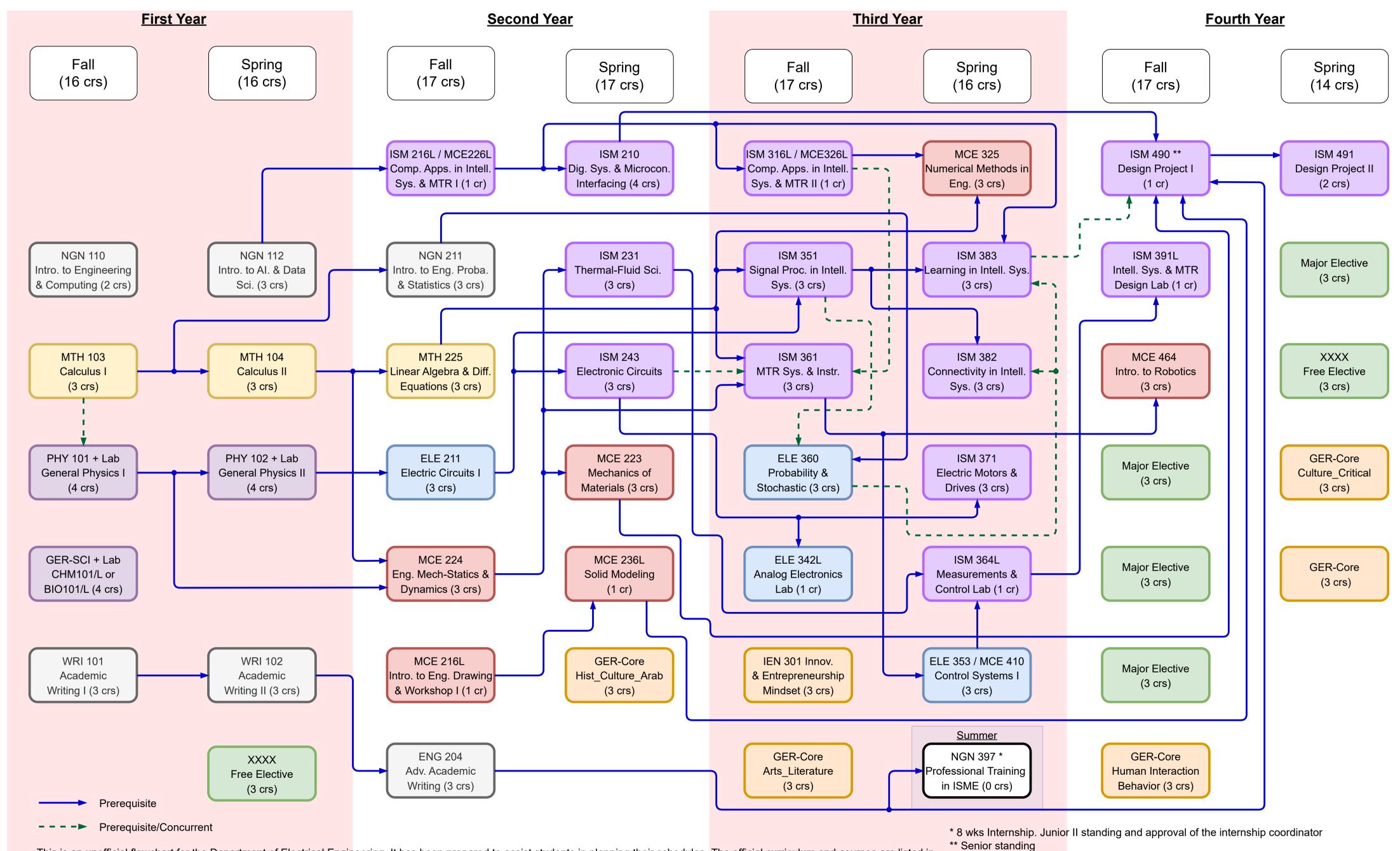# American University of Sharjah
College of Engineering, Department of Electrical Engineering
B.Sc in Intelligent Syst. & Mechatronics Eng. Catalog Year 2025/2026

AUS | الجـــامعة الأمــيركــية في الشــارقة
American University of Sharjah

First Year	Second Year	Third Year	Fourth Year

First Year

- Fall (16 crs)
- Spring (16 crs)

Second Year

- Fall (17 crs)
- Spring (17 crs)

Third Year

- Fall (17 crs)
- Spring (16 crs)

Fourth Year

- Fall (17 crs)
- Spring (14 crs)

Courses

- ISM 216L / MCE226L — Comp. Apps. in Intell. Sys. & MTR I (1 cr)
- ISM 210 — Dig. Sys. & Microcon. Interfacing (4 crs)
- ISM 316L / MCE326L — Comp. Apps. in Intell. Sys. & MTR II (1 cr)
- MCE 325 — Numerical Methods in Eng. (3 crs)
- ISM 490 ** — Design Project I (1 cr)
- ISM 491 — Design Project II (2 crs)

- NGN 110 — Intro. to Engineering & Computing (2 crs)
- NGN 112 — Intro. to AI. & Data Sci. (3 crs)
- NGN 211 — Intro. to Eng. Proba. & Statistics (3 crs)
- ISM 231 — Thermal-Fluid Sci. (3 crs)
- ISM 351 — Signal Proc. in Intell. Sys. (3 crs)
- ISM 383 — Learning in Intell. Sys. (3 crs)
- ISM 391L — Intell. Sys. & MTR Design Lab (1 cr)
- Major Elective (3 crs)

- MTH 103 — Calculus I (3 crs)
- MTH 104 — Calculus II (3 crs)
- MTH 225 — Linear Algebra & Diff. Equations (3 crs)
- ISM 243 — Electronic Circuits (3 crs)
- ISM 361 — MTR Sys. & Instr. (3 crs)
- ISM 382 — Connectivity in Intell. Sys. (3 crs)
- MCE 464 — Intro. to Robotics (3 crs)
- XXXX — Free Elective (3 crs)

- PHY 101 + Lab — General Physics I (4 crs)
- PHY 102 + Lab — General Physics II (4 crs)
- ELE 211 — Electric Circuits I (3 crs)
- MCE 223 — Mechanics of Materials (3 crs)
- ELE 360 — Probability & Stochastic (3 crs)
- ISM 371 — Electric Motors & Drives (3 crs)
- Major Elective (3 crs)
- GER-Core Culture_Critical (3 crs)

- GER-SCI + Lab CHM101/L or BIO101/L (4 crs)
- MCE 224 — Eng. Mech-Statics & Dynamics (3 crs)
- MCE 236L — Solid Modeling (1 cr)
- ELE 342L — Analog Electronics Lab (1 cr)
- ISM 364L — Measurements & Control Lab (1 cr)
- Major Elective (3 crs)
- GER-Core (3 crs)

- WRI 101 — Academic Writing I (3 crs)
- WRI 102 — Academic Writing II (3 crs)
- MCE 216L — Intro. to Eng. Drawing & Workshop I (1 cr)
- GER-Core Hist_Culture_Arab (3 crs)
- IEN 301 — Innov. & Entrepreneurship Mindset (3 crs)
- ELE 353 / MCE 410 — Control Systems I (3 crs)
- Major Elective (3 crs)

- XXXX — Free Elective (3 crs)
- ENG 204 — Adv. Academic Writing (3 crs)
- GER-Core Arts_Literature (3 crs)
- GER-Core Human Interaction Behavior (3 crs)

Summer
- NGN 397 * — Professional Training in ISME (0 crs)

Legend

→ Prerequisite
--→ Prerequisite/Concurrent

* 8 wks Internship. Junior II standing and approval of the internship coordinator
** Senior standing

This is an unofficial flowchart for the Department of Electrical Engineering. It has been prepared to assist students in planning their schedules. The official curriculum and courses are listed in the current version of The American University of Sharjah Catalog. The Department of Electrical Engineering may change course prerequisites and co-requisites as the contents of the courses evolve to keep pace with changing technology. Students must consult with their advisors prior to registration to ensure correct course sequencing.

Designed by Dr. Ming F Teng (ELE Department)
Revised Aug 2025