |  |
| Oral exam |  |  |  |
| Studying for Oral Exam |  |  |  |
| Report (Preparation and presentation time included) |  |  |  |
| Project (Preparation and presentation time included) |  |  |  |
| Presentation (Preparation time included) |  |  |  |
|  |  |  |  |
|  |  |  |  |
| Mid-Term Exam | 1 | 1 | 1 |
| Studying for Mid-Term Exam | 14 | 1,5 | 21 |
| Final Exam | 1 | 1 | 1 |
| Studying for Final Exam | 14 | 1,5 | 21 |
|  | **Total workload** | | **120** |
|  | **Total workload / 30** | | **4** |
|  | **Course ECTS Credit** | | **4** |

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| **Evaluation** | |
| **Activity Type** | **%** |
| Mid-term | 40 |
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| **Final Exam** | 60 |
| **Total** | 100 |

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| **RELATIONSHIP BETWEEN THE COURSE LEARNING OUTCOMES AND THE PROGRAM OUTCOMES (PO)** (5: Very high, 4: High, 3: Middle, 2: Low, 1: Very low) | | |
| **NO** | **PROGRAM OUTCOME** | **Contribution** |
| **1** | Adequate knowledge in basic sciences (mathematics, science) and the ability to apply theoretical and practical knowledge in these areas in problem solving | 3 |
| **2** | Ability to identify, define, formulate and solve complex problems; ability to select and apply appropriate analytical and modeling methods for this purpose | 4 |
| **3** | The ability to understand a complex system, system component or process and to solve system or process failures under certain realistic constraints. | 1 |
| **4** | Ability to develop, select and use modern techniques and tools required for practice; ability to use information technologies effectively | 2 |
| **5** | Ability to collect data for the investigation of problems, analyze and interpret the results | 1 |
| **6** | Ability to work effectively in disciplinary and multidisciplinary teams; ability to work individually | 2 |
| **7** | Ability to communicate effectively in oral and written Turkish; knowledge of at least one foreign language. | 1 |
| **8** | Awareness of the necessity of lifelong learning; the ability to access information, to follow developments in science and technology and to constantly renew oneself | 5 |
| **9** | Awareness of professional and ethical responsibility | 2 |
| **10** | Knowledge about business life practices such as project management, risk management and change management; awareness of entrepreneurship, innovation and sustainable development | 1 |
| **11** | Knowledge about the effects of technical applications on health, environment and safety in universal and social dimensions and contemporary issues; awareness of the legal consequences of problem-oriented solutions | 2 |

**ESOGU SİVRİHİSAR VOCATIONAL SCHOOL**

**COMPUTER PROGRAMMING PROGRAM**

**COURSE INFORMATION FORM**

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| --- | --- |
| **Course Name** | **Course Code** |
| **OCCUPATIONAL HEALTH AND SAFETY** | 221111168 |

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| **Semester** | **Number of Course Hours per Week** | | **Credit** | **ECTS** |
| **Theory** | **Practice** |
| 1 | 2 | 0 | 2 | 2 |

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| **Course Category (Credit)** | | | | |
| **Basic Sciences** | **Engineering Sciences** | **Design** | **General Education** | **Social** |
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| **Course Language** | **Course Level** | **Course Type** |
| Turkish | Associate degree | Compulsory |

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| **Prerequisite(s) if any** |  |
| **Objectives of the Course** | To provide those who have acquired the profession of construction technician with the awareness of Occupational and Worker Health within the professional ethics during the periods when they enter the profession and apply the managerial life and responsibilities in the profession, and to define, introduce and communicate their responsibilities and duties in accordance with the legislation. |
| **Short Course Content** | Regulation of Occupational Health and workplace working conditions, Occupational Safety Principles, worker working conditions, rules, facilities and elements (PPEs) in construction workplaces and construction sites, legal and administrative Occupational Health and Safety personal, institutional and organizational management principles. |

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| **Learning Outcomes of the Course** | | **ContributedPO(s)** | **Teaching Methods \*** | **Measuring Methods \*\*** |
| **1** | The course is explained theoretically with pp reflections and presentations; It is aimed to explain, exemplify and evaluate the legal, managerial, professional principles, ethics and principles of working life, environmental protection, occupational health and safety tools, equipment, rules and legislation from the perspective and window of construction technician. | 7,9 | 1,5 | A |

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| --- | --- |
| **Main Textbook** | All books, lecture notes, Law Texts, Regulations, Statutes, Case Laws, Rulings, legislation and writings related to the course are the main resources. |
| **Supporting References** | Practical, exemplary, corporate, personal books, lecture notes, directives, regulations, statutes, specifications, printed and written legislation on all other subjects are valid. |
| **Necessary Course Material** | Laptop, Datashow (data projection devices), Fixed or movable white screen, blackboard for written applications. |

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| **Course Schedule** | |
| **1** | Introduction, general introduction of Occupational Health and Safety, Work Accidents, Occupational Diseases |
| **2** | Development of Occupational Health and Safety in the world and in Türkiye |
| **3** | Legal dimension and duties, powers and responsibilities in occupational health and safety in Türkiye |
| **4** | Occupational Safety promotion, Risks in buildings and other construction style working environments |
| **5** | Working at Height, its dangers, protection methods, features and conditions |
| **6** | Places and types of falls, their shapes, precautions to be taken against falls, tools and equipment |
| **7** | Places and types of falls, their shapes, precautions to be taken against falls, tools and equipment |
| **8** | Mid-Term Exam |
| **9** | Types of accidents that result in crushing, squeezing, impact, soft tissue trauma |
| **10** | Workplace risks, working conditions, protection measures, equipment in construction and construction machinery, Working conditions, risks and characteristics, protection in closed environments (such as galleries, wells, tunnels and corridors) |
| **11** | Use of explosives, working conditions and environment with pressure containers and tubes, features, protection |
| **12** | Occupational Health and Safety, Occupational Disease documents, rules and conditions in legal and administrative media |
| **13** | Demonstration of occupational health and safety measures on a sample construction site |
| **14** | Presentation and discussion of assignments |
| **15** | Presentation and discussion of assignments |
| **16,17** | Final Exam |

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| **Calculation of CourseWorkload** | | | |
| **Activities** | **Number** | **Time (Hour)** | **Total Workload (Hour)** |
| Course Time (number of course hours per week) | 14 | 2 | 28 |
| Classroom Studying Time (review, reinforcing, prestudy,….) | 10 | 1 | 10 |
| Homework |  |  |  |
| QuizExam |  |  |  |
| Studying for Quiz Exam |  |  |  |
| Oral exam |  |  |  |
| Studying for Oral Exam |  |  |  |
| Report (Preparation and presentation time included) |  |  |  |
| Project (Preparation and presentation time included) |  |  |  |
| Presentation (Preparation time included) |  |  |  |
|  |  |  |  |
|  |  |  |  |
| Mid-Term Exam | 1 | 1 | 1 |
| Studying for Mid-Term Exam | 1 | 10 | 10 |
| Final Exam | 1 | 1 | 1 |
| Studying for Final Exam | 1 | 10 | 10 |
|  | **Total workload** | | **60** |
|  | **Total workload / 30** | | **2** |
|  | **CourseECTSCredit** | | **2** |

|  |  |
| --- | --- |
| **Evaluation** | |
| **Activity Type** | **%** |
| Mid-term | 40 |
| Quiz |  |
| Homework |  |
|  |  |
|  |  |
| **Final Exam** | 60 |
| **Total** | 100 |

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| **RELATIONSHIP BETWEEN THE COURSE LEARNING OUTCOMES AND THE PROGRAM OUTCOMES (PO)**(5: Very high, 4: High, 3:Middle, 2: Low, 1: Very low) | | |
| **NO** | **PROGRAM OUTCOME** | **Contribution** |
| **1** | Adequate knowledge in basic sciences (mathematics, science) and the ability to apply theoretical and practical knowledge in these areas in problem solving | 1 |
| **2** | Ability to identify, define, formulate and solve complex problems; ability to select and apply appropriate analytical and modeling methods for this purpose | 1 |
| **3** | The ability to understand a complex system, system component or process and to solve system or process failures under certain realistic constraints. | 2 |
| **4** | Ability to develop, select and use modern techniques and tools required for practice; ability to use information technologies effectively | 1 |
| **5** | Ability to collect data for the investigation of problems, analyze and interpret the results | 2 |
| **6** | Ability to work effectively in disciplinary and multidisciplinary teams; ability to work individually | 2 |
| **7** | Ability to communicate effectively in oral and written Turkish; knowledge of at least one foreign language. | 3 |
| **8** | Awareness of the necessity of lifelong learning; the ability to access information, to follow developments in science and technology and to constantly renew oneself | 2 |
| **9** | Awareness of professional and ethical responsibility | 5 |
| **10** | Knowledge about business life practices such as project management, risk management and change management; awareness of entrepreneurship, innovation and sustainable development | 1 |
| **11** | Knowledge about the effects of technical applications on health, environment and safety in universal and social dimensions and contemporary issues; awareness of the legal consequences of problem-oriented solutions | 1 |
| **12** |  |  |

**ESOGU SİVRİHİSAR VOCATIONAL SCHOOL**

**COMPUTER PROGRAMMING PROGRAM**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **Course Name** | **Course Code** |
| COMPUTER HARDWARE | 221111164 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Semester** | **Number of Course Hours per Week** | | **Credit** | **ECTS** |
| **Theory** | **Practice** |
| 1 | 3 | 0 | 3 | 3 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Course Category (Credit)** | | | | |
| **Basic Sciences** | **Engineering Sciences** | **Design** | **General Education** | **Social** |
|  | X |  |  |  |

|  |  |  |
| --- | --- | --- |
| **Course Language** | **Course Level** | **Course Type** |
| Turkish | Associate degree | Elective |

|  |  |
| --- | --- |
| **Prerequisite(s) if any** | - |
| **Objectives of the Course** | The Computer Hardware course aims to introduce students to the basic components of computer systems and to enable them to understand the functioning of these components and the interaction between them. Within the scope of this course, the installation, maintenance and troubleshooting processes of hardware components are discussed and students are expected to develop their practical skills. |
| **Short Course Content** | This course covers the basic components and operation of computer hardware. Topics include the motherboard, processor, memory, storage, power supply and peripherals. Hardware installation, configuration, troubleshooting, maintenance and current hardware technologies are also covered. Students will gain theoretical knowledge and practical skills. |

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| --- | --- | --- | --- | --- |
| **Learning Outcomes of the Course** | | **Contributed PO(s)** | **Teaching Methods \*** | **Measuring Methods \*\*** |
| **1** | Identify the basic hardware components of computer systems and explain their functions. | 2,8 | 1, 6 | A |
| **2** | Be able to install and configure hardware components correctly. | 2,8 | 1, 6 | A |
| **3** | Identify and solve basic problems that occur in computer hardware. | 2,8 | 1, 6 | A |
| **4** | Follow and apply current hardware technologies and innovations. | 2,8 | 1, 6 | A |
| **5** | Describe basic networking hardware and perform simple network configurations. | 2,8 | 1, 6 | A |

|  |  |
| --- | --- |
| **Main Textbook** | Bilgisayar Donanımı, Ebubekir Yaşar, EKİN KİTABEVİ YAYINLARI  Bilgisayar Donanımı ve Bileşenleri, Özkan Canay,Tolga Güngörsün ,1. Baskı, Eylül 2016 |
| **Supporting References** | - |
| **Necessary Course Material** | Lecture, Computer lab work, homework |

|  |  |
| --- | --- |
| **Course Schedule** | |
| **1** | Introduction and Overview of Computer Hardware |
| **2** | Motherboards and Components |
| **3** | Processors (CPU) and Working Principles |
| **4** | Memory Types and Management (RAM, ROM, Cache) |
| **5** | Storage Units (HDD, SSD, Optical Drives) |
| **6** | Power Supply and Peripherals |
| **7** | Video Cards and Sound Cards |
| **8** | Mid-Term Exam |
| **9** | Computer Assembly and Component Assembly |
| **10** | Diagnosing and Troubleshooting Hardware Problems |
| **11** | Current Hardware Technologies and Innovations |
| **12** | Basic Network Hardware and Configuration |
| **13** | Computer Maintenance and Repair |
| **14** | How to Improve Hardware Performance |
| **15** | General Review and Practical Project Studies |
| **16,17** | Final Exam |

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| --- | --- | --- | --- |
| **Calculation of Course Workload** | | | |
| **Activities** | **Number** | **Time (Hour)** | **Total Workload (Hour)** |
| Course Time (number of course hours per week) | 14 | 3 | 42 |
| Classroom Studying Time (review, reinforcing, prestudy,….) | 2 | 2 | 4 |
| Homework |  |  |  |
| Quiz Exam |  |  |  |
| Studying for Quiz Exam |  |  |  |
| Oral exam |  |  |  |
| Studying for Oral Exam |  |  |  |
| Report (Preparation and presentation time included) |  |  |  |
| Project (Preparation and presentation time included) |  |  |  |
| Presentation (Preparation time included) |  |  |  |
|  |  |  |  |
|  |  |  |  |
| Mid-Term Exam | 1 | 1 | 1 |
| Studying for Mid-Term Exam | 14 | 1,5 | 21 |
| Final Exam | 1 | 1 | 1 |
| Studying for Final Exam | 14 | 1,5 | 21 |
|  | **Total workload** | | **90** |
|  | **Total workload / 30** | | **3** |
|  | **Course ECTS Credit** | | **3** |

|  |  |
| --- | --- |
| **Evaluation** | |
| **Activity Type** | **%** |
| Mid-term | 40 |
|  |  |
| Homework |  |
|  |  |
|  |  |
| **Final Exam** | 60 |
| **Total** | 100 |

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| --- | --- | --- |
| **RELATIONSHIP BETWEEN THE COURSE LEARNING OUTCOMES AND THE PROGRAM OUTCOMES (PO)** (5: Very high, 4: High, 3: Middle, 2: Low, 1: Very low) | | |
| **NO** | **PROGRAM OUTCOME** | **Contribution** |
| **1** | Adequate knowledge in basic sciences (mathematics, science) and the ability to apply theoretical and practical knowledge in these areas in problem solving | 3 |
| **2** | Ability to identify, define, formulate and solve complex problems; ability to select and apply appropriate analytical and modeling methods for this purpose | 4 |
| **3** | The ability to understand a complex system, system component or process and to solve system or process failures under certain realistic constraints. | 1 |
| **4** | Ability to develop, select and use modern techniques and tools required for practice; ability to use information technologies effectively | 2 |
| **5** | Ability to collect data for the investigation of problems, analyze and interpret the results | 1 |
| **6** | Ability to work effectively in disciplinary and multidisciplinary teams; ability to work individually | 2 |
| **7** | Ability to communicate effectively in oral and written Turkish; knowledge of at least one foreign language. | 1 |
| **8** | Awareness of the necessity of lifelong learning; the ability to access information, to follow developments in science and technology and to constantly renew oneself | 5 |
| **9** | Awareness of professional and ethical responsibility | 2 |
| **10** | Knowledge about business life practices such as project management, risk management and change management; awareness of entrepreneurship, innovation and sustainable development | 1 |
| **11** | Knowledge about the effects of technical applications on health, environment and safety in universal and social dimensions and contemporary issues; awareness of the legal consequences of problem-oriented solutions | 2 |

**ESOGU SİVRİHİSAR VOCATIONAL SCHOOL**

**COMPUTER PROGRAMMING PROGRAM**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **Course Name** | **Course Code** |
| BASIC ELECTRONICS | 221111169 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Semester** | **Number of Course Hours per Week** | | **Credit** | **ECTS** |
| **Theory** | **Practice** |
| 1 | 3 | 0 | 3 | 3 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Course Category (Credit)** | | | | |
| **Basic Sciences** | **Engineering Sciences** | **Design** | **General Education** | **Social** |
|  | X |  |  |  |

|  |  |  |
| --- | --- | --- |
| **Course Language** | **Course Level** | **Course Type** |
| Turkish | Associate degree | Elective |

|  |  |
| --- | --- |
| **Prerequisite(s) if any** | - |
| **Objectives of the Course** | To be able to comprehend the basic electronic elements and principles required for computer hardware. To be able to comprehend the operation of circuits built with basic analog and digital electronic circuit elements. |
| **Short Course Content** | - Basic principles of electronic circuits  - Electronic circuit elements and semiconductors  - Fundamentals of analog electronic circuits  - Analysis and working principles of electronic circuits |

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| --- | --- | --- | --- | --- |
| **Learning Outcomes of the Course** | | **Contributed PO(s)** | **Teaching Methods \*** | **Measuring Methods \*\*** |
| **1** | Define electronic circuit elements (resistors, capacitors, coils, diodes, transistors, etc.) and explain their functions. | 6 | 1, 6 | A |
| **2** | Understand and apply the basic principles and working mechanisms of electrical and electronic circuits. | 6 | 1, 6 | A |
| **3** | Analyze circuits using measurement devices (multimeter, oscilloscope, etc.) used in electronic circuits. | 6 | 1, 6 | A |
| **4** | Design, assemble and operate simple electronic circuits. | 6 | 1, 6 | A |
| **5** | Identify and solve basic problems encountered in electronic circuits. | 6 | 1, 6 | A |

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| --- | --- |
| **Main Textbook** | Temel Elektronik- Hüseyin Demirel  Herkes İçin Elektronik – Eyüp Ersan Sülün, Muzaffer Aslan |
| **Supporting References** | - |
| **Necessary Course Material** | - |

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| **Course Schedule** | |
| **1** | Static Electricity |
| **2** | Taking Precautions Against Unforeseen Effects of Electric Current |
| **3** | Circuit elements and classification |
| **4** | Direct Current Circuit Solutions |
| **5** | Direct Current Circuit Solutions |
| **6** | Environmental Flows Method |
| **7** | Environmental Flows Method |
| **8** | Mid-Term Exam |
| **9** | Node Tension Method |
| **10** | Node Tension Method |
| **11** | Current source model, voltage source model and source transformations |
| **12** | Thevenin's Theorem |
| **13** | Maximum Power Theorem |
| **14** | Direct Current Storage elements |
| **15** | Direct Current Storage elements |
| **16,17** | Final Exam |

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| --- | --- | --- | --- |
| **Calculation of Course Workload** | | | |
| **Activities** | **Number** | **Time (Hour)** | **Total Workload (Hour)** |
| Course Time (number of course hours per week) | 14 | 3 | 42 |
| Classroom Studying Time (review, reinforcing, prestudy,….) | 2 | 2 | 4 |
| Homework |  |  |  |
| Quiz Exam |  |  |  |
| Studying for Quiz Exam |  |  |  |
| Oral exam |  |  |  |
| Studying for Oral Exam |  |  |  |
| Report (Preparation and presentation time included) |  |  |  |
| Project (Preparation and presentation time included) |  |  |  |
| Presentation (Preparation time included) |  |  |  |
|  |  |  |  |
|  |  |  |  |
| Mid-Term Exam | 1 | 1 | 1 |
| Studying for Mid-Term Exam | 14 | 1,5 | 21 |
| Final Exam | 1 | 1 | 1 |
| Studying for Final Exam | 14 | 1,5 | 21 |
|  | **Total workload** | | **90** |
|  | **Total workload / 30** | | **3** |
|  | **Course ECTS Credit** | | **3** |

|  |  |
| --- | --- |
| **Evaluation** | |
| **Activity Type** | **%** |
| Mid-term | 40 |
|  |  |
|  |  |
|  |  |
|  |  |
| **Final Exam** | 60 |
| **Total** | 100 |

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| --- | --- | --- |
| **RELATIONSHIP BETWEEN THE COURSE LEARNING OUTCOMES AND THE PROGRAM OUTCOMES (PO)** (5: Very high, 4: High, 3: Middle, 2: Low, 1: Very low) | | |
| **NO** | **PROGRAM OUTCOME** | **Contribution** |
| **1** | Adequate knowledge in basic sciences (mathematics, science) and the ability to apply theoretical and practical knowledge in these areas in problem solving | 3 |
| **2** | Ability to identify, define, formulate and solve complex problems; ability to select and apply appropriate analytical and modeling methods for this purpose | 3 |
| **3** | The ability to understand a complex system, system component or process and to solve system or process failures under certain realistic constraints. | 1 |
| **4** | Ability to develop, select and use modern techniques and tools required for practice; ability to use information technologies effectively | 2 |
| **5** | Ability to collect data for the investigation of problems, analyze and interpret the results | 1 |
| **6** | Ability to work effectively in disciplinary and multidisciplinary teams; ability to work individually | 5 |
| **7** | Ability to communicate effectively in oral and written Turkish; knowledge of at least one foreign language. | 1 |
| **8** | Awareness of the necessity of lifelong learning; the ability to access information, to follow developments in science and technology and to constantly renew oneself | 3 |
| **9** | Awareness of professional and ethical responsibility | 2 |
| **10** | Knowledge about business life practices such as project management, risk management and change management; awareness of entrepreneurship, innovation and sustainable development | 1 |
| **11** | Knowledge about the effects of technical applications on health, environment and safety in universal and social dimensions and contemporary issues; awareness of the legal consequences of problem-oriented solutions | 2 |

**ESOGU SİVRİHİSAR VOCATIONAL SCHOOL**

**COMPUTER PROGRAMMING PROGRAM**

**COURSE INFORMATION FORM**

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| --- | --- |
| **Course Name** | **Course Code** |
| APPLIED STATISTICS | 221111170 |

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| --- | --- | --- | --- | --- |
| **Semester** | **Number of Course Hours per Week** | | **Credit** | **ECTS** |
| **Theory** | **Practice** |
| 1 | 2 | 0 | 2 | 2 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Course Category (Credit)** | | | | |
| **Basic Sciences** | **Engineering Sciences** | **Design** | **General Education** | **Social** |
|  |  |  |  | X |

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| --- | --- | --- |
| **Course Language** | **Course Level** | **Course Type** |
| Turkish | Associate degree | Elective |

|  |  |
| --- | --- |
| **Prerequisite(s) if any** | - |
| **Objectives of the Course** | The aim of this course is to examine some statistical problems with the help of package programs and to teach the students to interpret the results obtained here. |
| **Short Course Content** | By giving the basic concepts of statistics, to be able to analyze them with some statistical software packages. |

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| --- | --- | --- | --- | --- |
| **Learning Outcomes of the Course** | | **Contributed PO(s)** | **Teaching Methods \*** | **Measuring Methods \*\*** |
| **1** | To have knowledge about some statistical software packages related to statistics and to be able to use them | 1,8 | 1, 6 | A |
| **2** | To be able to organize the data required in research and transfer them to the computer | 1,8 | 1, 6 | A |
| **3** | Creating tables and graphs with the help of some statistical software programs | 1,8 | 1, 6 | A |
| **4** | To be able to comprehend basic level statistical terms | 1,8 | 1, 6 | A |
| **5** | Establish a relationship between statistical concepts | 1,8 | 1, 6 | A |
| **6** | To be able to analyze basic statistical concepts and methods with statistical software programs | 1,8 | 1, 6 | A |
| **7** | To be able to interpret and present the results of statistical analysis | 1,8 | 1, 6 | A |

|  |  |
| --- | --- |
| **Main Textbook** | • Erkan IŞIĞIÇOK, Altı Sigma Kara Kuşaklar İçin Hipotez Testleri Yol Haritası, Marmara Kitabevi, Genişletilmiş 2. Baskı 2011, Bursa.  • Nuran BAYRAM, SPSS ile Veri Analizi, Ezgi Kitabevi, 2009, Bursa.  • Ayşe OĞUZLAR, İstatistiksel Veri Analizi 1, Ezgi Kitabevi, 2007, Bursa. |
| **Supporting References** | - |
| **Necessary Course Material** | Lecture, Computer Laboratory work, homework |

|  |  |
| --- | --- |
| **Course Schedule** | |
| **1** | Basic Statistics |
| **2** | Statistical Interpretation: December forecast |
| **3** | Range forecast for the average |
| **4** | Hypothesis testing |
| **5** | Hypothesis testing |
| **6** | Hypothesis testing |
| **7** | Hypothesis testing |
| **8** | Mid-Term Exam |
| **9** | t-Testi |
| **10** | z-Testi |
| **11** | Khi-Kare testleri |
| **12** | Khi-Kare testleri |
| **13** | Varyans analizi |
| **14** | Varyans analizi |
| **15** | Varyans analizi |
| **16,17** | Final Exam |

|  |  |  |  |
| --- | --- | --- | --- |
| **Calculation of Course Workload** | | | |
| **Activities** | **Number** | **Time (Hour)** | **Total Workload (Hour)** |
| Course Time (number of course hours per week) | 14 | 2 | 28 |
| Classroom Studying Time (review, reinforcing, prestudy,….) |  |  |  |
| Homework |  |  |  |
| Quiz Exam |  |  |  |
| Studying for Quiz Exam |  |  |  |
| Oral exam |  |  |  |
| Studying for Oral Exam |  |  |  |
| Report (Preparation and presentation time included) |  |  |  |
| Project (Preparation and presentation time included) |  |  |  |
| Presentation (Preparation time included) |  |  |  |
| Mid-Term Exam | 1 | 1 | 1 |
| Studying for Mid-Term Exam | 14 | 1 | 14 |
| Final Exam | 1 | 1 | 1 |
| Studying for Final Exam | 14 | 1 | 14 |
|  | **Total workload** | | **58** |
|  | **Total workload / 30** | | **1,93** |
|  | **Course ECTS Credit** | | **2** |

|  |  |
| --- | --- |
| **Evaluation** | |
| **Activity Type** | **%** |
| Mid-term | 40 |
|  |  |
|  |  |
|  |  |
|  |  |
| **Final Exam** | 60 |
| **Total** | 100 |

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| --- | --- | --- |
| **RELATIONSHIP BETWEEN THE COURSE LEARNING OUTCOMES AND THE PROGRAM OUTCOMES (PO)** (5: Very high, 4: High, 3: Middle, 2: Low, 1: Very low) | | |
| **NO** | **PROGRAM OUTCOME** | **Contribution** |
| **1** | Adequate knowledge in basic sciences (mathematics, science) and the ability to apply theoretical and practical knowledge in these areas in problem solving | 5 |
| **2** | Ability to identify, define, formulate and solve complex problems; ability to select and apply appropriate analytical and modeling methods for this purpose | 2 |
| **3** | The ability to understand a complex system, system component or process and to solve system or process failures under certain realistic constraints. | 1 |
| **4** | Ability to develop, select and use modern techniques and tools required for practice; ability to use information technologies effectively | 3 |
| **5** | Ability to collect data for the investigation of problems, analyze and interpret the results | 2 |
| **6** | Ability to work effectively in disciplinary and multidisciplinary teams; ability to work individually | 1 |
| **7** | Ability to communicate effectively in oral and written Turkish; knowledge of at least one foreign language. | 1 |
| **8** | Awareness of the necessity of lifelong learning; the ability to access information, to follow developments in science and technology and to constantly renew oneself | 4 |
| **9** | Awareness of professional and ethical responsibility | 2 |
| **10** | Knowledge about business life practices such as project management, risk management and change management; awareness of entrepreneurship, innovation and sustainable development | 1 |
| **11** | Knowledge about the effects of technical applications on health, environment and safety in universal and social dimensions and contemporary issues; awareness of the legal consequences of problem-oriented solutions | 2 |

**ESOGU SİVRİHİSAR VOCATIONAL SCHOOL**

**COMPUTER PROGRAMMING PROGRAM**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **Course Name** | **Course Code** |
| RESEARCH METHODS AND TECHNIQUES | 221111165 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Semester** | **Number of Course Hours per Week** | | **Credit** | **ECTS** |
| **Theory** | **Practice** |
| 1 | 2 | 0 | 2 | 2 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Course Category (Credit)** | | | | |
| **Basic Sciences** | **Engineering Sciences** | **Design** | **General Education** | **Social** |
|  |  |  |  | X |

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| --- | --- | --- |
| **Course Language** | **Course Level** | **Course Type** |
| Turkish | Associate degree | Elective |

|  |  |
| --- | --- |
| **Prerequisite(s) if any** | NONE |
| **Objectives of the Course** | Every student who takes this course learns how to collect data, evaluate data, analyze data with statistical programs, make presentations and prepare research reports. |
| **Short Course Content** | Conducting research and preparing a research report  Presenting the research |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Learning Outcomes of the Course** | | **Contributed PO(s)** | **Teaching Methods \*** | **Measuring Methods \*\*** |
| **1** | Conducting research | 1,2 | 1,5,6,11 | A,D |
| **2** | Data collection | 1,2 | 1,5,6,11 | A,D |
| **3** | Analyzing data with statistical methods | 1,2 | 1,5,6,11 | A,D |
| **4** | Preparing a research report | 1,2 | 1,5,6,11 | A,D |
| **5** | Presenting the research | 1,2 | 1,5,6,11 | A,D |

|  |  |
| --- | --- |
| **Main Textbook** | Karasar, Niyazi; Research Methods and Techniques |
| **Supporting References** | Slides Prepared by the Instructor Regarding the Course Content |
| **Necessary Course Material** | Projection, Computer |

|  |  |
| --- | --- |
| **Course Schedule** | |
| **1** | Definition and basic concepts of Scientific Research |
| **2** | Types of Research |
| **3** | Conducting Source Research |
| **4** | Data Types |
| **5** | Data sources and data collection methods |
| **6** | Quantitative and Qualitative Research Methods |
| **7** | Quantitative and Qualitative Research Methods |
| **8** | MIDTERM EXAM |
| **9** | Evaluating Research Results |
| **10** | Evaluating Research Results |
| **11** | Converting Research Results into Reports |
| **12** | Converting Research Results into Reports |
| **13** | Preparing for a Presentation |
| **14** | Preparing for a Presentation |
| **15** | Presentation |
| **16,17** | FINAL EXAM |

|  |  |  |  |
| --- | --- | --- | --- |
| **Calculation of Course Workload** | | | |
| **Activities** | **Number** | **Time (Hour)** | **Total Workload (Hour)** |
| Course Time (number of course hours per week) | 14 | 2 | 28 |
| Classroom Studying Time (review, reinforcing, prestudy,….) | 14 | 1 | 14 |
| Homework | 1 | 5 | 5 |
| Quiz Exam |  |  |  |
| Studying for Quiz Exam |  |  |  |
| Oral exam |  |  |  |
| Studying for Oral Exam |  |  |  |
| Report (Preparation and presentation time included) | 1 | 2 | 2 |
| Project (Preparation and presentation time included) |  |  |  |
| Presentation (Preparation time included) | 1 | 2 | 2 |
| Mid-Term Exam | 1 | 1 | 1 |
| Studying for Mid-Term Exam | 1 | 8 | 8 |
| Final Exam | 1 | 1 | 1 |
| Studying for Final Exam | 2 | 8 | 16 |
|  | **Total workload** | | **77** |
|  | **Total workload / 30** | | **2,566666667** |
|  | **Course ECTS Credit** | | **3** |
| **Evaluation** | | | |
| **Activity Type** | **%** | | |
| Mid-term | 25 | | |
| Homework | 25 | | |
|  |  | | |
|  |  | | |
|  |  | | |
| **Final Exam** | 50 | | |
| **Total** | 100 | | |

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| --- | --- | --- |
| **RELATIONSHIP BETWEEN THE COURSE LEARNING OUTCOMES AND THE PROGRAM OUTCOMES (PO)** (5: Very high, 4: High, 3: Middle, 2: Low, 1: Very low) | | |
| **NO** | **PROGRAM OUTCOME** | **Contribution** |
| **1** | Adequate knowledge in basic sciences (mathematics, science) and the ability to apply theoretical and practical knowledge in these areas in problem solving | 4 |
| **2** | Ability to identify, define, formulate and solve complex problems; ability to select and apply appropriate analytical and modeling methods for this purpose | 4 |
| **3** | The ability to understand a complex system, system component or process and to solve system or process failures under certain realistic constraints. | 1 |
| **4** | Ability to develop, select and use modern techniques and tools required for practice; ability to use information technologies effectively | 1 |
| **5** | Ability to collect data for the investigation of problems, analyze and interpret the results | 1 |
| **6** | Ability to work effectively in disciplinary and multidisciplinary teams; ability to work individually | 1 |
| **7** | Ability to communicate effectively in oral and written Turkish; knowledge of at least one foreign language. | 1 |
| **8** | Awareness of the necessity of lifelong learning; the ability to access information, to follow developments in science and technology and to constantly renew oneself | 1 |
| **9** | Awareness of professional and ethical responsibility | 1 |
| **10** | Knowledge about business life practices such as project management, risk management and change management; awareness of entrepreneurship, innovation and sustainable development | 1 |
| **11** | Knowledge about the effects of technical applications on health, environment and safety in universal and social dimensions and contemporary issues; awareness of the legal consequences of problem-oriented solutions | 1 |

**ESOGU SİVRİHİSAR VOCATIONAL SCHOOL**

**COMPUTER PROGRAMMING PROGRAM**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **Course Name** | **Course Code** |
| GENERAL AND TECHNICAL COMMUNICATION | 221111166 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Semester** | **Number of Course Hours per Week** | | **Credit** | **ECTS** |
| **Theory** | **Practice** |
| 1 | 2 | 0 | 2 | 3 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Course Category (Credit)** | | | | |
| **Basic Sciences** | **Engineering Sciences** | **Design** | **General Education** | **Social** |
|  |  |  |  | X |

|  |  |  |
| --- | --- | --- |
| **Course Language** | **Course Level** | **Course Type** |
| Turkish | Associate degree | Elective |

|  |  |
| --- | --- |
| **Prerequisite(s) if any** | NONE |
| **Objectives of the Course** | The aim of this course is to teach communication methods and to increase the student's communication skills. |
| **Short Course Content** | Definition of communication, its importance, individual and mass communication methods |

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| --- | --- | --- | --- | --- |
| **Learning Outcomes of the Course** | | **Contributed PO(s)** | **Teaching Methods \*** | **Measuring Methods \*\*** |
| **1** | Know the principles of communication | 7 | 1, 2, 5, 11 | A |
| **2** | Can set goals and set goals in communication. | 7 | 1, 2, 5,11 | A |
| **3** | People who may encounter in business life (employee, employer, customer, etc.) communicate successfully in relationships | 7 | 1, 2, 5,11 | A |

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| --- | --- |
| **Main Textbook** | Anadolu Üniversitesi Yayınları, SÖZLÜ VE SÖZSÜZ İLETİŞİM- Aralık 2018-Eskişehir  Anadolu Üniversitesi Yayınları, İKNA EDİCİ İLETİŞİM - Ağustos 2018-Eskişehir |
| **Supporting References** | Slides Prepared by the Instructor Regarding the Course Content, Lecture Notes |
| **Necessary Course Material** | Blackboard- Projection, Computer |

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| **Course Schedule** | |
| **1** | Definitions and importance of communication |
| **2** | Purpose and elements of communication |
| **3** | Internal communication |
| **4** | Close communication, Remote communication |
| **5** | Types of individual communication |
| **6** | Verbal and non-verbal communication, written communication |
| **7** | Technical communication |
| **8** | MIDTERM EXAM |
| **9** | Mass communication |
| **10** | Formal communication |
| **11** | Types of organizational communication |
| **12** | Communication efficiency |
| **13** | Persuasive communication |
| **14** | Communication failures and their consequences |
| **15** | Project-presentation, communication applications |
| **16,17** | FINAL EXAM |

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| --- | --- | --- | --- |
| **Calculation of Course Workload** | | | |
| **Activities** | **Number** | **Time (Hour)** | **Total Workload (Hour)** |
| Course Time (number of course hours per week) | 14 | 2 | 28 |
| Classroom Studying Time (review, reinforcing, prestudy,….) | 14 | 1 | 14 |
| Homework |  |  |  |
| Quiz Exam |  |  |  |
| Studying for Quiz Exam |  |  |  |
| Oral exam |  |  |  |
| Studying for Oral Exam |  |  |  |
| Report (Preparation and presentation time included) |  |  |  |
| Project (Preparation and presentation time included) |  |  |  |
| Presentation (Preparation time included) |  |  |  |
| Mid-Term Exam | 1 | 1 | 1 |
| Studying for Mid-Term Exam | 2 | 6 | 12 |
| Final Exam | 1 | 1 | 1 |
| Studying for Final Exam | 2 | 10 | 20 |
|  | **Total workload** | | **76** |
|  | **Total workload / 30** | | **2,5333333** |
|  | **Course ECTS Credit** | | **3** |

|  |  |
| --- | --- |
| **Evaluation** | |
| **Activity Type** | **%** |
| Mid-term | 40 |
| Homework |  |
|  |  |
|  |  |
|  |  |
| **Final Exam** | 60 |
| **Total** | 100 |

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| --- | --- | --- |
| **RELATIONSHIP BETWEEN THE COURSE LEARNING OUTCOMES AND THE PROGRAM OUTCOMES (PO)** (5: Very high, 4: High, 3: Middle, 2: Low, 1: Very low) | | |
| **NO** | **PROGRAM OUTCOME** | **Contribution** |
| **1** | Adequate knowledge in basic sciences (mathematics, science) and the ability to apply theoretical and practical knowledge in these areas in problem solving | 2 |
| **2** | Ability to identify, define, formulate and solve complex problems; ability to select and apply appropriate analytical and modeling methods for this purpose | 2 |
| **3** | The ability to understand a complex system, system component or process and to solve system or process failures under certain realistic constraints. | 1 |
| **4** | Ability to develop, select and use modern techniques and tools required for practice; ability to use information technologies effectively | 3 |
| **5** | Ability to collect data for the investigation of problems, analyze and interpret the results | 1 |
| **6** | Ability to work effectively in disciplinary and multidisciplinary teams; ability to work individually | 2 |
| **7** | Ability to communicate effectively in oral and written Turkish; knowledge of at least one foreign language. | 4 |
| **8** | Awareness of the necessity of lifelong learning; the ability to access information, to follow developments in science and technology and to constantly renew oneself | 1 |
| **9** | Awareness of professional and ethical responsibility | 2 |
| **10** | Knowledge about business life practices such as project management, risk management and change management; awareness of entrepreneurship, innovation and sustainable development | 1 |
| **11** | Knowledge about the effects of technical applications on health, environment and safety in universal and social dimensions and contemporary issues; awareness of the legal consequences of problem-oriented solutions | 1 |

**ESOGU SİVRİHİSAR VOCATIONAL SCHOOL**

**COMPUTER PROGRAMMING PROGRAM**

**COURSE INFORMATION FORM**

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| --- | --- |
| **Course Name** | **Course Code** |
| BEHAVIORAL SCIENCES | 221111167 |

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| --- | --- | --- | --- | --- |
| **Semester** | **Number of Course Hours per Week** | | **Credit** | **ECTS** |
| **Theory** | **Practice** |
| 1 | 2 | 0 | 2 | 3 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Course Category (Credit)** | | | | |
| **Basic Sciences** | **Engineering Sciences** | **Design** | **General Education** | **Social** |
|  |  |  |  | X |

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| --- | --- | --- |
| **Course Language** | **Course Level** | **Course Type** |
| Turkish | Associate degree | Elective |

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| --- | --- |
| **Prerequisite(s) if any** | NONE |
| **Objectives of the Course** | To inform students about the basic concepts of behavioral sciences and to introduce them to the importance of behavior in their work and normal lives. |
| **Short Course Content** | Basic concepts related to Behavioral Sciences. Branches of science that fall within the scope of Behavioral Sciences. Behavioral sciences that contribute to the study of organizations. The place of behavioral sciences in practice. Behavioral Approaches. Individual Basic Model of Behavior. Needs as the root cause of behaviors. Plane of behavior. Status and role behaviors. The place and importance of social institutions in human behavior. Interpersonal communication. Groups. Culture. |

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| --- | --- | --- | --- | --- |
| **Learning Outcomes of the Course** | | **Contributed PO(s)** | **Teaching Methods \*** | **Measuring Methods \*\*** |
| **1** | Getting to know the society in which one lives | 7 | 1, 2, 5, 11 | A |
| **2** | Getting to know yourself better | 7 | 1, 2, 5,11 | A |
| **3** | To improve knowledge of the effects of society on our behavior | 7 | 1, 2, 5,11 | A |

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| --- | --- | --- | --- |
| **Main Textbook** | | | Anadolu University Press, Introduction to Behavioral Sciences- 2013-Eskişehir |
| **Supporting References** | | | Slides Prepared by the Instructor Regarding the Course Content, Lecture Notes |
| **Necessary Course Material** | | | Projection, Computer |
| **Course Schedule** | | |
| **1** | Introduction of the course | |
| **2** | Introduction to sociology | |
| **3** | Introduction to Psychology | |
| **4** | Emerging sociology and hypothetical approaches | |
| **5** | Emerging sociological and hypothetical approaches | |
| **6** | Motives and Emotions | |
| **7** | Sensation and Perception | |
| **8** | MIDTERM EXAM | |
| **9** | Community and community structure, | |
| **10** | Community life, Community groups, Family | |
| **11** | Classification of communities | |
| **12** | Learning & Culture | |
| **13** | Personality Psychology and Personality Theories | |
| **14** | Social Influences on Behavior, Attitudes | |
| **15** | Social Influences on Behavior, Attitudes | |
| **16,17** | FINAL EXAM | |

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| --- | --- | --- | --- |
| **Calculation of Course Workload** | | | |
| **Activities** | **Number** | **Time (Hour)** | **Total Workload (Hour)** |
| Course Time (number of course hours per week) | 14 | 2 | 28 |
| Classroom Studying Time (review, reinforcing, prestudy,….) | 14 | 1 | 14 |
| Homework |  |  |  |
| Quiz Exam |  |  |  |
| Studying for Quiz Exam |  |  |  |
| Oral exam |  |  |  |
| Studying for Oral Exam |  |  |  |
| Report (Preparation and presentation time included) |  |  |  |
| Project (Preparation and presentation time included) |  |  |  |
| Presentation (Preparation time included) |  |  |  |
| Mid-Term Exam | 1 | 1 | 1 |
| Studying for Mid-Term Exam | 2 | 8 | 16 |
| Final Exam | 1 | 1 | 1 |
| Studying for Final Exam | 2 | 8 | 16 |
|  | **Total workload** | | **76** |
|  | **Total workload / 30** | | **2,533333** |
|  | **Course ECTS Credit** | | **3** |

|  |  |
| --- | --- |
| **Evaluation** | |
| **Activity Type** | **%** |
| Mid-term | 40 |
|  |  |
|  |  |
|  |  |
| **Final Exam** | 60 |
| **Total** | 100 |

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| --- | --- | --- |
| **RELATIONSHIP BETWEEN THE COURSE LEARNING OUTCOMES AND THE PROGRAM OUTCOMES (PO)** (5: Very high, 4: High, 3: Middle, 2: Low, 1: Very low) | | |
| **NO** | **PROGRAM OUTCOME** | **Contribution** |
| **1** | Adequate knowledge in basic sciences (mathematics, science) and the ability to apply theoretical and practical knowledge in these areas in problem solving | 2 |
| **2** | Ability to identify, define, formulate and solve complex problems; ability to select and apply appropriate analytical and modeling methods for this purpose | 2 |
| **3** | The ability to understand a complex system, system component or process and to solve system or process failures under certain realistic constraints. | 1 |
| **4** | Ability to develop, select and use modern techniques and tools required for practice; ability to use information technologies effectively | 3 |
| **5** | Ability to collect data for the investigation of problems, analyze and interpret the results | 1 |
| **6** | Ability to work effectively in disciplinary and multidisciplinary teams; ability to work individually | 2 |
| **7** | Ability to communicate effectively in oral and written Turkish; knowledge of at least one foreign language. | 4 |
| **8** | Awareness of the necessity of lifelong learning; the ability to access information, to follow developments in science and technology and to constantly renew oneself |  |
| **9** | Awareness of professional and ethical responsibility | 2 |
| **10** | Knowledge about business life practices such as project management, risk management and change management; awareness of entrepreneurship, innovation and sustainable development | 1 |
| **11** | Knowledge about the effects of technical applications on health, environment and safety in universal and social dimensions and contemporary issues; awareness of the legal consequences of problem-oriented solutions | 1 |
| **12** |  |  |

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**COURSE INFORMATION FORM**

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| --- | --- |
| **Course Name** | **Course Code** |
| TURKISH LANGUAGE II | 221012005 |

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| **Semester** | **Number of Course Hours per Week** | | **Credit** | **ECTS** |
| **Theory** | **Practice** |
| 2 | 2 | 0 | 2 | 2 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Course Category (Credit)** | | | | |
| **Basic Sciences** | **Engineering Sciences** | **Design** | **General Education** | **Social** |
|  |  |  |  | X |

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| --- | --- | --- |
| **Course Language** | **Course Level** | **Course Type** |
| Turkish | Associate degree | Compulsory |

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| --- | --- |
| **Prerequisite(s) if any** | NONE |
| **Objectives of the Course** | To show the richness of Turkish by informing students about the development and current situation of Turkish, to raise awareness of the national language, and to ensure that they can speak and write Turkish correctly. Comparing the Turkish language with the major languages ​​of the world. To compare the language policies of major languages ​​with the language policy of the Turkish language. Giving speech training. |
| **Short Course Content** | Definition and features of language; languages ​​in the world and the place of Turkish among world languages; Historical development of the Turkish language and the development of Western Turkish; Atatürk's works and views on the Turkish language; phonetics; spelling rules and punctuation; language policies. |

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| **Learning Outcomes of the Course** | | **Contributed PO(s)** | **Teaching Methods \*** | **Measuring Methods \*\*** |
| **1** | The student explains the language families in the world and the place of Turkish among the world languages. | 6,7 | 1 | A |
| **2** | Defines the rules of Turkish. | 6,7 | 1, 5 | A |
| **3** | Recognizes edge effects. | 6,7 | 1, 5, 11 | A |
| **4** | Applies spelling rules. | 6,7 | 5, 6 | A |
| **5** | Creates written and verbal compositions. | 6,7 | 6 | A |
| **6** | Uses Turkish correctly. | 6,7 | 6, 11 | A |

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| **Main Textbook** | *Türk Dili I-II*, ed. Ferruh Ağca, Eskişehir Osmangazi Üniversitesi Yayınları, 2018. |
| **Supporting References** | *Üniversiteler İçin Türk Dili*, Bayrak Yayınları, İstanbul, 1997. |
| **Necessary Course Material** | Projector, computer |

|  |  |
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| **Course Schedule** | |
| **1** | Elements of the Sentence |
| **2** | Elements of the Sentence |
| **3** | Sentence Types |
| **4** | Sentence Types |
| **5** | Punctuation |
| **6** | Punctuation |
| **7** | Punctuation |
| **8** | Mid-Term Exam |
| **9** | Written Expression |
| **10** | Written Expression |
| **11** | Oral Expression |
| **12** | Oral Expression |
| **13** | Spelling Rules |
| **14** | Spelling Rules |
| **15** | Expression Disorders |
| **16,17** | Final Exam |

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| --- | --- | --- | --- |
| **Calculation of Course Workload** | | | |
| **Activities** | **Number** | **Time (Hour)** | **Total Workload (Hour)** |
| Course Time (number of course hours per week) | 14 | 2 | 28 |
| Classroom Studying Time (review, reinforcing, prestudy,….) | 4 | 4 | 16 |
| Homework |  |  |  |
| Quiz Exam |  |  |  |
| Studying for Quiz Exam |  |  |  |
| Oral exam |  |  |  |
| Studying for Oral Exam |  |  |  |
| Report (Preparation and presentation time included) |  |  |  |
| Project (Preparation and presentation time included) |  |  |  |
| Presentation (Preparation time included) |  |  |  |
|  |  |  |  |
|  |  |  |  |
| Mid-Term Exam | 1 | 2 | 2 |
| Studying for Mid-Term Exam | 1 | 4 | 4 |
| Final Exam | 1 | 2 | 2 |
| Studying for Final Exam | 1 | 4 | 4 |
|  | **Total workload** | | **56** |
|  | **Total workload / 30** | | **1,86** |
|  | **Course ECTS Credit** | | **2** |

|  |  |
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| **Evaluation** | |
| **Activity Type** | **%** |
| Mid-term | 40 |
| Quiz |  |
| Homework |  |
|  |  |
|  |  |
| **Final Exam** | 60 |
| **Total** | 100 |

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| --- | --- | --- |
| **RELATIONSHIP BETWEEN THE COURSE LEARNING OUTCOMES AND THE PROGRAM OUTCOMES (PO)** (5: Very high, 4: High, 3: Middle, 2: Low, 1: Very low) | | |
| **NO** | **PROGRAM OUTCOME** | **Contribution** |
| **1** | Adequate knowledge in basic sciences (mathematics, science) and the ability to apply theoretical and practical knowledge in these areas in problem solving | 1 |
| **2** | Ability to identify, define, formulate and solve complex problems; ability to select and apply appropriate analytical and modeling methods for this purpose | 2 |
| **3** | The ability to understand a complex system, system component or process and to solve system or process failures under certain realistic constraints. | 2 |
| **4** | Ability to develop, select and use modern techniques and tools required for practice; ability to use information technologies effectively | 1 |
| **5** | Ability to collect data for the investigation of problems, analyze and interpret the results | 1 |
| **6** | Ability to work effectively in disciplinary and multidisciplinary teams; ability to work individually | 3 |
| **7** | Ability to communicate effectively in oral and written Turkish; knowledge of at least one foreign language. | 5 |
| **8** | Awareness of the necessity of lifelong learning; the ability to access information, to follow developments in science and technology and to constantly renew oneself | 1 |
| **9** | Awareness of professional and ethical responsibility | 1 |
| **10** | Knowledge about business life practices such as project management, risk management and change management; awareness of entrepreneurship, innovation and sustainable development | 1 |
| **11** | Knowledge about the effects of technical applications on health, environment and safety in universal and social dimensions and contemporary issues; awareness of the legal consequences of problem-oriented solutions | 1 |
| **12** |  |  |

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**COURSE INFORMATION FORM**

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| --- | --- |
| **Course Name** | **Course Code** |
| ATATURK'S PRINCIPLES AND HISTORY OF TURKISH REVOLUTION II | 221012001 |

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| **Semester** | **Number of Course Hours per Week** | | **Credit** | **ECTS** |
| **Theory** | **Practice** |
| 2 | 2 | 0 | 2 | 2 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Course Category (Credit)** | | | | |
| **Basic Sciences** | **Engineering Sciences** | **Design** | **General Education** | **Social** |
|  |  |  |  | X |

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| --- | --- | --- |
| **Course Language** | **Course Level** | **Course Type** |
| Turkish | Associate degree | Compulsory |

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| **Prerequisite(s) if any** | NONE |
| **Objectives of the Course** | To help students grow up as individuals who understand the establishment of the Republic, Atatürk's principles and revolutions, and who understand and protect secular, democratic and contemporary values, starting from the days following the victory of the Turkish War of Independence and the Treaty of Lausanne. |
| **Short Course Content** | Mudanya Armistice Agreement, Abolition of the Sultanate, Lausanne Peace Treaty, Proclamation of the Republic, Abolition of the Caliphate, 1924 Constitution, Multi-Party Life Experience, Sheikh Sait Uprising, Other Reactions Against the Republic, Alphabet Reform, University Reform, History and Language Reform, Revolutions in the field of economy, socio-economic life and law, Domestic and foreign politics followed during the Atatürk period, Atatürk's Principles, Developments in Turkey and the world after Atatürk's death |

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| **Learning Outcomes of the Course** | | | **Contributed PO(s)** | **Teaching Methods \*** | **Measuring Methods \*\*** |
| **1** | Learns the Mudanya Armistice Agreement and Lausanne Peace Treaty in detail | | 7 | 1 | A,K |
| **2** | Learns the political changes such as the abolition of the Sultanate, the proclamation of the Republic, the abolition of the Caliphate, etc. | | 7 | 1 | A,K |
| **3** | Understands the attempts made to transition to multi-party political life during the Atatürk period | | 7 | 1 | A,K |
| **4** | Recognizes the revolutions made in the field of law and education in order to establish a secular and modern social structure in Turkey | | 7 | 1 | A,K |
| **5** | Learns the revolutions in economic and social life | | 7 | 1 | A,K |
| **6** | Understands the developments in Turkish foreign policy during the Atatürk period | | 7 | 1 | A,K |
| **7** | Learns the six principles that form the basis of Kemalist thought system in detail and comprehends their importance | | 7 | 1 | A,K |
| **8** | Learns the complementary principles of Kemalist thought system | | 7 | 1 | A,K |
| **9** | Learns the domestic and foreign developments during İsmet İnönü period | | 7 | 1 | A,K |
| **10** | Recognizes the coming to power of the Democrat Party and the domestic and foreign developments in the years 1950-1960 | | 7 | 1 | A,K |
| **Main Textbook** | | Turan Şerafettin, Türk Devrim Tarihi, C.I-II, İstanbul, 1991–1995 | | | |
| **Supporting References** | | Ateş, Toktamış, Türk Devrim Tarihi, İstanbul: Der Yayınları, 2001.  Aybars, Ergün, Türkiye Cumhuriyeti Tarihi, İzmir: Ercan Kitabevi, 2000.  Eroğlu, Hamza, Türk İnkılap Tarihi, Ankara: Savaş Yayınları, 1990.  Kongar, Emre, Devrim Tarihi ve Toplumbilim Açısından Atatürk, İstanbul: Remzi Kitabevi, 1999.  Selek, Sebahattin, Anadolu İhtilali, İstanbul: Kastaç Yayınları, 1987.  Timur, Taner, Türk Devrimi ve Sonrası, Ankara: İmge Kitabevi, 1997. | | | |
| **Necessary Course Material** | |  | | | |

|  |  |
| --- | --- |
| **Course Schedule** | |
| **1** | Mudanya Ceasefire Agreement; Abolition of the Sultanate and the Lausanne Peace Treaty |
| **2** | Proclamation of the Republic and Abolition of the Caliphate |
| **3** | Efforts to move to multi-party life; Izmir Assassination and Menemen Incident |
| **4** | Revolutions in the Field of Law: The Constitutions of the New Turkish State |
| **5** | Revolutions in the Field of Law: Adoption of the Civil Code and Regulations on Women's Rights |
| **6** | Innovations in the Field of Education and Culture: The Law on Education, the adoption of Latin Letters, changes made in language-history and other fields |
| **7** | Innovations Concerning Economic Life: Abolition of tithe tax, innovations in agriculture and industry, statism |
| **8** | Mid-Term Exam |
| **9** | Innovations in Social Life: Dress Revolution, Closure of Lodges and Lodges, Surname Law, Weekend |
| **10** | Turkish Foreign Policy in the Atatürk Period: Etabli Problem, Mosul Problem, Relations with Foreign States |
| **11** | Turkish Foreign Policy in the Atatürk Era: Membership in the League of Nations, Balkan Pact, Montreux Straits Convention, Sadabad Pact |
| **12** | Atatürk's Principles: Republicanism, Secularism, Revolutionism, Nationalism, Populism, Statism |
| **13** | Integral Principles of the Kemalist Thought System |
| **14** | Developments in domestic and foreign politics during the İsmet İnönü Period |
| **15** | Democratic Party Era |
| **16,17** | Final Exam |

|  |  |  |  |
| --- | --- | --- | --- |
| **Calculation of Course Workload** | | | |
| **Activities** | **Number** | **Time (Hour)** | **Total Workload (Hour)** |
| Course Time (number of course hours per week) | 14 | 2 | 28 |
| Classroom Studying Time (review, reinforcing, prestudy,….) | 14 | 1 | 14 |
| Homework |  |  |  |
| Quiz Exam |  |  |  |
| Studying for Quiz Exam |  |  |  |
| Oral exam |  |  |  |
| Studying for Oral Exam |  |  |  |
| Project (Preparation and presentation time included) |  |  |  |
| Presentation (Preparation time included) |  |  |  |
| Mid-Term Exam | 1 | 1 | 1 |
| Studying for Mid-Term Exam | 1 | 8 | 8 |
| Final Exam | 1 | 1 | 1 |
| Studying for Final Exam | 1 | 8 | 8 |
|  | **Total workload** | | **60** |
|  | **Total workload / 30** | | **2** |
|  | **Course ECTS Credit** | | **2** |

|  |  |
| --- | --- |
| **Evaluation** | |
| **Activity Type** | **%** |
| Mid-term | 40 |
| Quiz |  |
| Homework |  |
|  |  |
|  |  |
| **Final Exam** | 60 |
| **Total** | 100 |

|  |  |  |
| --- | --- | --- |
| **RELATIONSHIP BETWEEN THE COURSE LEARNING OUTCOMES AND THE PROGRAM OUTCOMES (PO)** (5: Very high, 4: High, 3: Middle, 2: Low, 1: Very low) | | |
| **NO** | **PROGRAM OUTCOME** | **Contribution** |
| **1** | Adequate knowledge in basic sciences (mathematics, science) and the ability to apply theoretical and practical knowledge in these areas in problem solving | 1 |
| **2** | Ability to identify, define, formulate and solve complex problems; ability to select and apply appropriate analytical and modeling methods for this purpose | 1 |
| **3** | The ability to understand a complex system, system component or process and to solve system or process failures under certain realistic constraints. | 2 |
| **4** | Ability to develop, select and use modern techniques and tools required for practice; ability to use information technologies effectively | 1 |
| **5** | Ability to collect data for the investigation of problems, analyze and interpret the results | 2 |
| **6** | Ability to work effectively in disciplinary and multidisciplinary teams; ability to work individually | 2 |
| **7** | Ability to communicate effectively in oral and written Turkish; knowledge of at least one foreign language. | 5 |
| **8** | Awareness of the necessity of lifelong learning; the ability to access information, to follow developments in science and technology and to constantly renew oneself | 1 |
| **9** | Awareness of professional and ethical responsibility | 2 |
| **10** | Knowledge about business life practices such as project management, risk management and change management; awareness of entrepreneurship, innovation and sustainable development | 1 |
| **11** | Knowledge about the effects of technical applications on health, environment and safety in universal and social dimensions and contemporary issues; awareness of the legal consequences of problem-oriented solutions | 1 |
| **12** |  |  |

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**COMPUTER PROGRAMMING PROGRAM**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **Course Name** | **Course Code** |
| ENGLISH II | 221012006 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Semester** | **Number of Course Hours per Week** | | **Credit** | **ECTS** |
| **Theory** | **Practice** |
| 2 | 3 | 0 | 3 | 2 |

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| **Course Category (Credit)** | | | | |
| **Basic Sciences** | **Engineering Sciences** | **Design** | **General Education** | **Social** |
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| **Course Language** | **Course Level** | **Course Type** |
| English | Associate degree / Undergraduate | Compulsory |

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| **Prerequisite(s) if any** | NONE |
| **Objectives of the Course** | Students can communicate in simple and routine tasks requiring a simple and direct exchange of information on familiar and routine matters. They can describe in simple terms aspects of their background, immediate environment and matters in areas of immediate need.  Students can understand standard speech related to areas of most immediate personal relevance (e.g. personal and family information, shopping, local geography and employment) and can catch the main point in simple messages and announcements.  Students can read and find specific, predictable information in simple everyday material such as advertisements, prospectuses and timetables.  Students can handle very short social exchanges, even though they cannot usually keep the conversation going of their own accord.  They can write relating to matters in areas of immediate need, linking a series of phrases and sentences with connectors. |
| **Short Course Content** | The aim of the course is to teach students basic grammar rules in elementary level, give them speaking, writing, reading and listening knowledge of English. It consists of content and activities aimed at having students acquire Elementary Level English language skills according to evaluation and reference system of The Common European Framework. |

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| **Learning Outcomes of the Course** | **Contributed PO(s)** | **Teaching Methods \*** | **Measuring Methods \*\*** |
| **1** The student becomes familiar with basic grammar rules in  English. | 7,8 | 1, 5, 11 | A |
| **2** Analyzes English dialogues. | 7,8 | 1, 4, 5, 11 | A |
| **3** Understands and explains an English text at the level. | 7,8 | 1, 4, 5, 11 | A |
| **4** Communicates in written and spoken English. | 7,8 | 1, 4, 5, 11 | A |

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| **Main Textbook** | Warwick L., Williams D. (2020). *Roadmap A2 Students’ Book & Workbook*. Pearson Education Limited. |
| **Supporting References** | Murphy, R., (2004). *English Grammar in Use*, Cambridge University Press, |
| **Necessary Course Material** | Computer, Webcam, Speakers; or Smart phone |

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| **Course Schedule** | |
| **1** | 6A past simple (regular verbs) - prepositions - describe an event - understand reviews - understanding adjectives  6B past simple (irregular verbs) - describe a good weekend - understand a narrative - understanding the order of events |
| **2** | 6C past simple (questions) - verbs + prepositions - did you? - ask and answer questions - write a short story - using subject pronouns  6D give and accept an apology |
| **3** | 7A countable and uncountable nouns; some, any, lots of and a lot of - food and drink - vowel sounds; connected speech - describe food shopping items - understand announcements - listening for special information |
| **4** | 7B how much/how many? + quantifiers – food containers - sentence stress - create a dish - write a social media post - giving opinions and reasons |
| **5** | 7C comparative adjectives - describing places to eat - compare places to eat - follow instructions - understanding instructions  7D order in a café |
| **6** | 8A present continuous - geography -ing - describe a travel experience - write a guide - using adjectives  8B present simple and present continuous - weather - contractions - describe the weather - understand a news report - understanding connected speech |
| **7** | 8C superlative adjectives - phrases describing travel - compare places, activities and transport - understand a short article - understanding paragraph topics  8D make a phone call |
| **8** | Mid-Term Exam |
| **9** | 9A should/shouldn’t - health - give advice - understand a short talk - dealing with unknown words |
| **10** | 9B be going to - future plans - discuss your goals for the future - write an informal email - organising an email to a friend |
| **11** | 9C would like/want - activities with go - tonic stress; weak forms - describe what you want to do - understand a blog post - understanding because and so  9D make arrangements and invitations |
| **12** | 10A verb patterns - housework - sentence stress - interview people - write a personal profile - expressing likes and dislikes |
| **13** | 10B have to/don’t have to - clothes - word stress; have to - play a guessing game - understand an opinion article - identifying opinions |
| **14** | 10C present perfect simple - technology - contractions - talk about past experiences - understand an interview  - understanding time expressions |
| **15** | 10D give a compliment |
| **16,17** | Final Exam |

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| **Calculation of Course Workload** | | | |
| **Activities** | **Number** | **Time (Hour)** | **Total Workload (Hour)** |
| Course Time (number of course hours per week) | 14 | 3 | 42 |
| Classroom Studying Time (review, reinforcing, prestudy,….) | 14 | 1 | 14 |
| Homework | 1 | 2 | 2 |
| Quiz Exam |  |  |  |
| Studying for Quiz Exam |  |  |  |
| Oral exam |  |  |  |
| Studying for Oral Exam |  |  |  |
| Report (Preparation and presentation time included) |  |  |  |
| Project (Preparation and presentation time included) |  |  |  |
| Presentation (Preparation time included) |  |  |  |
|  |  |  |  |
|  |  |  |  |
| Mid-Term Exam | 1 | 2 | 2 |
| Studying for Mid-Term Exam | 1 | 4 | 4 |
| Final Exam | 1 | 2 | 2 |
| Studying for Final Exam | 1 | 6 | 6 |
|  | **Total workload** | | **72** |
| **Total workload / 30** | | **2,4** |
| **Course ECTS Credit** | | **2** |

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| --- | --- |
| **Evaluation** | |
| **Activity Type** | **%** |
| Mid-term | 40 |
| Quiz |  |
| Homework |  |
|  |  |
|  |  |
| **Final Exam** | 60 |
| **Total** | 100 |

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| **RELATIONSHIP BETWEEN THE COURSE LEARNING OUTCOMES AND THE PROGRAM**  **OUTCOMES (PO)** (5: Very high, 4: High, 3: Middle, 2: Low, 1: Very low) | | |
| **NO** | **PROGRAM OUTCOME** | **Contribution** |
| **1** | Adequate knowledge in basic sciences (mathematics, science) and the ability to apply theoretical and practical knowledge in these areas in problem solving | 1 |
| **2** | Ability to identify, define, formulate and solve complex problems; ability to select and apply appropriate analytical and modeling methods for this purpose | 2 |
| **3** | The ability to understand a complex system, system component or process and to solve system or process failures under certain realistic constraints. | 2 |
| **4** | Ability to develop, select and use modern techniques and tools required for practice; ability to use information technologies effectively | 1 |
| **5** | Ability to collect data for the investigation of problems, analyze and interpret the results | 1 |
| **6** | Ability to work effectively in disciplinary and multidisciplinary teams; ability to work individually | 1 |
| **7** | Ability to communicate effectively in oral and written Turkish; knowledge of at least one foreign language. | 5 |
| **8** | Awareness of the necessity of lifelong learning; the ability to access information, to follow developments in science and technology and to constantly renew oneself | 4 |
| **9** | Awareness of professional and ethical responsibility | 1 |
| **10** | Knowledge about business life practices such as project management, risk management and change management; awareness of entrepreneurship, innovation and sustainable development | 1 |
| **11** | Knowledge about the effects of technical applications on health, environment and safety in universal and social dimensions and contemporary issues; awareness of the legal consequences of problem-oriented solutions | 1 |

**ESOGU SİVRİHİSAR VOCATIONAL SCHOOL**

**COMPUTER PROGRAMMING PROGRAM**

**COURSE INFORMATION FORM**

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| **Course Name** | **Course Code** |
| CALCULUS II | 221112301 |

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| **Semester** | **Number of Course Hours per Week** | | **Credit** | **ECTS** |
| **Theory** | **Practice** |
| 2 | 3 | 0 | 3 | 3 |

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| **Course Category (Credit)** | | | | |
| **Basic Sciences** | **Engineering Sciences** | **Design** | **General Education** | **Social** |
| X |  |  |  |  |

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| --- | --- | --- |
| **Course Language** | **Course Level** | **Course Type** |
| Turkish | Associate degree | Compulsory |

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| **Prerequisite(s) if any** | No |
| **Objectives of the Course** | Being able to operate with vectors. Understanding the concept of limit and continuity. Being able to use derivatives and integrals to solve problems. |
| **Short Course Content** | Vectors, complex numbers, matrices, derivatives and their applications, integrals and their applications. |

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| **Learning Outcomes of the Course** | | **Contributed PO(s)** | **Teaching Methods \*** | **Measuring Methods \*\*** |
| **1** | Being able to perform four operations on vectors. To be able to operate with complex numbers and to perform polar and Cartesian transformations of complex numbers. To be able to solve derivative problems. Solving integration problems | PÇ1  PÇ3 | 1,5,10 | A |
| **2** | To practice these issues in your profession. | PÇ1  PÇ3 | 1, 5, 8, 10,11 | A |

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| **Main Textbook** | 1. Anadolu Üniversitesi Yayınları Genel Matematik. Eskişehir  2. Görgülü., A. (2000) Genel Matematik. Eskişehir  3. Şenel, M. , Orhun N. , Tüzemen Ş. ( 2003) Genel Matematik. Eskişehir  4. Yıldız E. (2004) Genel Matematik. Trabzon  5. Argün Z. (2001) Temel Matematik. Ankara : Seçkin Yayınevi |
| **Supporting References** |  |
| **Necessary Course Material** | Square square, protractor, compass and calculator. |

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| **Course Schedule** | |
| **1** | Vectors |
| **2** | Vectors |
| **3** | Definition of complex numbers, vector representation, four operations of complex numbers in Cartesian form |
| **4** | Polar and Cartesian transformations of complex numbers |
| **5** | Polar and Cartesian transformations of complex numbers |
| **6** | Matrices |
| **7** | Matrices |
| **8** | Midterm |
| **9** | Derivatives and applications |
| **10** | Derivatives and applications |
| **11** | Derivatives and applications |
| **12** | Integration and its applications |
| **13** | Integration and its applications |
| **14** | Integration and its applications |
| **15** | Integration and its applications |
| **16,17** | Final Exams |

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| **Calculation of Course Workload** | | | |
| **Activities** | **Number** | **Time (Hour)** | **Total Workload (Hour)** |
| Course Time (number of course hours per week) | 14 | 3 | 42 |
| Classroom Studying Time (review, reinforcing, prestudy,….) | 14 | 1 | 14 |
| Homework |  |  |  |
| Quiz Exam |  |  |  |
| Studying for Quiz Exam |  |  |  |
| Oral exam |  |  |  |
| Studying for Oral Exam |  |  |  |
| Report (Preparation and presentation time included) |  |  |  |
| Project (Preparation and presentation time included) |  |  |  |
| Presentation (Preparation time included) |  |  |  |
|  |  |  |  |
|  |  |  |  |
| Mid-Term Exam | 1 | 1 | 1 |
| Studying for Mid-Term Exam | 2 | 5 | 10 |
| Final Exam | 1 | 1 | 1 |
| Studying for Final Exam | 2 | 6 | 12 |
|  | **Total workload** | | **80** |
|  | **Total workload / 30** | | **2,666666667** |
|  | **Course ECTS Credit** | | **3** |

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| **Evaluation** | |
| **Activity Type** | **%** |
| Mid-term | 40 |
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| **Final Exam** | 60 |
| **Total** | 100 |

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| **RELATIONSHIP BETWEEN THE COURSE LEARNING OUTCOMES AND THE PROGRAM OUTCOMES (PO)** (5: Very high, 4: High, 3: Middle, 2: Low, 1: Very low) | | |
| **NO** | **PROGRAM OUTCOME** | **Contribution** |
| **1** | Adequate knowledge in basic sciences (mathematics, science) and the ability to apply theoretical and practical knowledge in these areas in problem solving | 5 |
| **2** | Ability to identify, define, formulate and solve complex problems; ability to select and apply appropriate analytical and modeling methods for this purpose | 1 |
| **3** | The ability to understand a complex system, system component or process and to solve system or process failures under certain realistic constraints. | 3 |
| **4** | Ability to develop, select and use modern techniques and tools required for practice; ability to use information technologies effectively | 1 |
| **5** | Ability to collect data for the investigation of problems, analyze and interpret the results | 1 |
| **6** | Ability to work effectively in disciplinary and multidisciplinary teams; ability to work individually | 1 |
| **7** | Ability to communicate effectively in oral and written Turkish; knowledge of at least one foreign language. | 1 |
| **8** | Awareness of the necessity of lifelong learning; the ability to access information, to follow developments in science and technology and to constantly renew oneself | 1 |
| **9** | Awareness of professional and ethical responsibility | 1 |
| **10** | Knowledge about business life practices such as project management, risk management and change management; awareness of entrepreneurship, innovation and sustainable development | 1 |
| **11** | Knowledge about the effects of technical applications on health, environment and safety in universal and social dimensions and contemporary issues; awareness of the legal consequences of problem-oriented solutions | 1 |

**ESOGU SİVRİHİSAR VOCATIONAL SCHOOL**

**COMPUTER PROGRAMMING PROGRAM**

**COURSE INFORMATION FORM**

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| **Course Name** | **Course Code** |
| DATA STRUCTURES AND PROGRAMMING | 221112143 |

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| **Semester** | **Number of Course Hours per Week** | | **Credit** | **ECTS** |
| **Theory** | **Practice** |
| 2 | 2 | 2 | 3 | 5 |

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| --- | --- | --- | --- | --- |
| **Course Category (Credit)** | | | | |
| **Basic Sciences** | **Engineering Sciences** | **Design** | **General Education** | **Social** |
|  | X |  |  |  |

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| **Course Language** | **Course Level** | **Course Type** |
| Turkish | Associate degree | Compulsory |

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| **Prerequisite(s) if any** | - |
| **Objectives of the Course** | Define data types that can be used for special purposes.  Understand and define pointer type variables.  To be able to create libraries using the facilities provided by the programming language and to be able to examine existing libraries.  To be able to use and control computer ports using the facilities provided by the programming language. |
| **Short Course Content** | This course provides a comprehensive coverage of data structures and programming techniques. Topics include basic data structures such as arrays, linked lists, stacks, queues, trees and graphs. Emphasis is also placed on the effective use of these data structures and how they relate to algorithms. Students learn how these structures are implemented in programming languages and their importance in the software development process. Students' problem solving skills are developed through practical applications and projects. |

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| **Learning Outcomes of the Course** | | **Contributed PO(s)** | **Teaching Methods \*** | **Measuring Methods \*\*** |
| **1** | Defines a type with a new name. | 1,4,5 | 1, 6, 10  11, 12, 14 | A, D, J |
| **2** | Knows data files and their types. | 1,4,5 | 1, 6, 10  11, 12, 14 | A, D, J |
| **3** | Know and do file opening, reading and writing. | 1,4,5 | 1, 6, 10  11, 12, 14 | A, D, J |
| **4** | Makes listings. | 1,4,5 | 1, 6, 10  11, 12, 14 | A, D, J |
| **5** | Write error preventive code in file operations. | 1,4,5 | 1, 6, 10  11, 12, 14 | A, D, J |
| **6** | Know and distinguish the properties of static and dynamic variables. | 1,4,5 | 1, 6, 10  11, 12, 14 | A, D, J |
| **7** | Defines and uses dynamic variables. | 1,4,5 | 1, 6, 10  11, 12, 14 | A, D, J |
| **8** | Use pointers with arrays. | 1,4,5 | 1, 6, 10  11, 12, 14 | A, D, J |

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| **Main Textbook** | 1-Fahri VATANSEVER-Algoritma Geliştirme ve Programlamaya Giriş- Seçkin yayıncılık  2.- Dr. Çölkesen Rifat, 'Programlama Algoritmalar', Papatya Yayıncılık |
| **Supporting References** | - |
| **Necessary Course Material** | Lecture, Computer lab work, homework |

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| **Course Schedule** | |
| **1** | Basic Data Types and Structures |
| **2** | Introduction to algorithm design |
| **3** | Algorithm elements |
| **4** | Implementation of the algorithm in a programming language |
| **5** | Algorithm complexity, Basic Algorithms |
| **6** | Data search algorithms |
| **7** | Data search algorithms |
| **8** | Mid-Term Exam |
| **9** | Sorting algorithms (bubble, binary, qsort algorithms) |
| **10** | Stack algorithms |
| **11** | Sequence algorithms |
| **12** | Tree algorithms |
| **13** | Programming |
| **14** | Programming |
| **15** | Controlling Computer Ports with Programming |
| **16,17** | Final Exam |

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| **Calculation of Course Workload** | | | |
| **Activities** | **Number** | **Time (Hour)** | **Total Workload (Hour)** |
| Course Time (number of course hours per week) | 14 | 4 | 56 |
| Classroom Studying Time (review, reinforcing, prestudy,….) | 2 | 2 | 4 |
| Homework |  |  |  |
| Quiz Exam |  |  |  |
| Studying for Quiz Exam |  |  |  |
| Oral exam |  |  |  |
| Studying for Oral Exam |  |  |  |
| Report (Preparation and presentation time included) |  |  |  |
| Project (Preparation and presentation time included) | 4 | 5 | 20 |
| Presentation (Preparation time included) |  |  |  |
| Mid-Term Exam | 1 | 1 | 1 |
| Studying for Mid-Term Exam | 14 | 2 | 28 |
| Final Exam | 1 | 1 | 1 |
| Studying for Final Exam | 14 | 2 | 28 |
|  | **Total workload** | | **138** |
|  | **Total workload / 30** | | **4.6** |
|  | **Course ECTS Credit** | | **5** |
| **Evaluation** | | | |
| **Activity Type** | **%** | | |
| Mid-term | 40 | | |
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| **Final Exam** | 60 | | |
| **Total** | 100 | | |

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| **RELATIONSHIP BETWEEN THE COURSE LEARNING OUTCOMES AND THE PROGRAM OUTCOMES (PO)** (5: Very high, 4: High, 3: Middle, 2: Low, 1: Very low) | | |
| **NO** | **PROGRAM OUTCOME** | **Contribution** |
| **1** | Adequate knowledge in basic sciences (mathematics, science) and the ability to apply theoretical and practical knowledge in these areas in problem solving | 4 |
| **2** | Ability to identify, define, formulate and solve complex problems; ability to select and apply appropriate analytical and modeling methods for this purpose | 3 |
| **3** | The ability to understand a complex system, system component or process and to solve system or process failures under certain realistic constraints. | 2 |
| **4** | Ability to develop, select and use modern techniques and tools required for practice; ability to use information technologies effectively | 5 |
| **5** | Ability to collect data for the investigation of problems, analyze and interpret the results | 5 |
| **6** | Ability to work effectively in disciplinary and multidisciplinary teams; ability to work individually | 2 |
| **7** | Ability to communicate effectively in oral and written Turkish; knowledge of at least one foreign language. | 1 |
| **8** | Awareness of the necessity of lifelong learning; the ability to access information, to follow developments in science and technology and to constantly renew oneself | 3 |
| **9** | Awareness of professional and ethical responsibility | 2 |
| **10** | Knowledge about business life practices such as project management, risk management and change management; awareness of entrepreneurship, innovation and sustainable development | 1 |
| **11** | Knowledge about the effects of technical applications on health, environment and safety in universal and social dimensions and contemporary issues; awareness of the legal consequences of problem-oriented solutions | 2 |

**ESOGU SİVRİHİSAR VOCATIONAL SCHOOL**

**COMPUTER PROGRAMMING PROGRAM**

**COURSE INFORMATION FORM**

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| --- | --- |
| **Course Name** | **Course Code** |
| BASICS OF WEB DESIGN | 221112147 |

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| --- | --- | --- | --- | --- |
| **Semester** | **Number of Course Hours per Week** | | **Credit** | **ECTS** |
| **Theory** | **Practice** |
| 2 | 1 | 2 | 2 | 2 |

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| --- | --- | --- | --- | --- |
| **Course Category (Credit)** | | | | |
| **Basic Sciences** | **Engineering Sciences** | **Design** | **General Education** | **Social** |
|  | X |  |  |  |

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| --- | --- | --- |
| **Course Language** | **Course Level** | **Course Type** |
| Turkish | Associate degree | Compulsory |

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| --- | --- |
| **Prerequisite(s) if any** | - |
| **Objectives of the Course** | With this course the student; it is aimed to gain the competencies of making HTML operations for the web project. |
| **Short Course Content** | HTML, CSS, JS and web basics |

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| --- | --- | --- | --- | --- |
| **Learning Outcomes of the Course** | | **Contributed PO(s)** | **Teaching Methods \*** | **Measuring Methods \*\*** |
| **1** | To be able to comprehend basic Internet concepts | 8,10 | 1, 6, 10  11, 12, 14 | A, D, J |
| **2** | To be able to use web page design programs and editors | 8,10 | 1, 6, 10  11, 12, 14 | A, D, J |
| **3** | Ability to use HTML tags | 8,10 | 1, 6, 10  11, 12, 14 | A, D, J |
| **4** | Understanding CSS rules | 8,10 | 1, 6, 10  11, 12, 14 | A, D, J |
| **5** | Design interactions with JS | 8,10 | 1, 6, 10  11, 12, 14 | A, D, J |

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| **Main Textbook** | 1) HTML ve XHTML, Osman Gürkan, Nirvana Yayınları  2) Powell Thomas A.(2004). HTML Ve XHTML. İstanbul: Alfa Yayınları |
| **Supporting References** | - |
| **Necessary Course Material** | Lecture, Computer lab work, homework |

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| **Course Schedule** | |
| **1** | Internet, IP number, Internet Space |
| **2** | Web Browsers, Search Engines |
| **3** | HTML Basic Tags |
| **4** | Text Editing Tags |
| **5** | View Edit Tags |
| **6** | Listing Tags |
| **7** | Listing Tags |
| **8** | Mid-Term Exam |
| **9** | Creating a Link (Hyperlink) |
| **10** | Creating a Link (Hyperlink) |
| **11** | Tables |
| **12** | Tables |
| **13** | Tables |
| **14** | Frames |
| **15** | Frames |
| **16,17** | Final Exam |

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| --- | --- | --- | --- |
| **Calculation of Course Workload** | | | |
| **Activities** | **Number** | **Time (Hour)** | **Total Workload (Hour)** |
| Course Time (number of course hours per week) | 14 | 2 | 28 |
| Classroom Studying Time (review, reinforcing, prestudy,….) |  |  |  |
| Homework |  |  |  |
| Quiz Exam |  |  |  |
| Studying for Quiz Exam |  |  |  |
| Oral exam |  |  |  |
| Studying for Oral Exam |  |  |  |
| Report (Preparation and presentation time included) |  |  |  |
| Project (Preparation and presentation time included) |  |  |  |
| Presentation (Preparation time included) |  |  |  |
|  |  |  |  |
|  |  |  |  |
| Mid-Term Exam | 1 | 1 | 1 |
| Studying for Mid-Term Exam | 14 | 1 | 14 |
| Final Exam | 1 | 1 | 1 |
| Studying for Final Exam | 14 | 1 | 14 |
|  | **Total workload** | | **58** |
|  | **Total workload / 30** | | **1,93** |
|  | **Course ECTS Credit** | | **2** |

|  |  |
| --- | --- |
| **Evaluation** | |
| **Activity Type** | **%** |
| Mid-term | 40 |
| Quiz |  |
| Homework |  |
|  |  |
|  |  |
| **Final Exam** | 60 |
| **Total** | 100 |

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| --- | --- | --- |
| **RELATIONSHIP BETWEEN THE COURSE LEARNING OUTCOMES AND THE PROGRAM OUTCOMES (PO)** (5: Very high, 4: High, 3: Middle, 2: Low, 1: Very low) | | |
| **NO** | **PROGRAM OUTCOME** | **Contribution** |
| **1** | Adequate knowledge in basic sciences (mathematics, science) and the ability to apply theoretical and practical knowledge in these areas in problem solving | 2 |
| **2** | Ability to identify, define, formulate and solve complex problems; ability to select and apply appropriate analytical and modeling methods for this purpose | 2 |
| **3** | The ability to understand a complex system, system component or process and to solve system or process failures under certain realistic constraints. | 2 |
| **4** | Ability to develop, select and use modern techniques and tools required for practice; ability to use information technologies effectively | 3 |
| **5** | Ability to collect data for the investigation of problems, analyze and interpret the results | 2 |
| **6** | Ability to work effectively in disciplinary and multidisciplinary teams; ability to work individually | 1 |
| **7** | Ability to communicate effectively in oral and written Turkish; knowledge of at least one foreign language. | 1 |
| **8** | Awareness of the necessity of lifelong learning; the ability to access information, to follow developments in science and technology and to constantly renew oneself | 5 |
| **9** | Awareness of professional and ethical responsibility | 2 |
| **10** | Knowledge about business life practices such as project management, risk management and change management; awareness of entrepreneurship, innovation and sustainable development | 4 |
| **11** | Knowledge about the effects of technical applications on health, environment and safety in universal and social dimensions and contemporary issues; awareness of the legal consequences of problem-oriented solutions | 2 |

**ESOGU SİVRİHİSAR VOCATIONAL SCHOOL**

**COMPUTER PROGRAMMING PROGRAM**

**COURSE INFORMATION FORM**

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| --- | --- |
| **Course Name** | **Course Code** |
| SOFTWARE INSTALLATION AND MANAGEMENT | 221112306 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Semester** | **Number of Course Hours per Week** | | **Credit** | **ECTS** |
| **Theory** | **Practice** |
| 2 | 2 | 0 | 2 | 2 |

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| --- | --- | --- | --- | --- |
| **Course Category (Credit)** | | | | |
| **Basic Sciences** | **Engineering Sciences** | **Design** | **General Education** | **Social** |
|  | X |  |  |  |

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| --- | --- | --- |
| **Course Language** | **Course Level** | **Course Type** |
| Turkish | Associate degree | Compulsory |

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| **Prerequisite(s) if any** |  |
| **Objectives of the Course** | Software Installation and Management course aims to teach students the basic principles of software installation and management processes. Within the scope of this course, installation processes of various types of software, software configuration and update methods, license management, diagnosis and resolution of software problems and security measures will be covered. Students will gain practical skills in software installation and management and will be equipped with the knowledge and skills to work effectively on operating systems and application software. |
| **Short Course Content** | This course covers the installation, configuration, updating, license management, security measures and software troubleshooting of operating systems and application software. Students will gain practical skills in software management tools and user support. |

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| **Learning Outcomes of the Course** | | **Contributed PO(s)** | **Teaching Methods \*** | **Measuring Methods \*\*** |
| **1** | Can perform the installation of different operating systems and application software. | 6,8 | 1, 6 | A |
| **2** | Apply software configuration and update processes effectively. | 6,8 | 1, 6 | A |
| **3** | Have knowledge about license management and software compatibility issues and can manage these processes. | 6,8 | 1, 6 | A |
| **4** | Diagnose software problems and find solutions. | 6,8 | 1, 6 | A |
| **5** | Can carry out software installation and management processes securely by taking security measures. | 6,8 | 1, 6 | A |
| **6** | Automate software installation and management processes by using software management tools. | 6,8 | 1, 6 | A |

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| **Main Textbook** | Balaban, E., 2003. Web Tasarım Kılavuzu, Pusula yayınları, İstanbul.  Çamoğlu, K., 2010. 10 Adımda Yazılım Geliştirme. Kodlab yayınları, İstanbul. |
| **Supporting References** | - |
| **Necessary Course Material** | Lecture, Computer lab work, homework |

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| **Course Schedule** | |
| **1** | Introduction to Software Installation and Management |
| **2** | Operating Systems: Installation and Configuration |
| **3** | Installation of Application Software |
| **4** | Software Configuration and Customization |
| **5** | Software Updates and Release Management |
| **6** | License Management and Software Compatibility |
| **7** | Diagnosing Software Problems |
| **8** | Mid-Term Exam |
| **9** | Software Troubleshooting |
| **10** | Security Measures and Software Security |
| **11** | Backup and Recovery Strategies |
| **12** | Software Management Tools and Automation |
| **13** | User Support and Training |
| **14** | Software Performance Monitoring and Optimization |
| **15** | General Review and Practical Project Studies |
| **16,17** | Final Exam |

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| --- | --- | --- | --- |
| **Calculation of Course Workload** | | | |
| **Activities** | **Number** | **Time (Hour)** | **Total Workload (Hour)** |
| Course Time (number of course hours per week) | 14 | 2 | 28 |
| Classroom Studying Time (review, reinforcing, prestudy,….) |  |  |  |
| Homework |  |  |  |
| Quiz Exam |  |  |  |
| Studying for Quiz Exam |  |  |  |
| Oral exam |  |  |  |
| Studying for Oral Exam |  |  |  |
| Report (Preparation and presentation time included) |  |  |  |
| Project (Preparation and presentation time included) |  |  |  |
| Presentation (Preparation time included) |  |  |  |
|  |  |  |  |
|  |  |  |  |
| Mid-Term Exam | 1 | 1 | 1 |
| Studying for Mid-Term Exam | 14 | 1 | 14 |
| Final Exam | 1 | 1 | 1 |
| Studying for Final Exam | 14 | 1 | 14 |
|  | **Total workload** | | **58** |
|  | **Total workload / 30** | | **1,93** |
|  | **Course ECTS Credit** | | **2** |

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| --- | --- |
| **Evaluation** | |
| **Activity Type** | **%** |
| Mid-term | 40 |
|  |  |
|  |  |
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|  |  |
| **Final Exam** | 60 |
| **Total** | 100 |

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| **RELATIONSHIP BETWEEN THE COURSE LEARNING OUTCOMES AND THE PROGRAM OUTCOMES (PO)** (5: Very high, 4: High, 3: Middle, 2: Low, 1: Very low) | | |
| **NO** | **PROGRAM OUTCOME** | **Contribution** |
| **1** | Adequate knowledge in basic sciences (mathematics, science) and the ability to apply theoretical and practical knowledge in these areas in problem solving | 1 |
| **2** | Ability to identify, define, formulate and solve complex problems; ability to select and apply appropriate analytical and modeling methods for this purpose | 2 |
| **3** | The ability to understand a complex system, system component or process and to solve system or process failures under certain realistic constraints. | 2 |
| **4** | Ability to develop, select and use modern techniques and tools required for practice; ability to use information technologies effectively | 3 |
| **5** | Ability to collect data for the investigation of problems, analyze and interpret the results | 2 |
| **6** | Ability to work effectively in disciplinary and multidisciplinary teams; ability to work individually | 4 |
| **7** | Ability to communicate effectively in oral and written Turkish; knowledge of at least one foreign language. | 1 |
| **8** | Awareness of the necessity of lifelong learning; the ability to access information, to follow developments in science and technology and to constantly renew oneself | 5 |
| **9** | Awareness of professional and ethical responsibility | 2 |
| **10** | Knowledge about business life practices such as project management, risk management and change management; awareness of entrepreneurship, innovation and sustainable development | 1 |
| **11** | Knowledge about the effects of technical applications on health, environment and safety in universal and social dimensions and contemporary issues; awareness of the legal consequences of problem-oriented solutions | 1 |

**ESOGU SİVRİHİSAR VOCATIONAL SCHOOL**

**COMPUTER PROGRAMMING PROGRAM**

**COURSE INFORMATION FORM**

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| --- | --- |
| **Course Name** | **Course Code** |
| ENTREPRENEURSHIP | 221112309 |

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| --- | --- | --- | --- | --- |
| **Semester** | **Number of Course Hours per Week** | | **Credit** | **ECTS** |
| **Theory** | **Practice** |
| 2 | 2 | 0 | 2 | 2 |

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| --- | --- | --- | --- | --- |
| **Course Category (Credit)** | | | | |
| **Basic Sciences** | **Engineering Sciences** | **Design** | **General Education** | **Social** |
|  |  |  |  | X |

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| --- | --- | --- |
| **Course Language** | **Course Level** | **Course Type** |
| Turkish | Associate degree | Compulsory |

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| --- | --- |
| **Prerequisite(s) if any** | - |
| **Objectives of the Course** | The Entrepreneurship course aims to introduce the concepts of entrepreneurship and entrepreneurship, to explain the key concepts in entrepreneurship and to build a bridge between the theoretical framework and the applications in daily life. The assumption here, of course, is not that every student who takes this course will be able to successfully start his/her own business immediately. Our aim is to encourage the active participation of the students and to analyze the common examples of successful and unsuccessful entrepreneurship in a healthier way. |
| **Short Course Content** | Entrepreneurship, Business and management, Classification of businesses, Small businesses |

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| --- | --- | --- | --- | --- |
| **Learning Outcomes of the Course** | | **Contributed PO(s)** | **Teaching Methods \*** | **Measuring Methods \*\*** |
| **1** | Understands who is and who is not an entrepreneur | 6,10 | 1, 6 | A |
| **2** | Explains the basic concepts of entrepreneurship | 6,10 | 1, 6 | A |
| **3** | Draws the entrepreneurship framework with real life examples | 6,10 | 1, 6 | A |
| **4** | Be aware of the different aspects and dimensions of entrepreneurship | 6,10 | 1, 6 | A |

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| **Main Textbook** | Girişimcilik ve Küçük İşletme Yönetimi (Orhan KÜÇÜK) |
| **Supporting References** | - |
| **Necessary Course Material** | Lecture, Computer lab work, homework |

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| **Course Schedule** | |
| **1** | Entrepreneurship |
| **2** | Entrepreneurship |
| **3** | Entrepreneurship |
| **4** | Business and management |
| **5** | Business and management |
| **6** | Business and management |
| **7** | Business and management |
| **8** | Mid-Term Exam |
| **9** | Business and management |
| **10** | Classification of businesses |
| **11** | Classification of businesses |
| **12** | Classification of businesses |
| **13** | Small businesses |
| **14** | Small businesses |
| **15** | Small businesses |
| **16,17** | Final Exam |

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| --- | --- | --- | --- |
| **Calculation of Course Workload** | | | |
| **Activities** | **Number** | **Time (Hour)** | **Total Workload (Hour)** |
| Course Time (number of course hours per week) | 14 | 2 | 28 |
| Classroom Studying Time (review, reinforcing, prestudy,….) | 2 | 2 | 4 |
| Homework |  |  |  |
| Quiz Exam |  |  |  |
| Studying for Quiz Exam |  |  |  |
| Oral exam |  |  |  |
| Studying for Oral Exam |  |  |  |
| Report (Preparation and presentation time included) |  |  |  |
| Project (Preparation and presentation time included) |  |  |  |
| Presentation (Preparation time included) |  |  |  |
|  |  |  |  |
|  |  |  |  |
| Mid-Term Exam | 1 | 1 | 1 |
| Studying for Mid-Term Exam | 7 | 1 | 7 |
| Final Exam | 1 | 1 | 1 |
| Studying for Final Exam | 14 | 1 | 14 |
|  | **Total workload** | | **55** |
|  | **Total workload / 30** | | **1,83** |
|  | **Course ECTS Credit** | | **2** |

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| **Evaluation** | |
| **Activity Type** | **%** |
| Mid-term | 40 |
|  |  |
|  |  |
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| **Final Exam** | 60 |
| **Total** | 100 |

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| **RELATIONSHIP BETWEEN THE COURSE LEARNING OUTCOMES AND THE PROGRAM OUTCOMES (PO)** (5: Very high, 4: High, 3: Middle, 2: Low, 1: Very low) | | |
| **NO** | **PROGRAM OUTCOME** | **Contribution** |
| **1** | Adequate knowledge in basic sciences (mathematics, science) and the ability to apply theoretical and practical knowledge in these areas in problem solving | 2 |
| **2** | Ability to identify, define, formulate and solve complex problems; ability to select and apply appropriate analytical and modeling methods for this purpose | 1 |
| **3** | The ability to understand a complex system, system component or process and to solve system or process failures under certain realistic constraints. | 2 |
| **4** | Ability to develop, select and use modern techniques and tools required for practice; ability to use information technologies effectively | 3 |
| **5** | Ability to collect data for the investigation of problems, analyze and interpret the results | 2 |
| **6** | Ability to work effectively in disciplinary and multidisciplinary teams; ability to work individually | 4 |
| **7** | Ability to communicate effectively in oral and written Turkish; knowledge of at least one foreign language. | 1 |
| **8** | Awareness of the necessity of lifelong learning; the ability to access information, to follow developments in science and technology and to constantly renew oneself | 2 |
| **9** | Awareness of professional and ethical responsibility | 3 |
| **10** | Knowledge about business life practices such as project management, risk management and change management; awareness of entrepreneurship, innovation and sustainable development | 5 |
| **11** | Knowledge about the effects of technical applications on health, environment and safety in universal and social dimensions and contemporary issues; awareness of the legal consequences of problem-oriented solutions | 1 |

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**COMPUTER PROGRAMMING PROGRAM**

**COURSE INFORMATION FORM**

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| --- | --- |
| **Course Name** | **Course Code** |
| NETWORK TECHNOLOGIES | 221112302 |

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| --- | --- | --- | --- | --- |
| **Semester** | **Number of Course Hours per Week** | | **Credit** | **ECTS** |
| **Theory** | **Practice** |
| 2 | 3 | 0 | 3 | 3 |

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| --- | --- | --- | --- | --- |
| **Course Category (Credit)** | | | | |
| **Basic Sciences** | **Engineering Sciences** | **Design** | **General Education** | **Social** |
|  | X |  |  |  |

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| --- | --- | --- |
| **Course Language** | **Course Level** | **Course Type** |
| Turkish | Associate degree | Elective |

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| --- | --- |
| **Prerequisite(s) if any** | - |
| **Objectives of the Course** | To teach the analysis, design and implementation of computer networks and the software and hardware components of these networks. |
| **Short Course Content** | Layers 3 to 7 of the OSI reference model, TCP/IP protocol structure, TCP/IP network applications. |

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| **Learning Outcomes of the Course** | | **Contributed PO(s)** | **Teaching Methods \*** | **Measuring Methods \*\*** |
| **1** | Students will learn the underlying principles of computer networks. | 3,4 | 1, 10   11, 12, 14 | A, D, J |
| **2** | Students will learn the details of the layered network structure and its working principle. | 3,4 | 1, 10   11, 12, 14 | A, D, J |
| **3** | Students will learn to distinguish between different network topologies and protocols. | 3,4 | 1, 10   11, 12, 14 | A, D, J |
| **4** | Students will learn the layers of the TCP/IP protocol structure and the tasks of these layers | 3,4 | 1, 10   11, 12, 14 | A, D, J |
| **5** | Students will learn how to create subnetworks and how to find paths between them. | 3,4 | 1, 10   11, 12, 14 | A, D, J |

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| --- | --- |
| **Main Textbook** | Computer Networks, Andrew S. Tanenbaum, Prentice Hall |
| **Supporting References** | The Communications Handbook, Jerry D. Gibson, CRC Press  Unix Network Programming Volume 1, 2, W. Richard Stevens, Prentice Hall |
| **Necessary Course Material** |  |

|  |  |
| --- | --- |
| **Course Schedule** | |
| **1** | INTRODUCTION TO COMPUTER NETWORKS |
| **2** | OSI Layer |
| **3** | OSI Layer |
| **4** | OSI Layer |
| **5** | OSI Layer |
| **6** | Examination and comparison of static and dynamic routing algorithms for finding the path to be followed between two points in a computer network |
| **7** | Definition of congestion at the network layer, its causes and solutions |
| **8** | Mid-Term Exam |
| **9** | Examination of the IP (Internetworking Protocol) protocol as an example network layer |
| **10** | Examination of the UDP (User Datagram Protocol) protocol in the TCP/IP protocol as an example of connectionless transportation |
| **11** | Examination of the connected transport layer structure by taking TCP (Transmisson Control Protocol) as an example |
| **12** | Examination of the definition, tasks and working principles of Session, Presentation and Application layers |
| **13** | Examination of Telnet, SSH, DNS, FTP, HTTP and similar applications in TCP/IP protocol structure |
| **14** | Application |
| **15** | Application |
| **16,17** | Final Exam |

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| --- | --- | --- | --- |
| **Calculation of Course Workload** | | | |
| **Activities** | **Number** | **Time (Hour)** | **Total Workload (Hour)** |
| Course Time (number of course hours per week) | 14 | 3 | 42 |
| Classroom Studying Time (review, reinforcing, prestudy,….) | 10 | 1 | 10 |
| Homework |  |  |  |
| Quiz Exam | 1 | 1 | 1 |
| Studying for Quiz Exam |  |  |  |
| Oral exam |  |  |  |
| Studying for Oral Exam |  |  |  |
| Report (Preparation and presentation time included) |  |  |  |
| Project (Preparation and presentation time included) |  |  |  |
| Presentation (Preparation time included) |  |  |  |
|  |  |  |  |
|  |  |  |  |
| Mid-Term Exam | 1 | 1 | 1 |
| Studying for Mid-Term Exam | 5 | 3 | 15 |
| Final Exam | 1 | 1 | 1 |
| Studying for Final Exam | 14 | 2 | 28 |
|  | **Toplam iş yükü** | | **98** |
|  | **Toplam iş yükü / 30** | | **3,2** |
|  | **Dersin AKTS Kredisi** | | **3** |

|  |  |
| --- | --- |
| **Evaluation** | |
| **Activity Type** | **%** |
| Mid-term | 40 |
| Quiz |  |
| Homework |  |
|  |  |
|  | 60 |
| **Final Exam** | 100 |
| **Total** | **%** |

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| --- | --- | --- |
| **RELATIONSHIP BETWEEN THE COURSE LEARNING OUTCOMES AND THE PROGRAM OUTCOMES (PO)** (5: Very high, 4: High, 3: Middle, 2: Low, 1: Very low) | | |
| **NO** | **PROGRAM OUTCOME** | **Contribution** |
| **1** | Adequate knowledge in basic sciences (mathematics, science) and the ability to apply theoretical and practical knowledge in these areas in problem solving | 3 |
| **2** | Ability to identify, define, formulate and solve complex problems; ability to select and apply appropriate analytical and modeling methods for this purpose | 3 |
| **3** | The ability to understand a complex system, system component or process and to solve system or process failures under certain realistic constraints. | 5 |
| **4** | Ability to develop, select and use modern techniques and tools required for practice; ability to use information technologies effectively | 5 |
| **5** | Ability to collect data for the investigation of problems, analyze and interpret the results | 4 |
| **6** | Ability to work effectively in disciplinary and multidisciplinary teams; ability to work individually | 3 |
| **7** | Ability to communicate effectively in oral and written Turkish; knowledge of at least one foreign language. | 3 |
| **8** | Awareness of the necessity of lifelong learning; the ability to access information, to follow developments in science and technology and to constantly renew oneself | 3 |
| **9** | Awareness of professional and ethical responsibility | 3 |
| **10** | Knowledge about business life practices such as project management, risk management and change management; awareness of entrepreneurship, innovation and sustainable development | 4 |
| **11** | Knowledge about the effects of technical applications on health, environment and safety in universal and social dimensions and contemporary issues; awareness of the legal consequences of problem-oriented solutions | 3 |

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**COMPUTER PROGRAMMING PROGRAM**

**COURSE INFORMATION FORM**

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| --- | --- |
| **Course Name** | **Course Code** |
| INTRODUCTION TO ARTIFICIAL INTELLIGENCE | 221112303 |

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| --- | --- | --- | --- | --- |
| **Semester** | **Number of Course Hours per Week** | | **Credit** | **ECTS** |
| **Theory** | **Practice** |
| 2 | 3 | 0 | 3 | 3 |

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| --- | --- | --- | --- | --- |
| **Course Category (Credit)** | | | | |
| **Basic Sciences** | **Engineering Sciences** | **Design** | **General Education** | **Social** |
|  | X |  |  |  |

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| --- | --- | --- |
| **Course Language** | **Course Level** | **Course Type** |
| Turkish | Associate degree | Elective |

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| --- | --- |
| **Prerequisite(s) if any** |  |
| **Objectives of the Course** | To have knowledge about the development and basic algorithms of Artificial Intelligence and to gain the ability to develop applications using artificial intelligence techniques. |
| **Short Course Content** | Introduction to artificial intelligence and basic concepts, history of artificial intelligence intelligent agents, problem solving: problem solving agents and problem formulation Search strategies, non-heuristic search: breadth-first search, depth-first search, uniform-cost search, depth-limited search, iterative deep search, two-way search, heuristic search methods; Greedy, A\* search, simulated annealing method, hill-climbing algorithm, local beam algorithm, genetic algorithms, genetic algorithms and applications, search in non-deterministic motions, search under no observation, search under partial observation, search in games, minimax algorithm, alpha-beta pruning, search in stochastic games, condition satisfaction problems |

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| --- | --- | --- | --- | --- |
| **Learning Outcomes of the Course** | | **Contributed PO(s)** | **Teaching Methods \*** | **Measuring Methods \*\*** |
| **1** | Learning the history of artificial intelligence | 3,4,5 | 1, 10   11, 12, 14 | A, D, J |
| **2** | Understand the basic concepts of artificial intelligence | 3,4,5 | 1, 10   11, 12, 14 | A, D, J |
| **3** | Learning AI-based search algorithms | 3,4,5 | 1, 10   11, 12, 14 | A, D, J |
| **4** | To be able to use artificial intelligence methods appropriate to the problem | 3,4,5 | 1, 10   11, 12, 14 | A, D, J |
| **5** | Develop applications using basic artificial intelligence techniques | 3,4,5 | 1, 10   11, 12, 14 | A, D, J |

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| **Main Textbook** | Prof. Dr. Vasif V. Nabiyev, “Yapay Zeka”, Seçkin Kitabevi, 3.baskı, 2010. |
| **Supporting References** | Textbook : Stuart Russell, Peter Norvig; “Artificial Intelligence A Modern Approach”, Prentice-Hall, Inc., 1995: |
| **Necessary Course Material** |  |

|  |  |
| --- | --- |
| **Course Schedule** | |
| **1** | Introduction to Artificial Intelligence |
| **2** | Artificial Neural Networks, Perceptron |
| **3** | Structures of Artificial Neural Networks |
| **4** | Supervised Learning |
| **5** | Unsupervised Learning |
| **6** | Fuzzy Logic |
| **7** | Classical and Fuzzy Sets |
| **8** | Mid-Term Exam |
| **9** | Fuzzy Logic and Supervisory Systems |
| **10** | Neural Fuzzy Logic |
| **11** | Genetic Algorithm and History |
| **12** | Genetic Algorithm Concepts |
| **13** | Genetic Algorithm Applications |
| **14** | Artificial Intelligence Application Areas |
| **15** | Artificial Intelligence Application Areas |
| **16,17** | Final Exam |

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| --- | --- | --- | --- |
| **Calculation of Course Workload** | | | |
| **Activities** | **Number** | **Time (Hour)** | **Total Workload (Hour)** |
| Course Time (number of course hours per week) | 14 | 3 | 42 |
| Classroom Studying Time (review, reinforcing, prestudy,….) | 10 | 1 | 10 |
| Homework |  |  |  |
| Quiz Exam | 1 | 1 | 1 |
| Studying for Quiz Exam |  |  |  |
| Oral exam |  |  |  |
| Studying for Oral Exam |  |  |  |
| Report (Preparation and presentation time included) |  |  |  |
| Project (Preparation and presentation time included) |  |  |  |
| Presentation (Preparation time included) |  |  |  |
| Mid-Term Exam | 1 | 1 | 1 |
| Studying for Mid-Term Exam | 5 | 3 | 15 |
| Final Exam | 1 | 1 | 1 |
| Studying for Final Exam | 14 | 2 | 28 |
|  | **Toplam iş yükü** | | **98** |
|  | **Toplam iş yükü / 30** | | **3,2** |
|  | **Dersin AKTS Kredisi** | | **3** |
| **Evaluation** | | | |
| **Activity Type** | **%** | | |
| Mid-term | 40 | | |
| Quiz |  | | |
| Homework |  | | |
|  |  | | |
|  |  | | |
| **Final Exam** | 60 | | |
| **Total** | 100 | | |

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| --- | --- | --- |
| **RELATIONSHIP BETWEEN THE COURSE LEARNING OUTCOMES AND THE PROGRAM OUTCOMES (PO)** (5: Very high, 4: High, 3: Middle, 2: Low, 1: Very low) | | |
| **NO** | **PROGRAM OUTCOME** | **Contribution** |
| **1** | Adequate knowledge in basic sciences (mathematics, science) and the ability to apply theoretical and practical knowledge in these areas in problem solving | 3 |
| **2** | Ability to identify, define, formulate and solve complex problems; ability to select and apply appropriate analytical and modeling methods for this purpose | 3 |
| **3** | The ability to understand a complex system, system component or process and to solve system or process failures under certain realistic constraints. | 5 |
| **4** | Ability to develop, select and use modern techniques and tools required for practice; ability to use information technologies effectively | 5 |
| **5** | Ability to collect data for the investigation of problems, analyze and interpret the results | 4 |
| **6** | Ability to work effectively in disciplinary and multidisciplinary teams; ability to work individually | 3 |
| **7** | Ability to communicate effectively in oral and written Turkish; knowledge of at least one foreign language. | 3 |
| **8** | Awareness of the necessity of lifelong learning; the ability to access information, to follow developments in science and technology and to constantly renew oneself | 3 |
| **9** | Awareness of professional and ethical responsibility | 3 |
| **10** | Knowledge about business life practices such as project management, risk management and change management; awareness of entrepreneurship, innovation and sustainable development | 4 |
| **11** | Knowledge about the effects of technical applications on health, environment and safety in universal and social dimensions and contemporary issues; awareness of the legal consequences of problem-oriented solutions | 3 |

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**COMPUTER PROGRAMMING PROGRAM**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **Course Name** | **Course Code** |
| DIGITAL ELECTRONICS | 221112307 |

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| --- | --- | --- | --- | --- |
| **Semester** | **Number of Course Hours per Week** | | **Credit** | **ECTS** |
| **Theory** | **Practice** |
| 2 | 3 | 0 | 3 | 4 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Course Category (Credit)** | | | | |
| **Basic Sciences** | **Engineering Sciences** | **Design** | **General Education** | **Social** |
|  | X |  |  |  |

|  |  |  |
| --- | --- | --- |
| **Course Language** | **Course Level** | **Course Type** |
| Turkish | Associate degree | Elective |

|  |  |
| --- | --- |
| **Prerequisite(s) if any** | - |
| **Objectives of the Course** | Installation and simplification of logic circuits |
| **Short Course Content** | Creation of basic logic circuits. |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Learning Outcomes of the Course** | | **Contributed PO(s)** | **Teaching Methods \*** | **Measuring Methods \*\*** |
| **1** | Building basic logic circuits | 1,2,8 | 1, 6 | A |
| **2** | Simplify basic logic circuits | 1,2,8 | 1, 6 | A |
| **3** | Building compound logic circuits | 1,2,8 | 1, 6 | A |
| **4** | Building arithmetic logic circuits | 1,2,8 | 1, 6 | A |

|  |  |
| --- | --- |
| **Main Textbook** | Mantık Devreleri Sayısal Elektronik, Prof.Dr. Hüseyin Ekiz |
| **Supporting References** | - |
| **Necessary Course Material** | Lecture |

|  |  |
| --- | --- |
| **Course Schedule** | |
| **1** | Number Systems |
| **2** | Logic Gate Circuits |
| **3** | Logic Gate Circuits Boolean mathematics |
| **4** | Boolean Mathematics |
| **5** | Karnough Map |
| **6** | Karnough Map |
| **7** | Karnough Map |
| **8** | Mid-Term Exam |
| **9** | Encoders |
| **10** | Decoders |
| **11** | Data Selectors |
| **12** | Data distributors |
| **13** | Collectors |
| **14** | Aggregators – Extractors |
| **15** | Aggregators – Extractors |
| **16,17** | Final Exam |

|  |  |  |  |
| --- | --- | --- | --- |
| **Calculation of Course Workload** | | | |
| **Activities** | **Number** | **Time (Hour)** | **Total Workload (Hour)** |
| Course Time (number of course hours per week) | 14 | 3 | 52 |
| Classroom Studying Time (review, reinforcing, prestudy,….) | 2 | 2 | 4 |
| Homework |  |  |  |
| Quiz Exam |  |  |  |
| Studying for Quiz Exam |  |  |  |
| Oral exam |  |  |  |
| Studying for Oral Exam |  |  |  |
| Report (Preparation and presentation time included) |  |  |  |
| Project (Preparation and presentation time included) |  |  |  |
| Presentation (Preparation time included) |  |  |  |
|  |  |  |  |
|  |  |  |  |
| Mid-Term Exam | 1 | 1 | 1 |
| Studying for Mid-Term Exam | 14 | 2 | 28 |
| Final Exam | 1 | 1 | 1 |
| Studying for Final Exam | 14 | 2 | 28 |
|  | **Total workload** | | **114** |
|  | **Total workload / 30** | | **3,8** |
|  | **Course ECTS Credit** | | **4** |

|  |  |
| --- | --- |
| **Evaluation** | |
| **Activity Type** | **%** |
| Mid-term | 40 |
|  |  |
|  |  |
|  |  |
|  |  |
| **Final Exam** | 60 |
| **Total** | 100 |

|  |  |  |
| --- | --- | --- |
| **RELATIONSHIP BETWEEN THE COURSE LEARNING OUTCOMES AND THE PROGRAM OUTCOMES (PO)** (5: Very high, 4: High, 3: Middle, 2: Low, 1: Very low) | | |
| **NO** | **PROGRAM OUTCOME** | **Contribution** |
| **1** | Adequate knowledge in basic sciences (mathematics, science) and the ability to apply theoretical and practical knowledge in these areas in problem solving | 3 |
| **2** | Ability to identify, define, formulate and solve complex problems; ability to select and apply appropriate analytical and modeling methods for this purpose | 3 |
| **3** | The ability to understand a complex system, system component or process and to solve system or process failures under certain realistic constraints. | 1 |
| **4** | Ability to develop, select and use modern techniques and tools required for practice; ability to use information technologies effectively | 2 |
| **5** | Ability to collect data for the investigation of problems, analyze and interpret the results | 1 |
| **6** | Ability to work effectively in disciplinary and multidisciplinary teams; ability to work individually | 2 |
| **7** | Ability to communicate effectively in oral and written Turkish; knowledge of at least one foreign language. | 1 |
| **8** | Awareness of the necessity of lifelong learning; the ability to access information, to follow developments in science and technology and to constantly renew oneself | 3 |
| **9** | Awareness of professional and ethical responsibility | 2 |
| **10** | Knowledge about business life practices such as project management, risk management and change management; awareness of entrepreneurship, innovation and sustainable development | 1 |
| **11** | Knowledge about the effects of technical applications on health, environment and safety in universal and social dimensions and contemporary issues; awareness of the legal consequences of problem-oriented solutions | 2 |

**ESOGU SİVRİHİSAR VOCATIONAL SCHOOL**

**COMPUTER PROGRAMMING PROGRAM**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **Course Name** | **Course Code** |
| GRAPHICS AND ANIMATION | 221112308 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Semester** | **Number of Course Hours per Week** | | **Credit** | **ECTS** |
| **Theory** | **Practice** |
| 2 | 2 | 2 | 3 | 4 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Course Category (Credit)** | | | | |
| **Basic Sciences** | **Engineering Sciences** | **Design** | **General Education** | **Social** |
|  |  | X |  |  |

|  |  |  |
| --- | --- | --- |
| **Course Language** | **Course Level** | **Course Type** |
| Turkish | Associate degree | Elective |

|  |  |
| --- | --- |
| **Prerequisite(s) if any** |  |
| **Objectives of the Course** | To learn poster logo animation design. To have knowledge about the types of image files |
| **Short Course Content** | Components required for Adobe Photoshop |

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| --- | --- | --- | --- | --- |
| **Learning Outcomes of the Course** | | **Contributed PO(s)** | **Teaching Methods \*** | **Measuring Methods \*\*** |
| **1** | Knows the most commonly used image saving formats. | 2,3,4 | 1, 6, 10   11, 12, 14 | A, D, J |
| **2** | Knows the properties of image files, | 2,3,4 | 1, 6, 10   11, 12, 14 | A, D, J |
| **3** | Converts image files to appropriate file types for use in web environment. | 2,3,4 | 1, 6, 10   11, 12, 14 | A, D, J |
| **4** | Creates image objects such as text, buttons that can be used on web pages. | 2,3,4 | 1, 6, 10   11, 12, 14 | A, D, J |
| **5** | Knows the general features of animation creation programs. | 2,3,4 | 1, 6, 10   11, 12, 14 | A, D, J |

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| --- | --- |
| **Main Textbook** | Photoshop CS6 KODLAB |
| **Supporting References** |  |
| **Necessary Course Material** |  |

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| --- | --- |
| **Course Schedule** | |
| **1** | Program installation, input settings, tool panel |
| **2** | Vehicle panel |
| **3** | Vector tools |
| **4** | Vector tools, Text editing operations |
| **5** | Color, contour and fill Applications, live filters |
| **6** | Layer Operations |
| **7** | Live filters |
| **8** | Mid-Term Exam |
| **9** | Layer Operations, slices and active regions |
| **10** | Buttons and drop-down menus |
| **11** | Pages |
| **12** | Moving Pictures |
| **13** | Demonstration of animation preparation techniques. |
| **14** | Animation application. |
| **15** | Animation application. |
| **16,17** | Final Exam |

|  |  |  |  |
| --- | --- | --- | --- |
| **Calculation of Course Workload** | | | |
| **Activities** | **Number** | **Time (Hour)** | **Total Workload (Hour)** |
| Course Time (number of course hours per week) | 14 | 4 | 56 |
| Classroom Studying Time (review, reinforcing, prestudy,….) | 14 | 1 | 14 |
| Homework |  |  |  |
| Quiz Exam | 1 | 1 | 1 |
| Studying for Quiz Exam |  |  |  |
| Oral exam |  |  |  |
| Studying for Oral Exam |  |  |  |
| Report (Preparation and presentation time included) |  |  |  |
| Project (Preparation and presentation time included) | 1 | 20 | 20 |
| Presentation (Preparation time included) | 1 | 1 | 1 |
|  |  |  |  |
|  |  |  |  |
| Mid-Term Exam | 1 | 1 | 1 |
| Studying for Mid-Term Exam | 2 | 2 | 4 |
| Final Exam | 1 | 1 | 1 |
| Studying for Final Exam | 14 | 0 | 28 |
|  | **Toplam iş yükü** | | **127** |
|  | **Toplam iş yükü / 30** | | **4,2** |
|  | **Dersin AKTS Kredisi** | | **4** |

|  |  |
| --- | --- |
| **Evaluation** | |
| **Activity Type** | **%** |
| Mid-term | 40 |
| Quiz |  |
| Homework |  |
|  |  |
|  |  |
| **Final Exam** | 60 |
| **Total** | 100 |

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| --- | --- | --- |
| **RELATIONSHIP BETWEEN THE COURSE LEARNING OUTCOMES AND THE PROGRAM OUTCOMES (PO)** (5: Very high, 4: High, 3: Middle, 2: Low, 1: Very low) | | |
| **NO** | **PROGRAM OUTCOME** | **Contribution** |
| **1** | Adequate knowledge in basic sciences (mathematics, science) and the ability to apply theoretical and practical knowledge in these areas in problem solving | 1 |
| **2** | Ability to identify, define, formulate and solve complex problems; ability to select and apply appropriate analytical and modeling methods for this purpose | 3 |
| **3** | The ability to understand a complex system, system component or process and to solve system or process failures under certain realistic constraints. | 3 |
| **4** | Ability to develop, select and use modern techniques and tools required for practice; ability to use information technologies effectively | 5 |
| **5** | Ability to collect data for the investigation of problems, analyze and interpret the results | 2 |
| **6** | Ability to work effectively in disciplinary and multidisciplinary teams; ability to work individually | 3 |
| **7** | Ability to communicate effectively in oral and written Turkish; knowledge of at least one foreign language. | 3 |
| **8** | Awareness of the necessity of lifelong learning; the ability to access information, to follow developments in science and technology and to constantly renew oneself | 2 |
| **9** | Awareness of professional and ethical responsibility | 2 |
| **10** | Knowledge about business life practices such as project management, risk management and change management; awareness of entrepreneurship, innovation and sustainable development | 3 |
| **11** | Knowledge about the effects of technical applications on health, environment and safety in universal and social dimensions and contemporary issues; awareness of the legal consequences of problem-oriented solutions | 2 |

**ESOGU SİVRİHİSAR VOCATIONAL SCHOOL**

**COMPUTER PROGRAMMING PROGRAM**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **Course Name** | **Course Code** |
| BUSINESS ETHICS | 221112304 |

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| --- | --- | --- | --- | --- |
| **Semester** | **Number of Course Hours per Week** | | **Credit** | **ECTS** |
| **Theory** | **Practice** |
| 2 | 2 | 0 | 2 | 3 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Course Category (Credit)** | | | | |
| **Basic Sciences** | **Engineering Sciences** | **Design** | **General Education** | **Social** |
|  |  |  |  | X |

|  |  |  |
| --- | --- | --- |
| **Course Language** | **Course Level** | **Course Type** |
| Turkish | Associate degree | Elective |

|  |  |
| --- | --- |
| **Prerequisite(s) if any** | NONE |
| **Objectives of the Course** | The aim of this course is to teach to gain competencies related to professional ethics. |
| **Short Course Content** | To examine the concepts of ethics and morality, to examine the factors that play a role in the formation of morality, to examine professional ethics and to examine the concept of social responsibility |

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| --- | --- | --- | --- | --- |
| **Learning Outcomes of the Course** | | **Contributed PO(s)** | **Teaching Methods \*** | **Measuring Methods \*\*** |
| **1** | Examines the concepts of ethics and morality | PÇ9 | 1,2,5 | A |
| **2** | Complies with the principles of professional ethics | PÇ9 | 1, 5, 8,12,13 | A |

|  |  |
| --- | --- |
| **Main Textbook** | Anadolu Üniversitesi Yayınları İş Etiği. Eskişehir |
| **Supporting References** |  |
| **Necessary Course Material** | Projector |

|  |  |
| --- | --- |
| **Course Schedule** | |
| **1** | Examine the concepts of ethics and morality |
| **2** | Examine the concepts of ethics and morality |
| **3** | Examine the ethical systems |
| **4** | Examine the ethical systems, investigate the factors that play a role in the formation of morality |
| **5** | Investigate the factors that play a role in the formation of morality |
| **6** | Examine the ethics of profession |
| **7** | Examine the ethics of profession |
| **8** | Mid-term exam |
| **9** | Examine the ethics of profession |
| **10** | Examine the ethics of profession |
| **11** | Analyzing the results of corruption and unethical behavior in professional life professional |
| **12** | Analyzing the results of corruption and unethical behavior in professional life professional |
| **13** | Examine the concept of social responsibility |
| **14** | Examine the concept of social responsibility |
| **15** | Examine the concept of social responsibility |
| **16,17** | Final exam |

|  |  |  |  |
| --- | --- | --- | --- |
| **Calculation of Course Workload** | | | |
| **Activities** | **Number** | **Time (Hour)** | **Total Workload (Hour)** |
| Course Time (number of course hours per week) | 14 | 2 | 28 |
| Classroom Studying Time (review, reinforcing, prestudy,….) | 1 | 6 | 6 |
| Homework |  |  |  |
| Quiz Exam |  |  |  |
| Studying for Quiz Exam |  |  |  |
| Oral exam |  |  |  |
| Studying for Oral Exam |  |  |  |
| Report (Preparation and presentation time included) |  |  |  |
| Project (Preparation and presentation time included) |  |  |  |
| Presentation (Preparation time included) |  |  |  |
| Mid-Term Exam | 1 | 1 | 1 |
| Studying for Mid-Term Exam | 14 | 1,5 | 21 |
| Final Exam | 1 | 1 | 1 |
| Studying for Final Exam | 14 | 1,5 | 21 |
|  | **Total workload** | | **78** |
|  | **Total workload / 30** | | **2,6** |
|  | **Course ECTS Credit** | | **3** |

|  |  |
| --- | --- |
| **Evaluation** | |
| **Activity Type** | **%** |
| Mid-term | 40 |
| Quiz |  |
| Homework |  |
|  |  |
|  |  |
| **Final Exam** | 60 |
| **Total** | 100 |

|  |  |  |
| --- | --- | --- |
| **RELATIONSHIP BETWEEN THE COURSE LEARNING OUTCOMES AND THE PROGRAM OUTCOMES (PO)** (5: Very high, 4: High, 3: Middle, 2: Low, 1: Very low) | | |
| **NO** | **PROGRAM OUTCOME** | **Contribution** |
| **1** | Adequate knowledge in basic sciences (mathematics, science) and the ability to apply theoretical and practical knowledge in these areas in problem solving | 1 |
| **2** | Ability to identify, define, formulate and solve complex problems; ability to select and apply appropriate analytical and modeling methods for this purpose | 1 |
| **3** | The ability to understand a complex system, system component or process and to solve system or process failures under certain realistic constraints. | 1 |
| **4** | Ability to develop, select and use modern techniques and tools required for practice; ability to use information technologies effectively | 1 |
| **5** | Ability to collect data for the investigation of problems, analyze and interpret the results | 1 |
| **6** | Ability to work effectively in disciplinary and multidisciplinary teams; ability to work individually | 1 |
| **7** | Ability to communicate effectively in oral and written Turkish; knowledge of at least one foreign language. | 1 |
| **8** | Awareness of the necessity of lifelong learning; the ability to access information, to follow developments in science and technology and to constantly renew oneself | 2 |
| **9** | Awareness of professional and ethical responsibility | 5 |
| **10** | Knowledge about business life practices such as project management, risk management and change management; awareness of entrepreneurship, innovation and sustainable development | 1 |
| **11** | Knowledge about the effects of technical applications on health, environment and safety in universal and social dimensions and contemporary issues; awareness of the legal consequences of problem-oriented solutions | 1 |
| **12** |  |  |

**ESOGU SİVRİHİSAR VOCATIONAL SCHOOL**

**COMPUTER PROGRAMMING PROGRAM**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **Course Name** | **Course Code** |
| CAREER PLANNING | 221112305 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Semester** | **Number of Course Hours per Week** | | **Credit** | **ECTS** |
| **Theory** | **Practice** |
| 2 | 2 | 0 | 2 | 3 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Course Category (Credit)** | | | | |
| **Basic Sciences** | **Engineering Sciences** | **Design** | **General Education** | **Social** |
|  |  |  |  | X |

|  |  |  |
| --- | --- | --- |
| **Course Language** | **Course Level** | **Course Type** |
| Turkish | Associate degree | Elective |

|  |  |
| --- | --- |
| **Prerequisite(s) if any** | No |
| **Objectives of the Course** | This course aims to help students plan their own careers. |
| **Short Course Content** | Career-related concepts, Career planning, Stages of the career planning process, Career planning models, CV writing, Job interview |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Learning Outcomes of the Course** | | **Contributed PO(s)** | **Teaching Methods \*** | **Measuring Methods \*\*** |
| **1** | Ability to distinguish between career-related concepts | 8,9 | 1,2,5 | A |
| **2** | Ability to explain career planning steps | 8,9 | 1,2,5 | A |
| **3** | Ability to determine career goals | 8,9 | 1,2,5 | A |
| **4** | Ability to prepare own CV and business letters | 8,9 | 1,2,5 | A |
| **5** | Gaining interview skills | 8,9 | 1,2,5 | A |

|  |  |
| --- | --- |
| **Main Textbook** | Öz Temel, K. (2020). Career planning and development |
| **Supporting References** |  |
| **Necessary Course Material** | Computer and projector |

|  |  |
| --- | --- |
| **Course Schedule** | |
| **1** | Career-related concepts |
| **2** | Career development theories |
| **3** | What is career planning? What are its features and principles? |
| **4** | Stages of the career planning process |
| **5** | Stages of the career planning process |
| **6** | Career planning models Goal setting in career planning |
| **7** | World career trends |
| **8** | Midterm |
| **9** | CV preparation |
| **10** | Resume types, CV format and examples, points to consider when preparing a CV |
| **11** | Cover letter Reference letter |
| **12** | Job interview purposes, methods and types |
| **13** | Preparation for the interview and interview stages |
| **14** | Situations that may be encountered during interviews; question types, body language-bodily signs |
| **15** | Situations that may be encountered during interviews; question types, body language-bodily signs |
| **16,17** | Final Exams |

|  |  |  |  |
| --- | --- | --- | --- |
| **Calculation of Course Workload** | | | |
| **Activities** | **Number** | **Time (Hour)** | **Total Workload (Hour)** |
| Course Time (number of course hours per week) | 14 | 2 | 28 |
| Classroom Studying Time (review, reinforcing, prestudy,….) | 2 | 2 | 4 |
| Homework |  |  |  |
| Quiz Exam |  |  |  |
| Studying for Quiz Exam |  |  |  |
| Oral exam |  |  |  |
| Studying for Oral Exam |  |  |  |
| Report (Preparation and presentation time included) |  |  |  |
| Project (Preparation and presentation time included) |  |  |  |
| Presentation (Preparation time included) |  |  |  |
|  |  |  |  |
|  |  |  |  |
| Mid-Term Exam | 1 | 1 | 1 |
| Studying for Mid-Term Exam | 14 | 1,5 | 21 |
| Final Exam | 1 | 1 | 1 |
| Studying for Final Exam | 14 | 1,5 | 21 |
|  | **Toplam iş yükü** | | **76** |
|  | **Toplam iş yükü / 30** | | **2,53** |
|  | **Dersin AKTS Kredisi** | | **3** |

|  |  |
| --- | --- |
| **Evaluation** | |
| **Activity Type** | **%** |
| Mid-term | 40 |
| Quiz |  |
| Homework |  |
|  |  |
|  |  |
| **Final Exam** | 60 |
| **Total** | 100 |

|  |  |  |
| --- | --- | --- |
| **RELATIONSHIP BETWEEN THE COURSE LEARNING OUTCOMES AND THE PROGRAM OUTCOMES (PO)** (5: Very high, 4: High, 3: Middle, 2: Low, 1: Very low) | | |
| **NO** | **PROGRAM OUTCOME** | **Contribution** |
| **1** | Adequate knowledge in basic sciences (mathematics, science) and the ability to apply theoretical and practical knowledge in these areas in problem solving | 1 |
| **2** | Ability to identify, define, formulate and solve complex problems; ability to select and apply appropriate analytical and modeling methods for this purpose | 1 |
| **3** | The ability to understand a complex system, system component or process and to solve system or process failures under certain realistic constraints. | 1 |
| **4** | Ability to develop, select and use modern techniques and tools required for practice; ability to use information technologies effectively | 1 |
| **5** | Ability to collect data for the investigation of problems, analyze and interpret the results | 1 |
| **6** | Ability to work effectively in disciplinary and multidisciplinary teams; ability to work individually | 1 |
| **7** | Ability to communicate effectively in oral and written Turkish; knowledge of at least one foreign language. | 2 |
| **8** | Awareness of the necessity of lifelong learning; the ability to access information, to follow developments in science and technology and to constantly renew oneself | 3 |
| **9** | Awareness of professional and ethical responsibility | 4 |
| **10** | Knowledge about business life practices such as project management, risk management and change management; awareness of entrepreneurship, innovation and sustainable development | 2 |
| **11** | Knowledge about the effects of technical applications on health, environment and safety in universal and social dimensions and contemporary issues; awareness of the legal consequences of problem-oriented solutions | 1 |

**ESOGU SİVRİHİSAR VOCATIONAL SCHOOL**

**COMPUTER PROGRAMMING PROGRAM**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **Course Name** | **Course Code** |
| VISUAL PROGRAMMING I | 221113233 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Semester** | **Number of Course Hours per Week** | | **Credit** | **ECTS** |
| **Theory** | **Practice** |
| 3 | 2 | 2 | 3 | 6 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Course Category (Credit)** | | | | |
| **Basic Sciences** | **Engineering Sciences** | **Design** | **General Education** | **Social** |
|  | X |  |  |  |

|  |  |  |
| --- | --- | --- |
| **Course Language** | **Course Level** | **Course Type** |
| Turkish | Associate degree | Compulsory |

|  |  |
| --- | --- |
| **Prerequisite(s) if any** |  |
| **Objectives of the Course** | Ensuring that students understand the basic concepts of visual programming and object oriented programming. |
| **Short Course Content** | Program software and advanced program development in C# software language |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Learning Outcomes of the Course** | | **Contributed PO(s)** | **Teaching Methods \*** | **Measuring Methods \*\*** |
| **1** | Learning to Use Visual Studio | 2,3,4,10 | 1, 6, 10   11, 12, 14 | A, D, J |
| **2** | Develop algorithms and write code with Visual C# | 2,3,4,10 | 1, 6, 10   11, 12, 14 | A, D, J |
| **3** | Learning to program with C# | 2,3,4,10 | 1, 6, 10   11, 12, 14 | A, D, J |
| **4** | Develop Windows applications | 2,3,4,10 | 1, 6, 10   11, 12, 14 | A, D, J |

|  |  |
| --- | --- |
| **Main Textbook** |  |
| **Supporting References** |  |
| **Necessary Course Material** |  |

|  |  |
| --- | --- |
| **Course Schedule** | |
| **1** | Installation of a visual program. Programming environment. Basic components and design phase |
| **2** | Building Blocks of Language; Language Environment |
| **3** | Working with basic data types |
| **4** | Decision/loop structures and applications |
| **5** | Numeric, alphanumeric, graphical, system commands and applications |
| **6** | Series |
| **7** | Methods |
| **8** | Mid-Term Exam |
| **9** | Forms |
| **10** | General control components and applications |
| **11** | General control components and applications |
| **12** | Dialog windows, dialog objects, properties, events and applications |
| **13** | Dialog windows, dialog objects, properties, events and applications |
| **14** | Database objects, properties, events and applications |
| **15** | Database objects, properties, events and applications |
| **16,17** | Final Exam |

|  |  |  |  |
| --- | --- | --- | --- |
| **Calculation of Course Workload** | | | |
| **Activities** | **Number** | **Time (Hour)** | **Total Workload (Hour)** |
| Course Time (number of course hours per week) | 14 | 4 | 56 |
| Classroom Studying Time (review, reinforcing, prestudy,….) | 14 | 2 | 28 |
| Homework |  |  |  |
| Quiz Exam | 1 | 1 | 1 |
| Studying for Quiz Exam |  |  |  |
| Oral exam |  |  |  |
| Studying for Oral Exam |  |  |  |
| Report (Preparation and presentation time included) |  |  |  |
| Project (Preparation and presentation time included) | 1 | 30 | 30 |
| Presentation (Preparation time included) | 1 | 1 | 1 |
|  |  |  |  |
|  |  |  |  |
| Mid-Term Exam | 1 | 1 | 1 |
| Studying for Mid-Term Exam | 7 | 3 | 21 |
| Final Exam | 1 | 1 | 1 |
| Studying for Final Exam | 14 | 3 | 42 |
|  | **Toplam iş yükü** | | **181** |
|  | **Toplam iş yükü / 30** | | **6,03** |
|  | **Dersin AKTS Kredisi** | | **6** |

|  |  |
| --- | --- |
| **Evaluation** | |
| **Activity Type** | **%** |
| Mid-term | 40 |
| Quiz |  |
| Homework |  |
|  |  |
|  |  |
| **Final Exam** | 60 |
| **Total** | 100 |

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| --- | --- | --- |
| **RELATIONSHIP BETWEEN THE COURSE LEARNING OUTCOMES AND THE PROGRAM OUTCOMES (PO)** (5: Very high, 4: High, 3: Middle, 2: Low, 1: Very low) | | |
| **NO** | **PROGRAM OUTCOME** | **Contribution** |
| **1** | Adequate knowledge in basic sciences (mathematics, science) and the ability to apply theoretical and practical knowledge in these areas in problem solving | 4 |
| **2** | Ability to identify, define, formulate and solve complex problems; ability to select and apply appropriate analytical and modeling methods for this purpose | 5 |
| **3** | The ability to understand a complex system, system component or process and to solve system or process failures under certain realistic constraints. | 5 |
| **4** | Ability to develop, select and use modern techniques and tools required for practice; ability to use information technologies effectively | 5 |
| **5** | Ability to collect data for the investigation of problems, analyze and interpret the results | 4 |
| **6** | Ability to work effectively in disciplinary and multidisciplinary teams; ability to work individually | 3 |
| **7** | Ability to communicate effectively in oral and written Turkish; knowledge of at least one foreign language. | 3 |
| **8** | Awareness of the necessity of lifelong learning; the ability to access information, to follow developments in science and technology and to constantly renew oneself | 3 |
| **9** | Awareness of professional and ethical responsibility | 3 |
| **10** | Knowledge about business life practices such as project management, risk management and change management; awareness of entrepreneurship, innovation and sustainable development | 5 |
| **11** | Knowledge about the effects of technical applications on health, environment and safety in universal and social dimensions and contemporary issues; awareness of the legal consequences of problem-oriented solutions | 3 |

**ESOGU SİVRİHİSAR VOCATIONAL SCHOOL**

**COMPUTER PROGRAMMING PROGRAM**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **Course Name** | **Course Code** |
| INTERNET PROGRAMMING I | 221113234 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Semester** | **Number of Course Hours per Week** | | **Credit** | **ECTS** |
| **Theory** | **Practice** |
| 3 | 2 | 2 | 3 | 6 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Course Category (Credit)** | | | | |
| **Basic Sciences** | **Engineering Sciences** | **Design** | **General Education** | **Social** |
|  | X |  |  |  |

|  |  |  |
| --- | --- | --- |
| **Course Language** | **Course Level** | **Course Type** |
| Turkish | Associate degree | Compulsory |

|  |  |
| --- | --- |
| **Prerequisite(s) if any** | - |
| **Objectives of the Course** | In addition to informing students about the basic concepts of the Internet, to provide students with the knowledge to make effective web page designs by using programs that help to prepare web pages both by writing HTML tags in the text editor and without writing HTML tags. |
| **Short Course Content** | Definition and historical development of the Internet; connection and access to the Internet: web page, www, HTTP, HTML, URL, FTP and TCP/IP definitions; software used for file transfer; sending e-mail and setting e-mail program settings; popular search/query systems on the web and advanced search tips; HTML: Properties of HTML as a markup language, basic tags; preparing a web site using Adobe Dreamweaver CS5 and uploading the page to the server. |

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| --- | --- | --- | --- | --- |
| **Learning Outcomes of the Course** | | **Contributed PO(s)** | **Teaching Methods \*** | **Measuring Methods \*\*** |
| **1** | To be able to understand the basic concepts and terms used in Internet usage and programming. | 2,6,10 | 1, 6, 10  11, 12, 14 | A, D, J |
| **2** | To be able to comprehend server-client logic. | 2,6,10 | 1, 6, 10  11, 12, 14 | A, D, J |
| **3** | To be able to use FTP software to transfer web pages to the server. | 2,6,10 | 1, 6, 10  11, 12, 14 | A, D, J |
| **4** | To be able to design a web page by writing basic HTML tags, taking into account the rules necessary for the design of a web page or site suitable for the purpose. | 2,6,10 | 1, 6, 10  11, 12, 14 | A, D, J |
| **5** | To be able to add elements such as text, tables, graphics or images using HTML tags and create links. | 2,6,10 | 1, 6, 10  11, 12, 14 | A, D, J |
| **6** | To be able to adjust the page layout using frames. | 2,6,10 | 1, 6, 10  11, 12, 14 | A, D, J |
| **7** | To be able to create a website using software such as Adobe Dreamweaver CS5 | 2,6,10 | 1, 6, 10  11, 12, 14 | A, D, J |

|  |  |
| --- | --- |
| **Main Textbook** | 1.Bal, H.Ç. (2005). Bilgisayar ve İnternet Kullanımı XP. Trabzon: Abp. 2.Erkan, K. (2003). Temel Bilgi Teknolojisi Kullanımı. Ankara: Pegem. |
| **Supporting References** | - |
| **Necessary Course Material** | Lecture, Computer lab work, homework |

|  |  |
| --- | --- |
| **Course Schedule** | |
| **1** | Definition, historical development and usage purposes of the Internet |
| **2** | Connection and access to the Internet: web page, www, HTTP, HTML, HTML, URL, FTP and TCP/IP definitions |
| **3** | Software used for file transfer |
| **4** | sending e-mail and adjusting e-mail program settings; popular search/query systems on the web and advanced search tips |
| **5** | HTML: The development of HTML and its features as a markup language |
| **6** | Basic HTML tags: formatting, links |
| **7** | Basic HTML tags: formatting, links |
| **8** | Mid-Term Exam |
| **9** | Basic HTML tags: in-document links, out-of-site links |
| **10** | Basic HTML tags: charts, lists, forms |
| **11** | Basic HTML tags: frames, images and image maps |
| **12** | Preparing a website using Adobe Adobe Dreamweaver CS5 program |
| **13** | Preparing a website using Adobe Adobe Dreamweaver CS5 program |
| **14** | Adobe Adobe Dreamweaver CS5 program, uploading the prepared web page to the server |
| **15** | Adobe Adobe Dreamweaver CS5 program, uploading the prepared web page to the server |
| **16,17** | Final Exam |

|  |  |  |  |
| --- | --- | --- | --- |
| **Calculation of Course Workload** | | | |
| **Activities** | **Number** | **Time (Hour)** | **Total Workload (Hour)** |
| Course Time (number of course hours per week) | 14 | 4 | 56 |
| Classroom Studying Time (review, reinforcing, prestudy,….) | 2 | 2 | 4 |
| Homework |  |  |  |
| Quiz Exam |  |  |  |
| Studying for Quiz Exam |  |  |  |
| Oral exam |  |  |  |
| Studying for Oral Exam |  |  |  |
| Report (Preparation and presentation time included) | 4 | 5 | 20 |
| Project (Preparation and presentation time included) | 4 | 5 | 20 |
| Presentation (Preparation time included) |  |  |  |
| Mid-Term Exam | 1 | 1 | 1 |
| Studying for Mid-Term Exam | 14 | 2 | 28 |
| Final Exam | 1 | 1 | 1 |
| Studying for Final Exam | 14 | 2 | 28 |
|  | **Total workload** | | **158** |
|  | **Total workload / 30** | | **5,26** |
|  | **Course ECTS Credit** | | **6** |

|  |  |
| --- | --- |
| **Evaluation** | |
| **Activity Type** | **%** |
| Mid-term | 40 |
|  |  |
|  |  |
|  |  |
|  |  |
| **Final Exam** | 60 |
| **Total** | 100 |

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| --- | --- | --- |
| **RELATIONSHIP BETWEEN THE COURSE LEARNING OUTCOMES AND THE PROGRAM OUTCOMES (PO)** (5: Very high, 4: High, 3: Middle, 2: Low, 1: Very low) | | |
| **NO** | **PROGRAM OUTCOME** | **Contribution** |
| **1** | Adequate knowledge in basic sciences (mathematics, science) and the ability to apply theoretical and practical knowledge in these areas in problem solving | 3 |
| **2** | Ability to identify, define, formulate and solve complex problems; ability to select and apply appropriate analytical and modeling methods for this purpose | 5 |
| **3** | The ability to understand a complex system, system component or process and to solve system or process failures under certain realistic constraints. | 2 |
| **4** | Ability to develop, select and use modern techniques and tools required for practice; ability to use information technologies effectively | 3 |
| **5** | Ability to collect data for the investigation of problems, analyze and interpret the results | 2 |
| **6** | Ability to work effectively in disciplinary and multidisciplinary teams; ability to work individually | 4 |
| **7** | Ability to communicate effectively in oral and written Turkish; knowledge of at least one foreign language. | 2 |
| **8** | Awareness of the necessity of lifelong learning; the ability to access information, to follow developments in science and technology and to constantly renew oneself | 3 |
| **9** | Awareness of professional and ethical responsibility | 3 |
| **10** | Knowledge about business life practices such as project management, risk management and change management; awareness of entrepreneurship, innovation and sustainable development | 5 |
| **11** | Knowledge about the effects of technical applications on health, environment and safety in universal and social dimensions and contemporary issues; awareness of the legal consequences of problem-oriented solutions | 2 |

**ESOGU SİVRİHİSAR VOCATIONAL SCHOOL**

**COMPUTER PROGRAMMING PROGRAM**

**COURSE INFORMATION FORM**

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| --- | --- |
| **Course Name** | **Course Code** |
| OBJECT ORIENTED PROGRAMMING I | 221113241 |

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| --- | --- | --- | --- | --- |
| **Semester** | **Number of Course Hours per Week** | | **Credit** | **ECTS** |
| **Theory** | **Practice** |
| 3 | 2 | 2 | 3 | 5 |

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| --- | --- | --- | --- | --- |
| **Course Category (Credit)** | | | | |
| **Basic Sciences** | **Engineering Sciences** | **Design** | **General Education** | **Social** |
|  | X |  |  |  |

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| --- | --- | --- |
| **Course Language** | **Course Level** | **Course Type** |
| Turkish | Associate degree | Compulsory |

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| --- | --- |
| **Prerequisite(s) if any** |  |
| **Objectives of the Course** | Classes, Objects and Members; Final and Static Members; Constructor and Finalizer Methods; UML Class Diagrams; Command Line Input/Output Operations; Control Flow; Relationships between Classes and Objects (Ownership, Usage, Part-Whole, Inheritance); Redefining and Multiple Definition of Methods; Primitives and Wrappers; Enum Structures; Exception Handling; File Operations; Generic Classes; Using Basic Data Structures; |
| **Short Course Content** | Program software and advanced program development in C# software language |

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| --- | --- | --- | --- | --- |
| **Learning Outcomes of the Course** | | **Contributed PO(s)** | **Teaching Methods \*** | **Measuring Methods \*\*** |
| **1** | Students gain the ability to perform object-oriented modeling for the design of the business logic layer of information systems | 2,3,4,10 | 1, 6, 10   11, 12, 14 | A, D, J |
| **2** | Students gain the ability to document their designs with UML class and sequence diagrams. | 2,3,4,10 | 1, 6, 10   11, 12, 14 | A, D, J |
| **3** | Students gain the ability to perform bidirectional conversions between Java code and learned UML diagrams | 2,3,4,10 | 1, 6, 10   11, 12, 14 | A, D, J |
| **4** | Students gain the ability to write Java or C# programs that run from the command line | 2,3,4,10 | 1, 6, 10   11, 12, 14 | A, D, J |
| **5** | Students gain the ability to use the basic features of current IDE programs | 2,3,4,10 | 1, 6, 10   11, 12, 14 | A, D, J |

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| **Main Textbook** | Java How to Program, Harvey M. Deitel & Paul J. Deitel, Prentice-Hall. 7. Sürüm veya daha günceli, Objects First Edition önerilir. |
| **Supporting References** | * Core Java 2 Volume I and II, C. S. Horstmann and G. Cornell, Prentice-Hall. 7. Sürüm veya daha günceli önerilir.   UML Distilled, Martin Fowler, Addison-Wesley, 2003 (3rd ed.) |
| **Necessary Course Material** |  |

|  |  |
| --- | --- |
| **Course Schedule** | |
| **1** | Introduction to Object-Oriented Programming (OOP): Object-oriented thinking, history and design principles |
| **2** | OOP basics: Properties, methods, events, control structures, loops and arrays. |
| **3** | OOP basics: Properties, methods, events, control structures, loops and arrays. |
| **4** | Data structures and algorithms: Primitive and reference types, lists, stacks, heaps, queues, dictionaries and their applications in OOP |
| **5** | Data structures and algorithms: Primitive and reference types, lists, stacks, heaps, queues, dictionaries and their applications in OOP |
| **6** | Object and class design, Unified Modeling Language (UML): Class diagrams, object diagrams and activity diagrams |
| **7** | Object and class design, Unified Modeling Language (UML): Class diagrams, object diagrams and activity diagrams |
| **8** | Mid-Term Exam |
| **9** | Inheritance, abstract classes and composition |
| **10** | Interfaces, polymorphism and SOLID principles |
| **11** | Exception handling and error handling in OOP |
| **12** | Memory management, garbage collection and resource processing |
| **13** | Advanced Application Development |
| **14** | Advanced Application Development |
| **15** | Advanced Application Development |
| **16,17** | Final Exam |

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| --- | --- | --- | --- |
| **Calculation of Course Workload** | | | |
| **Activities** | **Number** | **Time (Hour)** | **Total Workload (Hour)** |
| Course Time (number of course hours per week) | 14 | 4 | 56 |
| Classroom Studying Time (review, reinforcing, prestudy,….) | 14 | 2 | 28 |
| Homework |  |  |  |
| Quiz Exam | 1 | 1 | 1 |
| Studying for Quiz Exam |  |  |  |
| Oral exam |  |  |  |
| Studying for Oral Exam |  |  |  |
| Report (Preparation and presentation time included) |  |  |  |
| Project (Preparation and presentation time included) | 1 | 20 | 20 |
| Presentation (Preparation time included) | 1 | 1 | 1 |
|  |  |  |  |
|  |  |  |  |
| Mid-Term Exam | 1 | 1 | 1 |
| Studying for Mid-Term Exam | 5 | 3 | 15 |
| Final Exam | 1 | 1 | 1 |
| Studying for Final Exam | 14 | 0 | 28 |
|  | **Toplam iş yükü** | | **151** |
|  | **Toplam iş yükü / 30** | | **5,03** |
|  | **Dersin AKTS Kredisi** | | **5** |

|  |  |
| --- | --- |
| **Evaluation** | |
| **Activity Type** | **%** |
| Mid-term | 40 |
| Quiz |  |
| Homework |  |
|  |  |
|  |  |
| **Final Exam** | 60 |
| **Total** | 100 |

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| --- | --- | --- |
| **RELATIONSHIP BETWEEN THE COURSE LEARNING OUTCOMES AND THE PROGRAM OUTCOMES (PO)** (5: Very high, 4: High, 3: Middle, 2: Low, 1: Very low) | | |
| **NO** | **PROGRAM OUTCOME** | **Contribution** |
| **1** | Adequate knowledge in basic sciences (mathematics, science) and the ability to apply theoretical and practical knowledge in these areas in problem solving | 4 |
| **2** | Ability to identify, define, formulate and solve complex problems; ability to select and apply appropriate analytical and modeling methods for this purpose | 5 |
| **3** | The ability to understand a complex system, system component or process and to solve system or process failures under certain realistic constraints. | 5 |
| **4** | Ability to develop, select and use modern techniques and tools required for practice; ability to use information technologies effectively | 5 |
| **5** | Ability to collect data for the investigation of problems, analyze and interpret the results | 4 |
| **6** | Ability to work effectively in disciplinary and multidisciplinary teams; ability to work individually | 3 |
| **7** | Ability to communicate effectively in oral and written Turkish; knowledge of at least one foreign language. | 3 |
| **8** | Awareness of the necessity of lifelong learning; the ability to access information, to follow developments in science and technology and to constantly renew oneself | 3 |
| **9** | Awareness of professional and ethical responsibility | 3 |
| **10** | Knowledge about business life practices such as project management, risk management and change management; awareness of entrepreneurship, innovation and sustainable development | 5 |
| **11** | Knowledge about the effects of technical applications on health, environment and safety in universal and social dimensions and contemporary issues; awareness of the legal consequences of problem-oriented solutions | 3 |

**ESOGU SİVRİHİSAR VOCATIONAL SCHOOL**

**COMPUTER PROGRAMMING PROGRAM**

**COURSE INFORMATION FORM**

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| --- | --- |
| **Course Name** | **Course Code** |
| OPERATING SYSTEMS | 221113238 |

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| --- | --- | --- | --- | --- |
| **Semester** | **Number of Course Hours per Week** | | **Credit** | **ECTS** |
| **Theory** | **Practice** |
| 3 | 2 | 0 | 2 | 3 |

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| --- | --- | --- | --- | --- |
| **Course Category (Credit)** | | | | |
| **Basic Sciences** | **Engineering Sciences** | **Design** | **General Education** | **Social** |
|  | X |  |  |  |

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| --- | --- | --- |
| **Course Language** | **Course Level** | **Course Type** |
| Turkish | Associate degree | Compulsory |

|  |  |
| --- | --- |
| **Prerequisite(s) if any** | - |
| **Objectives of the Course** | To teach the main problems encountered in the design and construction of computer operating systems. |
| **Short Course Content** | Recognizes the architectures of operating systems and covers the basic concepts of personal and server-based operating systems. |

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| --- | --- | --- | --- | --- |
| **Learning Outcomes of the Course** | | **Contributed PO(s)** | **Teaching Methods \*** | **Measuring Methods \*\*** |
| **1** | Set up personal computer operating systems | 10 | 1, 6 | A |
| **2** | Customize the operating system | 10 | 1, 6 | A |
| **3** | Adding the computer with personal operating system to the network environment | 10 | 1, 6 | A |
| **4** | Adjusting security settings on a personal computer | 10 | 1, 6 | A |
| **5** | To gain the ability to use administrative tools in a personal computer operating system | 10 | 1, 6 | A |
| **6** | To know the basic concepts of server computer operating systems | 10 | 1, 6 | A |
| **7** | Set up and customize server computer operating systems | 10 | 1, 6 | A |

|  |  |
| --- | --- |
| **Main Textbook** | Harman, G. Halat, Ç. Bayraktar M. (2005). Microsoft Sertifika Sınavlarına Hazırlık Kılavuzu. İstanbul: Medyasoft Yayıncılık |
| **Supporting References** | - |
| **Necessary Course Material** | Lecture |

|  |  |
| --- | --- |
| **Course Schedule** | |
| **1** | Introduction to Operating Systems |
| **2** | History and Development of Operating Systems |
| **3** | Basic Components of Operating Systems |
| **4** | Transaction Management |
| **5** | Memory Management |
| **6** | File Systems and Management |
| **7** | Input/Output Systems and Device Management |
| **8** | Mid-Term Exam |
| **9** | Multitasking and Job Scheduling |
| **10** | Security and Protection |
| **11** | Network Operating Systems and Communications |
| **12** | Virtualization and Cloud Computing |
| **13** | Mobile Operating Systems |
| **14** | Current Operating Systems and Comparisons |
| **15** | General Review and Practical Project Studies |
| **16,17** | Final Exam |

|  |  |  |  |
| --- | --- | --- | --- |
| **Calculation of Course Workload** | | | |
| **Activities** | **Number** | **Time (Hour)** | **Total Workload (Hour)** |
| Course Time (number of course hours per week) | 14 | 2 | 28 |
| Classroom Studying Time (review, reinforcing, prestudy,….) |  |  |  |
| Homework |  |  |  |
| Quiz Exam |  |  |  |
| Studying for Quiz Exam |  |  |  |
| Oral exam |  |  |  |
| Studying for Oral Exam |  |  |  |
| Report (Preparation and presentation time included) |  |  |  |
| Project (Preparation and presentation time included) |  |  |  |
| Presentation (Preparation time included) |  |  |  |
|  |  |  |  |
|  |  |  |  |
| Mid-Term Exam | 1 | 1 | 1 |
| Studying for Mid-Term Exam | 14 | 2 | 28 |
| Final Exam | 1 | 1 | 1 |
| Studying for Final Exam | 14 | 2 | 28 |
|  | **Total workload** | | **86** |
|  | **Total workload / 30** | | **2,86** |
|  | **Course ECTS Credit** | | **3** |

|  |  |
| --- | --- |
| **Evaluation** | |
| **Activity Type** | **%** |
| Mid-term | 40 |
|  |  |
|  |  |
|  |  |
|  |  |
| **Final Exam** | 60 |
| **Total** | 100 |

|  |  |  |
| --- | --- | --- |
| **RELATIONSHIP BETWEEN THE COURSE LEARNING OUTCOMES AND THE PROGRAM OUTCOMES (PO)** (5: Very high, 4: High, 3: Middle, 2: Low, 1: Very low) | | |
| **NO** | **PROGRAM OUTCOME** | **Contribution** |
| **1** | Adequate knowledge in basic sciences (mathematics, science) and the ability to apply theoretical and practical knowledge in these areas in problem solving | 2 |
| **2** | Ability to identify, define, formulate and solve complex problems; ability to select and apply appropriate analytical and modeling methods for this purpose | 3 |
| **3** | The ability to understand a complex system, system component or process and to solve system or process failures under certain realistic constraints. | 2 |
| **4** | Ability to develop, select and use modern techniques and tools required for practice; ability to use information technologies effectively | 3 |
| **5** | Ability to collect data for the investigation of problems, analyze and interpret the results | 2 |
| **6** | Ability to work effectively in disciplinary and multidisciplinary teams; ability to work individually | 3 |
| **7** | Ability to communicate effectively in oral and written Turkish; knowledge of at least one foreign language. | 2 |
| **8** | Awareness of the necessity of lifelong learning; the ability to access information, to follow developments in science and technology and to constantly renew oneself | 2 |
| **9** | Awareness of professional and ethical responsibility | 3 |
| **10** | Knowledge about business life practices such as project management, risk management and change management; awareness of entrepreneurship, innovation and sustainable development | 4 |
| **11** | Knowledge about the effects of technical applications on health, environment and safety in universal and social dimensions and contemporary issues; awareness of the legal consequences of problem-oriented solutions | 2 |

**ESOGU SİVRİHİSAR VOCATIONAL SCHOOL**

**COMPUTER PROGRAMMING PROGRAM**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **Course Name** | **Course Code** |
| PROFESSIONAL FOREIGN LANGUAGE | 221113237 |

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| --- | --- | --- | --- | --- |
| **Semester** | **Number of Course Hours per Week** | | **Credit** | **ECTS** |
| **Theory** | **Practice** |
| 3 | 2 | 0 | 2 | 3 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Course Category (Credit)** | | | | |
| **Basic Sciences** | **Engineering Sciences** | **Design** | **General Education** | **Social** |
|  | X |  |  |  |

|  |  |  |
| --- | --- | --- |
| **Course Language** | **Course Level** | **Course Type** |
| English | Associate degree | Compulsory |

|  |  |
| --- | --- |
| **Prerequisite(s) if any** | - |
| **Objectives of the Course** | To teach the Turkish meanings of the terms used in computer technology to the students and to enable them to master the terminology and to gain the ability to translate professional writings written in foreign languages into their own language. |
| **Short Course Content** | Teaching some basic patterns to be able to read and understand an English text or to translate from English to Turkish. Teaching translation techniques by translating scientific writings related to the professional field. |

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| --- | --- | --- | --- | --- |
| **Learning Outcomes of the Course** | | **Contributed PO(s)** | **Teaching Methods \*** | **Measuring Methods \*\*** |
| **1** | Analyze professional texts in English | 7,8 | 1, 6 | A |
| **2** | Getting a general idea from what they read or listen to | 7,8 | 1, 6 | A |
| **3** | Understand abbreviations in sentences they read or listen to | 7,8 | 1, 6 | A |
| **4** | Selecting the appropriate equivalent of a word from a dictionary | 7,8 | 1, 6 | A |
| **5** | To be able to understand the texts related to the field | 7,8 | 1, 6 | A |
| **6** | To be able to develop vocabulary frequently used in computer technology | 7,8 | 1, 6 | A |

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| --- | --- |
| **Main Textbook** | 1.Hasdemir, Y. (2002). Translation Methods / Çeviri Metotları. İstanbul: Alfa. |
| **Supporting References** | 1. Yarmalı, E.S. (2002). Çeviri tekniği çözümleme. Ankara: Nobel.  2. Boztaş, İ., Aksoy, Z., Kocaman, A. (2001). İngilizce çeviri kılavuzu. Ankara: Hacettepe-Taş.  3. İnan, A. (1998). Akademisyenler ve mühendisler için teknik İngilizce çeviri klavuzu. İstanbul: Türkmen.  4. http://site.ebrary.com/lib/osmangazi/Doc?id=2001092&ppg=1. |
| **Necessary Course Material** | Lecture |

|  |  |
| --- | --- |
| **Course Schedule** | |
| **1** | Basic sentence structure in English, Simple sentences, Translation of simple sentences |
| **2** | Concept of time: Present Simple, Present Continuous |
| **3** | Time concept: Continuous Past Continuous, Continuous Past Continuous |
| **4** | The concept of tense: Past in infinitives, Past in gerunds, Future Tense: will, be (am/is/are) going to, Future Continuous Tense, Future Perfect Tense |
| **5** | Auxiliary Verbs: be (am/is/are) able to, can, could, had better, have to, may, might, must |
| **6** | Auxiliary Verbs: you don't have to, you should, you will, you should, you are used to, you will, you prefer |
| **7** | Auxiliary Verbs: you don't have to, you should, you will, you should, you are used to, you will, you prefer |
| **8** | Mid-Term Exam |
| **9** | Passive voice: passive voice according to tenses, passive voice in auxiliary verbs |
| **10** | Conjunctions: and, or, but, either....or, both....and, neither...nor, not only....but also, |
| **11** | Adjective clauses Defining Relative Clause, Non-Defining Relative Clause - who(m)/which/that/where |
| **12** | Paragraph Translation |
| **13** | Paragraph Translation |
| **14** | Paragraph Translation |
| **15** | Paragraph Translation |
| **16,17** | Final Exam |

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| --- | --- | --- | --- |
| **Calculation of Course Workload** | | | |
| **Activities** | **Number** | **Time (Hour)** | **Total Workload (Hour)** |
| Course Time (number of course hours per week) | 14 | 2 | 28 |
| Classroom Studying Time (review, reinforcing, prestudy,….) | 4 | 4 | 16 |
| Homework | 4 | 4 | 16 |
| Quiz Exam |  |  |  |
| Studying for Quiz Exam |  |  |  |
| Oral exam |  |  |  |
| Studying for Oral Exam |  |  |  |
| Report (Preparation and presentation time included) |  |  |  |
| Project (Preparation and presentation time included) |  |  |  |
| Presentation (Preparation time included) |  |  |  |
|  |  |  |  |
|  |  |  |  |
| Mid-Term Exam | 1 | 1 | 1 |
| Studying for Mid-Term Exam | 14 | 1 | 14 |
| Final Exam | 1 | 1 | 1 |
| Studying for Final Exam | 14 | 1 | 14 |
|  | **Total workload** | | **90** |
|  | **Total workload / 30** | | **3** |
|  | **Course ECTS Credit** | | **3** |

|  |  |
| --- | --- |
| **Evaluation** | |
| **Activity Type** | **%** |
| Mid-term | 40 |
|  |  |
|  |  |
|  |  |
|  |  |
| **Final Exam** | 60 |
| **Total** | 100 |

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| --- | --- | --- |
| **RELATIONSHIP BETWEEN THE COURSE LEARNING OUTCOMES AND THE PROGRAM OUTCOMES (PO)** (5: Very high, 4: High, 3: Middle, 2: Low, 1: Very low) | | |
| **NO** | **PROGRAM OUTCOME** | **Contribution** |
| **1** | Adequate knowledge in basic sciences (mathematics, science) and the ability to apply theoretical and practical knowledge in these areas in problem solving | 2 |
| **2** | Ability to identify, define, formulate and solve complex problems; ability to select and apply appropriate analytical and modeling methods for this purpose | 2 |
| **3** | The ability to understand a complex system, system component or process and to solve system or process failures under certain realistic constraints. | 2 |
| **4** | Ability to develop, select and use modern techniques and tools required for practice; ability to use information technologies effectively | 3 |
| **5** | Ability to collect data for the investigation of problems, analyze and interpret the results | 2 |
| **6** | Ability to work effectively in disciplinary and multidisciplinary teams; ability to work individually | 1 |
| **7** | Ability to communicate effectively in oral and written Turkish; knowledge of at least one foreign language. | 5 |
| **8** | Awareness of the necessity of lifelong learning; the ability to access information, to follow developments in science and technology and to constantly renew oneself | 5 |
| **9** | Awareness of professional and ethical responsibility | 2 |
| **10** | Knowledge about business life practices such as project management, risk management and change management; awareness of entrepreneurship, innovation and sustainable development | 4 |
| **11** | Knowledge about the effects of technical applications on health, environment and safety in universal and social dimensions and contemporary issues; awareness of the legal consequences of problem-oriented solutions | 2 |

**ESOGU SİVRİHİSAR VOCATIONAL SCHOOL**

**COMPUTER PROGRAMMING PROGRAM**

**COURSE INFORMATION FORM**

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| --- | --- |
| **Course Name** | **Course Code** |
| MOBILE PROGRAMMING I | 221113239 |

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| --- | --- | --- | --- | --- |
| **Semester** | **Number of Course Hours per Week** | | **Credit** | **ECTS** |
| **Theory** | **Practice** |
| 3 | 2 | 0 | 2 | 2 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Course Category (Credit)** | | | | |
| **Basic Sciences** | **Engineering Sciences** | **Design** | **General Education** | **Social** |
|  | X |  |  |  |

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| --- | --- | --- |
| **Course Language** | **Course Level** | **Course Type** |
| Turkish | Associate degree | Elective |

|  |  |
| --- | --- |
| **Prerequisite(s) if any** |  |
| **Objectives of the Course** | Learning software development technologies for mobile devices. |
| **Short Course Content** | Within the scope of the course, mobile programming components, concepts and methodologies related to the application development process are given and applications are realized on iOS and Android software. |

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| **Learning Outcomes of the Course** | | **Contributed PO(s)** | **Teaching Methods \*** | **Measuring Methods \*\*** |
| **1** | To be familiar with software development technologies for mobile devices. | 4,5,10 | 1, 6, 10   11, 12, 14 | A, D, J |
| **2** | To be familiar with mobile platforms. | 4,5,10 | 1, 6, 10   11, 12, 14 | A, D, J |
| **3** | Develop software for a mobile device. | 4,5,10 | 1, 6, 10   11, 12, 14 | A, D, J |
| **4** | Create an application | 4,5,10 | 1, 6, 10   11, 12, 14 | A, D, J |
| **5** | Design an application with group work | 4,5,10 | 1, 6, 10   11, 12, 14 | A, D, J |

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| **Main Textbook** | iOS Progrmlamaya Giriş (Şükrü İlker Bırakoğlu) Kodlab Yayınları  Objective C (Tevfik KIZILÖREN) Kodlab Yayınları |
| **Supporting References** | Merhaba Android (Ahmet Oğuz Mermerkaya, Murat ÖNDER) Pusula Yayınları  Android (Nizar ÖĞÜTMEN) Kodlab Yayınları |
| **Necessary Course Material** | PC |

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| **Course Schedule** | |
| **1** | Basic concepts on mobile programming |
| **2** | Mobile application design, iOS and Android development |
| **3** | Algorithms, processes and technologies used in application development, Preparation of Development Environment, |
| **4** | Intent Concept, Operators, Decision Control Expressions |
| **5** | Cycles |
| **6** | Using the Class Method, Methods, Pointers, Structures |
| **7** | Multiple Parameter Usage, Access Token, Inheritance |
| **8** | Mid-Term Exam |
| **9** | Clean code writing techniques |
| **10** | Applying database to the application |
| **11** | Adding a database to the application |
| **12** | Mobile application design |
| **13** | Resource management in application development processes |
| **14** | App publishing |
| **15** | App publishing |
| **16,17** | Final Exam |

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| --- | --- | --- | --- |
| **Calculation of Course Workload** | | | |
| **Activities** | **Number** | **Time (Hour)** | **Total Workload (Hour)** |
| Course Time (number of course hours per week) | 14 | 2 | 28 |
| Classroom Studying Time (review, reinforcing, prestudy,….) |  |  |  |
| Homework |  |  |  |
| Quiz Exam | 1 | 1 | 1 |
| Studying for Quiz Exam |  |  |  |
| Oral exam |  |  |  |
| Studying for Oral Exam |  |  |  |
| Report (Preparation and presentation time included) |  |  |  |
| Project (Preparation and presentation time included) | 1 | 20 | 20 |
| Presentation (Preparation time included) |  |  |  |
|  |  |  |  |
|  |  |  |  |
| Mid-Term Exam | 1 | 1 | 1 |
| Studying for Mid-Term Exam | 2 | 2 | 4 |
| Final Exam | 1 | 1 | 1 |
| Studying for Final Exam | 1 | 1 | 1 |
|  | **Toplam iş yükü** | | **56** |
|  | **Toplam iş yükü / 30** | | **1,8** |
|  | **Dersin AKTS Kredisi** | | **2** |

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| --- | --- |
| **Evaluation** | |
| **Activity Type** | **%** |
| Mid-term | 40 |
| Quiz |  |
| Homework |  |
|  |  |
|  |  |
| **Final Exam** | 60 |
| **Total** | 100 |

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| --- | --- | --- |
| **RELATIONSHIP BETWEEN THE COURSE LEARNING OUTCOMES AND THE PROGRAM OUTCOMES (PO)** (5: Very high, 4: High, 3: Middle, 2: Low, 1: Very low) | | |
| **NO** | **PROGRAM OUTCOME** | **Contribution** |
| **1** | Adequate knowledge in basic sciences (mathematics, science) and the ability to apply theoretical and practical knowledge in these areas in problem solving | 3 |
| **2** | Ability to identify, define, formulate and solve complex problems; ability to select and apply appropriate analytical and modeling methods for this purpose | 2 |
| **3** | The ability to understand a complex system, system component or process and to solve system or process failures under certain realistic constraints. | 2 |
| **4** | Ability to develop, select and use modern techniques and tools required for practice; ability to use information technologies effectively | 5 |
| **5** | Ability to collect data for the investigation of problems, analyze and interpret the results | 5 |
| **6** | Ability to work effectively in disciplinary and multidisciplinary teams; ability to work individually | 4 |
| **7** | Ability to communicate effectively in oral and written Turkish; knowledge of at least one foreign language. | 3 |
| **8** | Awareness of the necessity of lifelong learning; the ability to access information, to follow developments in science and technology and to constantly renew oneself | 3 |
| **9** | Awareness of professional and ethical responsibility | 2 |
| **10** | Knowledge about business life practices such as project management, risk management and change management; awareness of entrepreneurship, innovation and sustainable development | 5 |
| **11** | Knowledge about the effects of technical applications on health, environment and safety in universal and social dimensions and contemporary issues; awareness of the legal consequences of problem-oriented solutions | 4 |

**ESOGU SİVRİHİSAR VOCATIONAL SCHOOL**

**COMPUTER PROGRAMMING PROGRAM**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **Course Name** | **Course Code** |
| CONTROL CIRCUITS | 221113240 |

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| --- | --- | --- | --- | --- |
| **Semester** | **Number of Course Hours per Week** | | **Credit** | **ECTS** |
| **Theory** | **Practice** |
| 3 | 2 | 0 | 2 | 2 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Course Category (Credit)** | | | | |
| **Basic Sciences** | **Engineering Sciences** | **Design** | **General Education** | **Social** |
|  | X |  |  |  |

|  |  |  |
| --- | --- | --- |
| **Course Language** | **Course Level** | **Course Type** |
| Turkish | Associate degree | Elective |

|  |  |
| --- | --- |
| **Prerequisite(s) if any** | - |
| **Objectives of the Course** | Installation of control elements, operating one-phase asynchronous motors using control circuit elements, operating three-phase asynchronous motors using control circuit elements, changing the direction of rotation of three-phase asynchronous motors, braking of three-phase asynchronous motors. |
| **Short Course Content** | Installation of Control Elements, Three Phase Induction Motors intermittent and continuous operation, Three Phase Induction Motors Starting, Three Phase Induction Motors, Changing the direction of rotation in three-phase induction motors, Braking in Three Phase Induction Motors, Starting one-phase induction motors, One Phase Induction Motor Changing the direction of rotation, Rotor Winding Induction Motors Starting |

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| **Learning Outcomes of the Course** | | **Contributed PO(s)** | **Teaching Methods \*** | **Measuring Methods \*\*** |
| **1** | Can make the assembly of control elements. | 2,10 | 1, 6 | A |
| **2** | Three-phase asynchronous motors can operate intermittently, continuously and remotely. | 2,10 | 1, 6 | A |
| **3** | Three-phase asynchronous motors can start, change the direction of rotation and braking with various methods. | 2,10 | 1, 6 | A |
| **4** | Can start one-phase asynchronous motors, can change the direction of rotation. | 2,10 | 1, 6 | A |
| **5** | Can start rotor wound asynchronous motors and run double speed asynchronous motors. | 2,10 | 1, 6 | A |
| **6** | Can make the assembly of control elements. | 2,10 | 1, 6 | A |

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| **Main Textbook** | Elektrik Kumanda Devreleri (Prof. Dr. İlhami Çolak, Dr. Ramazan Bayındır) Seçkin yayınevi |
| **Supporting References** | - |
| **Necessary Course Material** | Lecture |

|  |  |
| --- | --- |
| **Course Schedule** | |
| **1** | Control Elements |
| **2** | Control Elements |
| **3** | Protection Relays |
| **4** | Intermittent and Continuous Operation of Three Phase Induction Motors |
| **5** | Starting Three Phase Induction Motors from Two Different Locations (Remote) |
| **6** | Resistance Starting of Three Phase Induction Motors |
| **7** | Resistance Starting of Three Phase Induction Motors |
| **8** | Mid-Term Exam |
| **9** | Starting Three Phase Induction Motors with Reactance and Auto Transformer |
| **10** | Star-delta starting of three-phase induction motors |
| **11** | Rotation Direction Change in Three Phase Induction Motors |
| **12** | Braking in Three Phase Induction Motors |
| **13** | Braking in Three Phase Induction Motors, |
| **14** | One Phase Induction Motor Control Circuits |
| **15** | One Phase Induction Motor Control Circuits |
| **16,17** | Final Exam |

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| --- | --- | --- | --- |
| **Calculation of Course Workload** | | | |
| **Activities** | **Number** | **Time (Hour)** | **Total Workload (Hour)** |
| Course Time (number of course hours per week) | 14 | 2 | 28 |
| Classroom Studying Time (review, reinforcing, prestudy,….) |  |  |  |
| Homework |  |  |  |
| Quiz Exam |  |  |  |
| Studying for Quiz Exam |  |  |  |
| Oral exam |  |  |  |
| Studying for Oral Exam |  |  |  |
| Report (Preparation and presentation time included) |  |  |  |
| Project (Preparation and presentation time included) |  |  |  |
| Presentation (Preparation time included) |  |  |  |
|  |  |  |  |
|  |  |  |  |
| Mid-Term Exam | 1 | 1 | 1 |
| Studying for Mid-Term Exam | 14 | 1 | 14 |
| Final Exam | 1 | 1 | 1 |
| Studying for Final Exam | 14 | 1 | 14 |
|  | **Total workload** | | **58** |
|  | **Total workload / 30** | | **1,93** |
|  | **Course ECTS Credit** | | **2** |

|  |  |
| --- | --- |
| **Evaluation** | |
| **Activity Type** | **%** |
| Mid-term | 40 |
|  |  |
| Homework |  |
|  |  |
|  |  |
| **Final Exam** | 60 |
| **Total** | 100 |

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| --- | --- | --- |
| **RELATIONSHIP BETWEEN THE COURSE LEARNING OUTCOMES AND THE PROGRAM OUTCOMES (PO)** (5: Very high, 4: High, 3: Middle, 2: Low, 1: Very low) | | |
| **NO** | **PROGRAM OUTCOME** | **Contribution** |
| **1** | Adequate knowledge in basic sciences (mathematics, science) and the ability to apply theoretical and practical knowledge in these areas in problem solving | 2 |
| **2** | Ability to identify, define, formulate and solve complex problems; ability to select and apply appropriate analytical and modeling methods for this purpose | 4 |
| **3** | The ability to understand a complex system, system component or process and to solve system or process failures under certain realistic constraints. | 2 |
| **4** | Ability to develop, select and use modern techniques and tools required for practice; ability to use information technologies effectively | 3 |
| **5** | Ability to collect data for the investigation of problems, analyze and interpret the results | 2 |
| **6** | Ability to work effectively in disciplinary and multidisciplinary teams; ability to work individually | 3 |
| **7** | Ability to communicate effectively in oral and written Turkish; knowledge of at least one foreign language. | 1 |
| **8** | Awareness of the necessity of lifelong learning; the ability to access information, to follow developments in science and technology and to constantly renew oneself | 2 |
| **9** | Awareness of professional and ethical responsibility | 3 |
| **10** | Knowledge about business life practices such as project management, risk management and change management; awareness of entrepreneurship, innovation and sustainable development | 4 |
| **11** | Knowledge about the effects of technical applications on health, environment and safety in universal and social dimensions and contemporary issues; awareness of the legal consequences of problem-oriented solutions | 2 |

**ESOGU SİVRİHİSAR VOCATIONAL SCHOOL**

**COMPUTER PROGRAMMING PROGRAM**

**COURSE INFORMATION FORM**

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| --- | --- |
| **Course Name** | **Course Code** |
| INTRODUCTION TO INFORMATION SECURITY | 221113244 |

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| --- | --- | --- | --- | --- |
| **Semester** | **Number of Course Hours per Week** | | **Credit** | **ECTS** |
| **Theory** | **Practice** |
| 3 | 2 | 0 | 2 | 2 |

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| --- | --- | --- | --- | --- |
| **Course Category (Credit)** | | | | |
| **Basic Sciences** | **Engineering Sciences** | **Design** | **General Education** | **Social** |
|  | X |  |  |  |

|  |  |  |
| --- | --- | --- |
| **Course Language** | **Course Level** | **Course Type** |
| Turkish | Associate degree | Elective |

|  |  |
| --- | --- |
| **Prerequisite(s) if any** | - |
| **Objectives of the Course** | Introduction to Information Security course aims to teach students the basic principles and practices in ensuring the security of information systems. Within the scope of this course, topics such as cyber threats, security policies, encryption, network security, access control and security auditing are discussed and it is aimed for students to gain knowledge and skills in the field of information security. |
| **Short Course Content** | This course covers the fundamental concepts and applications of information security. Topics include cyber threats, security policies and standards, encryption techniques, network security, access control, security audits, and incident response. Students will gain the knowledge and skills necessary to ensure the security of information systems. |

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| **Learning Outcomes of the Course** | | **Contributed PO(s)** | **Teaching Methods \*** | **Measuring Methods \*\*** |
| **1** | It can define the types of cyber threats and their effects on information systems. | 2,10 | 1,6 | A |
| **2** | It can ensure the security of information systems by applying security policies and standards. | 2,10 | 1,6 | A |
| **3** | It can ensure data security by using encryption techniques. | 2,10 | 1,6 | A |
| **4** | It can protect the security of networks by applying network security principles. | 2,10 | 1,6 | A |
| **5** | It can increase the security of information systems by performing access control and security audits. | 2,10 | 1,6 | A |

|  |  |
| --- | --- |
| **Main Textbook** | "Computer Security: Principles and Practice" - Yazarlar: William Stallings ve Lawrie Brown  "Network Security Essentials: Applications and Standards" - Yazar: William Stallings  "Introduction to Computer Security" - Yazarlar: Michael Goodrich ve Roberto Tamassia |
| **Supporting References** | - |
| **Necessary Course Material** | Lecture, Computer lab work, homework |

|  |  |
| --- | --- |
| **Course Schedule** | |
| **1** | Introduction to Information Security and Basic Concepts |
| **2** | Cyber ​​Threats and Attack Types |
| **3** | Security Policies and Standards |
| **4** | Introduction to Encryption Techniques |
| **5** | Symmetric and Asymmetric Encryption Methods |
| **6** | Fundamentals of Network Security |
| **7** | Firewalls and VPN |
| **8** | Mid-Term Exam |
| **9** | Access Control and Authentication |
| **10** | Security Audits and Incident Management |
| **11** | Malware and Protection Methods |
| **12** | Web Security and Application Security |
| **13** | Mobile Device Security |
| **14** | Cloud Security |
| **15** | General Repetition and Applied Project Work |
| **16,17** | Final Exam |

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| --- | --- | --- | --- |
| **Calculation of Course Workload** | | | |
| **Activities** | **Number** | **Time (Hour)** | **Total Workload (Hour)** |
| Course Time (number of course hours per week) | 14 | 2 | 28 |
| Classroom Studying Time (review, reinforcing, prestudy,….) |  |  |  |
| Homework |  |  |  |
| Quiz Exam |  |  |  |
| Studying for Quiz Exam |  |  |  |
| Oral exam |  |  |  |
| Studying for Oral Exam |  |  |  |
| Report (Preparation and presentation time included) |  |  |  |
| Project (Preparation and presentation time included) |  |  |  |
| Presentation (Preparation time included) |  |  |  |
|  |  |  |  |
|  |  |  |  |
| Mid-Term Exam | 1 | 1 | 1 |
| Studying for Mid-Term Exam | 14 | 1 | 14 |
| Final Exam | 1 | 1 | 1 |
| Studying for Final Exam | 14 | 1 | 14 |
|  | **Total workload** | | **58** |
|  | **Total workload / 30** | | **1,93** |
|  | **Course ECTS Credit** | | **2** |

|  |  |
| --- | --- |
| **Evaluation** | |
| **Activity Type** | **%** |
| Mid-term | 40 |
|  |  |
|  |  |
|  |  |
|  |  |
| **Final Exam** | 60 |
| **Total** | 100 |

|  |  |  |
| --- | --- | --- |
| **RELATIONSHIP BETWEEN THE COURSE LEARNING OUTCOMES AND THE PROGRAM OUTCOMES (PO)** (5: Very high, 4: High, 3: Middle, 2: Low, 1: Very low) | | |
| **NO** | **PROGRAM OUTCOME** | **Contribution** |
| **1** | Adequate knowledge in basic sciences (mathematics, science) and the ability to apply theoretical and practical knowledge in these areas in problem solving | 2 |
| **2** | Ability to identify, define, formulate and solve complex problems; ability to select and apply appropriate analytical and modeling methods for this purpose | 4 |
| **3** | The ability to understand a complex system, system component or process and to solve system or process failures under certain realistic constraints. | 2 |
| **4** | Ability to develop, select and use modern techniques and tools required for practice; ability to use information technologies effectively | 3 |
| **5** | Ability to collect data for the investigation of problems, analyze and interpret the results | 2 |
| **6** | Ability to work effectively in disciplinary and multidisciplinary teams; ability to work individually | 3 |
| **7** | Ability to communicate effectively in oral and written Turkish; knowledge of at least one foreign language. | 1 |
| **8** | Awareness of the necessity of lifelong learning; the ability to access information, to follow developments in science and technology and to constantly renew oneself | 2 |
| **9** | Awareness of professional and ethical responsibility | 3 |
| **10** | Knowledge about business life practices such as project management, risk management and change management; awareness of entrepreneurship, innovation and sustainable development | 4 |
| **11** | Knowledge about the effects of technical applications on health, environment and safety in universal and social dimensions and contemporary issues; awareness of the legal consequences of problem-oriented solutions | 2 |

**ESOGU SİVRİHİSAR VOCATIONAL SCHOOL**

**COMPUTER PROGRAMMING PROGRAM**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **Course Name** | **Course Code** |
| ROBOTIC CODING | 221113245 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Semester** | **Number of Course Hours per Week** | | **Credit** | **ECTS** |
| **Theory** | **Practice** |
| 3 | 2 | 0 | 2 | 2 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Course Category (Credit)** | | | | |
| **Basic Sciences** | **Engineering Sciences** | **Design** | **General Education** | **Social** |
|  | X |  |  |  |

|  |  |  |
| --- | --- | --- |
| **Course Language** | **Course Level** | **Course Type** |
| Turkish | Associate degree | Elective |

|  |  |
| --- | --- |
| **Prerequisite(s) if any** | - |
| **Objectives of the Course** | The Robotics Coding course aims to provide students with basic knowledge and skills in the design, programming and control of robotic systems. Within the scope of this course, the introduction of robotic components, the use of sensors and actuators, the development of robotic software and the application of algorithms are discussed, and students are aimed to gain competencies in developing robotic projects. |
| **Short Course Content** | This course covers the design, programming and control of robotic systems. Topics include introduction to robotic components, use of sensors and actuators, development of robotic software, implementation of basic algorithms, integration of robotic systems and programming of autonomous robots. Students will develop robotic coding skills through practical projects. |

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| --- | --- | --- | --- | --- |
| **Learning Outcomes of the Course** | | **Contributed PO(s)** | **Teaching Methods \*** | **Measuring Methods \*\*** |
| **1** | Identify the basic components of robotic systems and explain their functions. | 2,10 | 1,6 | A |
| **2** | Design and program robotic systems using sensors and actuators. | 2,10 | 1,6 | A |
| **3** | Develop robotic software and integrate this software into robotic systems. | 2,10 | 1,6 | A |
| **4** | Program autonomous robots using basic algorithms in robotic applications. | 2,10 | 1,6 | A |
| **5** | Identify technical problems encountered in robotic projects and produce solutions. | 2,10 | 1,6 | A |

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| --- | --- |
| **Main Textbook** | "Robot Programming: A Guide to Controlling Autonomous Robots" - Yazar: Joseph L. Jones, Anita M. Flynn, Bruce A. Seiger  "Introduction to Robotics: Mechanics and Control" - Yazar: John J. Craig |
| **Supporting References** | - |
| **Necessary Course Material** | Lecture, Computer lab work, homework |

|  |  |
| --- | --- |
| **Course Schedule** | |
| **1** | Introduction to Robotics Coding and Basic Concepts |
| **2** | Robotic Components: Sensors and Actuators |
| **3** | Hardware Structure of Robotic Systems |
| **4** | Basic Electronics and Circuit Design |
| **5** | Robotic Software and Programming Languages |
| **6** | Basic Algorithms and Robot Control |
| **7** | Processing and Use of Sensor Data |
| **8** | Mid-Term Exam |
| **9** | Motion Planning and Path Finding Algorithms |
| **10** | Integration and Communication in Robotic Systems |
| **11** | Programming of Autonomous Robots |
| **12** | Debugging and Troubleshooting in Robotic Projects |
| **13** | Using Artificial Intelligence in Robotic Applications |
| **14** | Robotic Project Development Processes |
| **15** | General Review and Practical Project Presentations |
| **16,17** | Final Exam |

|  |  |  |  |
| --- | --- | --- | --- |
| **Calculation of Course Workload** | | | |
| **Activities** | **Number** | **Time (Hour)** | **Total Workload (Hour)** |
| Course Time (number of course hours per week) | 14 | 2 | 28 |
| Classroom Studying Time (review, reinforcing, prestudy,….) |  |  |  |
| Homework |  |  |  |
| Quiz Exam |  |  |  |
| Studying for Quiz Exam |  |  |  |
| Oral exam |  |  |  |
| Studying for Oral Exam |  |  |  |
| Report (Preparation and presentation time included) |  |  |  |
| Project (Preparation and presentation time included) |  |  |  |
| Presentation (Preparation time included) |  |  |  |
|  |  |  |  |
|  |  |  |  |
| Mid-Term Exam | 1 | 1 | 1 |
| Studying for Mid-Term Exam | 14 | 1 | 14 |
| Final Exam | 1 | 1 | 1 |
| Studying for Final Exam | 14 | 1 | 14 |
|  | **Total workload** | | **58** |
|  | **Total workload / 30** | | **1,93** |
|  | **Course ECTS Credit** | | **2** |

|  |  |
| --- | --- |
| **Evaluation** | |
| **Activity Type** | **%** |
| Mid-term | 40 |
|  |  |
|  |  |
|  |  |
|  |  |
| **Final Exam** | 60 |
| **Total** | 100 |

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| **RELATIONSHIP BETWEEN THE COURSE LEARNING OUTCOMES AND THE PROGRAM OUTCOMES (PO)** (5: Very high, 4: High, 3: Middle, 2: Low, 1: Very low) | | |
| **NO** | **PROGRAM OUTCOME** | **Contribution** |
| **1** | Adequate knowledge in basic sciences (mathematics, science) and the ability to apply theoretical and practical knowledge in these areas in problem solving | 2 |
| **2** | Ability to identify, define, formulate and solve complex problems; ability to select and apply appropriate analytical and modeling methods for this purpose | 4 |
| **3** | The ability to understand a complex system, system component or process and to solve system or process failures under certain realistic constraints. | 2 |
| **4** | Ability to develop, select and use modern techniques and tools required for practice; ability to use information technologies effectively | 3 |
| **5** | Ability to collect data for the investigation of problems, analyze and interpret the results | 2 |
| **6** | Ability to work effectively in disciplinary and multidisciplinary teams; ability to work individually | 3 |
| **7** | Ability to communicate effectively in oral and written Turkish; knowledge of at least one foreign language. | 1 |
| **8** | Awareness of the necessity of lifelong learning; the ability to access information, to follow developments in science and technology and to constantly renew oneself | 2 |
| **9** | Awareness of professional and ethical responsibility | 3 |
| **10** | Knowledge about business life practices such as project management, risk management and change management; awareness of entrepreneurship, innovation and sustainable development | 4 |
| **11** | Knowledge about the effects of technical applications on health, environment and safety in universal and social dimensions and contemporary issues; awareness of the legal consequences of problem-oriented solutions | 2 |

**ESOGU SİVRİHİSAR VOCATIONAL SCHOOL**

**COMPUTER PROGRAMMING PROGRAM**

**COURSE INFORMATION FORM**

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| --- | --- |
| **Course Name** | **Course Code** |
| NEW TRENDS IN PROGRAMMING | 221113242 |

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| --- | --- | --- | --- | --- |
| **Semester** | **Number of Course Hours per Week** | | **Credit** | **ECTS** |
| **Theory** | **Practice** |
| 3 | 2 | 0 | 2 | 2 |

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| --- | --- | --- | --- | --- |
| **Course Category (Credit)** | | | | |
| **Basic Sciences** | **Engineering Sciences** | **Design** | **General Education** | **Social** |
|  | X |  |  |  |

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| --- | --- | --- |
| **Course Language** | **Course Level** | **Course Type** |
| Turkish | Associate degree | Elective |

|  |  |
| --- | --- |
| **Prerequisite(s) if any** | - |
| **Objectives of the Course** | New Trends in Programming course aims to introduce students to the latest technological developments and trends in the field of software development and to provide them with an understanding of the practical applications and impacts of these innovations. In this course, modern programming languages, software development methods, artificial intelligence, machine learning, big data analytics and other current topics are covered to equip students with up-to-date knowledge and skills. |
| **Short Course Content** | This course covers the latest technological developments and trends in software development. Topics include modern programming languages, software development methods, artificial intelligence and machine learning, big data analytics, cloud computing, Internet of Things (IoT) and blockchain technologies. Students will examine the practical applications of these innovations and learn how to utilise these trends in their software development process. |

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| **Learning Outcomes of the Course** | | **Contributed PO(s)** | **Teaching Methods \*** | **Measuring Methods \*\*** |
| **1** | Understand and apply the basic principles of modern programming languages and software development methods. | 4,8,10 | 1, 6 | A |
| **2** | Recognise artificial intelligence and machine learning algorithms and develop simple applications. | 4,8,10 | 1, 6 | A |
| **3** | Analyse data using big data analytics concepts and tools. | 4,8,10 | 1, 6 | A |
| **4** | Define cloud computing technologies and develop cloud-based applications. | 4,8,10 | 1, 6 | A |
| **5** | Have knowledge about Internet of Things (IoT) and blockchain technologies and use these technologies in software projects. | 4,8,10 | 1, 6 | A |
| **6** | Follow the latest trends and innovations in the field of software development and apply this knowledge in practical projects. | 4,8,10 | 1, 6 | A |

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| **Main Textbook** | Artificial Intelligence: A Modern Approach, Stuart Russell ve Peter Norvig  Uygulamalı Örneklerle Yapay Zekâ Algoritmaları ve Programlama, Dr. Ali Şir Attila, 1. Baskı, Nisan 2022 |
| **Supporting References** | - |
| **Necessary Course Material** | Lecture |

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| **Course Schedule** | |
| **1** | Introduction to New Trends in Programming |
| **2** | Modern Programming Languages and Trends |
| **3** | Software Development Methods and Agile Methodologies |
| **4** | Introduction to Artificial Intelligence and Machine Learning |
| **5** | Machine Learning Algorithms and Applications |
| **6** | Big Data and Data Analytics |
| **7** | Big Data Tools and Technologies |
| **8** | Mid-Term Exam |
| **9** | Cloud Computing Fundamentals |
| **10** | Cloud Based Application Development |
| **11** | Internet of Things (IoT) and Applications |
| **12** | Blockchain Technologies and Applications |
| **13** | Current Software Security Trends |
| **14** | Future Programming Technologies |
| **15** | General Review and Applied Project Studies |
| **16,17** | Final Exam |

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| --- | --- | --- | --- |
| **Calculation of Course Workload** | | | |
| **Activities** | **Number** | **Time (Hour)** | **Total Workload (Hour)** |
| Course Time (number of course hours per week) | 14 | 2 | 28 |
| Classroom Studying Time (review, reinforcing, prestudy,….) |  |  |  |
| Homework |  |  |  |
| Quiz Exam |  |  |  |
| Studying for Quiz Exam |  |  |  |
| Oral exam |  |  |  |
| Studying for Oral Exam |  |  |  |
| Report (Preparation and presentation time included) |  |  |  |
| Project (Preparation and presentation time included) |  |  |  |
| Presentation (Preparation time included) |  |  |  |
| Mid-Term Exam | 1 | 1 | 1 |
| Studying for Mid-Term Exam | 14 | 1 | 14 |
| Final Exam | 1 | 1 | 1 |
| Studying for Final Exam | 14 | 1 | 14 |
|  | **Total workload** | | **58** |
|  | **Total workload / 30** | | **1,93** |
|  | **Course ECTS Credit** | | **2** |
| **Evaluation** | | | |
| **Activity Type** | **%** | | |
| Mid-term | 40 | | |
|  |  | | |
|  |  | | |
|  |  | | |
|  |  | | |
| **Final Exam** | 60 | | |
| **Total** | 100 | | |

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| **RELATIONSHIP BETWEEN THE COURSE LEARNING OUTCOMES AND THE PROGRAM OUTCOMES (PO)** (5: Very high, 4: High, 3: Middle, 2: Low, 1: Very low) | | |
| **NO** | **PROGRAM OUTCOME** | **Contribution** |
| **1** | Adequate knowledge in basic sciences (mathematics, science) and the ability to apply theoretical and practical knowledge in these areas in problem solving | 2 |
| **2** | Ability to identify, define, formulate and solve complex problems; ability to select and apply appropriate analytical and modeling methods for this purpose | 2 |
| **3** | The ability to understand a complex system, system component or process and to solve system or process failures under certain realistic constraints. | 2 |
| **4** | Ability to develop, select and use modern techniques and tools required for practice; ability to use information technologies effectively | 3 |
| **5** | Ability to collect data for the investigation of problems, analyze and interpret the results | 2 |
| **6** | Ability to work effectively in disciplinary and multidisciplinary teams; ability to work individually | 1 |
| **7** | Ability to communicate effectively in oral and written Turkish; knowledge of at least one foreign language. | 1 |
| **8** | Awareness of the necessity of lifelong learning; the ability to access information, to follow developments in science and technology and to constantly renew oneself | 5 |
| **9** | Awareness of professional and ethical responsibility | 2 |
| **10** | Knowledge about business life practices such as project management, risk management and change management; awareness of entrepreneurship, innovation and sustainable development | 4 |
| **11** | Knowledge about the effects of technical applications on health, environment and safety in universal and social dimensions and contemporary issues; awareness of the legal consequences of problem-oriented solutions | 2 |

**ESOGU SİVRİHİSAR VOCATIONAL SCHOOL**

**COMPUTER PROGRAMMING PROGRAM**

**COURSE INFORMATION FORM**

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| --- | --- |
| **Course Name** | **Course Code** |
| DATABASE MANAGEMENT SYSTEMS | 221113246 |

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| --- | --- | --- | --- | --- |
| **Semester** | **Number of Course Hours per Week** | | **Credit** | **ECTS** |
| **Theory** | **Practice** |
| 3 | 2 | 2 | 3 | 5 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Course Category (Credit)** | | | | |
| **Basic Sciences** | **Engineering Sciences** | **Design** | **General Education** | **Social** |
|  | X |  |  |  |

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| --- | --- | --- |
| **Course Language** | **Course Level** | **Course Type** |
| Turkish | Associate degree | Elective |

|  |  |
| --- | --- |
| **Prerequisite(s) if any** | - |
| **Objectives of the Course** | Introduction to database management systems, introduction to SQL, basic database concepts, basic SQL commands, use of SQL with programming languages and applications. |
| **Short Course Content** | To be able to perceive the concept of database, to create a database, to design forms and to design queries. |

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| **Learning Outcomes of the Course** | | **Contributed PO(s)** | **Teaching Methods \*** | **Measuring Methods \*\*** |
| **1** | Explain and discuss the introduction to SQL commands. | 2,10 | 1, 6 | A |
| **2** | Explain, discuss and interpret basic SQL commands, summarising data. | 2,10 | 1, 6 | A |
| **3** | Generate query operations from a table, explain, discuss and interpret. | 2,10 | 1, 6 | A |
| **4** | Can create and discuss database applications. | 2,10 | 1, 6 | A |
| **5** | Describe, discuss and interpret basic SQL commands, summarising data. | 2,10 | 1, 6 | A |

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| --- | --- |
| **Main Textbook** | Introducing Microsoft SQL Server 2012 by Ross Mistry and Stacia Misner (Apr 7, 2012)  The Language of SQL: How to Access Data in Relational Databases by Larry Rockoff (Jun 3, 2010)  Microsoft ADO.NET 4 Step by Step (Step by Step (Microsoft)) by Tim Patrick (Nov 1, 2010) - Programming Microsoft ADO.NET 4 by David Sceppa (May 22, 2013) |
| **Supporting References** | - |
| **Necessary Course Material** | Lecture, Computer laboratory work, homework |

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| **Course Schedule** | |
| **1** | Basic database concepts. |
| **2** | Database design. |
| **3** | Database management system, definition, creation, processing, continuity, classification. |
| **4** | Data model, relationships, keys, data types, data management, relational database properties, normalisation, data models. |
| **5** | Basic SQL commands; database, user, table creation. |
| **6** | Basic SQL commands; database, user, table creation. |
| **7** | Basic SQL commands; database, user, table creation. |
| **8** | Mid-Term Exam |
| **9** | Query from one table. |
| **10** | Query from more than one table |
| **11** | Advanced database objects |
| **12** | Advanced database object implementations |
| **13** | Sample database design |
| **14** | Database design applications |
| **15** | Database design applications |
| **16,17** | Final Exam |

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| --- | --- | --- | --- |
| **Calculation of Course Workload** | | | |
| **Activities** | **Number** | **Time (Hour)** | **Total Workload (Hour)** |
| Course Time (number of course hours per week) | 14 | 3 | 52 |
| Classroom Studying Time (review, reinforcing, prestudy,….) | 5 | 2 | 10 |
| Homework | 6 | 5 | 30 |
| Quiz Exam |  |  |  |
| Studying for Quiz Exam |  |  |  |
| Oral exam |  |  |  |
| Studying for Oral Exam |  |  |  |
| Report (Preparation and presentation time included) |  |  |  |
| Project (Preparation and presentation time included) |  |  |  |
| Presentation (Preparation time included) |  |  |  |
|  |  |  |  |
|  |  |  |  |
| Mid-Term Exam | 1 | 1 | 1 |
| Studying for Mid-Term Exam | 14 | 2 | 28 |
| Final Exam | 1 | 1 | 1 |
| Studying for Final Exam | 14 | 2 | 28 |
|  | **Total workload** | | **150** |
|  | **Total workload / 30** | | **5** |
|  | **Course ECTS Credit** | | **5** |

|  |  |
| --- | --- |
| **Evaluation** | |
| **Activity Type** | **%** |
| Mid-term | 40 |
|  |  |
|  |  |
|  |  |
|  |  |
| **Final Exam** | 60 |
| **Total** | 100 |

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| --- | --- | --- |
| **RELATIONSHIP BETWEEN THE COURSE LEARNING OUTCOMES AND THE PROGRAM OUTCOMES (PO)** (5: Very high, 4: High, 3: Middle, 2: Low, 1: Very low) | | |
| **NO** | **PROGRAM OUTCOME** | **Contribution** |
| **1** | Adequate knowledge in basic sciences (mathematics, science) and the ability to apply theoretical and practical knowledge in these areas in problem solving | 3 |
| **2** | Ability to identify, define, formulate and solve complex problems; ability to select and apply appropriate analytical and modeling methods for this purpose | 4 |
| **3** | The ability to understand a complex system, system component or process and to solve system or process failures under certain realistic constraints. | 2 |
| **4** | Ability to develop, select and use modern techniques and tools required for practice; ability to use information technologies effectively | 3 |
| **5** | Ability to collect data for the investigation of problems, analyze and interpret the results | 2 |
| **6** | Ability to work effectively in disciplinary and multidisciplinary teams; ability to work individually | 3 |
| **7** | Ability to communicate effectively in oral and written Turkish; knowledge of at least one foreign language. | 2 |
| **8** | Awareness of the necessity of lifelong learning; the ability to access information, to follow developments in science and technology and to constantly renew oneself | 2 |
| **9** | Awareness of professional and ethical responsibility | 3 |
| **10** | Knowledge about business life practices such as project management, risk management and change management; awareness of entrepreneurship, innovation and sustainable development | 5 |
| **11** | Knowledge about the effects of technical applications on health, environment and safety in universal and social dimensions and contemporary issues; awareness of the legal consequences of problem-oriented solutions | 2 |

**ESOGU SİVRİHİSAR VOCATIONAL SCHOOL**

**COMPUTER PROGRAMMING PROGRAM**

**COURSE INFORMATION FORM**

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| --- | --- |
| **Course Name** | **Course Code** |
| ADVANCED PYTHON PROGRAMMING | 221113243 |

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| --- | --- | --- | --- | --- |
| **Semester** | **Number of Course Hours per Week** | | **Credit** | **ECTS** |
| **Theory** | **Practice** |
| 3 | 2 | 2 | 3 | 5 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Course Category (Credit)** | | | | |
| **Basic Sciences** | **Engineering Sciences** | **Design** | **General Education** | **Social** |
|  | X |  |  |  |

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| --- | --- | --- |
| **Course Language** | **Course Level** | **Course Type** |
| Turkish | Associate degree | Elective |

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| --- | --- |
| **Prerequisite(s) if any** |  |
| **Objectives of the Course** | The Advanced Python Programming course aims to teach students advanced topics in the Python programming language and to provide them with skills that can be used in complex software projects. Within the scope of this course, topics such as data structures, algorithms, object-oriented programming, modular programming, debugging and performance optimization are covered, and the aim is to provide students with professional-level software development competencies in the Python language. |
| **Short Course Content** | This course covers advanced topics in the Python programming language. Topics include advanced data structures, algorithms, object-oriented programming (OOP), modular programming and package management, debugging and testing, data analytics and scientific computing, web development, multithreading, and performance optimization. By studying these topics in depth, students gain the skills to develop professional-level software projects in the Python language. |

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| **Learning Outcomes of the Course** | | **Contributed PO(s)** | **Teaching Methods \*** | **Measuring Methods \*\*** |
| **1** | Solve complex problems using advanced data structures and algorithms. | 2,10 | 1, 6, 10  11, 12, 14 | A, D, J |
| **2** | Write modular and reusable code using object-oriented programming (OOP) principles. | 2,10 | 1, 6, 10  11, 12, 14 | A, D, J |
| **3** | Apply debugging and testing techniques in Python programs. | 2,10 | 1, 6, 10  11, 12, 14 | A, D, J |
| **4** | Effectively use Python libraries (pandas, NumPy, SciPy, etc.) for data analytics and scientific computing. | 2,10 | 1, 6, 10  11, 12, 14 | A, D, J |
| **5** | Develop projects on advanced Python topics such as web development and multithreading. | 2,10 | 1, 6, 10  11, 12, 14 | A, D, J |

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| --- | --- |
| **Main Textbook** | Fluent Python: Clear, Concise, and Effective Programming 1st Edition, Yazar: Luciano Ramalho |
| **Supporting References** | - |
| **Necessary Course Material** | Lecture, Computer lab work, homework |

|  |  |
| --- | --- |
| **Course Schedule** | |
| **1** | Introduction to Advanced Python Programming |
| **2** | Advanced Data Structures |
| **3** | Algorithms and Problem Solving |
| **4** | Object-Oriented Programming (OOP) |
| **5** | Modular Programming and Package Management |
| **6** | Debugging and Testing |
| **7** | Data Analytics and Scientific Computing |
| **8** | Mid-Term Exam |
| **9** | Data Manipulation with NumPy and Pandas |
| **10** | Data Visualization (Matplotlib, Seaborn) |
| **11** | Web Development with Flask and Django |
| **12** | Multithreading and Concurrent Programming |
| **13** | Performance Optimization |
| **14** | Advanced Python Techniques and Tips |
| **15** | General Review and Hands-on Project Work |
| **16,17** | Final Exam |

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| --- | --- | --- | --- |
| **Calculation of Course Workload** | | | |
| **Activities** | **Number** | **Time (Hour)** | **Total Workload (Hour)** |
| Course Time (number of course hours per week) | 14 | 3 | 52 |
| Classroom Studying Time (review, reinforcing, prestudy,….) | 5 | 2 | 10 |
| Homework | 6 | 5 | 30 |
| Quiz Exam |  |  |  |
| Studying for Quiz Exam |  |  |  |
| Oral exam |  |  |  |
| Studying for Oral Exam |  |  |  |
| Report (Preparation and presentation time included) |  |  |  |
| Project (Preparation and presentation time included) |  |  |  |
| Presentation (Preparation time included) |  |  |  |
|  |  |  |  |
|  |  |  |  |
| Mid-Term Exam | 1 | 1 | 1 |
| Studying for Mid-Term Exam | 14 | 2 | 28 |
| Final Exam | 1 | 1 | 1 |
| Studying for Final Exam | 14 | 2 | 28 |
|  | **Total workload** | | **150** |
|  | **Total workload / 30** | | **5** |
|  | **Course ECTS Credit** | | **5** |

|  |  |
| --- | --- |
| **Evaluation** | |
| **Activity Type** | **%** |
| Mid-term | 40 |
|  |  |
|  |  |
|  |  |
|  |  |
| **Final Exam** | 60 |
| **Total** | 100 |

|  |  |  |
| --- | --- | --- |
| **RELATIONSHIP BETWEEN THE COURSE LEARNING OUTCOMES AND THE PROGRAM OUTCOMES (PO)** (5: Very high, 4: High, 3: Middle, 2: Low, 1: Very low) | | |
| **NO** | **PROGRAM OUTCOME** | **Contribution** |
| **1** | Adequate knowledge in basic sciences (mathematics, science) and the ability to apply theoretical and practical knowledge in these areas in problem solving | 3 |
| **2** | Ability to identify, define, formulate and solve complex problems; ability to select and apply appropriate analytical and modeling methods for this purpose | 4 |
| **3** | The ability to understand a complex system, system component or process and to solve system or process failures under certain realistic constraints. | 2 |
| **4** | Ability to develop, select and use modern techniques and tools required for practice; ability to use information technologies effectively | 3 |
| **5** | Ability to collect data for the investigation of problems, analyze and interpret the results | 2 |
| **6** | Ability to work effectively in disciplinary and multidisciplinary teams; ability to work individually | 3 |
| **7** | Ability to communicate effectively in oral and written Turkish; knowledge of at least one foreign language. | 2 |
| **8** | Awareness of the necessity of lifelong learning; the ability to access information, to follow developments in science and technology and to constantly renew oneself | 2 |
| **9** | Awareness of professional and ethical responsibility | 3 |
| **10** | Knowledge about business life practices such as project management, risk management and change management; awareness of entrepreneurship, innovation and sustainable development | 5 |
| **11** | Knowledge about the effects of technical applications on health, environment and safety in universal and social dimensions and contemporary issues; awareness of the legal consequences of problem-oriented solutions | 2 |

**ESOGU SİVRİHİSAR VOCATIONAL SCHOOL**

**COMPUTER PROGRAMMING PROGRAM**

**COURSE INFORMATION FORM**

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| --- | --- |
| **Course Name** | **Course Code** |
| VISUAL PROGRAMMING II | 221114245 |

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| --- | --- | --- | --- | --- |
| **Semester** | **Number of Course Hours per Week** | | **Credit** | **ECTS** |
| **Theory** | **Practice** |
| 4 | 2 | 2 | 3 | 6 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Course Category (Credit)** | | | | |
| **Basic Sciences** | **Engineering Sciences** | **Design** | **General Education** | **Social** |
|  | X |  |  |  |

|  |  |  |
| --- | --- | --- |
| **Course Language** | **Course Level** | **Course Type** |
| Turkish | Associate degree | Compulsory |

|  |  |
| --- | --- |
| **Prerequisite(s) if any** |  |
| **Objectives of the Course** | Ensuring that students understand the basic concepts of visual programming and object oriented programming. |
| **Short Course Content** | Program software and advanced program development in C# software language |

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| --- | --- | --- | --- | --- |
| **Learning Outcomes of the Course** | | **Contributed PO(s)** | **Teaching Methods \*** | **Measuring Methods \*\*** |
| **1** | Can use an Object Oriented programming editor. | 2,3,4,10 | 1, 6, 10   11, 12, 14 | A, D, J |
| **2** | Learn to program with advanced C# | 2,3,4,10 | 1, 6, 10   11, 12, 14 | A, D, J |
| **3** | Will be able to make database connection. | 2,3,4,10 | 1, 6, 10   11, 12, 14 | A, D, J |
| **4** | Will be able to develop advanced applications. | 2,3,4,10 | 1, 6, 10   11, 12, 14 | A, D, J |

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| --- | --- |
| **Main Textbook** | Her Yönüyle C#; Sefer Algan; Pusula YAYINCILIK; ISBN: 9789756477175 HER YÖNÜYLE C#; Volkan AKTAŞ; KODLAB Yayıncılık, ISBN: 6054205295 |
| **Supporting References** |  |
| **Necessary Course Material** |  |

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| --- | --- |
| **Course Schedule** | |
| **1** | Classes, objects, abstract classes |
| **2** | Inheritance, polymorphism, interfaces |
| **3** | Working with basic data types |
| **4** | Forms, controls |
| **5** | Create and add components |
| **6** | Database and c# connections |
| **7** | Reporting from the database |
| **8** | Mid-Term Exam |
| **9** | Obtaining graphs from the database Reporting from the database |
| **10** | Obtaining graphs from the database Reporting from the database |
| **11** | Preparing a database installation kit |
| **12** | Advanced Application Development |
| **13** | Advanced Application Development |
| **14** | Advanced Application Development |
| **15** | Advanced Application Development |
| **16,17** | Final Exam |

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| --- | --- | --- | --- |
| **Calculation of Course Workload** | | | |
| **Activities** | **Number** | **Time (Hour)** | **Total Workload (Hour)** |
| Course Time (number of course hours per week) | 14 | 4 | 56 |
| Classroom Studying Time (review, reinforcing, prestudy,….) | 14 | 2 | 28 |
| Homework |  |  |  |
| Quiz Exam | 1 | 1 | 1 |
| Studying for Quiz Exam |  |  |  |
| Oral exam |  |  |  |
| Studying for Oral Exam |  |  |  |
| Report (Preparation and presentation time included) |  |  |  |
| Project (Preparation and presentation time included) | 1 | 30 | 30 |
| Presentation (Preparation time included) | 1 | 1 | 1 |
|  |  |  |  |
|  |  |  |  |
| Mid-Term Exam | 1 | 1 | 1 |
| Studying for Mid-Term Exam | 7 | 3 | 21 |
| Final Exam | 1 | 1 | 1 |
| Studying for Final Exam | 14 | 3 | 42 |
|  | **Toplam iş yükü** | | **181** |
|  | **Toplam iş yükü / 30** | | **6,03** |
|  | **Dersin AKTS Kredisi** | | **6** |

|  |  |
| --- | --- |
| **Evaluation** | |
| **Activity Type** | **%** |
| Mid-term | 40 |
| Quiz |  |
| Homework |  |
|  |  |
|  |  |
| **Final Exam** | 60 |
| **Total** | 100 |

|  |  |  |
| --- | --- | --- |
| **RELATIONSHIP BETWEEN THE COURSE LEARNING OUTCOMES AND THE PROGRAM OUTCOMES (PO)** (5: Very high, 4: High, 3: Middle, 2: Low, 1: Very low) | | |
| **NO** | **PROGRAM OUTCOME** | **Contribution** |
| **1** | Adequate knowledge in basic sciences (mathematics, science) and the ability to apply theoretical and practical knowledge in these areas in problem solving | 4 |
| **2** | Ability to identify, define, formulate and solve complex problems; ability to select and apply appropriate analytical and modeling methods for this purpose | 5 |
| **3** | The ability to understand a complex system, system component or process and to solve system or process failures under certain realistic constraints. | 5 |
| **4** | Ability to develop, select and use modern techniques and tools required for practice; ability to use information technologies effectively | 5 |
| **5** | Ability to collect data for the investigation of problems, analyze and interpret the results | 4 |
| **6** | Ability to work effectively in disciplinary and multidisciplinary teams; ability to work individually | 3 |
| **7** | Ability to communicate effectively in oral and written Turkish; knowledge of at least one foreign language. | 3 |
| **8** | Awareness of the necessity of lifelong learning; the ability to access information, to follow developments in science and technology and to constantly renew oneself | 3 |
| **9** | Awareness of professional and ethical responsibility | 3 |
| **10** | Knowledge about business life practices such as project management, risk management and change management; awareness of entrepreneurship, innovation and sustainable development | 5 |
| **11** | Knowledge about the effects of technical applications on health, environment and safety in universal and social dimensions and contemporary issues; awareness of the legal consequences of problem-oriented solutions | 3 |

**ESOGU SİVRİHİSAR VOCATIONAL SCHOOL**

**COMPUTER PROGRAMMING PROGRAM**

**COURSE INFORMATION FORM**

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| **Course Name** | **Course Code** |
| INTERNET PROGRAMMING II | 221114246 |

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| **Semester** | **Number of Course Hours per Week** | | **Credit** | **ECTS** |
| **Theory** | **Practice** |
| 4 | 2 | 2 | 3 | 6 |

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| **Course Category (Credit)** | | | | |
| **Basic Sciences** | **Engineering Sciences** | **Design** | **General Education** | **Social** |
|  | X |  |  |  |

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| **Course Language** | **Course Level** | **Course Type** |
| Turkish | Associate degree | Compulsory |

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| **Prerequisite(s) if any** | - |
| **Objectives of the Course** | To inform students about the programmes and languages that can be used to design interactive and dynamic web pages using database. |
| **Short Course Content** | Easy PHP installation; variables, data types and operators in PHP language; URL query statements; program control structures; global and local variable fields; array variables; text operations; date and time operations; databases and data configurations; MySQL; PHPMyAdmin; SQL; using MySQL with PHP. |

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| **Learning Outcomes of the Course** | | **Contributed PO(s)** | **Teaching Methods \*** | **Measuring Methods \*\*** |
| **1** | Understanding the necessity and use of dynamic pages in website design. | 2,10 | 1, 6, 10  11, 12, 14 | A, D, J |
| **2** | Learning server-side programming. | 2,10 | 1, 6, 10  11, 12, 14 | A, D, J |
| **3** | Learning the server programs needed to run dynamic web pages. | 2,10 | 1, 6, 10  11, 12, 14 | A, D, J |
| **4** | Being able to install and adjust server and database programs. | 2,10 | 1, 6, 10  11, 12, 14 | A, D, J |
| **5** | Being able to create all elements of forms that help users enter data on dynamic pages using HTML tags and being able to respond to the entered data. | 2,10 | 1, 6, 10  11, 12, 14 | A, D, J |
| **6** | Understanding the working principles of PHP script language. | 2,10 | 1, 6, 10  11, 12, 14 | A, D, J |
| **7** | Being able to write PHP scripts in a way that can perform applications according to the need. | 2,10 | 1, 6, 10  11, 12, 14 | A, D, J |
| **8** | Creating session management using PHP. | 2,10 | 1, 6, 10  11, 12, 14 | A, D, J |

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| **Main Textbook** | Çaycı, Ö. (2003). PHP ve MySQL. Ankara: Seçkin |
| **Supporting References** | Otaner, K. (2001). PHP ve MySQL ile Web Yazılımı Geliştirme. İstanbul: Sistem.  Öcal, H. (1997). PHP: E-book: http://www.hemenpaylas.com/download/123186/PHP\_book.zip.html. |
| **Necessary Course Material** | Lecture, Computer lab work, homework |

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| **Course Schedule** | |
| **1** | Web server (Apache) installation and settings; PHP interpreter installation; Installation of database program (MySQL) and interface program that facilitates database use (PHPMyAdmin) |
| **2** | Variables, data types and operators in PHP language; URL query sentences |
| **3** | Program control structures: if-else, for, while, switch |
| **4** | Program control structures: require, include and functions |
| **5** | Global and local variable fields; superglobals |
| **6** | Array variables: array structure, keyed and multi-keyed array variables |
| **7** | Foreach loop, array variable functions |
| **8** | Mid-Term Exam |
| **9** | Text operations: functions for editing strings, splitting and merging strings, Searching and replacing texts |
| **10** | Date and time operations: using timestamp, strtotime, date, mktime and chkdate functions |
| **11** | Network operations: HTTP headers, cookies and HTTP authentication; |
| **12** | Databases and data configurations; MySQL; PHPMyAdmin: creating databases, creating tables, creating fields, adding data to fields and table settings, SQL: using select, select where, and/or, order by, limit, insert, update, delete, min, max, avg and sum statements |
| **13** | Using MySQL with PHP: Connecting to MySQL with PHP, |
| **14** | Using MySQL with PHP: Performing SQL queries on the database, receiving SQL query results, closing the connection |
| **15** | Receiving SQL query results, closing the connection |
| **16,17** | Final Exam |

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| **Calculation of Course Workload** | | | |
| **Activities** | **Number** | **Time (Hour)** | **Total Workload (Hour)** |
| Course Time (number of course hours per week) | 14 | 4 | 56 |
| Classroom Studying Time (review, reinforcing, prestudy,….) | 2 | 2 | 4 |
| Homework |  |  |  |
| Quiz Exam |  |  |  |
| Studying for Quiz Exam |  |  |  |
| Oral exam |  |  |  |
| Studying for Oral Exam |  |  |  |
| Report (Preparation and presentation time included) | 4 | 5 | 20 |
| Project (Preparation and presentation time included) | 4 | 5 | 20 |
| Presentation (Preparation time included) |  |  |  |
| Mid-Term Exam | 1 | 1 | 1 |
| Studying for Mid-Term Exam | 14 | 2 | 28 |
| Final Exam | 1 | 1 | 1 |
| Studying for Final Exam | 14 | 2 | 28 |
|  | **Total workload** | | **158** |
|  | **Total workload / 30** | | **5,26** |
|  | **Course ECTS Credit** | | **6** |

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| **Evaluation** | |
| **Activity Type** | **%** |
| Mid-term | 40 |
|  |  |
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| **Final Exam** | 60 |
| **Total** | 100 |

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| **RELATIONSHIP BETWEEN THE COURSE LEARNING OUTCOMES AND THE PROGRAM OUTCOMES (PO)** (5: Very high, 4: High, 3: Middle, 2: Low, 1: Very low) | | |
| **NO** | **PROGRAM OUTCOME** | **Contribution** |
| **1** | Adequate knowledge in basic sciences (mathematics, science) and the ability to apply theoretical and practical knowledge in these areas in problem solving | 3 |
| **2** | Ability to identify, define, formulate and solve complex problems; ability to select and apply appropriate analytical and modeling methods for this purpose | 5 |
| **3** | The ability to understand a complex system, system component or process and to solve system or process failures under certain realistic constraints. | 2 |
| **4** | Ability to develop, select and use modern techniques and tools required for practice; ability to use information technologies effectively | 3 |
| **5** | Ability to collect data for the investigation of problems, analyze and interpret the results | 2 |
| **6** | Ability to work effectively in disciplinary and multidisciplinary teams; ability to work individually | 4 |
| **7** | Ability to communicate effectively in oral and written Turkish; knowledge of at least one foreign language. | 2 |
| **8** | Awareness of the necessity of lifelong learning; the ability to access information, to follow developments in science and technology and to constantly renew oneself | 3 |
| **9** | Awareness of professional and ethical responsibility | 3 |
| **10** | Knowledge about business life practices such as project management, risk management and change management; awareness of entrepreneurship, innovation and sustainable development | 5 |
| **11** | Knowledge about the effects of technical applications on health, environment and safety in universal and social dimensions and contemporary issues; awareness of the legal consequences of problem-oriented solutions | 2 |

**ESOGU SİVRİHİSAR VOCATIONAL SCHOOL**

**COMPUTER PROGRAMMING PROGRAM**

**COURSE INFORMATION FORM**

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| **Course Name** | **Course Code** |
| OBJECT ORIENTED PROGRAMMING II | 221114301 |

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| **Semester** | **Number of Course Hours per Week** | | **Credit** | **ECTS** |
| **Theory** | **Practice** |
| 4 | 2 | 2 | 3 | 5 |

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| **Course Category (Credit)** | | | | |
| **Basic Sciences** | **Engineering Sciences** | **Design** | **General Education** | **Social** |
|  | X |  |  |  |

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| --- | --- | --- |
| **Course Language** | **Course Level** | **Course Type** |
| Turkish | Associate degree | Compulsory |

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| **Prerequisite(s) if any** |  |
| **Objectives of the Course** | Classes, Objects and Members; Final and Static Members; Constructor and Finalizer Methods; UML Class Diagrams; Command Line Input/Output Operations; Control Flow; Relationships between Classes and Objects (Ownership, Usage, Part-Whole, Inheritance); Redefining and Multiple Definition of Methods; Primitives and Wrappers; Enum Structures; Exception Handling; File Operations; Generic Classes; Using Basic Data Structures; |
| **Short Course Content** | Program software and advanced program development in C# or Java software language |

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| **Learning Outcomes of the Course** | | **Contributed PO(s)** | **Teaching Methods \*** | **Measuring Methods \*\*** |
| **1** | Students gain the ability to perform object-oriented modeling for the design of the business logic layer of information systems | 2,3,4,10 | 1, 6, 10   11, 12, 14 | A, D, J |
| **2** | Students gain the ability to document their designs with UML class and sequence diagrams. | 2,3,4,10 | 1, 6, 10   11, 12, 14 | A, D, J |
| **3** | Students gain the ability to perform bidirectional conversions between Java code and learned UML diagrams | 2,3,4,10 | 1, 6, 10   11, 12, 14 | A, D, J |
| **4** | Students gain the ability to write Java programs that run from the command line | 2,3,4,10 | 1, 6, 10   11, 12, 14 | A, D, J |
| **5** | Students gain the ability to use the basic features of current IDE programs | 2,3,4,10 | 1, 6, 10   11, 12, 14 | A, D, J |

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| **Main Textbook** | Java How to Program, Harvey M. Deitel & Paul J. Deitel, Prentice-Hall. 7. Sürüm veya daha günceli, Objects First Edition önerilir. |
| **Supporting References** | * Core Java 2 Volume I and II, C. S. Horstmann and G. Cornell, Prentice-Hall. 7. Sürüm veya daha günceli önerilir.   UML Distilled, Martin Fowler, Addison-Wesley, 2003 (3rd ed.) |
| **Necessary Course Material** |  |

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| **Course Schedule** | |
| **1** | Classes, objects, members. Exceptions: Final and static. UML Class diagrams. |
| **2** | Classes, objects, members. Special cases: Final and static. UML Class diagrams. |
| **3** | Constructors and terminators. Control flow. Creation of objects. |
| **4** | UML Sequence diagrams. Multiple definition of constructors and methods. Primitives. String and Math classes. I/O operations from the command line. |
| **5** | Data structures and algorithms: Primitive and reference types, lists, stacks, queues, dictionaries and their applications in OOP. |
| **6** | Ownership and use relations. One-way and two-way ownership. |
| **7** | Inheritance. Method redefinition and its difference from multi-method redefinition. |
| **8** | Mid-Term Exam |
| **9** | Primitives, wrappers, parameters. Outlier management. |
| **10** | Working with files and streams (serialization and inversion). |
| **11** | Using basic data structures with generic classes (List and mapping structures). |
| **12** | Type conversion. Enum classes. Inner classes. |
| **13** | UML, UML Class Diagrams, UML User Diagrams |
| **14** | Concurrency, parallel programming and asynchronous programming |
| **15** | Introduction to parallel programming. |
| **16,17** | Final Exam |

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| **Calculation of Course Workload** | | | |
| **Activities** | **Number** | **Time (Hour)** | **Total Workload (Hour)** |
| Course Time (number of course hours per week) | 14 | 4 | 56 |
| Classroom Studying Time (review, reinforcing, prestudy,….) | 14 | 2 | 28 |
| Homework |  |  |  |
| Quiz Exam | 1 | 1 | 1 |
| Studying for Quiz Exam |  |  |  |
| Oral exam |  |  |  |
| Studying for Oral Exam |  |  |  |
| Report (Preparation and presentation time included) |  |  |  |
| Project (Preparation and presentation time included) | 1 | 20 | 20 |
| Presentation (Preparation time included) | 1 | 1 | 1 |
| Mid-Term Exam | 1 | 1 | 1 |
| Studying for Mid-Term Exam | 5 | 3 | 15 |
| Final Exam | 1 | 1 | 1 |
| Studying for Final Exam | 14 | 0 | 28 |
|  | **Toplam iş yükü** | | **151** |
|  | **Toplam iş yükü / 30** | | **5,03** |
|  | **Dersin AKTS Kredisi** | | **5** |
| **Evaluation** | | | |
| **Activity Type** | **%** | | |
| Mid-term | 40 | | |
| Quiz |  | | |
| Homework |  | | |
|  |  | | |
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| **Final Exam** | 60 | | |
| **Total** | 100 | | |

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| **RELATIONSHIP BETWEEN THE COURSE LEARNING OUTCOMES AND THE PROGRAM OUTCOMES (PO)** (5: Very high, 4: High, 3: Middle, 2: Low, 1: Very low) | | |
| **NO** | **PROGRAM OUTCOME** | **Contribution** |
| **1** | Adequate knowledge in basic sciences (mathematics, science) and the ability to apply theoretical and practical knowledge in these areas in problem solving | 4 |
| **2** | Ability to identify, define, formulate and solve complex problems; ability to select and apply appropriate analytical and modeling methods for this purpose | 5 |
| **3** | The ability to understand a complex system, system component or process and to solve system or process failures under certain realistic constraints. | 5 |
| **4** | Ability to develop, select and use modern techniques and tools required for practice; ability to use information technologies effectively | 5 |
| **5** | Ability to collect data for the investigation of problems, analyze and interpret the results | 4 |
| **6** | Ability to work effectively in disciplinary and multidisciplinary teams; ability to work individually | 3 |
| **7** | Ability to communicate effectively in oral and written Turkish; knowledge of at least one foreign language. | 3 |
| **8** | Awareness of the necessity of lifelong learning; the ability to access information, to follow developments in science and technology and to constantly renew oneself | 3 |
| **9** | Awareness of professional and ethical responsibility | 3 |
| **10** | Knowledge about business life practices such as project management, risk management and change management; awareness of entrepreneurship, innovation and sustainable development | 5 |
| **11** | Knowledge about the effects of technical applications on health, environment and safety in universal and social dimensions and contemporary issues; awareness of the legal consequences of problem-oriented solutions | 3 |

**ESOGU SİVRİHİSAR VOCATIONAL SCHOOL**

**COMPUTER PROGRAMMING PROGRAM**

**COURSE INFORMATION FORM**

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| **Course Name** | **Course Code** |
| SERVER OPERATING SYSTEMS | 221114307 |

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| **Semester** | **Number of Course Hours per Week** | | **Credit** | **ECTS** |
| **Theory** | **Practice** |
| 4 | 2 | 0 | 2 | 2 |

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| **Course Category (Credit)** | | | | |
| **Basic Sciences** | **Engineering Sciences** | **Design** | **General Education** | **Social** |
|  | X |  |  |  |

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| **Course Language** | **Course Level** | **Course Type** |
| Turkish | Associate degree | Compulsory |

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| **Prerequisite(s) if any** |  |
| **Objectives of the Course** | To teach the main problems encountered in the installation and management of server operating systems. |
| **Short Course Content** | It covers the basic concepts of personal and server-based operating systems by recognizing the architectures of server operating systems. |

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| **Learning Outcomes of the Course** | | **Contributed PO(s)** | **Teaching Methods \*** | **Measuring Methods \*\*** |
| **1** | Prepare the server operating system for use | 2,10 | 1, 6 | A |
| **2** | Perform data management | 2,10 | 1, 6 | A |
| **3** | Manage the directory service of the server operating system | 2,10 | 1, 6 | A |
| **4** | Provide network management | 2,10 | 1, 6 | A |
| **5** | Be able to manage network services | 2,10 | 1, 6 | A |

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| **Main Textbook** | Windows Server 2012, Bülent Gür, Murat İbrahim Kantar, Seçkin Yayıncılık |
| **Supporting References** | - |
| **Necessary Course Material** | Lectures, Computer lab work, homework |

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| **Course Schedule** | |
| **1** | Server Operating System |
| **2** | Server Operating System Management |
| **3** | File System Disk Clustering Systems (Raid) |
| **4** | File and Directory Management |
| **5** | Data Sharing and Security |
| **6** | Backup and Restore |
| **7** | Backup and Restore |
| **8** | Mid-Term Exam |
| **9** | Active Directory Structure |
| **10** | Creating and Managing User Group Accounts |
| **11** | Advanced Account Management |
| **12** | Tcp/IP Networks |
| **13** | Network Printing Services |
| **14** | Dhcp Service |
| **15** | Dhcp Service |
| **16,17** | Final Exam |

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| **Calculation of Course Workload** | | | |
| **Activities** | **Number** | **Time (Hour)** | **Total Workload (Hour)** |
| Course Time (number of course hours per week) | 14 | 2 | 28 |
| Classroom Studying Time (review, reinforcing, prestudy,….) |  |  |  |
| Homework |  |  |  |
| Quiz Exam |  |  |  |
| Studying for Quiz Exam |  |  |  |
| Oral exam |  |  |  |
| Studying for Oral Exam |  |  |  |
| Report (Preparation and presentation time included) |  |  |  |
| Project (Preparation and presentation time included) |  |  |  |
| Presentation (Preparation time included) |  |  |  |
|  |  |  |  |
|  |  |  |  |
| Mid-Term Exam | 1 | 1 | 1 |
| Studying for Mid-Term Exam | 14 | 1 | 14 |
| Final Exam | 1 | 1 | 1 |
| Studying for Final Exam | 14 | 1 | 14 |
|  | **Total workload** | | **58** |
|  | **Total workload / 30** | | **1,93** |
|  | **Course ECTS Credit** | | **2** |

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| **Evaluation** | |
| **Activity Type** | **%** |
| Mid-term | 40 |
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| **Final Exam** | 60 |
| **Total** | 100 |

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| **RELATIONSHIP BETWEEN THE COURSE LEARNING OUTCOMES AND THE PROGRAM OUTCOMES (PO)** (5: Very high, 4: High, 3: Middle, 2: Low, 1: Very low) | | |
| **NO** | **PROGRAM OUTCOME** | **Contribution** |
| **1** | Adequate knowledge in basic sciences (mathematics, science) and the ability to apply theoretical and practical knowledge in these areas in problem solving | 3 |
| **2** | Ability to identify, define, formulate and solve complex problems; ability to select and apply appropriate analytical and modeling methods for this purpose | 4 |
| **3** | The ability to understand a complex system, system component or process and to solve system or process failures under certain realistic constraints. | 2 |
| **4** | Ability to develop, select and use modern techniques and tools required for practice; ability to use information technologies effectively | 3 |
| **5** | Ability to collect data for the investigation of problems, analyze and interpret the results | 2 |
| **6** | Ability to work effectively in disciplinary and multidisciplinary teams; ability to work individually | 3 |
| **7** | Ability to communicate effectively in oral and written Turkish; knowledge of at least one foreign language. | 2 |
| **8** | Awareness of the necessity of lifelong learning; the ability to access information, to follow developments in science and technology and to constantly renew oneself | 2 |
| **9** | Awareness of professional and ethical responsibility | 3 |
| **10** | Knowledge about business life practices such as project management, risk management and change management; awareness of entrepreneurship, innovation and sustainable development | 4 |
| **11** | Knowledge about the effects of technical applications on health, environment and safety in universal and social dimensions and contemporary issues; awareness of the legal consequences of problem-oriented solutions | 2 |

**ESOGU SİVRİHİSAR VOCATIONAL SCHOOL**

**COMPUTER PROGRAMMING PROGRAM**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **Course Name** | **Course Code** |
| INTERNSHIP APPLICATIONS | 221114305 |

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| **Semester** | **Number of Course Hours per Week** | | **Credit** | **ECTS** |
| **Theory** | **Practice** |
| 4 | 0 | 5 | 0 | 5 |

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| **Course Category (Credit)** | | | | |
| **Basic Sciences** | **Engineering Sciences** | **Design** | **General Education** | **Social** |
|  |  |  | x |  |

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| --- | --- | --- |
| **Course Language** | **Course Level** | **Course Type** |
| Turkish | Associate degree | Compulsory |

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| **Prerequisite(s) if any** | No |
| **Objectives of the Course** | Business Application |
| **Short Course Content** | Internship work |

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| **Learning Outcomes of the Course** | | **Contributed PO(s)** | **Teaching Methods \*** | **Measuring Methods \*\*** |
| **1** | Business Application | 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11 | 6, 7, 8, 10, 11, 12 | E, K |

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| --- | --- |
| **Main Textbook** |  |
| **Supporting References** |  |
| **Necessary Course Material** |  |

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| **Course Schedule** | |
| **1** | Internship |
| **2** | Internship |
| **3** | Internship |
| **4** | Internship |
| **5** | Internship |
| **6** | Internship |
| **7** | Internship |
| **8** | Internship |
| **9** | Internship |
| **10** | Internship |
| **11** | Internship |
| **12** | Internship |
| **13** | Internship |
| **14** | Internship |
| **15** | Internship |
| **16,17** | Final Exam |

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| --- | --- | --- | --- |
| **Calculation of Course Workload** | | | |
| **Activities** | **Number** | **Time (Hour)** | **Total Workload (Hour)** |
| Course Time (number of course hours per week) |  |  |  |
| Classroom Studying Time (review, reinforcing, prestudy,….) |  |  |  |
| Homework |  |  |  |
| Quiz Exam |  |  |  |
| Studying for Quiz Exam |  |  |  |
| Oral exam |  |  |  |
| Studying for Oral Exam |  |  |  |
| Report (Preparation and presentation time included) | 1 | 150 | 150 |
| Project (Preparation and presentation time included) |  |  |  |
| Presentation (Preparation time included) |  |  |  |
|  |  |  |  |
|  |  |  |  |
| Mid-Term Exam |  |  |  |
| Studying for Mid-Term Exam |  |  |  |
| Final Exam |  |  |  |
| Studying for Final Exam |  |  |  |
|  | **Total workload** | | **150** |
|  | **Total workload / 30** | | **5** |
|  | **Course ECTS Credit** | | **5** |

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| --- | --- |
| **Evaluation** | |
| **Activity Type** | **%** |
|  |  |
|  |  |
|  |  |
| **Final Exam** | 100 |
| **Total** | 100 |

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| **RELATIONSHIP BETWEEN THE COURSE LEARNING OUTCOMES AND THE PROGRAM OUTCOMES (PO)** (5: Very high, 4: High, 3: Middle, 2: Low, 1: Very low) | | |
| **NO** | **PROGRAM OUTCOME** | **Contribution** |
| **1** | Adequate knowledge in basic sciences (mathematics, science) and the ability to apply theoretical and practical knowledge in these areas in problem solving | 3 |
| **2** | Ability to identify, define, formulate and solve complex problems; ability to select and apply appropriate analytical and modeling methods for this purpose | 5 |
| **3** | The ability to understand a complex system, system component or process and to solve system or process failures under certain realistic constraints. | 4 |
| **4** | Ability to develop, select and use modern techniques and tools required for practice; ability to use information technologies effectively | 4 |
| **5** | Ability to collect data for the investigation of problems, analyze and interpret the results | 5 |
| **6** | Ability to work effectively in disciplinary and multidisciplinary teams; ability to work individually | 3 |
| **7** | Ability to communicate effectively in oral and written Turkish; knowledge of at least one foreign language. | 3 |
| **8** | Awareness of the necessity of lifelong learning; the ability to access information, to follow developments in science and technology and to constantly renew oneself | 3 |
| **9** | Awareness of professional and ethical responsibility | 4 |
| **10** | Knowledge about business life practices such as project management, risk management and change management; awareness of entrepreneurship, innovation and sustainable development | 3 |
| **11** | Knowledge about the effects of technical applications on health, environment and safety in universal and social dimensions and contemporary issues; awareness of the legal consequences of problem-oriented solutions | 3 |

**ESOGU SİVRİHİSAR VOCATIONAL SCHOOL**

**COMPUTER PROGRAMMING PROGRAM**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **Course Name** | **Course Code** |
| MOBILE PROGRAMMING II | 221114251 |

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| --- | --- | --- | --- | --- |
| **Semester** | **Number of Course Hours per Week** | | **Credit** | **ECTS** |
| **Theory** | **Practice** |
| 4 | 2 | 0 | 2 | 2 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Course Category (Credit)** | | | | |
| **Basic Sciences** | **Engineering Sciences** | **Design** | **General Education** | **Social** |
|  | X |  |  |  |

|  |  |  |
| --- | --- | --- |
| **Course Language** | **Course Level** | **Course Type** |
| Turkish | Associate degree | Elective |

|  |  |
| --- | --- |
| **Prerequisite(s) if any** |  |
| **Objectives of the Course** | Learning software development technologies for mobile devices. |
| **Short Course Content** | Within the scope of the course, mobile programming components, concepts and methodologies related to the application development process are given and applications are realized on iOS and Android software. |

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| **Learning Outcomes of the Course** | | **Contributed PO(s)** | **Teaching Methods \*** | **Measuring Methods \*\*** |
| **1** | To be familiar with software development technologies for mobile devices. | 4,5,10 | 1, 6, 10   11, 12, 14 | A, D, J |
| **2** | To be familiar with mobile platforms. | 4,5,10 | 1, 6, 10   11, 12, 14 | A, D, J |
| **3** | Develop software for a mobile device. | 4,5,10 | 1, 6, 10   11, 12, 14 | A, D, J |
| **4** | Create an apllication | 4,5,10 | 1, 6, 10   11, 12, 14 | A, D, J |
| **5** | Design an application with group work | 4,5,10 | 1, 6, 10   11, 12, 14 | A, D, J |

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| **Main Textbook** | iOS Progrmlamaya Giriş (Şükrü İlker Bırakoğlu) Kodlab Yayınları  Objective C (Tevfik KIZILÖREN) Kodlab Yayınları |
| **Supporting References** | Merhaba Android (Ahmet Oğuz Mermerkaya, Murat ÖNDER) Pusula Yayınları  Android (Nizar ÖĞÜTMEN) Kodlab Yayınları |
| **Necessary Course Material** | Personel Computer |

|  |  |
| --- | --- |
| **Course Schedule** | |
| **1** | Clean code writing techniques iOS Software and Preliminaries |
| **2** | Mobile application design, iOS and Android development |
| **3** | Algorithms, processes and technologies used in application development, Preparation of Development Environment, |
| **4** | Using the Class Method, |
| **5** | Methods, Pointers, Structures |
| **6** | Multiple Parameter Usage, Access Token, Inheritance |
| **7** | Using Interface and Implemantation |
| **8** | Mid-Term Exam |
| **9** | NS Classes SQL Lite Database Operations |
| **10** | NS Classes SQL Lite Database Operations |
| **11** | Adding a database to the application |
| **12** | Protocols |
| **13** | Memory Management |
| **14** | App publishing |
| **15** | App publishing |
| **16,17** | Final Exam |

|  |  |  |  |
| --- | --- | --- | --- |
| **Calculation of Course Workload** | | | |
| **Activities** | **Number** | **Time (Hour)** | **Total Workload (Hour)** |
| Course Time (number of course hours per week) | 14 | 2 | 28 |
| Classroom Studying Time (review, reinforcing, prestudy,….) |  |  |  |
| Homework |  |  |  |
| Quiz Exam | 1 | 1 | 1 |
| Studying for Quiz Exam |  |  |  |
| Oral exam |  |  |  |
| Studying for Oral Exam |  |  |  |
| Report (Preparation and presentation time included) |  |  |  |
| Project (Preparation and presentation time included) | 1 | 20 | 20 |
| Presentation (Preparation time included) |  |  |  |
|  |  |  |  |
|  |  |  |  |
| Mid-Term Exam | 1 | 1 | 1 |
| Studying for Mid-Term Exam | 2 | 2 | 4 |
| Final Exam | 1 | 1 | 1 |
| Studying for Final Exam | 1 | 1 | 1 |
|  | **Toplam iş yükü** | | **56** |
|  | **Toplam iş yükü / 30** | | **1,8** |
|  | **Dersin AKTS Kredisi** | | **2** |

|  |  |
| --- | --- |
| **Evaluation** | |
| **Activity Type** | **%** |
| Mid-term | 40 |
| Quiz |  |
| Homework |  |
|  |  |
|  |  |
| **Final Exam** | 60 |
| **Total** | 100 |

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| --- | --- | --- |
| **RELATIONSHIP BETWEEN THE COURSE LEARNING OUTCOMES AND THE PROGRAM OUTCOMES (PO)** (5: Very high, 4: High, 3: Middle, 2: Low, 1: Very low) | | |
| **NO** | **PROGRAM OUTCOME** | **Contribution** |
| **1** | Adequate knowledge in basic sciences (mathematics, science) and the ability to apply theoretical and practical knowledge in these areas in problem solving | 3 |
| **2** | Ability to identify, define, formulate and solve complex problems; ability to select and apply appropriate analytical and modeling methods for this purpose | 2 |
| **3** | The ability to understand a complex system, system component or process and to solve system or process failures under certain realistic constraints. | 2 |
| **4** | Ability to develop, select and use modern techniques and tools required for practice; ability to use information technologies effectively | 5 |
| **5** | Ability to collect data for the investigation of problems, analyze and interpret the results | 5 |
| **6** | Ability to work effectively in disciplinary and multidisciplinary teams; ability to work individually | 4 |
| **7** | Ability to communicate effectively in oral and written Turkish; knowledge of at least one foreign language. | 3 |
| **8** | Awareness of the necessity of lifelong learning; the ability to access information, to follow developments in science and technology and to constantly renew oneself | 3 |
| **9** | Awareness of professional and ethical responsibility | 2 |
| **10** | Knowledge about business life practices such as project management, risk management and change management; awareness of entrepreneurship, innovation and sustainable development | 5 |
| **11** | Knowledge about the effects of technical applications on health, environment and safety in universal and social dimensions and contemporary issues; awareness of the legal consequences of problem-oriented solutions | 4 |

**ESOGU SİVRİHİSAR VOCATIONAL SCHOOL**

**COMPUTER PROGRAMMING PROGRAM**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **Course Name** | **Course Code** |
| PROGRAMMABLE CONTROLLERS | 221114252 |

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| --- | --- | --- | --- | --- |
| **Semester** | **Number of Course Hours per Week** | | **Credit** | **ECTS** |
| **Theory** | **Practice** |
| 4 | 2 | 0 | 2 | 2 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Course Category (Credit)** | | | | |
| **Basic Sciences** | **Engineering Sciences** | **Design** | **General Education** | **Social** |
|  | X |  |  |  |

|  |  |  |
| --- | --- | --- |
| **Course Language** | **Course Level** | **Course Type** |
| Turkish | Associate degree | Elective |

|  |  |
| --- | --- |
| **Prerequisite(s) if any** | - |
| **Objectives of the Course** | Programming PLC with ladder diagrams and function blocks and gaining touch panel programming competencies |
| **Short Course Content** | PLC usage and applications |

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| --- | --- | --- | --- | --- |
| **Learning Outcomes of the Course** | | **Contributed PO(s)** | **Teaching Methods \*** | **Measuring Methods \*\*** |
| **1** | To be able to recognize the structure of programmable logic controllers, to understand the working principle | 10 | 1, 6 | A |
| **2** | To be able to apply the programming principles of programmable logic controllers | 10 | 1, 6 | A |
| **3** | To be able to program and make application examples | 10 | 1, 6 | A |

|  |  |
| --- | --- |
| **Main Textbook** | -Özdamar C., “PLC” Birsen Yayınevi-İstanbul ISBN: 975-511-332-0 2. -Kurtulan S., “PLC ile Endüstriyel Otomasyon” Birsen Yayınevi-İstanbul 2003 ISBN: 975-511-200-6 3.  -Akdoğan A., “Otomasyon Sistemleri” Birsen Yayınevi-İstanbul 1997 ISBN: 975-511-151-4 4. |
| **Supporting References** | - |
| **Necessary Course Material** | Lecture |

|  |  |
| --- | --- |
| **Course Schedule** | |
| **1** | PLC basic technology |
| **2** | PLC units |
| **3** | PLC interface program |
| **4** | Writing a program with a ladder diagram |
| **5** | Writing a program with a ladder diagram |
| **6** | Writing a program with a ladder diagram |
| **7** | Writing a program with a ladder diagram |
| **8** | Mid-Term Exam |
| **9** | Using Sequential Function Block Programs |
| **10** | Using Sequential Function Block Programs |
| **11** | Writing Sequential Function Block Programs |
| **12** | PLC Programming |
| **13** | PLC Programming |
| **14** | PLC Programming |
| **15** | PLC Programming |
| **16,17** | Final Exam |

|  |  |  |  |
| --- | --- | --- | --- |
| **Calculation of Course Workload** | | | |
| **Activities** | **Number** | **Time (Hour)** | **Total Workload (Hour)** |
| Course Time (number of course hours per week) | 14 | 2 | 28 |
| Classroom Studying Time (review, reinforcing, prestudy,….) |  |  |  |
| Homework |  |  |  |
| Quiz Exam |  |  |  |
| Studying for Quiz Exam |  |  |  |
| Oral exam |  |  |  |
| Studying for Oral Exam |  |  |  |
| Report (Preparation and presentation time included) |  |  |  |
| Project (Preparation and presentation time included) |  |  |  |
| Presentation (Preparation time included) |  |  |  |
|  |  |  |  |
|  |  |  |  |
| Mid-Term Exam | 1 | 1 | 1 |
| Studying for Mid-Term Exam | 14 | 1 | 14 |
| Final Exam | 1 | 1 | 1 |
| Studying for Final Exam | 14 | 1 | 14 |
|  | **Total workload** | | **58** |
|  | **Total workload / 30** | | **1,93** |
|  | **Course ECTS Credit** | | **2** |

|  |  |
| --- | --- |
| **Evaluation** | |
| **Activity Type** | **%** |
| Mid-term | 40 |
|  |  |
|  |  |
|  |  |
|  |  |
| **Final Exam** | 60 |
| **Total** | 100 |

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| --- | --- | --- |
| **RELATIONSHIP BETWEEN THE COURSE LEARNING OUTCOMES AND THE PROGRAM OUTCOMES (PO)** (5: Very high, 4: High, 3: Middle, 2: Low, 1: Very low) | | |
| **NO** | **PROGRAM OUTCOME** | **Contribution** |
| **1** | Adequate knowledge in basic sciences (mathematics, science) and the ability to apply theoretical and practical knowledge in these areas in problem solving | 3 |
| **2** | Ability to identify, define, formulate and solve complex problems; ability to select and apply appropriate analytical and modeling methods for this purpose | 4 |
| **3** | The ability to understand a complex system, system component or process and to solve system or process failures under certain realistic constraints. | 2 |
| **4** | Ability to develop, select and use modern techniques and tools required for practice; ability to use information technologies effectively | 3 |
| **5** | Ability to collect data for the investigation of problems, analyze and interpret the results | 2 |
| **6** | Ability to work effectively in disciplinary and multidisciplinary teams; ability to work individually | 3 |
| **7** | Ability to communicate effectively in oral and written Turkish; knowledge of at least one foreign language. | 2 |
| **8** | Awareness of the necessity of lifelong learning; the ability to access information, to follow developments in science and technology and to constantly renew oneself | 2 |
| **9** | Awareness of professional and ethical responsibility | 3 |
| **10** | Knowledge about business life practices such as project management, risk management and change management; awareness of entrepreneurship, innovation and sustainable development | 4 |
| **11** | Knowledge about the effects of technical applications on health, environment and safety in universal and social dimensions and contemporary issues; awareness of the legal consequences of problem-oriented solutions | 2 |

**ESOGU SİVRİHİSAR VOCATIONAL SCHOOL**

**COMPUTER PROGRAMMING PROGRAM**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **Course Name** | **Course Code** |
| INFORMATION TECHNOLOGY LAW | 221114303 |

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| --- | --- | --- | --- | --- |
| **Semester** | **Number of Course Hours per Week** | | **Credit** | **ECTS** |
| **Theory** | **Practice** |
| 4 | 2 | 0 | 2 | 2 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Course Category (Credit)** | | | | |
| **Basic Sciences** | **Engineering Sciences** | **Design** | **General Education** | **Social** |
|  |  |  |  | X |

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| --- | --- | --- |
| **Course Language** | **Course Level** | **Course Type** |
| Turkish | Associate degree | Elective |

|  |  |
| --- | --- |
| **Prerequisite(s) if any** |  |
| **Objectives of the Course** | It is aimed to explain the basic concepts and institutions of IT law, as well as to evaluate and discuss the emergence and development process of artificial intelligence law. |
| **Short Course Content** | The basic principles of information law, the internet, the emergence and functioning of the internet, the emergence and development of artificial intelligence law, and the examination of current developments and legal studies in this context constitute the content of the course. |

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| --- | --- | --- | --- | --- |
| **Learning Outcomes of the Course** | | **Contributed PO(s)** | **Teaching Methods \*** | **Measuring Methods \*\*** |
| **1** | Knows security protocols and administrative measures to be taken against security threats. | 9,11 | 1, 10   11, 12 | A,B, D |
| **2** | To be able to evaluate the knowledge and skills acquired in the field of law and IT legislation with a critical approach, to renew and continuously improve their lifelong knowledge. | 9,11 | 1, 10   11, 12 | A,B, D |

|  |  |
| --- | --- |
| **Main Textbook** |  |
| **Supporting References** |  |
| **Necessary Course Material** |  |

|  |  |
| --- | --- |
| **Course Schedule** | |
| **1** | Basic concepts of IT law, technical and legal infrastructure in this context |
| **2** | The relationship of information law with other branches of private and public law |
| **3** | Examination of Law No. 5651 and the responsibilities of access, hosting and content providers within the framework of this examination |
| **4** | Basic principles regarding contracts made electronically |
| **5** | Basic principles regarding electronic commerce and in this context, Law No. 6563 on the Regulation of Electronic Commerce |
| **6** | Digital signature and proof in electronic documents |
| **7** | Protection of personal data and private life on the Internet |
| **8** | Mid-Term Exam |
| **9** | Overview of cybercrimes regulated in the Turkish Penal Code |
| **10** | Data mining and social media law |
| **11** | The emergence, development and future of artificial intelligence law |
| **12** | Personality theories on artificial intelligence, driver's license debates |
| **13** | Current debates on the legal and criminal liability of artificial intelligence tools |
| **14** | Artificial intelligence and ethics |
| **15** | National and international legislation studies on artificial intelligence law |
| **16,17** | Final Exam |

|  |  |  |  |
| --- | --- | --- | --- |
| **Calculation of Course Workload** | | | |
| **Activities** | **Number** | **Time (Hour)** | **Total Workload (Hour)** |
| Course Time (number of course hours per week) | 14 | 2 | 28 |
| Classroom Studying Time (review, reinforcing, prestudy,….) |  |  |  |
| Homework |  |  |  |
| Quiz Exam | 1 | 1 | 1 |
| Studying for Quiz Exam |  |  |  |
| Oral exam |  |  |  |
| Studying for Oral Exam |  |  |  |
| Report (Preparation and presentation time included) |  |  |  |
| Project (Preparation and presentation time included) |  |  |  |
| Presentation (Preparation time included) |  |  |  |
|  |  |  |  |
|  |  |  |  |
| Mid-Term Exam | 1 | 1 | 1 |
| Studying for Mid-Term Exam | 5 | 3 | 15 |
| Final Exam | 1 | 1 | 1 |
| Studying for Final Exam | 14 | 1 | 14 |
|  | **Toplam iş yükü** | | **60** |
|  | **Toplam iş yükü / 30** | | **2** |
|  | **Dersin AKTS Kredisi** | | **2** |

|  |  |
| --- | --- |
| **Evaluation** | |
| **Activity Type** | **%** |
| Mid-term | 40 |
| Quiz |  |
| Homework |  |
|  |  |
|  |  |
| **Final Exam** | 60 |
| **Total** | 100 |

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| --- | --- | --- |
| **RELATIONSHIP BETWEEN THE COURSE LEARNING OUTCOMES AND THE PROGRAM OUTCOMES (PO)** (5: Very high, 4: High, 3: Middle, 2: Low, 1: Very low) | | |
| **NO** | **PROGRAM OUTCOME** | **Contribution** |
| **1** | Adequate knowledge in basic sciences (mathematics, science) and the ability to apply theoretical and practical knowledge in these areas in problem solving | 2 |
| **2** | Ability to identify, define, formulate and solve complex problems; ability to select and apply appropriate analytical and modeling methods for this purpose | 3 |
| **3** | The ability to understand a complex system, system component or process and to solve system or process failures under certain realistic constraints. | 3 |
| **4** | Ability to develop, select and use modern techniques and tools required for practice; ability to use information technologies effectively | 4 |
| **5** | Ability to collect data for the investigation of problems, analyze and interpret the results | 4 |
| **6** | Ability to work effectively in disciplinary and multidisciplinary teams; ability to work individually | 4 |
| **7** | Ability to communicate effectively in oral and written Turkish; knowledge of at least one foreign language. | 3 |
| **8** | Awareness of the necessity of lifelong learning; the ability to access information, to follow developments in science and technology and to constantly renew oneself | 2 |
| **9** | Awareness of professional and ethical responsibility | 5 |
| **10** | Knowledge about business life practices such as project management, risk management and change management; awareness of entrepreneurship, innovation and sustainable development | 4 |
| **11** | Knowledge about the effects of technical applications on health, environment and safety in universal and social dimensions and contemporary issues; awareness of the legal consequences of problem-oriented solutions | 5 |

**ESOGU SİVRİHİSAR VOCATIONAL SCHOOL**

**COMPUTER PROGRAMMING PROGRAM**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **Course Name** | **Course Code** |
| HUMAN COMPUTER INTERACTION | 221114304 |

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| --- | --- | --- | --- | --- |
| **Semester** | **Number of Course Hours per Week** | | **Credit** | **ECTS** |
| **Theory** | **Practice** |
| 4 | 2 | 0 | 2 | 2 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Course Category (Credit)** | | | | |
| **Basic Sciences** | **Engineering Sciences** | **Design** | **General Education** | **Social** |
|  | X |  |  |  |

|  |  |  |
| --- | --- | --- |
| **Course Language** | **Course Level** | **Course Type** |
| Turkish | Associate degree | Elective |

|  |  |
| --- | --- |
| **Prerequisite(s) if any** | - |
| **Objectives of the Course** | The Human Computer Interaction course aims to provide students with information about user-centered design principles and interaction techniques. Within the scope of this course, the skills required to design effective and usable interfaces, analyze and improve user experience are developed, and students are aimed to apply both theoretical and practical HCI methods. |
| **Short Course Content** | This course covers the concepts and applications of human-computer interaction (HCI). Topics include fundamental principles of HCI, user-centered design, usability testing, interface design, cognitive ergonomics, interaction techniques, and HCI research methods. Students will design interfaces to improve user experience and learn various HCI methods in practice. |

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| --- | --- | --- | --- | --- |
| **Learning Outcomes of the Course** | | **Contributed PO(s)** | **Teaching Methods \*** | **Measuring Methods \*\*** |
| **1** | Understand and apply user-centered design principles. | 2,10 | 1, 6 | A |
| **2** | Evaluate the effectiveness of interfaces by conducting usability tests. | 2,10 | 1, 6 | A |
| **3** | Design effective and user-friendly interfaces. | 2,10 | 1, 6 | A |
| **4** | Analyze user experience using HCI research methods and develop improvement suggestions. | 2,10 | 1, 6 | A |

|  |  |
| --- | --- |
| **Main Textbook** | "İnsan Bilgisayar Etkileşimi ve Kullanılabilirlik Mühendisliği" - Yazar: Kürşat Çağıltay |
| **Supporting References** | - |
| **Necessary Course Material** | Lecture |

|  |  |
| --- | --- |
| **Course Schedule** | |
| **1** | Introduction to Human Computer Interaction |
| **2** | Basic Principles and History of HCI |
| **3** | User-Centered Design |
| **4** | Usability and Usability Testing |
| **5** | Cognitive Ergonomics and Human Factors |
| **6** | Interface Design and Prototyping |
| **7** | Interaction Techniques and Models |
| **8** | Mid-Term Exam |
| **9** | Mobile and Web Interface Design |
| **10** | Visual Design Principles and Information Architecture |
| **11** | HCI Research Methods |
| **12** | HCI and Artificial Intelligence |
| **13** | Accessibility and Universal Design |
| **14** | Current Trends and Future Directions in HCI |
| **15** | General Review and Applied Project Presentations |
| **16,17** | Final Exam |

|  |  |  |  |
| --- | --- | --- | --- |
| **Calculation of Course Workload** | | | |
| **Activities** | **Number** | **Time (Hour)** | **Total Workload (Hour)** |
| Course Time (number of course hours per week) | 14 | 2 | 28 |
| Classroom Studying Time (review, reinforcing, prestudy,….) |  |  |  |
| Homework |  |  |  |
| Quiz Exam |  |  |  |
| Studying for Quiz Exam |  |  |  |
| Oral exam |  |  |  |
| Studying for Oral Exam |  |  |  |
| Report (Preparation and presentation time included) |  |  |  |
| Project (Preparation and presentation time included) |  |  |  |
| Presentation (Preparation time included) |  |  |  |
|  |  |  |  |
|  |  |  |  |
| Mid-Term Exam | 1 | 1 | 1 |
| Studying for Mid-Term Exam | 14 | 1 | 14 |
| Final Exam | 1 | 1 | 1 |
| Studying for Final Exam | 14 | 1 | 14 |
|  | **Total workload** | | **58** |
|  | **Total workload / 30** | | **1,93** |
|  | **Course ECTS Credit** | | **2** |

|  |  |
| --- | --- |
| **Evaluation** | |
| **Activity Type** | **%** |
| Mid-term | 40 |
|  |  |
|  |  |
|  |  |
|  |  |
| **Final Exam** | 60 |
| **Total** | 100 |

|  |  |  |
| --- | --- | --- |
| **RELATIONSHIP BETWEEN THE COURSE LEARNING OUTCOMES AND THE PROGRAM OUTCOMES (PO)** (5: Very high, 4: High, 3: Middle, 2: Low, 1: Very low) | | |
| **NO** | **PROGRAM OUTCOME** | **Contribution** |
| **1** | Adequate knowledge in basic sciences (mathematics, science) and the ability to apply theoretical and practical knowledge in these areas in problem solving | 3 |
| **2** | Ability to identify, define, formulate and solve complex problems; ability to select and apply appropriate analytical and modeling methods for this purpose | 4 |
| **3** | The ability to understand a complex system, system component or process and to solve system or process failures under certain realistic constraints. | 2 |
| **4** | Ability to develop, select and use modern techniques and tools required for practice; ability to use information technologies effectively | 3 |
| **5** | Ability to collect data for the investigation of problems, analyze and interpret the results | 2 |
| **6** | Ability to work effectively in disciplinary and multidisciplinary teams; ability to work individually | 3 |
| **7** | Ability to communicate effectively in oral and written Turkish; knowledge of at least one foreign language. | 2 |
| **8** | Awareness of the necessity of lifelong learning; the ability to access information, to follow developments in science and technology and to constantly renew oneself | 2 |
| **9** | Awareness of professional and ethical responsibility | 3 |
| **10** | Knowledge about business life practices such as project management, risk management and change management; awareness of entrepreneurship, innovation and sustainable development | 4 |
| **11** | Knowledge about the effects of technical applications on health, environment and safety in universal and social dimensions and contemporary issues; awareness of the legal consequences of problem-oriented solutions | 2 |

**ESOGU SİVRİHİSAR VOCATIONAL SCHOOL**

**COMPUTER PROGRAMMING PROGRAM**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **Course Name** | **Course Code** |
| SYSTEM ANALYSIS AND DESIGN | 221114306 |

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| --- | --- | --- | --- | --- |
| **Semester** | **Number of Course Hours per Week** | | **Credit** | **ECTS** |
| **Theory** | **Practice** |
| 4 | 2 | 2 | 3 | 4 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Course Category (Credit)** | | | | |
| **Basic Sciences** | **Engineering Sciences** | **Design** | **General Education** | **Social** |
|  | X |  |  |  |

|  |  |  |
| --- | --- | --- |
| **Course Language** | **Course Level** | **Course Type** |
| Turkish | Associate degree | Elective |

|  |  |
| --- | --- |
| **Prerequisite(s) if any** | - |
| **Objectives of the Course** | Ability to prepare projects.  Ability to choose the appropriate programming language.  The aim of the course is to provide students with the ability to analyze and design systems they will encounter. |
| **Short Course Content** | Research and Preliminary Project |

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| **Learning Outcomes of the Course** | | **Contributed PO(s)** | **Teaching Methods \*** | **Measuring Methods \*\*** |
| **1** | Conducts group work to select a topic within the framework set forth. | 3,11 | 1, 6 | A |
| **2** | Conducts preliminary work on the topic. | 3,11 | 1, 6 | A |
| **3** | Determines the scope of the study. | 3,11 | 1, 6 | A |
| **4** | Examines the selected study in detail, finds solution suggestions with group mates and the instructor. | 3,11 | 1, 6 | A |
| **5** | Writes the steps of the process. | 3,11 | 1, 6 | A |

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| **Main Textbook** | Sistem Analizi ve Tasarımı (Çetin Güler) |
| **Supporting References** | - |
| **Necessary Course Material** | Lecture, Computer lab work, homework |

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| **Course Schedule** | |
| **1** | Introduction to Systems Analysis and Design |
| **2** | System Development Life Cycle, processes and methodologies |
| **3** | Project initiation |
| **4** | Project Management |
| **5** | Modeling an existing or new information system with data flow diagrams |
| **6** | Modeling an existing or new information system with data flow diagrams |
| **7** | Determining system requirements, Use-case analysis |
| **8** | Mid-Term Exam |
| **9** | Process modeling |
| **10** | Data modeling |
| **11** | System design |
| **12** | Architecture design |
| **13** | User interface design |
| **14** | Data storage and program design |
| **15** | Data storage and program design |
| **16,17** | Final Exam |

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| **Calculation of Course Workload** | | | |
| **Activities** | **Number** | **Time (Hour)** | **Total Workload (Hour)** |
| Course Time (number of course hours per week) | 14 | 4 | 56 |
| Classroom Studying Time (review, reinforcing, prestudy,….) |  |  |  |
| Homework |  |  |  |
| Quiz Exam |  |  |  |
| Studying for Quiz Exam |  |  |  |
| Oral exam |  |  |  |
| Studying for Oral Exam |  |  |  |
| Report (Preparation and presentation time included) |  |  |  |
| Project (Preparation and presentation time included) |  |  |  |
| Presentation (Preparation time included) |  |  |  |
|  |  |  |  |
|  |  |  |  |
| Mid-Term Exam | 1 | 1 | 1 |
| Studying for Mid-Term Exam | 14 | 2 | 28 |
| Final Exam | 1 | 1 | 1 |
| Studying for Final Exam | 14 | 2 | 28 |
|  | **Total workload** | | **114** |
|  | **Total workload / 30** | | **3,8** |
|  | **Course ECTS Credit** | | **4** |

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| **Evaluation** | |
| **Activity Type** | **%** |
| Mid-term | 40 |
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| **Final Exam** | 60 |
| **Total** | 100 |

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| **RELATIONSHIP BETWEEN THE COURSE LEARNING OUTCOMES AND THE PROGRAM OUTCOMES (PO)** (5: Very high, 4: High, 3: Middle, 2: Low, 1: Very low) | | |
| **NO** | **PROGRAM OUTCOME** | **Contribution** |
| **1** | Adequate knowledge in basic sciences (mathematics, science) and the ability to apply theoretical and practical knowledge in these areas in problem solving | 3 |
| **2** | Ability to identify, define, formulate and solve complex problems; ability to select and apply appropriate analytical and modeling methods for this purpose | 2 |
| **3** | The ability to understand a complex system, system component or process and to solve system or process failures under certain realistic constraints. | 4 |
| **4** | Ability to develop, select and use modern techniques and tools required for practice; ability to use information technologies effectively | 3 |
| **5** | Ability to collect data for the investigation of problems, analyze and interpret the results | 2 |
| **6** | Ability to work effectively in disciplinary and multidisciplinary teams; ability to work individually | 3 |
| **7** | Ability to communicate effectively in oral and written Turkish; knowledge of at least one foreign language. | 2 |
| **8** | Awareness of the necessity of lifelong learning; the ability to access information, to follow developments in science and technology and to constantly renew oneself | 2 |
| **9** | Awareness of professional and ethical responsibility | 3 |
| **10** | Knowledge about business life practices such as project management, risk management and change management; awareness of entrepreneurship, innovation and sustainable development | 2 |
| **11** | Knowledge about the effects of technical applications on health, environment and safety in universal and social dimensions and contemporary issues; awareness of the legal consequences of problem-oriented solutions | 4 |

**ESOGU SİVRİHİSAR VOCATIONAL SCHOOL**

**COMPUTER PROGRAMMING PROGRAM**

**COURSE INFORMATION FORM**

|  |  |
| --- | --- |
| **Course Name** | **Course Code** |
| CONTENT MANAGEMENT SYSTEMS | 221114302 |

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| --- | --- | --- | --- | --- |
| **Semester** | **Number of Course Hours per Week** | | **Credit** | **ECTS** |
| **Theory** | **Practice** |
| 4 | 3 | 0 | 3 | 4 |

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| **Course Category (Credit)** | | | | |
| **Basic Sciences** | **Engineering Sciences** | **Design** | **General Education** | **Social** |
|  | X |  |  |  |

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| --- | --- | --- |
| **Course Language** | **Course Level** | **Course Type** |
| Turkish | Associate degree | Elective |

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| **Prerequisite(s) if any** | - |
| **Objectives of the Course** | The Content Management Systems course aims to provide students with comprehensive knowledge and skills in creating websites using CMS platforms, content management, user management and security. Within the scope of this course, applications will be made regarding the installation, configuration and customization of popular CMS platforms and students' competencies in developing effective, user-friendly and secure websites will be increased. |
| **Short Course Content** | This course covers the basic principles and applications of content management systems (CMS). Topics include the definition and importance of CMS, popular CMS platforms (WordPress, Joomla, Drupal), CMS installation and configuration, content creation and management, theme and plugin usage, user management, security measures and performance optimization. Students will gain the skills to create effective and secure websites by doing practical work on various CMS platforms. |

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| **Learning Outcomes of the Course** | | **Contributed PO(s)** | **Teaching Methods \*** | **Measuring Methods \*\*** |
| **1** | Explain the basic principles and functions of content management systems. | 3,11 | 1, 6 | A |
| **2** | Install and configure popular CMS platforms (WordPress, Joomla, Drupal, etc.). | 3,11 | 1, 6 | A |
| **3** | Design and manage effective and user-friendly websites using CMS. | 3,11 | 1, 6 | A |
| **4** | Customize CMS platforms using themes and plugins. | 3,11 | 1, 6 | A |
| **5** | Implement user management and access control on CMS. | 3,11 | 1, 6 | A |
| **6** | Take security measures and optimize performance on CMS-based websites. | 3,11 | 1, 6 | A |

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| **Main Textbook** | İçerik Yönetim Sistemleri, AÖF Yayınları, Mehmet Kesim, Mehmet Fırat |
| **Supporting References** | - |
| **Necessary Course Material** | Lecture, Computer lab work, homework |

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| **Course Schedule** | |
| **1** | Introduction to Content Management Systems and Basic Concepts |
| **2** | Popular CMS Platforms: WordPress, Joomla, Drupal |
| **3** | CMS Installation and Initial Configuration |
| **4** | Basic Content Creation and Management |
| **5** | Page and Menu Structures |
| **6** | Theme Selection and Customization |
| **7** | Plugins and Modules |
| **8** | Mid-Term Exam |
| **9** | User Management and Access Control |
| **10** | CMS Security: Basic Principles and Practices |
| **11** | Performance Optimization and Acceleration Techniques |
| **12** | SEO and CMS: Search Engine Optimization |
| **13** | E-commerce and Applications with CMS |
| **14** | Content Management Best Practices |
| **15** | General Repetition and Applied Project Work |
| **16,17** | Final Exam |

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| **Calculation of Course Workload** | | | |
| **Activities** | **Number** | **Time (Hour)** | **Total Workload (Hour)** |
| Course Time (number of course hours per week) | 14 | 3 | 42 |
| Classroom Studying Time (review, reinforcing, prestudy,….) | 2 | 2 | 4 |
| Homework |  |  |  |
| Quiz Exam |  |  |  |
| Studying for Quiz Exam |  |  |  |
| Oral exam |  |  |  |
| Studying for Oral Exam |  |  |  |
| Report (Preparation and presentation time included) |  |  |  |
| Project (Preparation and presentation time included) |  |  |  |
| Presentation (Preparation time included) |  |  |  |
|  |  |  |  |
|  |  |  |  |
| Mid-Term Exam | 1 | 1 | 1 |
| Studying for Mid-Term Exam | 14 | 2 | 28 |
| Final Exam | 1 | 1 | 1 |
| Studying for Final Exam | 14 | 2 | 28 |
|  | **Total workload** | | **104** |
|  | **Total workload / 30** | | **3,466** |
|  | **Course ECTS Credit** | | **4** |

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| **Evaluation** | |
| **Activity Type** | **%** |
| Mid-term | 40 |
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|  |  |
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| **Final Exam** | 60 |
| **Total** | 100 |

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| **RELATIONSHIP BETWEEN THE COURSE LEARNING OUTCOMES AND THE PROGRAM OUTCOMES (PO)** (5: Very high, 4: High, 3: Middle, 2: Low, 1: Very low) | | |
| **NO** | **PROGRAM OUTCOME** | **Contribution** |
| **1** | Adequate knowledge in basic sciences (mathematics, science) and the ability to apply theoretical and practical knowledge in these areas in problem solving | 3 |
| **2** | Ability to identify, define, formulate and solve complex problems; ability to select and apply appropriate analytical and modeling methods for this purpose | 2 |
| **3** | The ability to understand a complex system, system component or process and to solve system or process failures under certain realistic constraints. | 4 |
| **4** | Ability to develop, select and use modern techniques and tools required for practice; ability to use information technologies effectively | 3 |
| **5** | Ability to collect data for the investigation of problems, analyze and interpret the results | 2 |
| **6** | Ability to work effectively in disciplinary and multidisciplinary teams; ability to work individually | 3 |
| **7** | Ability to communicate effectively in oral and written Turkish; knowledge of at least one foreign language. | 2 |
| **8** | Awareness of the necessity of lifelong learning; the ability to access information, to follow developments in science and technology and to constantly renew oneself | 2 |
| **9** | Awareness of professional and ethical responsibility | 3 |
| **10** | Knowledge about business life practices such as project management, risk management and change management; awareness of entrepreneurship, innovation and sustainable development | 2 |
| **11** | Knowledge about the effects of technical applications on health, environment and safety in universal and social dimensions and contemporary issues; awareness of the legal consequences of problem-oriented solutions | 4 |