THE CITY COLLEGE – SCHOOL OF ENGINEERING  
Mechanical Engineering Curriculum  
Fall 2015 – Spring 2016

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Math 21000</td>
<td>3 cr.</td>
<td>Calculus I</td>
</tr>
<tr>
<td>Calc I</td>
<td>3 cr.</td>
<td>Pre: Math 19500 (C min.)</td>
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<tr>
<td>Math 20200</td>
<td>3 cr.</td>
<td>Calculus II</td>
</tr>
<tr>
<td>Phys 20700</td>
<td>4 cr.</td>
<td>General Physics I</td>
</tr>
<tr>
<td>ME 14500</td>
<td>2 cr.</td>
<td>Computer-Aided Drafting</td>
</tr>
<tr>
<td>ME 15000</td>
<td>2 cr.</td>
<td>Instr. Drafting</td>
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<tr>
<td>ME 14300</td>
<td>1 cr.</td>
<td>Engineering Design</td>
</tr>
<tr>
<td>Liberal Arts</td>
<td>3 cr.</td>
<td>See the list below</td>
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<tr>
<td>Math 20300</td>
<td>4 cr.</td>
<td>Calculus III</td>
</tr>
<tr>
<td>Phys 20800</td>
<td>4 cr.</td>
<td>General Physics II</td>
</tr>
<tr>
<td>ME 24600</td>
<td>3 cr.</td>
<td>Engineering Mechanics I</td>
</tr>
<tr>
<td>ME 24900</td>
<td>2 cr.</td>
<td>Manufacturing Processes</td>
</tr>
<tr>
<td>Science Elective</td>
<td>3 cr.</td>
<td>See the list below</td>
</tr>
<tr>
<td>ME 31000</td>
<td>3 cr.</td>
<td>Mechanics of Materials</td>
</tr>
<tr>
<td>ME 31400</td>
<td>3 cr.</td>
<td>Pre: Math 31000 (C min.), ME 24600, &amp; ME 32200</td>
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<tr>
<td>ME 31600</td>
<td>3 cr.</td>
<td>Fluid Mechanics</td>
</tr>
<tr>
<td>ME 46100</td>
<td>4 cr.</td>
<td>Pre: Math 31600 (C min.), Phys 20800 (C min.)</td>
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<tr>
<td>Liberal Arts</td>
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<tr>
<td>Math 39100</td>
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<td>Difference Equations</td>
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<tr>
<td>ME 24700</td>
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<td>Engineering Mechanics II</td>
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<tr>
<td>ME 34000</td>
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<td>Pre: ME 24700 (C min.), &amp; ME 33000</td>
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<tr>
<td>Liberal Arts</td>
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<td>See the list below</td>
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<tr>
<td>Math 39200</td>
<td>3 cr.</td>
<td>Linear Algebra/Vector Analysis</td>
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<tr>
<td>Pre: Math 20000</td>
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<td>Math 43000</td>
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<td>General Chemistry II</td>
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<tr>
<td>ME 43600</td>
<td>3 cr.</td>
<td>Aerospace-Fluids Lab</td>
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<tr>
<td>ME 46200</td>
<td>3 cr.</td>
<td>Manufacturing Processes</td>
</tr>
<tr>
<td>ME Elective</td>
<td>3 cr.</td>
<td>See the list below</td>
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<tr>
<td>ME 47300</td>
<td>3 cr.</td>
<td>Senior Design Project I</td>
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<tr>
<td>ME 47400</td>
<td>3 cr.</td>
<td>Senior Design Project II</td>
</tr>
<tr>
<td>Liberal Arts</td>
<td>3 cr.</td>
<td>See the list below</td>
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<tr>
<td>Design Electives (three courses)</td>
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<tr>
<td>Engr 55500</td>
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<td>Thermal Hydraulics</td>
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<tr>
<td>ME 53800</td>
<td>1 cr.</td>
<td>Automotive Safety Design and Injury Biohazard</td>
</tr>
<tr>
<td>ME 55000</td>
<td>1 cr.</td>
<td>Nuclear Reactor Design, Operation and Safety</td>
</tr>
<tr>
<td>ME 46600</td>
<td>1 cr.</td>
<td>Dyn Aerospace Analysis</td>
</tr>
<tr>
<td>ME 46800</td>
<td>1 cr.</td>
<td>Aircraft &amp; Rocket Prop</td>
</tr>
<tr>
<td>ME 46900</td>
<td>1 cr.</td>
<td>Spacecraft Sys. &amp; Design</td>
</tr>
<tr>
<td>ME 47100</td>
<td>1 cr.</td>
<td>Energy Sys. Design</td>
</tr>
<tr>
<td>ME 51100</td>
<td>1 cr.</td>
<td>Adv. Mechanics</td>
</tr>
<tr>
<td>ME 51400</td>
<td>1 cr.</td>
<td>Rotorcraft Aerody.</td>
</tr>
<tr>
<td>ME 51500</td>
<td>1 cr.</td>
<td>Orbital Mech</td>
</tr>
<tr>
<td>ME 53700</td>
<td>1 cr.</td>
<td>Turbomach</td>
</tr>
<tr>
<td>ME 53800</td>
<td>1 cr.</td>
<td>Automotive Safety Design and Injury Biohazard</td>
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<td>ME 55000</td>
<td>1 cr.</td>
<td>Nuclear Reactor Design, Operation and Safety</td>
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<td>1 cr.</td>
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<td>1 cr.</td>
<td>Rotorcraft Aerody.</td>
</tr>
<tr>
<td>ME 51500</td>
<td>1 cr.</td>
<td>Orbital Mech</td>
</tr>
<tr>
<td>ME 53700</td>
<td>1 cr.</td>
<td>Turbomach</td>
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<tr>
<td>ME Elective (6 credits)</td>
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<tr>
<td>BME 50200</td>
<td>2 cr.</td>
<td>Cell &amp; Tissue Trans.</td>
</tr>
<tr>
<td>BME 50300</td>
<td>1 cr.</td>
<td>Cell &amp; Tissue Biomat</td>
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<tr>
<td>ME 41000</td>
<td>1 cr.</td>
<td>Review of Engr. Fund. (note: 1 cr.)</td>
</tr>
<tr>
<td>ME 40300</td>
<td>1 cr.</td>
<td>Micro/Nano Tech.</td>
</tr>
<tr>
<td>ME 46700</td>
<td>1 cr.</td>
<td>Spec. Topics Aerospace Engr.</td>
</tr>
<tr>
<td>ME 53600</td>
<td>1 cr.</td>
<td>Sustainable Energy Conv. Systems</td>
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<tr>
<td>ME 59020</td>
<td>1 cr.</td>
<td>Special Proj. (note: 1-3 cr.)</td>
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<tr>
<td>ME 59050</td>
<td>1 cr.</td>
<td>Teaching /Research Exp.</td>
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<tr>
<td>ME 59060</td>
<td>1 cr.</td>
<td>Topics in ME (note: 3—6 cr.)</td>
</tr>
<tr>
<td>ME 59090</td>
<td>1 cr.</td>
<td>Prod. Dev. Mgt &amp; Mkt</td>
</tr>
<tr>
<td>Phys 21000</td>
<td>1 cr.</td>
<td>Mod. Physics for Eng.</td>
</tr>
<tr>
<td>Or any course from Design Electives</td>
<td></td>
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<tr>
<td>Science Elective (two courses)</td>
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<tr>
<td>Bio 10100</td>
<td>1 cr.</td>
<td>Foundation of Bio.</td>
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<td>Bio 32100</td>
<td>1 cr.</td>
<td>Human Phys.</td>
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<tr>
<td>Chem 10401</td>
<td>1 cr.</td>
<td>Gen. Chem. II</td>
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<tr>
<td>Chem 26100</td>
<td>1 cr.</td>
<td>Org. Chem I</td>
</tr>
<tr>
<td>Chem 33000</td>
<td>1 cr.</td>
<td>Phys. Chem I</td>
</tr>
<tr>
<td>Csc 10200</td>
<td>1 cr.</td>
<td>Intro to Comp.</td>
</tr>
<tr>
<td>EAS 10600</td>
<td>1 cr.</td>
<td>Earth Systems Science</td>
</tr>
<tr>
<td>EAS 21000</td>
<td>1 cr.</td>
<td>Earth Atmos.</td>
</tr>
<tr>
<td>Phys 42200</td>
<td>1 cr.</td>
<td>Biophysics</td>
</tr>
</tbody>
</table>

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. 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 ccny.cuny.edu/engineering/gen-ed 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 liberal arts 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.
   - Most students must also satisfy Pathways liberal arts requirements. See ccny.cuny.edu/engineering/pathways.

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

6. Transfer students with credit for Math 20200 are considered too advanced for Engr 10100. They should take a 1-credit ME Elective course instead.

7. 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