## Year 2

### Term A
- NMM 2270A: Applied Mathematics for Engineering II
- BME 3201A: Fundamentals of Biomedical Engineering Design
- CS 1027A: Computer Science Fundamentals II
- ECE 2205A: Electric Circuits I
- ECE 2240A: Electrical Laboratory
- ECE 2277A: Digital Logic Systems

### Term B
- NMM 2276B: Applied Mathematics for Electrical & Mechanical Eng. III
- ECE 2231B: Introduction to Electronics
- ECE 2233B: Circuits and Systems
- ECE 2236B: Magnetic Circuits and Transmission Lines
- ECE 2242B: Principles of Design in Electrical Engineering
- One 0.5-credit non-technical elective *

## Year 3

### Term A
- NMM 3415A: Advanced Applied Mathematics for Electrical Engineering
- Biol 1001A: Biology for Sciences I
- ECE 3330A: Control Systems
- ECE 3332A: Electric Machines
- ECE 3337A: Electronic Circuits
- SS 2141A: Applied Probability and Statistics for Engineers

### Term B
- Biol 1002B: Biology for Sciences II
- ECE 3331B: Introduction to Signal Processing
- ECE 3336B: Electromagnetic Theory
- ECE 3370B: Communication Electronics I
- ECE 3375B: Microprocessors and Microcomputers
- ECE 3399B: Principles and Practices of Design of Electronic Systems

## Year 4

### Term A
- Biochem 2280A: Biochemistry and Molecular Biology
- BME 3301A: Neural Systems Engineering
- ECE 4455A: Biomedical Systems Analysis
- Physiol 2130: Human Physiology
- 0.5 credit Biomedical Science elective
- 0.5 credit Healthcare non-technical elective

### Term B
- BME 3303B: Cellular Systems Engineering
- MME 4469B: Biomechanics of the Musculoskeletal System
- Physiol 2130: Human Physiology
- Two 0.5-credit Biomedical Science electives
- One 0.5-credit Healthcare non-technical elective
- One 0.5-credit Open elective (taken in either term)**

## NOTES:

### Important:
Students are responsible for ensuring they have the correct courses required for their degree. If you are unsure which courses you still need or if you see courses listed on the progression sheet that are no longer offered or are not offered in the term you see listed here, please contact your Academic Counsellor.

### Non-technical electives:
[https://www.eng.uwo.ca/undergraduate/upper-year/electives.html](https://www.eng.uwo.ca/undergraduate/upper-year/electives.html)

### Healthcare Non-technical Electives
- Anthropology 2290F/G: Cultures of Health and Healing
- Economics 2169F/G: Economics of Health Care
- History 2195A/B: Epidemics in North America
- Law 3101A/B: Healthcare Law
- Philosophy 2071E: Biomedical Ethics
- Philosophy 2072F/G: Bioethics and Disability
- Philosophy 2715F/G: Health Care Ethics
- Religious Studies 2239F/G: Christian Bioethics
- Sociology 2179A/B: Promotion of Community Health
- Sociology 2180A/B: Development of Health Inequalities
- Women’s Studies 2244: Women and Health

### Technical Elective List:
Some technical electives may not be offered in a given academic year. Consult the Department for accurate listing. Courses that do not appear on the list below require special permission from the Department.

### Biomedical Sciences Electives
- Biochemistry 3385A/B: Human Biochemistry
- Biochemistry 3386A/B: Clinical Biochemistry
- Biology 2382A/B: Cell Biology
- Biology 2581A/B: Genetics
- Chemistry 2213A/B: Organic Chemistry
- Chemistry 2283F/G: Organic Chemistry II
- Communication Sciences and Disorders 4417A/B: Hearing Science
- Health Science 2300A/B: Systemic Approach to Functional Anatomy
- Health Science 3300A/B: Anatomy of the Human Body
- Medical Science 4931F/G: Selected Topics in Medical Science
- Physiology 3140A/B: Cellular Physiology
- Psychology 2220A/B: Intro. to Behavioural & Cognitive Neuroscience

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*The official version of the academic calendar can be found at: [www.westerncalendar.uwo.ca](http://www.westerncalendar.uwo.ca)
**Year 5**

**Term A**

- BME 4400  Biomedical Engineering Research Thesis (1.5-credit course)
- ECE 4416  Electrical/Computer Engineering Project
- ECE 4429A Advanced Digital Signal Processing
- ECE 4437A Communications Theory
- ECE 4445A Introduction to Digital Image Processing
- ELI 4410F Engineering Ethics, Sustainable Development and the Law

**Term B**

- BME 4400  Biomedical Engineering Research Thesis (1.5-credit course)
- ECE 4416  Electrical/Computer Engineering Project
- ELI 3200B Engineering Innovation I: New Venture Creation

Two 0.5-credit BME technical electives
One 0.5-credit ECE technical elective
(https://www.eng.uwo.ca/undergraduate/upper-year/next.html)

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**Biomedical Engineering (BME) Electives**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CBE 4421A/B</td>
<td>Intro. to Biomaterials Engineering</td>
</tr>
<tr>
<td>Medical Biophysics</td>
<td>Analysis of Oxygen Transport</td>
</tr>
<tr>
<td>3507F/G</td>
<td></td>
</tr>
<tr>
<td>Medical Biophysics</td>
<td>Intro. to Biomedical Optics</td>
</tr>
<tr>
<td>3645A/B</td>
<td></td>
</tr>
<tr>
<td>Medical Biophysics</td>
<td>Medical Imaging</td>
</tr>
<tr>
<td>4475A/B</td>
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<tr>
<td>Medical Biophysics</td>
<td>Hemodynamics</td>
</tr>
<tr>
<td>4535A/B</td>
<td></td>
</tr>
</tbody>
</table>

**Open Electives**

For the course credit designated as an “open elective”, students may select any course from the lists of: Biomedical Science electives; BME technical electives; MME technical electives; Healthcare non-technical electives; or Faculty of Engineering approved non-technical electives.