



**Sultan Qaboos University**  
**Academic Degree and Degree Plan of Postgraduate Studies Program**

|                       |                                      |                      |  |
|-----------------------|--------------------------------------|----------------------|--|
| <b>College</b>        | Engineering                          |                      |  |
| <b>Department</b>     | Electrical and Computer Engineering  | <b>Degree</b>        | Master of Science  |
| <b>Program- Major</b> | Electrical and Computer Engineering  | <b>Cohort</b>        | 2019   |
| <b>Specialization</b> | Electronic Instrumentation & Control | <b>Mode of Study</b> | <input type="checkbox"/> Full time<br><input type="checkbox"/> Part time<br><input checked="" type="checkbox"/> Both |

|                                       |               |                         |
|---------------------------------------|---------------|-------------------------|
| <b>Credit Required for Graduation</b> | 30            |                         |
| <b>Core Courses</b>                   | <b>Thesis</b> | <b>Elective Courses</b> |
| 9                                     | 6             | 15                      |

| Program Option  |   |  |
|---|---|--|
| <input checked="" type="checkbox"/> <b>Courses and thesis</b> | <input type="checkbox"/> <b>Thesis Only</b> | <input type="checkbox"/> <b>Courses Only</b> |
| <input type="checkbox"/> <b>Courses &amp; Examination</b>     |   |  |

| Core Courses |  |         |
|--------------|--|---------|
| Course Code  | Course Title                           | Credits |
| ECCE6400     | Optimization Techniques in Engineering | 3       |
| ECCE6132     | Linear System Theory                   | 3       |
| ECCE6315     | Power System Analysis                  | 3       |
| ECCE6316     | Power System Stability and Control     | 3       |
| ECCE6122     | Digital Signal Processing              | 3       |
| ECCE6124     | Digital Transmission                   | 3       |
| ECCE6261     | Advanced Modeling and Simulation       | 3       |
| ECCE6242     | Advanced Computer Networks             | 3       |
| ENGR6911     | Advanced Engineering Management        | 3       |
| ENGR6913     | Advanced Engineering Mathematics       | 3       |
| <b>Total</b> |  | 9       |

| Elective Courses |  |         |
|------------------|--|---------|
| ECCE6450         | Advanced Robot Manipulation                          | 3       |
| ECCE6424         | Computer Control of Dynamic Systems                  | 3       |
| ECCE6440         | Intelligent Sensor Systems                           | 3       |
| ECCE6431         | Control of Electrical Drives                         | 3       |
| ECCE6430         | Advanced Power Electronics                           | 3       |
| ECCE6423         | Optimal Control Systems                              | 3       |
| ECCE6492         | Special Topics in Control                            | 3       |
| ECCE6325         | Integrated Resource Planning for Electric Utilities  | 3       |
| ECCE6346         | High Voltage Technology                              | 3       |
| ECCE6355         | Distributed Generation                               | 3       |
| ECCE6367         | New Trends in Electrical Machines Technology         | 3       |
| ECCE6150         | Microwave Remote Sensing                             | 3       |
| ECCE6127         | Information Theory and Coding                        | 3       |
| ECCE6128         | Antenna Theory and Design                            | 3       |
| ECCE6133         | Optical communication Systems                        | 3       |
| ECCE6162         | Radio wave Propagation and Radio Spectrum Management | 3       |
| ECCE6232         | Advanced Computer Architecture                       | 3       |
| ECCE6244         | Network Analysis: Theory and Applications            | 3       |
| ECCE6275         | Neural Networks and Intelligent System               | 3       |
| ECCE6161         | High Speed Digital Design                            | 3       |
| ECCE6282         | Advanced Network Security                            | 3       |
| ECCE6284         | Reliability and Fault-Tolerant Systems               | 3       |
| ECCE6250         | Digital Image Processing                             | 3       |
| ECCE6262         | Real Time Systems                                    | 3       |
| ECCE6510         | Advanced Spectral Analysis for Biomedical Signals    | 3       |
| ECCE6213         | Directed Studies                                     | 3       |
| ENGR6910         | Advanced Engineering Probability & Statistics        | 3       |
| ENGR6920         | Renewable Energy Systems                             | 3       |
| ECCE6425         | Nonlinear systems and Engineering Applications       | 3       |
| ECCE6426         | Modelling and Control of Renewable energy systems    | 3       |
| ECCE6317         | Economic Operations of Power Systems                 | 3       |
| ECCE6318         | Power System Operation and Control                   | 3       |
| ECCE6319         | Microgrids and Smart Grid                            | 3       |
| ECCE6320         | Advanced Power Systems Protection                    | 3       |
| Total            |  | 15      |
| Thesis           |  |         |
| Course Code      | Course Title   | Credits |
| ECCE7001         | Master Thesis  | 6       |
| Total            |  | 6       |

| Approval and Signatures     |                            |  |
|-----------------------------|----------------------------|--|
| <b>Program Coordinator:</b> | <b>Head of Department:</b> | <b>Assistant Dean for Postgraduate Studies and Research:</b> |
| Dr. Mostefa Mesbah          | Dr. Mohammed Al-Badi       | Dr. Nasser Al-Azri   |

**Note: - New courses can be added.**

**- Please seal all pages when adding new pages.**