| SCADA SYSTEMS | | | | | | | | | | |
|---------------|--|---|---|--|--|--|--|--|--|--|
| 1 | Course Title: | SCADA | SYSTEMS | | | | | | | |
| 2 | Course Code: | ELES220 |) | | | | | | | |
| 3 | Type of Course: | Optional | | | | | | | | |
| 4 | Level of Course: | Short Cy | cle | | | | | | | |
| 5 | Year of Study: | 2 | | | | | | | | |
| 6 | Semester: | 4 | | | | | | | | |
| 7 | ECTS Credits Allocated: | 3.00 | | | | | | | | |
| 8 | Theoretical (hour/week): | 2.00 | | | | | | | | |
| 9 | Practice (hour/week): | 0.00 | | | | | | | | |
| 10 | Laboratory (hour/week): | 0 | | | | | | | | |
| 11 | Prerequisites: | None | | | | | | | | |
| 12 | Language: | Turkish | | | | | | | | |
| 13 | Mode of Delivery: | Face to f | ace | | | | | | | |
| 14 | Course Coordinator: | Öğr.Gör. | ÖMER ERİŞ | | | | | | | |
| 15 | Course Lecturers: | | | | | | | | | |
| 16 | Contact information of the Course Coordinator: | omereris@uludag.edu.tr 0541 522 2059 Uludağ Üniversitesi İnegöl Meslek Yüksekokulu İnegöl/BURSA | | | | | | | | |
| 17 | Website: | | | | | | | | | |
| 18 | Objective of the Course: | To gain qualification in setting up scada system and record-keeping operations. | | | | | | | | |
| 19 | Contribution of the Course to Professional Development: | | | | | | | | | |
| 20 | Learning Outcomes: | | | | | | | | | |
| | | 1 | Ability to use scada program. | | | | | | | |
| | | 2 | Ability to prepare computer and control system connection and labels in a correct way. | | | | | | | |
| | | 3 | Ability to prepare scada interface | | | | | | | |
| | | 4 | Ability to use OPC (Open Process Control) server program | | | | | | | |
| | | 5 | Ability to do Tag logging and alarm handling settings | | | | | | | |
| | | 6 | Ability to record tag status and data on database. | | | | | | | |
| | | 7 | Ability to use visual programming interface. | | | | | | | |
| | | 8 | Ability to use computer ports and to monitor and to record data using visual programming. | | | | | | | |
| | | 9 | | | | | | | | |
| | | 10 | | | | | | | | |
| 21 | Course Content: | | | | | | | | | |
| | Course Content: | | | | | | | | | |
| Week | Theoretical | | Practice | | | | | | | |
| 1 | Scada program 1. What is Scada? 2. Properties of Scada 3. Components of Scada Program 4. Requirements of Scada Program 5. Installations of Scada Programs | | | | | | | | | |

| 2 | Scada Program and control device connection 1. Scada Program and control device connection 2. Making connection settings 3. Tag concept 4. Object tag connection Design of Scada interface 1. Page Object 2. Buttons 3. Input-Output Units 4. Other objects | | | |
|---|---|---|--|---|
| 4 | Opc (Open Process Control) server 1. What is OPC? 2. Types of Opc 3. Opc installation 4. Adding device to Opc server 5. Adding tag to Opc server 6. Communicator control device with Opc server | | | |
| 5 | Tag Logging 1. What is tag logging? 2. Archive Settings 3. Tag Logging settings on Scada program 4. Monitoring tag status using Trend object. | | | |
| Activit | 20 | Number | Duration (bour) | Total Work |
| | 65 | | | Load (hour) |
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| Theore | tsashowing Alarm on page | 14 0 | 3.00 0.00 | Load (hour) 42.00 0.00 |
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| Theore Practica Self stu Homew | ticashowing Alarm on page als/Labs dy pathogenation /orks | 14 0 14 0 | 3.00 0.00 3.00 0.00 | Load (hour) 42.00 0.00 42.00 0.00 |
| Theore Practice Self stu Homew Project | tes teashowing Alarm on page als/Labs dy pathogeration vorks 1.3. What is Sql? | 14 0 14 0 0 0 0 0 0 | 3.00 0.00 3.00 0.00 0.00 | Load (hour) 42.00 0.00 42.00 0.00 0.00 |
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| 10 | Visual programming objects 1. Visual programming language object 1.1. Form object 1.2. Command button object 1.3. Textbox object 1.4. Slider bar object 1.5. Combobox List 1.6. Radio button object 1.7. Listbox object 1.8 Image object | ects | | | | | | | |
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| 11 | Visual programming objects 1. Visual programming language object 1.1. Form object 1.2. Command button object 1.3. Textbox object 1.4. Slider bar object 1.5. Combobox List 1.6. Radio button object 1.7. Listbox object 1.8 Image object | ects | | | | | | | |
| 12 | Computer ports and visual programm 1. Parallel port programming 1.1. Preparing parallel port interfact 1.2. Parallel port program 2. Serial port programming 2.1. Mscomm object 2.2. Serial port program | ning e | | | | | | | |
| 13 | Device control using visual programm language 1. Opc server 1.1. Adding device to Opc server 1.2. Adding Opc server object to pr 1.3. Changing tags 1.4. Reading tag | ning ogram | | | | | | | |
| 14 | Data monitoring and recording using programming 1. Recording to database 1.1. Creating database connection 1.2. Database recording codes | visual | | | | | | | |
| 22 | Textbooks, References and/or Other Materials: | | SCADA for Industry; David Bailey, Edwin Wright | | | | | | |
| 23 | Assesment | | | | | | | | |
| TERML | LEARNING ACTIVITIES | NUMBE R | WEIGHT | | | | | | |
| Midtern | m Exam | 1 | 40.00 | | | | | | |
| Quiz | | 0 | 0.00 | | | | | | |
| Home \ | work-project | 0 | 0.00 | | | | | | |
| Final E | xam | 1 | 60.00 | | | | | | |
| Iotal | Nution of Torm (Voor) Loorning Activiti | 2 | 100.00 | | | | | | |
| Succes | ss Grade | 5 10 | 40.00 | | | | | | |
| Contrib | oution of Final Exam to Success Grade | Э | 60.00 | | | | | | |
| Total | | | 100.00 | | | | | | |
| Measu Course | rement and Evaluation Techniques Us | sed in the | | | | | | | |
| 24 ECTS / WORK LOAD TABLE | | | | | | | | | |

| 25 | CONTRIBUTION OF LEARNING OUTCOMES TO PROGRAMME QUALIFICATIONS | | | | | | | | | | | | | | | |
|--|--|------------------|-----|-----|-----|----------|-----|-----|--------|----------|------|-------------|----------|------|------|------|
| | PQ1 | PQ2 | PQ3 | PQ4 | PQ5 | PQ6 | PQ7 | PQ8 | PQ9 | PQ1 0 | PQ11 | PQ12 | PQ1 3 | PQ14 | PQ15 | PQ16 |
| ÖK1 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ÖK2 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ÖK3 | 0 | 0 | 0 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ÖK4 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ÖK5 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ÖK6 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ÖK7 | 0 | 0 | 0 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ÖK8 | 0 | 0 | 0 | 4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LO: Learning Objectives PQ: Program Qualifications | | | | | | | | | | | | | | | | |
| Contrib 1 ution Level: | | 1 very low 2 low | | | | 3 Medium | | | 4 High | | | 5 Very High | | | | |