New Electrical Engineering Undergraduate Curriculum 2019-2020

Date: 02/01/2019
NMT Electrical Engineering Critical Path (120 Credit Hours Total)

Projects will be selected as demonstrators of learning objectives for each semester.

Semester 1 (Fall)
- EE 161 Basic Electronics Lab I (1)
- Phys 121 L & Physics I (5)
- Math 131 Calc I (4)

Semester 2 (Spring)
- EE 162 Basic Electronics Lab II (1)
- Phys 122 L & Physics II (5)
- Math 132 Calc II (4)
- Math 335 ODE (3)

Semester 3 (Fall)
- EE 211 Circuits (3)
- EE 271 Math Eng (3)

Semester 4 (Spring)
- Math 231 Calc III (4)
- EE 252 Digital Elec (3)
- EE 212 Circuits II (3)

Semester 5 (Fall)
- EE 361 Mixed Electronics Lab I (2)
- EE 353 Analog Elec (3)
- EE 351 Microcontrollers (3)
- EE 311 Signals & Sys (3)

Semester 6 (Spring)
- Eng Elective (3)
- EE 332 E & M (3)
- EE 372 Modeling & Sim (3)
- EE 431 Electrodynamics (3)
- EE 481 Capstone I (3)
- EE 482 Capstone II (3)

Semester 7 (Fall)
- EE 481 Capstone I (3)
- Eng Elective (3)
- EE 411 Stoc Proc & Comm (3)
- EE 472 DSP (4)

Semester 8 (Spring)
- Eng Elective (3)

Disclaimer: Use this document as only a general idea regarding the flow of the program. Changes may occur and requirements differ by the catalog you are under. Always check the course catalog as it is the ultimate source for the curriculum and its requirements.

Current curriculum layout encourages students to pursue minors with a path to graduate in 4 years. Most suitable minors are:
- Minor in Optical Science & Engineering - requiring only 1 additional credits if courses used for Eng. Electives
- Minor in Mathematics or Minor in Engineering Management - requiring 12 additional credits
- Minor in Environmental Engineering - requiring 9 additional credits

Requirements to Finish Gen Ed (suggested distribution)

Semester 1 (Fall)
- Humanities (3)
- Engi 111 English (3)

Semester 2 (Spring)
- Fine Arts (3)
- Engi 112 English (3)

Semester 3 (Fall)
- Chem 121 L Chemistry I (4)
- Social Science (3)

Semester 4 (Spring)
- Chem 122 L Chemistry II (4)
- Humanities (3)
- Engi 341 Tech Writing (3)

Sample Curriculum Credit Count

<table>
<thead>
<tr>
<th>Semester 1</th>
<th>Semester 2</th>
<th>Semester 3</th>
<th>Semester 4</th>
<th>Semester 5</th>
<th>Semester 6</th>
<th>Semester 7</th>
<th>Semester 8</th>
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<tbody>
<tr>
<td>16</td>
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</tbody>
</table>
New NMT Electrical Engineering
Undergraduate Curriculum

Key changes:

1. EE curriculum is now 120 Credits
2. EE 101 (2) is now split between two semesters and became EE 161 (1) and EE 162 (1)
3. EE 251 (3) is now EE 271 (3) and is a prerequisite for more EE courses
4. Labs from EE 212, EE 231, EE 308 and EE 321 have been combined and better integrated into EE 361 (2) and EE 362 (1) Mixed Electronics labs in 3rd year
5. EE 382 is no longer required
6. A new course EE 372: Modeling & Simulation course has been added
7. Some courses have been moved from normally offered in the Fall to Spring and vice versa
8. Math 254: Linear Algebra is no longer required for EE but if you plan to pursue a math minor it is still required
9. Now only three technical electives are required instead of four
10. No explicit requirement of EE elective vs engineering elective
**Freshmen Going to Sophomore**

If you are currently a freshmen in electrical engineering and going to your sophomore year starting Fall 2019 assuming:

**EE Courses (based on current and previous catalogs) probably already taken are**

- EE 101: Introduction to Electrical Engineering

**EE courses you need to take are**

<table>
<thead>
<tr>
<th>Fall 2019</th>
<th>Spring 2020</th>
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<tbody>
<tr>
<td>EE 211: Circuits I (3)</td>
<td>EE 252: Digital Electronics (3)</td>
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<tr>
<td>EE 271: Mathematical Engineering (3)</td>
<td>EE 212: Circuits II (3)</td>
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<table>
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<tr>
<th>Fall 2020</th>
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<td>EE 311: Signals and Systems (3)</td>
<td>EE 332: E &amp; M (3)</td>
</tr>
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<td>EE 351: Microcontrollers (3)</td>
<td>EE 362: Mixed Electronics II (1)</td>
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<tr>
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<td>EE 472: DSP (4)</td>
</tr>
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<td>EE 482: Capstone II (3)</td>
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If you remain on an older catalog you will have to check that catalog for additional requirements which requires additional credits as well as distinction between electrical engineering electives and engineering electives.
**Sophomore Going to Junior**

If you are currently a sophomore in electrical engineering and going to your junior year starting Fall 2019 assuming:

**EE Courses (based on current and previous catalogs) probably already taken are**

- EE 101: Introduction to Electrical Engineering
- EE 211: Circuits I
- EE 212: Circuits II
- EE 231: Digital Electronics
- EE 251: Mathematical Engineering
- EE 308: Microcontrollers (will not be offered in Fall 2019 or Spring 2019 unless there are special cases)

**EE courses (under new curriculum) you need to take are**

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Junior Going to Senior

If you are currently a junior in electrical engineering and going to your senior year starting Fall 2019 assuming:

EE Courses (based on current and previous catalogs) taken probably are

- EE 101: Introduction to Electrical Engineering
- EE 211: Circuits I
- EE 212: Circuits II
- EE 231: Digital Electronics
- EE 251: Mathematical Engineering
- EE 308: Microcontrollers
- EE 321: Analog Electronics and Lab
- EE 333: E&M I
- EE 341: Signals and Systems
- EE 382: Introduction to Design
- EE 434: E&M II (will not be offered Fall 2019 or Spring 2020 unless there are special cases)

EE courses (under new curriculum) you need to take are

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