

## Study Plan for Bachelor's Degree in Electronics Engineering for year 2021 - 2022

The Bachelor's Degree in Electronics Engineering awarded at Princess Sumaya University for Technology after the successful completion of 160 Credit Hours distributed as follows:-

### University Requirements (27 CHs)

#### 1. Compulsory Requirements (18 CHs)

| Course Number | Course Title                                     | Credit Hours | Prerequisite | Concurrent |
|---------------|--|--------------|--------------|------------|
| 11100         | Computer Skills (Remedial)                       | 0            |              |            |
| 31021         | Arabic Language Communication Skills (Remedial)  | 0            |              |            |
| 31022         | English Language Communication Skills (Remedial) | 0            |              |            |
| 31112         | Arabic Language Communication Skills             | 3            | 31021        |            |
| 31122         | English Language Communication Skills            | 3            | 31022        |            |
| 31151         | National Education                               | 3            |              |            |
| 31160         | Leadership and Societal Responsibility           | 0            |              |            |
| 31251         | Military Science                                 | 3            |              |            |
| 31254         | Entrepreneurship and Innovation                  | 3            |              |            |
| 31374         | Life Skills                                      | 3            |              |            |

#### 2. Elective Requirements (9 CHs)

| Course Number | Course Title                                  | Credit Hours | Prerequisite | Concurrent |
|---------------|---|--------------|--------------|------------|
| 20251         | History of Science                            | 3            |              |            |
| 31100         | Sports and Health                             | 3            |              |            |
| 31130         | Foreign languages                             | 3            |              |            |
| 31152         | Arabic Islamic Civilization                   | 3            |              |            |
| 31211         | Arabic Literature                             | 3            | 31112        |            |
| 31252         | Governance and Development                    | 3            |              |            |
| 31260         | Human Rights                                  | 3            |              |            |
| 31261         | Introduction to Politics and Economic Science | 3            |              |            |
| 31264         | Introduction To Psychology                    | 3            |              |            |
| 31272         | Development and Environment                   | 3            |              |            |
| 31311         | Scientific Research Methods                   | 3            |              |            |
| 31351         | Contemporary Issues in the Arab World         | 3            |              |            |
| 31352         | Jerusalem : History and Facts                 | 3            |              |            |
| 31362         | Philosophy and Critical Thinking              | 3            |              |            |

### School Requirements (30 CHs)

#### 1. Compulsory Requirements (30 CHs)

| Course Number | Course Title               | Credit Hours | Prerequisite | Concurrent |
|---------------|----------------------------|--------------|--------------|------------|
| 11103         | Structured Programming     | 3            | 11100        |            |
| 11151         | Structured Programming Lab | 1            |              | 11103      |
| 20132         | Calculus (1)               | 3            |              |            |
| 20133         | Calculus (2)               | 3            | 20132        |            |

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| Course Number | Course Title                               | Credit Hours | Prerequisite           | Concurrent |
|---------------|--|--------------|------------------------|------------|
| 20140         | Basic Concepts in Chemistry                | 1            |                        |            |
| 20141         | Physics (1)                                | 3            |                        |            |
| 20142         | Physics (2)                                | 3            | 20141                  |            |
| 20150         | Physics Lab                                | 1            |                        | 20142      |
| 20200         | Technical Writing and Communication Skills | 3            | 31112,31122            |            |
| 20231         | Calculus (3)                               | 3            | 20133                  |            |
| 21218         | Engineering Drawing Lab                    | 1            |                        |            |
| 21219         | Engineering Workshop                       | 1            |                        |            |
| 23411         | Engineering Economics                      | 3            | Finish 99 Credit Hours |            |
| 24411         | Engineering Ethics                         | 1            | Finish 99 Credit Hours |            |

### Program Requirements (103 CHs)

#### 1. Compulsory Requirements (94 CHs)

| Course Number | Course Title                       | Credit Hours | Prerequisite            | Concurrent |
|---------------|------------------------------------|--------------|-------------------------|------------|
| 20232         | Engineering Mathematics(1)         | 3            | 20133                   |            |
| 20234         | Linear Algebra                     | 3            |                         |            |
| 20331         | Engineering Mathematics(2)         | 3            | 20231,20232             |            |
| 20333         | Numerical Analysis                 | 3            | 20133                   |            |
| 20335         | Applied Probability and Statistics | 3            | 20231                   |            |
| 21221         | Electric Circuits (1)              | 3            | 20142                   |            |
| 21222         | Electric Circuits (2)              | 3            | 21221                   |            |
| 21229         | Electric Circuits Lab              | 1            |                         | 21222      |
| 21231         | Electronics (1)                    | 3            | 21221                   |            |
| 21331         | Electronics (2)                    | 3            | 21231                   |            |
| 21332         | Digital Electronics                | 3            | 21231                   |            |
| 21338         | Electronics Lab                    | 1            | 21229                   | 21331      |
| 21339         | Digital Electronics Lab            | 1            | 21229                   | 21332      |
| 21431         | Communication Electronics          | 3            | 21331,23357             |            |
| 21432         | Optical Electronics                | 3            | 21331                   |            |
| 21439         | Communication Electronics Lab      | 1            | 21338                   | 21431      |
| 21490         | Practical Training                 | 3            | Finish 99 Credit Hours  |            |
| 21531         | VLSI Circuits                      | 3            | 21332                   |            |
| 21572         | Industrial Electronics             | 3            | 24471                   |            |
| 21574         | Medical Electronics                | 3            | 21331                   |            |
| 21579         | Industrial Electronics Lab         | 1            | 21338                   | 21572      |
| 21591         | Senior Project (1)                 | 1            | Finish 120 Credit Hours |            |
| 21592         | Senior Project (2)                 | 2            | 21591                   |            |
| 22241         | Digital Logic Design               | 3            |                         |            |
| 22348         | Digital Logic Lab                  | 1            | 22241                   |            |
| 22442         | Embedded Systems                   | 3            | 21231,21338,22241,22348 |            |
| 23321         | Electromagnetics (1)               | 3            | 20142,20331             |            |
| 23351         | Signals and Systems                | 3            | 20232,21222             | 23356      |

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| Course Number | Course Title                                      | Credit Hours | Prerequisite | Concurrent |
|---------------|---|--------------|--------------|------------|
| 23356         | Programming Applications in Signals & Systems Lab | 1            |              | 23351      |
| 23357         | Communications (1)                                | 3            | 23351        |            |
| 23452         | Communications (2)                                | 3            | 20335,23357  |            |
| 23459         | Communications Lab                                | 1            | 21338        | 23452      |
| 23571         | Digital Signal Processing                         | 3            | 23351        |            |
| 24322         | Instruments and Measurements                      | 3            | 21231        |            |
| 24329         | Instruments and Measurements Lab                  | 1            | 21229        | 24322      |
| 24361         | Electric Machines (1)                             | 3            | 21222,23321  |            |
| 24467         | Power Electronics                                 | 3            | 21331,24361  |            |
| 24471         | Automatic Control                                 | 3            | 23351        |            |
| 24479         | Automatic Control Lab                             | 1            |              | 24471      |

**2. Elective Requirements (9 CHs)**

| Course Number | Course Title                                       | Credit Hours | Prerequisite | Concurrent |
|---------------|--|--------------|--------------|------------|
| 11206         | Object Oriented Programming                        | 3            | 11103        |            |
| 20242         | Materials Physics and Chemistry for Engineers      | 3            | 20132,20142  |            |
| 21533         | RF Microelectronics                                | 3            | 21331,23357  |            |
| 21534         | Mixed Signal IC Design                             | 3            | 21331        |            |
| 21535         | Solid State Electronics                            | 3            | 21231        |            |
| 21536         | Analog IC Design                                   | 3            | 21331        |            |
| 21573         | Image Processing                                   | 3            | 23351        |            |
| 21581         | Special Topics in Electronics Engineering          | 3            |              |            |
| 22320         | Computer Architecture (1)                          | 3            | 22241        |            |
| 22344         | Microprocessors                                    | 3            | 21231,22241  |            |
| 22582         | Special Topics in Computer Engineering (1)         | 3            |              |            |
| 23582         | Special Topics in Communications Engineering (1)   | 3            |              |            |
| 24573         | Digital Control                                    | 3            | 24471        |            |
| 24583         | Special Topics in Power And Energy Engineering     | 3            |              |            |
| 25593         | Special Topics in Network Security Engineering (1) | 3            |              |            |