

## Mechatronics System Engineering and Artificial Intelligence Systems Engineering (Option E)

September 2026 (for students who started first year in 2025 or later)

<p><b>Year 2</b></p> <p><b>Term A</b></p> <p>NMM 2270A Applied Mathematics for Engineering II  MSE 2200Q Engineering Shop Safety Training  MME 2202A Mechanics of Materials  MME 2204A Thermodynamics I  AISE 2205A Algorithms and Data Structures  SS 2141A Applied Probability and Statistics</p> <p><b>Term B</b></p> <p>NMM 2276B Applied Mathematics for Elec &amp; Mech Eng III  MSE 2221B Computational Methods in Mechatronic Systems Engineering  MME 2213B Engineering Dynamics  MME 2273B Introduction to Fluid Mechanics and Heat transfer  AISE 2251B Software Design for Systems Engineering  Two 0.5 non-technical electives</p> <p><b>Year 3</b></p> <p><b>Term A</b></p> <p>MSE 2201A Introduction to Electrical Instrumentation  ECE 2205A Electric Circuits  DS 3000A Intro to Machine Learning  AISE 3309A Database Systems  AISE 3350A Cyber-Physical Systems Theory  One 0.5 non-technical elective</p> <p><b>Term B</b></p> <p>MSE 2202B Intro to Mechatronic Design  MSE 2233B Circuits and Systems  MME 3360B Finite Element Methods in Mechanical Engineering  AISE 3010B Data Engineering and Machine Learning  AISE 3351B Digital Systems and Signal Processing  Writing 2130G Building Better (Communication) Bridges: Rhetoric &amp; Professional Communication for Engineers</p> <p><b>Year 4</b></p> <p><b>Term A</b></p> <p>MSE 3310A Electric Motors and Drives  MSE 3381A Kinetics and Dynamics of Machines  ECE 2277A Digital Logic Systems  ECE 3330A Control Systems  AISE 4010A Deep Learning for Time Series Data  AISE 4430A Introduction to Computer Networking, Security &amp; IOT Systems</p> <p><b>Term B</b></p> <p>MSE 3302A Sensors and Actuators  ECE 3375A Microprocessors and microcomputers  MME 3380B Mechanical Components Design  AISE 4020A Artificial Intelligence Systems Engineering Design I  One 0.5-credit AISE technical elective (can be in term A or B)*</p>	<p><b>NOTES:</b></p> <p><b>Important:</b></p> <p>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.</p> <p><b>Non-technical Electives:</b></p> <p>Please choose a maximum of 1.0 credits (one 1.0-credit course or two 0.5-credit courses) from the 1000 level and a minimum of one 0.5-credit from the 2000 (or higher) level.  <a href="https://www.eng.uwo.ca/undergraduate/upper-year/electives.html">https://www.eng.uwo.ca/undergraduate/upper-year/electives.html</a></p> <p><b>*AISE Technical Electives:</b></p> <p>AISE technical electives refer to a list of AI-based technical courses offered by the Faculty of Engineering and Faculty of Science. These courses are approved by the AISE Program Committee. The list will be updated every year.</p> <p>Some technical electives may not be offered in a given academic year. Consult the Department for accurate listing.</p> <p><b>AISE Technical Electives</b></p> <table border="1"> <tr> <td>AISE 4025A/B</td> <td>Intro to computer assisted surgery</td> </tr> <tr> <td>AISE 4070A/B</td> <td>Selected Topics</td> </tr> <tr> <td>AISE 4071A/B</td> <td>Selected Topics</td> </tr> <tr> <td>CS 3340A/B</td> <td>Analysis Of Algorithms I</td> </tr> <tr> <td>CS 4417A/B</td> <td>Unstructured Data</td> </tr> <tr> <td>ECE 3390A/B</td> <td>Hardware/Software Co-Design</td> </tr> <tr> <td>ECE 4438A/B</td> <td>Advanced Image Processing and Analysis</td> </tr> <tr> <td>ECE 4445A/B</td> <td>Introduction to Digital Image Processing</td> </tr> <tr> <td>SE 4455A/B</td> <td>Cloud Computing</td> </tr> </table>	AISE 4025A/B	Intro to computer assisted surgery	AISE 4070A/B	Selected Topics	AISE 4071A/B	Selected Topics	CS 3340A/B	Analysis Of Algorithms I	CS 4417A/B	Unstructured Data	ECE 3390A/B	Hardware/Software Co-Design	ECE 4438A/B	Advanced Image Processing and Analysis	ECE 4445A/B	Introduction to Digital Image Processing	SE 4455A/B	Cloud Computing
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**Year 5**

**Term A**

MSE 3301A	Materials Selection and Manufacturing Processes
MSE 4401A	Robotic Manipulators
MSE 4499	Mechatronic Design Project**
AISE 3020A	AI: Ethics, Bias and Privacy
AISE 4450A	Data Driven Control of Cyber-Physical Systems

**Term B**

MSE 4499	Mechatronic Design Project**
ECE 4460B or ECE 4469B	Real Time and Embedded Systems or Applied Control Systems
ELI 4110F	Engineering Ethics, Sustainable Development & the Law
Two 0.5-credit AISE technical electives (can be in term A or B)*	

\*\* With approved AISE focus. Capstone design projects must be reviewed in consultation with the AISE Program Director.