

## Electrical Engineering Curriculum Fall 2013 – Spring 2014

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|--|---|--|---|--|---|---|
| <b>Math 20100</b><br>Calculus I<br>Pre: Math 19500 (C min.)<br>3 cr.   | <b>Chem 10301</b><br>General Chemistry I<br>Pre: Math 19500<br>4 cr.  | <b>Engl 11000</b><br>Freshman Composition<br>3 cr.   | <b>Engr 10100</b> <sup>7</sup><br>Engineering Design<br>Pre/Co: Math 19500 (min.C)<br>1 cr.   | <b>Liberal Arts</b> <sup>4</sup><br>(10000 or higher)<br>3 cr.                                       | <b>Liberal Arts</b> <sup>4</sup><br>(10000 or higher)<br>3 cr.  |   |
| <b>Math 20200</b><br>Calculus II<br>Pre: Math 20100 (C min.)<br>3 cr.  | <b>Phys 20700</b><br>General Physics I<br>Pre/Co: Math 20200<br>4 cr.   |  | <b>CSc 10200</b><br>Introduction to Computing<br>Pre: Math 19500 (C min.)<br>or Pre/Co: Math 20100 (C min.)<br>3 cr.  | <b>Engl 21007</b><br>Writing for Engineering<br>Pre: Eng 11000 or FIQWS<br>3 cr.                     | <b>Liberal Arts</b> <sup>4</sup><br>(10000 or higher)<br>3 cr.  |   |
| <b>Math 20300</b><br>Calculus III<br>Pre: Math 20200 (C min.)<br>4 cr.   | <b>Phys 20800</b><br>General Physics II<br>Pre: Phys 20700<br>Pre/Co: Math 20300<br>4 cr.                       | <b>Engr 20400</b><br>Electrical Circuits<br>Pre/Co: Phys 20800 (C min.), Math 20300 (C min.)<br>3 cr.  |   | <b>EE 21000</b><br>Switching Systems<br>Pre: Math 20200 (C min.)<br>3 cr.                            | <b>Engr 10300</b><br>Analysis Tools for Engineers<br>Pre: Math 20100 (C min.)<br>2 cr.  |   |
| <b>Math 39100</b><br>Differential Equations<br>Pre: Math 20300<br>3 cr.  | <b>Math 39200</b><br>Lin. Algeb & Vector Anal.<br>Pre: Math 20300<br>3 cr.                                      | <b>EE 20500</b><br>Linear Systems I<br>Pre: Engr 10300, Engr 20400<br>Pre/Co: Math 39100 (C min.)<br>3 cr.   | <b>EE 22100</b><br>EE Lab I<br>Pre: EE 21000 & Engr 20400<br>Pre/Co: Engr 10300<br>1 cr.  | <b>EE 24100</b><br>Electronics I<br>Pre: Phys 20800 (C min.)<br>Pre/Co: EE 20500 & EE 21000<br>3 cr. | <b>EE 31100</b><br>Probability & Random Proc.<br>Pre: Math 20300 (C min.)<br>3 cr.  |   |
| <b>EE 30600</b><br>Linear Systems II<br>Pre: EE 20500<br>3 cr.   | <b>Phys 32300</b><br>Quantum Mech for Engr<br>Pre: Phys 20800, Math 39100<br>& Math 39200<br>3 cr.              | <b>EE 32200</b><br>EE Lab II<br>Pre: EE 22100 & EE 24100<br>1 cr.  | <b>EE 33000</b><br>Electromagnetics<br>Pre: Math 39100 (C min.), Math 39200 (C min.)<br>& Phys 20800 (C min.)<br>3 cr.  | <b>EE Restricted Elective</b><br>See the list<br>3 cr.   | <b>EE 25900</b><br>Programming for EE<br>Pre: CSc 10200 & Engr 10300<br>Pre/Co: Math 39100 (C min.) &<br>Math 39200 (C min.)<br>4 cr. |   |
| <b>EE 31200</b><br>Communication Theory<br>Pre: EE 31100, EE 20500<br>3 cr.  | <b>EE 42500</b><br>Computer Engineering Lab<br>Pre/Co: EE 34400 or 44400 or<br>[CSc 21000 & CSc 34200]<br>1 cr. | <b>Lecture Elective</b><br>See the list<br>3 cr.   |   | <b>EE 33900</b><br>Semiconductor Mat'ls & Devices<br>Pre: EE 33000, Phys 32300<br>3 cr.              | <b>EE 34400</b><br>(formerly called 44400)<br>Digital Computer Systems<br>Pre: EE 21000<br>Pre/Co: EE 25900<br>3 cr.                  |   |
| <b>Engr 27600</b><br>Engineering Economics<br>Pre: Math 20100 (C min.)<br>3 cr.  | <b>Lecture Elective</b><br>See the list<br>3 cr.  | <b>EE Restricted Elective</b><br>See the list<br>3 cr.   | <b>Liberal Arts</b> <sup>4</sup><br>(10000 or higher)<br>3 cr.  | <b>Liberal Arts</b> <sup>4</sup><br>(20000 or higher)<br>3 cr.                                       | <b>EE 59866</b><br>Senior Design Project I<br>Pre: EE 25900, EE 30600, EE 31200, EE<br>32200, EE 33900, EE 34400, EE 42500<br>3 cr.   |   |
| <b>Lecture Electives</b><br>Chem 10400: Gen. Chem II (C min)<br>CSc 31800: Internet Programming<br>CSc 34200: Computer Organization<br>Math 32800: Num Analysis<br>Engr 10600: Appl Algebra (GPA 2.75)<br>Engr 11100: Engr Anal (GPA 2.75)<br>Engr 11200: Complex Var (GPA 2.75)<br>Engr 23000: Thermodynamics<br>Engr 30000: Soc Issues of Biomed<br>Engr 30100: Intro to Sat Remote Sens<br>EE 33300: Antennas & Fiber-Optics<br>EE 34200: Electronics II<br>EE 35700: Electric Power Engr<br>EE 37100: Control & Feedback Sys.<br>EE 43800: Mgt Concepts for Engr<br>EE 44100: Solid State Devices<br>EE 45000: Microwave Networks<br>EE 45100: Comm Electronics<br>6 cr. |   | (2 courses) – See Note 5 below<br>EE 45200: Fiber Optic Comm<br>EE 45300: Digital Signal Proc<br>EE 45400: Phys Electronics<br>EE 45500: Elem. of Power System<br>EE 45600: Elements of Ctrl Theory<br>EE 45700: Digital Integ Ckt<br>EE 45800: Intro to Lasers<br>EE 45900: Microproc<br>EE 46000: Computer Comm<br>EE 46200: Photonic Engr<br>EE 46300: Wireless Comm<br><br>EE 46400: VLSI Design<br>EE 47100: Intro to Digital Image Proc.<br>EE 51000: Indep Study<br>BME 50100: Cell & Tissue Mech<br>BME 50200: Cell & Tissue Trans<br>BME 50300: Cell & Tissue Biomat<br>BME 50500: Image & Signal Proc.<br>Phys 45200: Adv Optics | <b>Lab Elective (2 Course)</b><br>CSc 34300: Comp. Sys. Dsgn (co: CSc34200)<br>EE 32300: EE Lab III (pre: EE 322 & EE 342)<br>EE 42100: LAN Lab (pre/co: EE 46000)<br>EE 42200: Analog Comm (pre: EE 31200)<br>EE 42300: Microwave (pre/co: EE 45000)<br>EE 42600: Control Lab (pre: EE 37100)<br>EE 42700: Digital Sys.(pre:EE 444 or CSc 210 & CSc 342)<br>EE 42800: Photonics Lab (pre/co: EE 33000/EE331)<br>EE 42900: Solid State (pre/co: EE 44100) |  | <b>Lecture Elective</b><br>See the list<br>3 cr.  | <b>EE 59867</b><br>Senior Design Project II<br>Pre: EE 59866<br>3 cr. |
| <b>EE Restricted Electives</b><br>(As instructed above choose 2 of 4 courses listed below)<br>EE 33300: Antennas & Fiber-Optics (Pre: EE 33000)<br>EE 34200: Electronics II (Pre: EE 24100)<br>EE 37100: Control & Feedback Sys. (Pre: EE205, Co: Math 39100 & Math 39200 (C min))<br>EE 44100: Solid State Devices (Pre: EE 33900)  |   |  |   |  |   |   |

**1. The latest version of the curriculum sheet supersedes any curriculum and pre-/corequisite 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 electives:** 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 is posted on the School of Engineering web site at <http://www.ccny.cuny.edu/engineering/genreq.html> and can be viewed at the Office of Undergraduate Affairs (ST-209) or the Office of Student Programs (ST-2M7).  
Each course falls into one or more general education clusters, specified in the list. The six courses must collectively occupy at least three clusters. The four clusters are: (f) Professional and Ethical Responsibilities, (g) Communication, (h) Global and Societal Context, and (j) Contemporary Issues.
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.
8. **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: 130**