BS Electrical Engineering Requirements (123 Hours)
Updated March, 2013

Students may apply for certification into the Bachelor of Science in Electrical Engineering degree program after completion of the following courses with a grade of C or better: Chem 105; Cpt S 121,122; E E 214; Engl 101; Math 171, 172, 273; Phys 201, 202.

No courses listed in this schedule of study may be taken on a pass/fail basis. All listed EE and CptS courses, prerequisites to these courses, and required electives must be completed with a grade of C or better. This policy applies to transfer courses as well as courses completed at WSU.

Course descriptions, including pre-requisites, are available in the WSU catalog: http://catalog.wsu.edu. Requests for transfer credit for EECS courses must include a complete syllabus from the transfer institution.

First Semester 16 credits
Chem 105 Principles of Chem [P] (GER) 4
(1 year HS chem or Chem 101; Math 107 or c//)
Engl 101 Composition [W] (GER) 3
Engr 120 Intro to Engineering 2
GenEd 110 or 111 World Civ [A] (GER) 3
Math 171 Calc I [N] (GER) 4
(Prereq Math 107 or placement)

Second Semester 14 credits
CptS 121 Prog Des and Dev 4
Math 172 Calc II (Prereq Math 171) 4
Math 220 Linear Algebra (Prereq Math 171) 2
Phys 201 Phys for Sci and Eng [P] (GER) 4
(Prereq Math 171 with C or better)

Third Semester 14 credits
E E 214 Logic Circuits 4
(Prereq Math 171 with C or better)
CptS 122 Data Structures (Prereq CptS 121) 4
Math 273 Calc III (Prereq Math 172) 2
Phys 202 Phys for Sci and Eng [P] (GER) 4
(Prereq Math 172 and Phys 201 both with C or better)

Fourth Semester 17 credits
E E 234 Microprocessors 4
(Prereq CptS 122 or EE 221; EE 214)
E E 261 Elect Circuits I 3
(Prereq Math 315 or c//, Phys 202)
E E 262 Elect Circuits Lab 1
(Prereq EE 221; EE 261 or c//)
EconS 101 or 102 [S] (GER) 3
Gened 110 or 111 World Civ [A] (GER) 3
Math 315 Differential Equations 3
(Prereq Math 273 & 220 both with C or better)

COMPLETE WRITING PORTFOLIO
⇒ after 60 credit hours

Fifth Semester 15 Credits
E E 311 Electronics 3
(Prereq EE 214, EE 261; C// in EE 352)
E E 321 Electrical Circuits II (Prereq EE 261) 3
E E 331 Fields and Waves 3
(Prereq EE 261, 262; Math 315; Phys 202)
E E 352 EE Lab I (Prereq EE 311, 321, or c//) 3
Engr Sci Elective I 3

Sixth Semester 15 Credits
E E 341 Signals and Systems 3
(Prereq EE 321; Stat 360 or 443 or c//)
E E 361 Elect Power Systems (Prereq EE 321) 3
Engineering Science II 3
Math 360 Probability and Statistics 3
(Prereq Math 172)
Track Elective 3

Seventh Semester 17 Credits
Biological Science [B] (GER) 3
E E 415 Design Proj Mgmt 2
(Prereq Senior standing, completion of Econ 101 or 102 and all required 300 level courses)
Engl 402 or 403 Tech Write [W] (GER) 3
Intercultural Studies [I,G,K] (GER) 3
Track Electives 6

Eighth Semester 15 Credits
Arts/Humanities [HD] (GER) 3
E E 416 EE Design [M] [T] 3
(Prereq EE 415, Engl 402/403)
Track Electives 6
Arts/Humanities [HD] or Social Science [SD] 3

COMPLETE EXIT INTERVIEW AND SURVEY
⇒ must be complete for degree to be awarded

Footnotes
1 Choose from C E 211 Statics, M E 212 Dynamics, M E 301 Thermodynamics, or MSE 302 Electronic Materials. 2 Students follow one of three tracks for an emphasis in their degree program: Power, Microelectronics, or Systems. A general track is also available.
**Power track:**

Required courses:
- EE 362 Power System Lab (S)
- EE 491 Performance of Power Systems (F)

At least six credits from:
- EE 486 Power Electronic (S)
- EE 489 Introduction to Control Systems (F)
- EE 492 Renewable Energy (F)
- EE 493 Protection of Power Systems I (S)
- EE 494 Protective Relay Lab (S)

→ At least 3 more credits of approved technical electives.

**Microelectronics track:**

Required:
- EE 351 Distributed Parameter Systems (S)
- EE 476 Analog Integrated Circuits (F)
- EE 496 Intro to Semiconductor Device Theory (F)

At least six credits from:
- EE 431 RF and Microwave Circuits and Systems (S)
- EE 464 Digital Signal Processing I (F)
- EE 489 Introduction to Control Systems (F)

**Systems track:**

Required:
- EE 464 Digital Signal Processing I (F)
- EE 489 Introduction to Control Systems (F)

At least three credits from:
- EE 432 RF Engineering for Telecommunications (F)
- EE 451 Digital Communication Systems (S)

At least six credits from:
- EE 351 Distributed Parameter Systems (S)
- EE 431 RF and Microwave Circuits and Systems (S)
- EE 432 RF Engineering for Telecommunications (F)
- EE 451 Digital Communication Systems (S)
- EE 470 Concepts in Biotechnology (S)

**General track:**

At least one from:
- EE 351 Distributed Parameter Systems (S)
- EE 362 Power System Laboratory (S)
- EE 489 Introduction to Control Systems (F)

At least three credits from:
- EE 432 RF Engineering for Telecommunications (F)
- EE 451 Digital Communication Systems (S)
- EE 491 Performance of Power Systems (F)

→ At least nine credits from the list of approved technical electives, which must include three credits of 400- or 500-level EE coursework.

**Computer Engineering track:**

Required courses:
- EE 434 ASIC and Digital Systems Design
- EE 466 LSI Design

At least one from:
- EE 324 Fundamental of Digital Systems
- EE 334 Computer Architecture
- CptS 360 System Programming

→ At least 6 more credits of approved technical electives.

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**Footnotes**

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2 Students follow one of three tracks for an emphasis in their degree program: Power, Microelectronics, or Systems. A general track is also available.