# **BS** Electrical Engineering Curriculum

Effective Spring 2015 (120 hours)

UNM Core Curriculum, June 2015

FALL SEMESTERCorres #Gene CRCourse #Course #CoreCRECE 101: Intro to ECEIIMATH 163: Calculus IIIIECE 131: Programming FundamentalsIIECON 105 or 106* Macro/MicroeconomicsSBIENGL 110: Accelerated CompositionWSIECON 105 or 106* Macro/MicroeconomicsSBIIn equivalent based on placement)WSIPHYC 161: General Physics IIPNSIIMATH 162: Calculus IMTHIPHYC 161: General Physics II LabPNSIIPHYC 160: General Physics IPNSIPHYC 1611: General Physics II LabPNSIICourse #CoreCNPHYC 1611: General Physics II LabPNSIIIECE 203: Circuit Analysis ICoreCNCourse #Course #Course #IIIECE 203: Circuit Analysis ICoreCNSECE 2061: InstrumentationII <td< th=""><th colspan="7">FRESHMAN-FIRST YEAR</th></td<>	FRESHMAN-FIRST YEAR						
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\*See approved list of core electives in the ECE Undergraduate Handbook.

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\*\*\*Technical elective is developed in consultation with your academic advisor and can be taken from ECE, Computer Science, Physics, Math or other engineering-related courses 300-level or above. (ECE 231: Intermediate Programming is the only 200-level exception)

No grades below a 'C' are allowed in the Electrical Engineering Program.

# BS Electrical Engineering Graduation Requirements Effective Spring 2015

Total credit hours: 120; All grades must be C or better in the Electrical Engineering Program For more information, see the ECE Undergraduate Handbook at www.ece.unm.edu

#### **General Education Component**

#### Written Communication (9 credit)

ENGL 110 • Accelerated Composition (3) (or ENGL 111 & ENGL 112 Composition I & II (6); or ENGL 113 Enhanced Composition (4) ) ENGL 120 Composition III (3) Engl 219 Technical Writing (3)

#### Area of Knowledge (18 credits)

Core Social/Behavioral Science Elect. (3) Econ 105 or 106 (Social & Beh. Science) (3) Core Humanities Elective (6) Core Fine Arts Elective (3) Core Second-Language Elective (3)

#### **Mathematics & Sciences Component**

Mathematics (16 credits)

Math 162 •, 163 •, 264 Calculus I, II, III (12) ECE 300- Advanced Engineering Mathematics (4)

# Science (13 credits)

Phys 160\* 161\* 161L\*, 262\* General Physics (10) Basic Science or Mathematics\* 300 level and above (3) (Chem 121 or 122, Bio 110 or 123 or 202, Astr 270 or 271)

# **Electrical Engineering Component**

#### Required (36 credits)

ECE 101 Introduction to ECE (1)\* ECE 131 Programming Fundamentals (3)\* ECE 203 Circuit Analysis I (3)\* ECE 206L Instrumentation (2) ECE 213 Circuit Analysis II (3) ECE 238L Computer Logic Design (4) ECE 314 Signals & Systems (3) ECE 321L Electronics I (4) ECE 340 Probabilistic Methods (3) ECE 344L Microprocessors (4) ECE 419 Senior Design I (3) ECE 420 Senior Design II (3)

# **EE Completeness (19 credits)**

ECE 322L Electronics II (4) ECE 341 Intro to Communication Systems (3) ECE 345 Intro to Control Systems (3) ECE 360 Electromagnetic Fields & Waves (3) ECE 371 Materials & Devices (3) ECE 381 Intro to Power Systems (3)

# Track Courses (6 credits - depth)

Two courses from one of the following available tracks (6):

- Digital Systems
- Electromagnetics
- Microelectronics
- Optoelectronics
- Power/Energy Systems
- Signals and Communications
- Systems and Controls

#### Technical Elective (3 credits - breadth)

ECE Technical Elective (3) Approved 300-level and above course developed in consultation with your faculty advisor May include ECE 231 Intermediate Programming (3)

*Eighteen hours of prerequisite technical courses must be completed prior to applying to the department.* 

A GPA of 2.5 or better on prerequisite coursework is required for admission to the department. A student's overall GPA must not fall below 2.20

- Denotes required prerequisites that must be completed prior to applying for admission to ECE.
- \* Ten additional hours of prerequisite course work must be chosen from these courses.