

## College of Engineering

### Bachelor of Science in Electrical Engineering for Full Time Students Four Years Study Plan as of Academic Year 2025/2026

| FRESHMAN YEAR (34 Credit Hours) |                                           |              |               |                |                  |                          |                                     |              |               |                |                                |
|---------------------------------|-------------------------------------------|--------------|---------------|----------------|------------------|--------------------------|-------------------------------------|--------------|---------------|----------------|--------------------------------|
| FIRST "FALL" SEMESTER           |                                           |              |               |                |                  | SECOND "SPRING" SEMESTER |                                     |              |               |                |                                |
| Course Number                   | Course Title                              | Credit Hours | Contact Hours |                | Pre-requisite    | Course Number            | Course Title                        | Credit Hours | Contact Hours |                | Pre-requisite                  |
|                                 |                                           |              | Lecture       | Lab / Tutorial |                  |                          |                                     |              | Lecture       | Lab / Tutorial |                                |
| <b>ISLM 1221</b>                | Islamic Cultures, Values & Societies      | 2            | 2             | 0              | IELTS/ APTIS     | <b>Social Science</b>    | Elective                            | 3            | 3             | 0              | <i>Select one from List</i>    |
| <b>COMM 1321</b>                | Oral Communication                        | 3            | 3             | 0              | IELTS/ APTIS     | <b>PHED 1111</b>         | Active Living Lifestyle             | 1            | 1             | 0              |                                |
| <b>UNIV 1211</b>                | Professional Development and Competencies | 2            | 2             | 0              |                  | <b>COMM 1322</b>         | Writing Communication               | 3            | 3             | 0              | <i>COMM 1321</i>               |
| <b>MATH 1422</b>                | Calculus I                                | 4            | 4             | 1              | <i>PRPM 0022</i> | <b>UNIV 1212</b>         | Critical Thinking & Problem Solving | 2            | 2             | 0              | <i>UNIV 1211</i>               |
| <b>PHYS 1421</b>                | Physics for Engineers I                   | 4            | 3             | 3              | <i>PRPM 0022</i> | <b>MATH 1423</b>         | Calculus II                         | 4            | 4             | 0              | <i>MATH 1422</i>               |
| <b>GEEN 1211</b>                | Intro to Engineering                      | 2            | 2             | 0              | <i>PRPM 0022</i> | <b>PHYS 1422</b>         | Physics for Engineers II            | 4            | 3             | 3              | <i>PHYS 1421<br/>MATH 1422</i> |
| <b>Total</b>                    |                                           | <b>17</b>    | <b>16</b>     | <b>4</b>       |                  | <b>Total</b>             |                                     | <b>17</b>    | <b>16</b>     | <b>3</b>       |                                |

| SOPHOMORE YEAR (33 Credit Hours) |                                        |              |               |                |                                |                          |                                         |              |               |                |                  |
|----------------------------------|----------------------------------------|--------------|---------------|----------------|--------------------------------|--------------------------|-----------------------------------------|--------------|---------------|----------------|------------------|
| FIRST "FALL" SEMESTER            |                                        |              |               |                |                                | SECOND "SPRING" SEMESTER |                                         |              |               |                |                  |
| Course Number                    | Course Title                           | Credit Hours | Contact Hours |                | Pre-requisite                  | Course Number            | Course Title                            | Credit Hours | Contact Hours |                | Pre-requisite    |
|                                  |                                        |              | Lecture       | Lab / Tutorial |                                |                          |                                         |              | Lecture       | Lab / Tutorial |                  |
| <b>ASSE 2111</b>                 | Learning Outcome Assessment I          | 1            | 1             | 0              | <i>Sophomore Level</i>         | <b>UNIV 1221</b>         | Generative AI Prompt Engineering Basics | 2            | 2             | 0              | <i>UNIV 1211</i> |
| <b>COMM 2321</b>                 | Technical & Professional Communication | 3            | 3             | 0              | <i>COMM 1322</i>               | <b>COMM 2322</b>         | Writing & Research                      | 3            | 3             | 0              | <i>COMM 2321</i> |
| <b>EEEN 2411</b>                 | Circuits I                             | 4            | 3             | 3              | <i>MATH 1423<br/>PHYS 1422</i> | <b>UNIV 1213</b>         | Leadership & Teamwork                   | 2            | 2             | 0              | <i>UNIV 1212</i> |
| <b>MATH 1324</b>                 | Calculus III                           | 3            | 3             | 0              | <i>MATH 1423</i>               | <b>GEEN 2310</b>         | Applied Linear Algebra for Engineers    | 3            | 3             | 0              | <i>MATH 1324</i> |
| <b>CHEM 1421</b>                 | Chemistry for Engineers I              | 4            | 3             | 3              | <i>PRPM 0022</i>               | <b>MATH 2332</b>         | Ordinary Differential Equations         | 3            | 3             | 0              | <i>MATH 1324</i> |
| <b>GEEN 2211</b>                 | Engineering Computing                  | 2            | 1             | 3              | <i>MATH 1423<br/>GEEN 1211</i> | <b>EEEN 2312</b>         | Circuits II                             | 3            | 3             | 0              | <i>EEEN 2411</i> |
| <b>Total</b>                     |                                        | <b>17</b>    | <b>16</b>     | <b>6</b>       |                                | <b>Total</b>             |                                         | <b>16</b>    | <b>15</b>     | <b>3</b>       |                  |

## Bachelor of Science in Electrical Engineering for Full Time Students

### Four Years Study Plan as of Academic Year 2025/2026

| JUNIOR YEAR (35 Credit Hours) |                                  |              |               |               |                                     |                          |                                        |              |               |                   |                                |
|-------------------------------|----------------------------------|--------------|---------------|---------------|-------------------------------------|--------------------------|----------------------------------------|--------------|---------------|-------------------|--------------------------------|
| FIRST “FALL” SEMESTER         |                                  |              |               |               |                                     | SECOND “SPRING” SEMESTER |                                        |              |               |                   |                                |
| Course Number                 | Course Title                     | Credit Hours | Contact Hours |               | Pre-requisite                       | Course Number            | Course Title                           | Credit Hours | Contact Hours |                   | Pre-requisite                  |
|                               |                                  |              | Lecture       | Lab/ Tutorial |                                     |                          |                                        |              | Lecture       | Studio / Tutorial |                                |
| <b>ASSE 3211</b>              | Learning Outcome Assessment II   | 2            | 2             | 0             | <i>ASSE 2111 &amp; Junior Level</i> | <b>EEEN 3422</b>         | Electronics II                         | 4            | 3             | 3                 | <i>EEEN 3421</i>               |
| <b>EEEN 3392</b>              | Advanced Applied Mathematics     | 3            | 3             | 0             | <i>GEEN 2310 &amp; MATH 2332</i>    | <b>EEEN 3432</b>         | Microcontroller Systems                | 4            | 3             | 3                 | <i>EEEN 3331<br/>GEEN 2211</i> |
| <b>EEEN 3361</b>              | Electromagnetic Fields and Waves | 3            | 3             | 0             | <i>EEEN 2411<br/>MATH 1324</i>      | <b>EEEN 3341</b>         | Signals and Systems                    | 3            | 3             | 0                 | <i>EEEN 2312<br/>EEEN 3392</i> |
| <b>EEEN 3421</b>              | Electronics I                    | 4            | 3             | 3             | <i>EEEN 2411</i>                    | <b>EEEN 3461</b>         | Electric Machinery                     | 4            | 3             | 3                 | <i>EEEN 3361<br/>EEEN 2312</i> |
| <b>EEEN 3331</b>              | Digital Systems                  | 3            | 2             | 3             | <i>EEEN 2411</i>                    |                          |                                        |              |               |                   |                                |
| <b>UNIV 2221</b>              | Future Skills                    | 2            | 2             | 0             | <i>UNIV 1221</i>                    | <b>EEEN 3391</b>         | Probability and Random Signal Analysis | 3            | 3             | 0                 | <i>EEEN 2312<br/>EEEN 3392</i> |
| Total                         |                                  | 17           | 15            | 6             |                                     | Total                    |                                        | 18           | 15            | 9                 |                                |

| SUMMER OF JUNIOR YEAR (3 Credit Hours) |              |              |                                  |                                       |
|----------------------------------------|--------------|--------------|----------------------------------|---------------------------------------|
| Course Number                          | Course Title | Credit Hours |                                  | Pre-requisite                         |
| <b>EEEN 3301</b>                       | Internship   | 3            | 8 weeks (320 hours)<br>full time | End of Junior Year or 90 Credit Hours |

| SENIOR YEAR (34 Credit Hours) |                                        |              |               |                |                                |                          |                                         |              |               |                |                                |
|-------------------------------|----------------------------------------|--------------|---------------|----------------|--------------------------------|--------------------------|-----------------------------------------|--------------|---------------|----------------|--------------------------------|
| FIRST "FALL" SEMESTER         |                                        |              |               |                |                                | SECOND "SPRING" SEMESTER |                                         |              |               |                |                                |
| Course Number                 | Course Title                           | Credit Hours | Contact Hours |                | Pre-requisite                  | Course Number            | Course Title                            | Credit Hours | Contact Hours |                | Pre-requisite                  |
|                               |                                        |              | Lecture       | Lab / Tutorial |                                |                          |                                         |              | Lecture       | Lab / Tutorial |                                |
| <b>EEEN 4440</b>              | Communication Systems                  | 4            | 3             | 3              | <i>EEEN 3391<br/>EEEN 3341</i> | <b>EEEN 4394</b>         | Electrical Engineering Senior Design II | 3            | 3             | 3              | <i>GEEN 4311<br/>EEEN 4393</i> |
| <b>EEEN 4393</b>              | Electrical Engineering Senior Design I | 3            | 3             | 3              | <i>EEEN 3432<br/>EEEN 3461</i> | <b>EEEN 4451</b>         | Automatic Control Systems               | 4            | 3             | 3              | <i>EEEN 3341<br/>EEEN 4423</i> |
| <b>EEEN 4423</b>              | Sensors and Instrumentation            | 4            | 3             | 3              | <i>EEEN 3422</i>               | <b>EEEN 4XXX</b>         | Technical Elective II                   | 3            | 3             | 0              | <i>Select from List</i>        |
| <b>EEEN 4XXX</b>              | Technical Elective I                   | 3            | 3             | 0              | <i>Select from List</i>        | <b>EEEN 4424</b>         | Power Electronics                       | 4            | 3             | 3              | <i>EEEN 3422</i>               |
| <b>GEEN 4311</b>              | Engineering Economy                    | 3            | 3             | 0              | <i>EEEN 3422</i>               | <b>PHED 1112</b>         | Healthy Behaviors and Management        | 1            | 1             | 0              | <i>PHED 1111</i>               |
|                               |                                        |              |               |                |                                | <b>UNIV 2222</b>         | System Thinking for Future Innovations  | 2            | 2             | 0              | <i>UNIV 2221</i>               |
| <b>Total</b>                  |                                        | <b>17</b>    | <b>15</b>     | <b>9</b>       |                                | <b>Total</b>             |                                         | <b>17</b>    | <b>15</b>     | <b>9</b>       |                                |

**TOTAL DEGREE CREDIT HOURS = 139**

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### Bachelor of Science in Electrical Engineering for Full Time Students Four Years Study Plan as of Academic Year 2025/2026

| SOCIAL SCIENCE ELECTIVES |                                  |              |                |
|--------------------------|----------------------------------|--------------|----------------|
| Course Number            | Course Title                     | Credit Hours | Pre-requisites |
| GEGR 1311                | World Regional Geography         | 3            | None           |
| HIST 1311                | World Civilizations              | 3            | None           |
| PSYC 1311                | Introduction to Psychology       | 3            | None           |
| SUST 1311                | Introduction to Sustainability   | 3            | None           |
| FREN 1311                | Introduction to French Language  | 3            | None           |
| SPAN 1311                | Introduction to Spanish Language | 3            | None           |
| ECON 1311                | Introduction to Macroeconomics   | 3            | None           |
| ECON 1312                | Introduction to Microeconomics   | 3            | None           |

| ELECTRICAL ENGINEERING TECHNICAL ELECTIVES |                                            |              |                                 |
|--------------------------------------------|--------------------------------------------|--------------|---------------------------------|
| Course Number                              | Course Title                               | Credit Hours | Pre-requisites                  |
| EEEN 4371                                  | Electric Power Systems                     | 3            | EEEN 3461 Electric Machinery    |
| EEEN 4372                                  | Electric Power Transmission & Distribution | 3            | EEEN 3461 Electric Machinery    |
| EEEN 4342                                  | Digital Communication Systems              | 3            | EEEN 4440 Communication Systems |
| EEEN 4343                                  | Wireless Communication Systems             | 3            | EEEN 4440 Communication Systems |

#### NOTES:

- Completion of PRPM 0022 Pre-Calculus is required before entry into Electrical Engineering.
- This Program of Study applies to ONLY full time students. Minimum of 12 credit hours constitutes full time status.
- Student GPA determines maximum semester course load as per department advisement criteria.
- EEEN major courses may be offered only in the semester shown on this plan.
- EEEN major summer course offerings are not guaranteed.
- Internship experience may not be combined with any courses.

**Dr. Samir El-Nakla**

Chair, Electrical Engineering

**Dr. Jamal Nayfeh**

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**Dr. Muhammad Waqar Ashraf**

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**Dr. Faisal Yousif Al Anezi**

Vice President for Academic Affairs