

Mechanical Engineering Curriculum

Fall 2013 – Spring 2014

<b>Math 20102</b> Calculus I Pre: Math 19500 (C min.) 3 cr.	<b>General Chemistry Chem 10301</b> Pre: Math 19500 4 cr.	<b>ME 14500</b> Computer-Aided Drafting 2 cr.	<b>Engl 11000</b> Freshman Composition 3 cr.	<b>Engr 10100 <sup>6</sup></b> Engineering Design Pre/Co: Math 19500 (min.C) 1 cr.	<b>Liberal Arts</b> 3 cr.	
<b>Math 20202</b> Calculus II Pre: Math 20100 (C min.) 3 cr.	<b>Phys 20700</b> General Physics I Pre/Co: Math 20200 4 cr.	<b>1<sup>st</sup> Science Elective</b> (select one) Bio 10100: Foundation of Bio. Chem 10401: Gen. Chem. II Cse 10200: Intro to Comp. EAS 21300: Engr. Geo. 3 - 4 cr.		<b>Eng 21007</b> Writing for Engineering Pre: Eng 11000 or FIQWS 3 cr.	<b>Liberal Arts</b> 3 cr.	
<b>Math 20300</b> Calculus III Pre: Math 20200 (C min.) 4 cr.	<b>Phys 20800</b> General Physics II Pre: Phys 20700 Pre/Co: Math 20300 4 cr.	<b>ME 24600</b> Engineering Mechanics I Pre: Phys 20700 (C min.) & Math 20200 (C min.) Pre/Co: ME 14500 or BME 22000 3 cr.	<b>Engr 20400</b> Electrical Circuits Pre/Co: Phys 20800 (C min.) Pre/Co: Math 20300 (C min.) 3 cr.		<b>Liberal Arts</b> 3 cr.	
<b>Math 39100</b> Differential Equations Pre: Math 20300 3 cr.	<b>ME 24700</b> Engineering Mechanics II Pre: ME 24600 Pre/Co: Math 39100 (C min.) 3 cr.	<b>2<sup>nd</sup> Science Elective</b> (select one, no duplication) Bio 32100: Human Phys. Chem 26100: Org. Chem I Chem 33000: Phys Chem I EAS 21700: Earth Atm Sci Phys 321000: Mod Phys 3 cr.		<b>ME 33000</b> Mechanics of Materials Pre: Math 20300 (C min.), ME 24600 3 cr.	<b>ME 32200</b> Computer Meth. in Engr. Pre/Co: Math 39100 (C min.) 3 cr.	<b>Engr 23000</b> Thermodynamics Pre: Chem 10301 (C min.), Phys 20800 (C min.) & Math 20300 (C min.) 3 cr.
<b>Math 39200</b> Linear Algebra/Vector Analysis Pre: Math 20300 3 cr.	<b>ME 31100</b> Fundamentals of Mechatronics Pre: Math 39100 (C min.), Engr 20400, ME 24700, & ME 33000 Pre/Co: Math 39200, ME 32200, & Engl 21007 3 cr.	<b>ME 35600</b> Fluid Mechanics Pre: Math 39100 (C min.), Phys 20800 (C min.) Pre/Co: Math 39200 3 cr.		<b>ME 46100</b> Engineering Materials Pre: Chem 10301 (C min.) & Engl 21007 Pre/Co: ME 33000 4 cr.	<b>Liberal Arts</b> 3 cr.	
<b>ME 43000</b> Thermal Sys. Analysis & Design Pre: Engr 23000 & ME 35600 3 cr.	<b>ME 37100</b> Computer-Aided Design Pre: ME 14500, ME 33000 & ME 32200 Pre/Co: Math 39200 3 cr.	<b>ME 41100</b> Systems Controls Pre: ME 31100, ME 33000 Pre/Co: ME 35600 4 cr.	<b>ME 43300</b> Heat Transfer Pre/Co: ME 35600 3 cr.	<b>ME 47200</b> Mech. Systems Design Pre: ME 24700 & ME 33000 Pre/Co: ME 46100 3 cr.		
<b>Design Elective</b> (1 Course) See the list below 3 cr.	<b>ME 43600</b> Aero-Thermal-Fluids Lab Pre: ME 31100, ME 43000 & ME 43300 1 cr.	<b>ME 46200</b> Manufacturing Processes Pre: ME 14500 & ME 46100 3 cr.	<b>ME 46300</b> Micro/Nano Tech. Pre: ME 35600 or ChE 34100 Pre/Co: ME 46200 3 cr.	<b>ME 47300</b> Senior Design Project I Pre: ME 47200 Pre/Co: ME 37100, ME 43300, ME 46200 & ME 43600 & ME 41100 3 cr.		<b>Liberal Arts</b> (20000 or higher) 3 cr.
<b>Design Electives (2 Courses)</b> Engr 55500 Thermal Hydraulics Engr 55600 Nuclear Reactor Design, Operation and Safety ME 44100 Adv. Stress Anal. ME 46600 Dyn Aerospace Vehicles ME 46800 Aircraft & Rocket Prop ME46900 Spacecraft Sys. & Design ME 47100 Energy Sys. Design BME 50100 Cell & Tissue Mech. BME 50200 Cell & Tissue Trans. BME 50300 Cell & Tissue Biomat ME 51100 Adv. Mechatronics ME 51400 Rotorcraft Aerodyn. 6 cr.		<b>ME Elective (1 Course)</b> Engr 55400: Reactor Physics and Engineering ME 40100: Review of Engineering Fundamental (1 cr.) ME 46700: Spec. Topics Aerospace Engr. ME 47000: Spec. Proj. Aerospace Engr. ME 52600: Finite Element Method ME 53600: Sustainable Energy Conversion Systems ME 5900X-5910X: Special Proj. (1-3 cr.) ME 59500: Teaching /Research Exp. ME 5980X-5990X: Topics in ME (3-6 cr.) ME 59901: Prod. Dev. Mgmt & Mkt. Phys 32100: Mod. Physics for Eng. Any course from Design Electives 3 cr.		<b>ME 47400</b> Senior Design Project II Pre: ME 47300 & ME 41100 3 cr.		<b>Liberal Arts</b> (20000 or higher) 3 cr.

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

- “C” Passing Grade Requirement: Courses in shaded area (■) require a minimum passing grade of “C”.
- Skills tests: Certain students may be required to pass CUNY Assessment Tests in one or more subjects within 1 or 2 years of admission.
- General Education/Liberal Arts electives: ME students must take six approved courses (18 credits) of which at least two (6 credits) 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.cuny.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.
- 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 Mechanical Engineering courses taken at CCNY.
- Transfer students with credit for Math 20200 are considered too advanced for Engr 10100. They should take a 1-credit ME Elective course instead.
- Program Changes: Substitution of other courses for required courses must be approved by the Chair of the Mechanical Engineering Department (ST-233), and the Associate Dean of the Office of Undergraduate Affairs (ST-209) for final approval.

Total Credits: 130 – 131