Electrical Engineering Curriculum

## SPRING 2020

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| **Math 20100**  Calculus I  Pre: Math 19500 (C min.)  4 cr. | **Chem 10301**  General Chemistry  Pre: Math 19500  4 cr. | | **Engl 11000**  Freshman Composition  3 cr. | | | **Engr 10100 7**  Engineering Design  Pre/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 II  Pre: Math 20100 (C min)  4 cr. | **Phys 20700**  General Physics I  Pre/Co: Math 212 or 202  4 cr. | |  | | | **CSc 10200**  Introduction to Computing  Pre: Math 19500 (C min)  Pre/Co: Math 20100 (C min.)  3 cr. | | **Engl 21007**  Writing for Engineering  Pre: Engl 11000  3 cr. | | **Liberal Arts 4**  (10000 or higher)  3 cr. |
| **Math 20300 or 21300**  Calculus III  Pre Math 203: Math202C min  Pre Math 213: Math212C min  4 cr. | **Phys 20800**  General Physics II  Pre: Phys 20700  Pre/Co: Math 213 or 203  4 cr. | | **Engr 20400**  Electrical Circuits  Pre/Co: Phys 20800 (C min), Math 21300 (C min)  3 cr. | | | | | **EE 21000**  Switching Systems  Pre/Co: Math 21200 (C min)  3 cr. | | **Engr 10300**  Computer-Aided Analysis Tools for Engineers  Pre: Math 20100 (C min)  2 cr. |
| **Math 39100**  Differential Equations  Pre: Math 21300  3 cr. | **Math 34600 or 39200**  Lin.Alg or LinAlg & Vec.Anls  Pre for Math 346: Math 21300  Pre for Math 392: Math 20300  3 cr. | | **EE 20500**  Linear Systems I  Pre: Engr 10300, Engr 20400  Pre/Co: Math 39100 (C min)  3 cr. | | | **EE 22100**  EE Lab I  Pre: EE 21000 & Engr 20400  Pre/Co: Engr 10300  1 cr. | | **EE 24100**  Electronics I  Pre: Phys 20800 (C min)  Pre/Co: EE 20500 & EE 21000  3 cr. | | **EE 31100**  Probability & Statistics  Pre: Math 21300 (C min)  3 cr. |
| **EE 30600**  Linear Systems II  Pre: EE 20500  3 cr. | **Phys 32300**  Quantum Mechanics for Engr  Pre: Phys 20800, Math 39100 & Math 39200  3 cr. | | **EE 32200**  EE Lab II  Pre: EE 22100 & EE 24100  1 cr. | | **EE 33000**  Electromagnetics  Pre: Math 39100 (C min.), Math 39200 (C min.) & Phys 20800 (C min.)  3 cr. | | | **EE Restricted Elective**  See the list below  3 cr. | | **EE 25900**  Programming for EE  Pre: CSc 10200 & Engr 10300  Pre/Co: Math 39100 (C min.) & Math 39200  (C min.)  4 cr. |
| **EE 31200**  Communication Theory  Pre: EE 20500 & EE 31100  3 cr. | **EE 42500**  Computer Engineering Lab  Pre: EE 32200  Pre/Co: EE 34400 or  [CSc 21000 & CSc 34200]  1 cr. | | **Lecture Electives** See the list below 3 cr. | | **EE 33900**  Semiconductor Materials & Devices  Pre: EE 33000, Phys 32300  3 cr. | | | **EE 34400**  Digital Computer Systems  Pre: EE 21000  Pre/Co: EE 25900  3 cr. | | **Lecture Elective** See the list below 3 cr. |
| **Engr 27600**  Engineering Economics  Pre: Math 20100 (C min.)  3 cr. | **Lecture Electives** See the list below 3 cr. | | **EE Restricted Elective**  See the list below  3 cr. | | **Liberal Arts 4**  (10000 or higher)  3 cr. | | | **Liberal Arts 4**  (20000 or higher)  3 cr. | **EE 59866**  Senior Design Project I  Pre: EE 25900, EE 30600, EE 31200, EE  32200, EE 33900, EE 34400, EE 42500  3 cr. | |
| **Lecture Electives**  Chem 10401: Gen. Chem. II (C min)  Csc 31800: Internet Programming  Csc 34200: Computer Organization  Math 32800: Num Analysis  Engr I0600: Appl. Algebra (GPA 2.75)  Engr I1100: Engr Anal (GPA 2.75)  Engr I1200: Complex Var. (GPA 2.75)  Engr 23000: Thermodynamics  Engr 30000: Soc. Issues of Biomed  Engr 30100: Intro to Sat Remote Sens  EE 33300: Antennas & Fiber-Optics  EE 34200: Electronics II  EE 35700: Electric Power Engr  EE 37100: Control & Feedback Sys.  EE 43800: Mgt Concepts for Engr  EE 44100: Solid State Devices  EE 45000: Microwave Networks  EE 45100: Comm. Electronics  6 cr. | | *(2 courses)* – See **Note 5** below  EE 45200: Fiber Optic Comm.  EE 45300: Digital Signal Proc  EE 45400: Phys Electronics  EE 45500: Elem. of Power System  EE 45600: Elements of Ctrl Theory  EE 45700: Digital Integ Circuit  EE 45800: Introd. to Lasers  EE 45900: Microprocessors  EE 46000: Computer Comm.  EE 46200: Photonic Engr  EE 46300: Wireless Comm.  EE 46400: VLSI Design  EE 47100: Intro to Digital Image Proc.  EE 51000: Independent Study  BME 50100: Cell & Tissue Mech.  BME 50200: Cell & Tissue Trans  BME 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 list 3 cr. | **EE 59867**  Senior Design Project II  Pre: EE 598.66  3 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