Electrical Engineering Curriculum

## SPRING 2020

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| **Math 20100**Calculus IPre: Math 19500 (C min.)4 cr. | **Chem 10301** General ChemistryPre: Math 195004 cr. | **Engl 11000**Freshman Composition3 cr. | **Engr 10100 7**Engineering DesignPre/Co: Math 19500 (C min)1 cr. | **Liberal Arts 4**(10000 or higher)3 cr. | **Liberal Arts 4**(10000 or higher)3 cr. |
| **Math 21200**Calculus IIPre: Math 20100 (C min)4 cr. | **Phys 20700**General Physics IPre/Co: Math 212 or 202 4 cr. |  | **CSc 10200**Introduction to ComputingPre: Math 19500 (C min) Pre/Co: Math 20100 (C min.)3 cr. | **Engl 21007**Writing for EngineeringPre: Engl 110003 cr. | **Liberal Arts 4**(10000 or higher)3 cr. |
| **Math 20300 or 21300**Calculus IIIPre Math 203: Math202C minPre Math 213: Math212C min4 cr. | **Phys 20800**General Physics IIPre: Phys 20700Pre/Co: Math 213 or 2034 cr. | **Engr 20400**Electrical CircuitsPre/Co: Phys 20800 (C min), Math 21300 (C min)3 cr. | **EE 21000**Switching SystemsPre/Co: Math 21200 (C min)3 cr. | **Engr 10300**Computer-Aided Analysis Tools for EngineersPre: Math 20100 (C min)2 cr. |
| **Math 39100**Differential EquationsPre: Math 213003 cr. | **Math 34600 or 39200**Lin.Alg or LinAlg & Vec.AnlsPre for Math 346: Math 21300Pre for Math 392: Math 20300 3 cr. | **EE 20500**Linear Systems IPre: Engr 10300, Engr 20400Pre/Co: Math 39100 (C min)3 cr. | **EE 22100**EE Lab IPre: EE 21000 & Engr 20400Pre/Co: Engr 103001 cr. | **EE 24100**Electronics IPre: Phys 20800 (C min)Pre/Co: EE 20500 & EE 210003 cr. | **EE 31100**Probability & StatisticsPre: Math 21300 (C min)3 cr. |
| **EE 30600**Linear Systems IIPre: EE 205003 cr. | **Phys 32300**Quantum Mechanics for EngrPre: Phys 20800, Math 39100 & Math 392003 cr. | **EE 32200**EE Lab IIPre: EE 22100 & EE 241001 cr. | **EE 33000**ElectromagneticsPre: Math 39100 (C min.), Math 39200 (C min.) & Phys 20800 (C min.)3 cr. | **EE Restricted Elective**See the list below3 cr. | **EE 25900**Programming for EEPre: CSc 10200 & Engr 10300Pre/Co: Math 39100 (C min.) & Math 39200  (C min.)4 cr. |
| **EE 31200**Communication Theory Pre: EE 20500 & EE 311003 cr. | **EE 42500** Computer Engineering LabPre: EE 32200 Pre/Co: EE 34400 or [CSc 21000 & CSc 34200]1 cr. | **Lecture Electives**See the list below3 cr. | **EE 33900**Semiconductor Materials & DevicesPre: EE 33000, Phys 323003 cr. | **EE 34400**Digital Computer SystemsPre: EE 21000Pre/Co: EE 259003 cr. | **Lecture Elective**See the list below3 cr. |
| **Engr 27600**Engineering EconomicsPre: Math 20100 (C min.)3 cr. | **Lecture Electives**See the list below3 cr. | **EE Restricted Elective**See the list below3 cr. | **Liberal Arts 4**(10000 or higher)3 cr. | **Liberal Arts 4**(20000 or higher)3 cr. | **EE 59866**Senior Design Project IPre: EE 25900, EE 30600, EE 31200, EE32200, EE 33900, EE 34400, EE 425003 cr. |
|  **Lecture Electives**Chem 10401: Gen. Chem. II (C min)Csc 31800: Internet ProgrammingCsc 34200: Computer OrganizationMath 32800: Num AnalysisEngr I0600: Appl. Algebra (GPA 2.75)Engr I1100: Engr Anal (GPA 2.75)Engr I1200: Complex Var. (GPA 2.75)Engr 23000: ThermodynamicsEngr 30000: Soc. Issues of BiomedEngr 30100: Intro to Sat Remote SensEE 33300: Antennas & Fiber-Optics EE 34200: Electronics II EE 35700: Electric Power EngrEE 37100: Control & Feedback Sys.EE 43800: Mgt Concepts for EngrEE 44100: Solid State Devices EE 45000: Microwave NetworksEE 45100: Comm. Electronics6 cr.  | *(2 courses)* – See **Note 5** belowEE 45200: Fiber Optic Comm.EE 45300: Digital Signal ProcEE 45400: Phys ElectronicsEE 45500: Elem. of Power SystemEE 45600: Elements of Ctrl TheoryEE 45700: Digital Integ CircuitEE 45800: Introd. to LasersEE 45900: MicroprocessorsEE 46000: Computer Comm.EE 46200: Photonic EngrEE 46300: Wireless Comm.EE 46400: VLSI DesignEE 47100: Intro to Digital Image Proc.EE 51000: Independent StudyBME 50100: Cell & Tissue Mech.BME 50200: Cell & Tissue TransBME 50300: Cell & Tissue Biomat.BME 50500: Image & Signal Proc. Phys 45200: Adv. Optics | **Lab Elective** *(2 courses)*Csc 34300: Comp. Syst. Design (co: Csc 34200)EE 32300 : EE lab III (pre: EE 32200 & EE 34200)EE 42100: LAN Lab (pre: EE 22100, pre/co: EE 46000)EE 42200: Analog Comm. (pre: EE 22100 & EE 31200)EE 42300: Microwave (pre/co: EE 45000)EE 42600: Control Lab (pre: EE 22100, pre/co: EE 37100)EE 42700: Digital Sys. (pre: EE 34400 or Csc 21000 & Csc 34200)EE 42800: Photonics Lab (pre/co: EE 33000/EE 33100)EE 42900: Solid State (pre/co: EE 44100) | **Lecture Elective***(1 course)*See the list3 cr. | **EE 59867**Senior Design Project IIPre: EE 598.663 cr. |
| 2 cr. | **EE Restricted Electives** (As instructed above choose 2 of 4 courses listed below)EE 33300: Antennas & Fiber-Optics (Pre: EE 33000)EE 34200: Electronics II (Pre: EE 24100)EE 37100: Control & Feedback Sys. (Pre: EE 205; Math 39100 & Math 39200 (both C min))EE 44100: Solid State Devices (Pre: EE 33900) |

**1.** **The latest version of the curriculum sheet supersedes any curriculum and pre-/co-requisite information in the Undergraduate Bulletin or online**.

**2.** **“C” Passing Grade Requirement:** Courses in shaded area ( ) require a minimum passing grade of “**C**.”

**3. Skills tests:** Certain students may be required to pass CUNY Assessment Tests in one or more subjects within 1 or 2 years of admission.

**4. General Education / Liberal Arts Requirements:** EE students must take five approved courses and Engr. 27600 (Engineering Economics) for a total of 18 credits (six courses) of which at least 6 credits (two courses) must be at the 20000 level or higher. A list of approved courses can be viewed at the Office of Undergraduate Affairs (ST-209) or the Office of Student Programs (ST-2M7).

**5. Lecture Elective Requirements:** Total 6 courses (18 credits) with at least 3 courses (9 credits) from EE courses.

**6. Other Graduation Requirements:** Apply for graduation during registration for the last semester. Minimum GPA of 2.00. Minimum QPA of zero. Residency Requirement: 36 credits of 30000-level or higher Electrical Engineering courses taken at CCNY.

**7. Transfer students** with credit for Math 20200 are considered too advanced for Engr 10100. They should take a 1-credit advanced EE lab instead.

1. **Program Changes:** Substitution of other courses for required courses must be approved by the Chair of the Electrical Engineering Department (ST-602) and the Associate Dean of the Office of Undergraduate Affairs (ST-209).

##### Total Credits: 132