# Mechatronics Engineering and Business (Option B)

**September 2021 (for students who entered first year in September 2016)**

## Year 2

### Term A
- AM 2270A: Applied Mathematics for Engineering II
- ECE 2205A: Electric Circuits I
- MSE 2200Q: Engineering Shop Safety Training
- MSE 2201A: Introduction to Electrical Instrumentation
- MSE 2212A: Mechanics of Materials
- MSE 2214A: Thermodynamics
- CS 1037A: Computer Science Fundamentals II
- BUS 2257: Accounting & Business Analysis

### Term B
- AM 2276B: Applied Math for Electrical & Mechanical Eng. III
- MSE 2202B: Introduction to Mechatronic Design
- MSE 2213B: Engineering Dynamics
- MSE 2233B: Circuits and Systems
- MSE 2273B: Introduction to Heat Transfer and Fluid Mechanics
- BUS 2257: Accounting & Business Analysis

## Year 3: HBA 1

## Year 4

### Term A
- AM 3415A: Applied Math for Electrical Engineering
- SS 2141A: Applied Probability and Statistics for Engineers
- ECE 2277A: Digital Logic Systems
- ECE 3330A: Control Systems
- MSE 3301A: Materials Selection and Manufacturing Processes
- MSE 3310A: Electric Motors and Drives
- MSE 3381A: Kinematics and Dynamics of Machines
- BUS 4569: Ivey Field Project

### Term B
- ECE 3331B: Signal Processing
- ECE 3375B: Microprocessors and Microcomputers
- MSE 3302B: Sensors and Actuators
- MSE 3360B: Finite Element Methods for Mechanical Engineering
- MSE 3380B: Machine Component Design for Mechatronic Systems

## Year 5

### Term A
- MSE 4401A: Robotic Manipulators
- MSE 4499: Mechatronic Design Project

#### 1.5 HBA required courses**
- One 0.5-credit technical elective

### Term B
- MSE 4499: Mechatronic Design Project
- ES 4498G: Engineering Ethics, Sustainable Development & the Law

#### One 0.5-credit technical elective
- 2.0 credits of Business electives chosen from 4000 level Business courses

## Technical Electives

Some technical electives may not be offered in a given academic year. Consult the Department for accurate listing.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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</thead>
<tbody>
<tr>
<td>ECE 4455A/B</td>
<td>Biomedical Systems Analysis</td>
</tr>
<tr>
<td>ECE 4460A/B</td>
<td>Real-time and Embedded Systems</td>
</tr>
<tr>
<td>ECE 4469A/B</td>
<td>Applied Control Systems</td>
</tr>
</tbody>
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**NOTES:**

- **1.5 HBA required courses:**
  - International Perspective Requirement: Business 4505A/B.
  - Corporations and Society Requirement: 0.5-credit from Business Administration – Corporations and Society offered during the academic year to satisfy this requirement.
  - Managerial Accounting Requirement: Business 4624A/B