ENG401 DESIGN PROJECT: PROVISIONAL PROJECT TITLES

Provisional Final Year Project Titles (Prof. Dr. M. Hakan HOCAOĞLU)

1. Design of touch and step potential measurement device (Max. 2 students)
2. Design of mutual coupling measurement systems (Max. 4 students, 2 students may be from Mechatronic Engineering)
3. State of charge monitoring systems for lithium batteries (Max. 2 students)
4. Design of Excel based cable layout tool (1 student)
5. Designing an EXCEL based tool for analysing interaction between pipelines and power cables (1 student)
6. Designing an EXCEL based tool for analysing interaction between pipelines and overhead lines (1 student)

Provisional Final Year Project Titles (Prof. Dr. Nedim TUTKUN)

1. Four-Quadrant DC Motor Speed Control Using Microcontroller (1 student)
2. AC Lamp Dimmer Based on Android Smart Phone (1 student)
3. Automatic Conveyor for Industrial Automation (Max. 2 students)
4. Green House Monitoring and Control (Max. 2 students)
5. Touch Screen Based Speed Controlling of AC Motor (Max. 2 students)
6. ZigBee and GSM based Real Time Home and Industrial Automation System (Max. 2 students)
7. Power Generation from a Wind Turbine (Max. 2 students)
8. Optimal Power Generation using Solar System (Max. 2 students)
9. DC-DC Converter for Small Electric Vehicles (Max. 2 students)
10. Remote-Controlled Lifeguard Robot (Max. 2 students)
11. Automated Energy Measurement using Wi-Fi Enabled Raspberry Pi

Provisional Final Year Project Titles (Prof. Dr. Fatih ÜSTÜNER)

1. Comparison of Different Impedance Matching Techniques in High-Speed Digital Circuits (1 student)
2. Comparison of Different Crosstalk Prevention Techniques in High-Speed Digital Circuits (1 student)
3. The Effect of Different Grounding Techniques to The Radiated Emission Characteristics of Digital Circuits (1 student)
4. Modelling and Simulation of Higher Order Harmonics due to AC Motor Variable Speed Drives (1 student)
5. Design and Development of an RF Spectrum Analyser (Max. 3 students)
6. Design and Development of an Arbitrary Waveform Generator (Max. 2 students)
7. Design and Implementation of a Thunderstorm Detector (1 student)
8. Design and Development of an RF Signal Generator (Max. 2 students)
9. Design and Development of EMC Antennas (1 student)
10. Design and Development of a Flight Simulator Cockpit (Max. 2 students)
11. Design and Development of a Force-Feedback Yoke (Max. 2 students)
12. Design and Development of an Air Traffic Control (ATC) Communication Simulator (Max. 2 students)
13. Design and Development of a Programmable Logic Controller (Max. 3 students)
14. Design and Development of a Data Acquisition System with Rogowski Coil (Max. 2

students)
15. Design and Development of IoT Weather Station (1 student)

Provisional Final Year Project Titles (Prof. Dr. Serhan YARKAN)

1. Harmonic analysis with linear methods on embedded systems (1 student)
2. Digital controlled FM transmitter (1 student)
3. Acoustic direction finder (1 student)
4. Relaying TV signals with wireless relay (1 student)
5. Power/cable network diagnosis (cable fault finder, cable network probe, etc.) (1 student)
6. Home appliances power profile identification (1 student)
7. Universal TV remote control (1 student)
8. Visible Light Communication (1 student)
9. Digital demodulation for known standards (1 student)
10. Laser Microphone (1 student)
11. Celestial object tracking and focusing with electromechanical system (1 student)
12. Vehicle driving behaviour characterization (1 student)

Provisional Final Year Project Titles (Dr. Öğr. Üyesi Vedat TAVAS)

1. Design and fabricate your own Arduino–Uno board with an extra a memory chip (Max. 2 students)
2. Design and fabricate your own Arduino–mega board with Wi-Fi and Bluetooth peripherals (Max. 2 students)
3. PID controlled robot (1 student)
4. FPGA based Design (1 student)
5. PLC based control (1 student)
6. Embedded system design (1 student)

Provisional Final Year Project Titles (Öğr. Gör. Cengiz RİVA)

1. Smart Cellular Conveyor-1. (Max. 2 students)
2. Smart Cellular Conveyor-2. (Max. 3 students)
3. Artificial Hand-1. (Max. 2 students)
4. Artificial Hand-2. (Max. 3 students)
5. Boolean Function Minimizer and Logic Circuit Designer Tool-1 (Max. 1 students)
6. Boolean Function Minimizer and Logic Circuit Designer Tool-2 (Max. 2 students)
7. Emergency Communication System (Max. 2 students)

Provisional Final Year Project Titles (Dr. Öğr. Üyesi Ali BOYACI)

1. Vehicle fault analyzer using vibrations (1 student)
2. Road quality analyzer using gyro and gps (1 student)
3. CANBus sniffer and interceptor (1 student)
4. Disaster communications (1 student)
5. Delta robot (1 student)
6. Micro-mouse design (1 student)