**Electrical Engineering Study Plan – Academic Year 2024–2025**

**Total Credit Hours: 136 credit hours**

**First Year: First Semester (Total: 18 credit hours)**

* MATH 101 – Calculus I (4 credit hours)  
  Prerequisite: MATH 002
* PHYS 101 – General Physics I (4 credit hours)  
  Prerequisite: MATH 002  
  Co-requisite: MATH 101
* CHEM 101 – General Chemistry (4 credit hours)  
  Prerequisite: none
* ENGL 101 – First Year Composition (3 credit hours)  
  Prerequisite: ENGL 005
* GHAL xxx – Humanities, Arts and Languages Elective (3 credit hours)  
  Prerequisite: none

**First Year: Second Semester (Total: 18 credit hours)**

* MATH 102 – Calculus II (4 credit hours)  
  Prerequisite: MATH 101
* PHYS 102 – General Physics II (4 credit hours)  
  Prerequisite: PHYS 101
* ENGL 102 – Introduction to Report Writing (3 credit hours)  
  Prerequisite: ENGL 101
* CS 141 – Introduction to Computing for Engineers (3 credit hours)  
  Prerequisite: none
* ENGG 103 – Introduction to Engineering Drawing (1 credit hour)  
  Prerequisite: none
* GDMC xxx – Diversity and Multiculturalism Elective (3 credit hours)  
  Prerequisite: none

**Second Year: First Semester (Total: 17 credit hours)**

* MATH 201 – Differential Equations (3 credit hours)  
  Prerequisite: MATH 102
* EE 201 – Electric Circuits I (3 credit hours)  
  Prerequisite: MATH 102, PHYS 102
* EE 203 – Electric Circuits I Lab (1 credit hour)  
  Co-requisite: EE 201
* EE 231 – Logic Circuits Design (3 credit hours)  
  Prerequisite: CS 141, PHYS 102
* EE 233 – Logic Circuits Design Lab (1 credit hour)  
  Co-requisite: EE 231
* ENGL 201 – Technical Writing (3 credit hours)  
  Prerequisite: ENGL 102
* GIAS 101 – Islamic Culture (3 credit hours)  
  Prerequisite: none

**Second Year: Second Semester (Total: 16 credit hours)**

* MATH 202 – Calculus III (3 credit hours)  
  Prerequisite: MATH 102
* MATH 204 – Linear Algebra (3 credit hours)  
  Prerequisite: MATH 102
* EE 202 – Electric Circuits II (3 credit hours)  
  Prerequisite: MATH 201, EE 201
* EE 222 – Electronic Circuits I (3 credit hours)  
  Prerequisite: EE 201
* EE 224 – Electronic Circuits I Lab (1 credit hour)  
  Co-requisite: EE 222
* GIAS 102 – Arabic Language Skills (3 credit hours)  
  Prerequisite: none

**Summer Field Experience I (Optional)**

* EE 294 – Summer Field Experience I (1 credit hour)  
  Prerequisite: none

**Third Year: First Semester (Total: 18 credit hours)**

* MATH 301 – Advanced Mathematics for Electrical Engineering (3 credit hours)  
  Prerequisite: MATH 202, MATH 204
* EE 311 – Electromagnetic Fields (2 credit hours)  
  Prerequisite: PHYS 102, MATH 202
* EE 321 – Electronic Circuits II (3 credit hours)  
  Prerequisite: EE 222
* EE 323 – Electronic Circuits II Lab (1 credit hour)  
  Co-requisite: EE 321
* EE 341 – Signals & Systems (3 credit hours)  
  Prerequisite: EE 202, MATH 201
* EE 351 – Electric Machines (3 credit hours)  
  Prerequisite: EE 201
* GSOS xxx – Social Sciences Elective (3 credit hours)  
  Prerequisite: none

**Third Year: Second Semester (Total: 18 credit hours)**

* STAT 342 – Statistical Methods for Engineers (3 credit hours)  
  Prerequisite: MATH 102
* EE 312 – Electromagnetic Waves (2 credit hours)  
  Prerequisite: EE 311, MATH 301
* EE 326 – Microprocessor & Microcontroller (3 credit hours)  
  Prerequisite: EE 231, EE 321
* EE 328 – Microprocessor & Microcontroller Applications Lab (1 credit hour)  
  Co-requisite: EE 326
* EE 342 – Introduction to Digital Signal Processing (3 credit hours)  
  Prerequisite: EE 341
* EE 356 – Introduction to Modern Power Systems (3 credit hours)  
  Prerequisite: EE 201
* EE 358 – Electric Machines and Power Lab (1 credit hour)  
  Prerequisite: EE 351  
  Co-requisite: EE 356

**Summer Field Experience II**

* EE 394 – Summer Field Experience II (1 credit hour)  
  Prerequisite: none

**Fourth Year: First Semester (Total: 15 credit hours)**

* EE 461 – Control Systems Analysis (3 credit hours)  
  Prerequisite: EE 341, MATH 301
* EE 463 – Control Systems Lab (1 credit hour)  
  Co-requisite: EE 461
* EE 471 – Communication Systems (3 credit hours)  
  Prerequisite: EE 341, STAT 342
* EE 473 – Communication Systems Lab (1 credit hour)  
  Co-requisite: EE 471
* XXXX xxx – Free Elective (3 credit hours)  
  Prerequisite: none
* EE 491 – Capstone Project I (1 credit hour)  
  Prerequisite: Senior Status ≥ 98

**Fourth Year: Second Semester (Total: 15 credit hours)**

* ENGG 401 – Engineering Management (3 credit hours)  
  Prerequisite: none
* EE 492 – Capstone Project II (3 credit hours)  
  Prerequisite: EE 491
* EE 4xx – Professional Elective II (3 credit hours)  
  Prerequisite: none
* EE 4xx – Professional Elective III (3 credit hours)  
  Prerequisite: none
* GIAS xxx – Islamic Studies Elective (3 credit hours)  
  Prerequisite: none