

**KING FAHD UNIVERSITY OF PETROLEUM & MINERALS****DEPARTMENT OF ELECTRICAL ENGINEERING****EE 411****LIST OF ASSIGNED CAPSTONE PROJECTS****072**

| # | Project Title                                                                                                                                                                              | Pre-requisites                                                                                                                      | Advisor(s)                                                    |
|---|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------|
| A | Practical Design and Laser testing of Underground Cables Defective and Thermal Problems: Part 1                                                                                            |                                                                                                                                     | Dr. Shwehdi EE department, and Dr. Gondal, Physics Department |
| B | Practical Design and Laser testing of Underground Cables Defective and Thermal Problems: Part 2                                                                                            |                                                                                                                                     | Dr. Shwehdi EE department, and Dr. Gondal, Physics Department |
| C | Implementation of Bluetooth based Positioning System                                                                                                                                       | Good programming ability : Java , C , or equivalent, EE370 and it would be very helpful if some students have already studied EE400 | Dr. Ali Muqaibel / Dr. Saad Al-Shahrani                       |
| D | Implementation of Doppler Frequency Measurement System                                                                                                                                     |                                                                                                                                     | Dr. Ali Muqaibel / Dr. Munir Al-Absi                          |
| E | Design and Implementation of RFID Reader (RFID is an electronic tagging technology that allows an object, place, or person to be automatically identified at a distance using radio waves) |                                                                                                                                     | Dr. H. Ragheb, Dr. M. Gahtani, and Dr. M. Mohandes            |

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|---|----------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------|
| F | Performance Evaluation of Voice over IP (VoIP) on University Data Network  | EE 370, 2. Basic Knowledge of Networking (preferably EE 400)                                                                 | Dr. Maan Kousa, Mr. Ahmar Shafi, and Mr. Muhammad Ajmal Khan |
| G | Design and Analysis of Microstrip filters                                  | EE 340                                                                                                                       | Dr. Essam Hassan and Dr. Sheikh Sharif Iqbal                 |
| H | Design and Implementation of a DC Motor Drive Controller                   | EE 360 and EE 380                                                                                                            | Dr. A. H. A. Rahim & Dr. M. Abido                            |
| I | Design of Electronic System for Band Screen Control                        |                                                                                                                              | Dr. Al Zaher, Hussain                                        |
| J | Compound document image parsing                                            |                                                                                                                              | Dr. A. Zidouri                                               |
| K | Universal Mobile Phone Charger                                             |                                                                                                                              | Dr. A. Zidouri and Noman Tassaduq                            |
| L | A simulation study of Adhoc Sensor Network for Industrial Complexes        | Network Simulation tools are required<br>OPNET option is too expensive. We need to find some tools which are available free. | Dr. Asrar Sheikh                                             |
| M | An accurate micro ampere current source                                    | EE 303                                                                                                                       | Dr. Munir Al-absi                                            |
| N | Implementation of a direction finder                                       | EE 303                                                                                                                       | Dr. Munir Al-absi, Ahmed Abu Alhassn                         |
| O | Design of Magnetic Field Sensor for Extremely Low Frequency Magnetic Field | EE340, EE303, EE200                                                                                                          | Dr. Alaa El-Din Hussein                                      |

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| P | Identifying People using their Face Images                        | knowledge of MATLAB | Dr. M. Deriche and Dr. A. Zidouri                                            |
| Q | Hand Recognition System for Secure Access                         | knowledge of MATLAB | Dr. M. Deriche                                                               |
| R | Arabic Speech Recognition                                         | knowledge of MATLAB | Dr. M. Deriche                                                               |
| S | Classification of Modulation Techniques                           |                     | Dr. M. Deriche, Y. Harthi                                                    |
| T | Design fo PID Speed Controller for a DC machine Using Cassy L     | ee 360 and ee380    | Dr. Chokri Belhaj Ahmed                                                      |
| U | Air-Conditioning Load Management for Residential Area             |                     | Dr. Mahmoud Kassas & Dr. Tarek Abdulgalil (RI)                               |
| V | Design of speed controller for DC motor using labview             |                     | Dr. Mahmoud Kassas & Dr. Mohamed Abido, Mr. Ahmed Abul Hussian               |
| W | Simulation Study of Wireless Industrial Networks                  |                     | Dr. Samir Al-Ghadhban                                                        |
| X | Design of a Wireless Sensor Network for Monitoring Applications   | EE370 and EE303     | Dr. Salam Zummo, Dr. Munir Al-Absi, Mr. Ahmad AbuHussain and Mr. Ahmer Shafi |
| Y | Design of an echo canceller equipped with double-talk detector    |                     | Dr. Azzedine Zerguine                                                        |
| Z | Design and Analysis of a safe starting of 6500 HP motor in Abqaiq |                     | Dr. Zakariya Al-Hamouz                                                       |