# AYDIN ADNAN MENDERES UNIVERSITY
# COURSE INFORMATION FORM

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|---|---|---|---|---|---|---|---|---|---|
| Course Title | Automatic Control | | | | | | | | |
| Course Code | ELE268 | | Couse Level | Short Cycle (Associate's Degree) | | | | | |
| ECTS Credit | 6 | Workload | 150 *(Hours)* | Theory | 3 | Practice | 1 | Laboratory | 0 |
| Objectives of the Course | By this course, the students learn the installation of command systems and operation of monophase and triphase asynchronous motors using command circuit elements, changing the direction of rotation and braking. | | | | | | | | |
| Course Content | Giving way to monophase and triphase asynchronous motors, adjustment of direction of rotation and commanding | | | | | | | | |
| Work Placement | N/A | | | | | | | | |
| Planned Learning Activities and Teaching Methods | Explanation (Presentation), Experiment, Demonstration | | | | | | | | |
| Name of Lecturer(s) | | | | | | | | | |

| **Assessment Methods and Criteria** | | |
|---|---|---|
| Method | Quantity | Percentage (%) |
| Midterm Examination | 1 | 40 |
| Final Examination | 1 | 70 |

| **Recommended or Required Reading** | |
|---|---|
| 1 | Lecturer notes |

| Week | Weekly Detailed Course Contents | |
|---|---|---|
| 1 | Theoretical | Command Elements Protection Relays |
| 2 | Theoretical | Operation of Triphase Asynchronous Motors Interrupted and Continously |
| 3 | Theoretical | Operation of Triphase Asynchronous Motors from Two Different Remote Places |
| 4 | Theoretical | Changing the Direction of Rotation in Triphase Asynchronous Motors |
| 5 | Theoretical | Giving Way in Triphase Asynchronous Motors by Resistor with Wound Rotor |
| 6 | Theoretical | Giving Way to Triphase Asynchronous Motors by Reactance and Automobile Transformer |
| 7 | Theoretical | Giving Way to Triphase Asynchronous Motors by Star Triangle |
| 8 | Theoretical | Braking in Triphase Asynchronous Motors |
| 9 | Theoretical | Command in Motors with Double Rotation |
| 10 | Theoretical | Command Circuits of Monophase Asynchronous Motors |
| 11 | Theoretical | Changing the Direction of Rotation in Monophase Asynchronous Motors |
| 12 | Theoretical | Giving Way to DC Motors |
| 13 | Theoretical | Changing the Direction of Rotation in DC Motors |
| 14 | Theoretical | Braking in DC Motors |

| **Workload Calculation** | | | | |
|---|---|---|---|---|
| Activity | Quantity | Preparation | Duration | Total Workload |
| Lecture - Theory | 14 | 1 | 3 | 56 |
| Lecture - Practice | 14 | 2 | 2 | 56 |
| Assignment | 5 | 2 | 1 | 15 |
| Midterm Examination | 1 | 10 | 1 | 11 |
| Final Examination | 1 | 10 | 2 | 12 |
| | | | Total Workload (Hours) | 150 |
| | | | [Total Workload (Hours) / 25*] = **ECTS** | 6 |
| **25 hour workload is accepted as 1 ECTS* | | | | |

| **Learning Outcomes** | |
|---|---|
| 1 | Installation of command elements, operation of triphase asynchronous motors interrupted, continously and remote |
| 2 | Giving way to triphase asynchronous motors with defferent methods, changing the direction of rotation and braking |

| | |
|---|---|
| 3 | Giving way to monophase asynchronous motors, changing the direction of rotation, giving way to asynchronous motors with wound rotor and operation of asynchronous motors having double rotation |
| 4 | To be able to control double speed motors. |
| 5 | To be able to control DC motors. |

| **Programme Outcomes** *(Electrics)* | |
|---|---|
| 1 | ABILITY TO MAKE APPLICATIONS OF MEASUREMENT AND CALCULATION |
| 2 | ABILITY TO MAKE CONNECTIONS OF A DC CIRCUIT |
| 3 | ABILITY TO MAKE BASIC ELECTRONIC CIRCUIT AND APPLICATIONS |
| 4 | ABILITY TO MAKE ELECTRIC INSTALLMENT APPLICATIONS |
| 5 | ADAPTING VOCATIONAL ETHICAL VALUES |
| 6 | ABILITY TO MAKE COMMUNICATION |
| 7 | ABILITY TO MAKE CONNECTIONS OF AC CIRCUIT |
| 8 | ABILITY TO MAKE NUMERICAL CIRCUITS |
| 9 | ABILITY TO MAKE INSTALLATIONS OF TRANSFORMER AND DC ELECTRIC MACHINES |
| 10 | ABILITY TO MAKE COMPUTER AIDED DESIGN |
| 11 | ABILITY TO APPLY VOCATIONAL TECHNICAL METHODS |
| 12 | ABILITY TO MAKE INSTALLATIONS OF AC ELECTRIC MACHINES |
| 13 | ABILITY TO MAKE SPECIAL ELECTRIC INSTALLMENTS |
| 14 | ABILITY TO MAKE INSTALLMENTS OF COMMAND SYSTEMS |
| 15 | ABILITY TO DRAW COMPUTER AIDED ELECTRIC SCHEME |
| 16 | ABILITY TO MAKE POWER ELECTRONICS CIRCUITS |
| 17 | ABILITY TO MAKE SYSTEM ANALYSIS AND PRODUCT DESIGN |
| 18 | ABILITY TO IMPROVE ONESELF UTILIZING INFORMATION OPPORTUNITIES |
| 19 | ABILITY TO DRAW COMPUTER AIDED ELECTRIC INSTALLMENT PROJECT |
| 20 | ABILITY TO MAKE ANALYSIS AND MAINTENANCE OF ELECTRICAL ENERGY PRODUCTION SYSTEMS |
| 21 | ABILITY TO MAKE THE WINDING OF ACCURATE AND ALTERNATIVE CURRENT ENGINES |
| 22 | ABILITY TO RECOGNIZE SYSTEMS USED IN ELECTRICAL ENERGY TRANSMISSION AND DISTRIBUTION AND TROUBLESHOOTING |
| 23 | Ability to use the methods and techniques of career planning and discussing the effects of character traits on career preferences. |
| 24 | Ability to  plan a career in their own profession. |
| 25 | To provide them with knowledge about substance use and addiction problem and prevention methods. |

**Contribution of Learning Outcomes to Programme Outcomes** *1:Very Low, 2:Low, 3:Medium, 4:High, 5:Very High*

| | L1 | L2 | L3 | L4 | L5 |
|---|---|---|---|---|---|
| P1 | | 3 | | 2 | 2 |
| P4 | | | | 2 | 3 |
| P9 | 3 | | | | |
| P13 | | 3 | 3 | 3 | 3 |
| P14 | 5 | 5 | 4 | 5 | 5 |
| P16 | | 3 | 4 | 2 | 3 |