H. CIVIL ENGINEERING AND ARTIFICIAL INTELLIGENCE SYSTEMS ENGINEERING, SMART CITIES AND STRUCTURAL ENGINEERING OPTION H

September 2023 (students who entered *first year* in September 2021 or later)

Year 2:
Term A
CEE 2202A	Mechanics of Materials
CEE 2217A	Introduction to Environmental Engineering
CEE 2220A	Introduction to Structural Engineering
SE 2205A	Algorithms & Data Structure for Object-Oriented Design
NMM 2270A	Applied Math for Engineering II
SS 2141A	Applied Probability and Statistics for Engineers

Term B
CEE 2219B	Computation Tools for Civil Engineers
CEE 2221B	Structural Theory and Design
NMM 2276B	Applied Mathematics for Electrical and Mechanical Engineers
SE 2251B	Software Design for Systems Engineering
Writing 2130g	Building Better (Communication) Bridges: Rhetoric & Professional Communication for Engineers
0.5 non-technical elective	

Year 3:
Term A
CEE 2224	Engineering Fluid Mechanics
CEE 4401A	Principles of Transportation Engineering
DS 3000A	Introduction to Machine Learning
ECE 3350A	Cyber-Physical Systems Theory
SE 3309A	Database Management Systems
SE 4430A	Introduction to Computer Networking, Security & IOT Systems

Term B
AISE 3010B	Data Engineering and Machine Learning
CEE 2224	Engineering Fluid Mechanics
CEE 4412B	Intelligent Transportation Systems
EarthSci 2281b	Geology for Engineers
ECE 3351B	Digital Systems and Signal Processing
0.5 non-technical elective	

Year 4:
Term A
CEE 3321A	Soil Mechanics & Hydrogeologic Engineering
CEE 3340A	Analysis of Indeterminate Structures
CEE 3347A	Reinforced Concrete Design
CEE 3348A	Project Management & Engineering Cases
CEE 3369A	Materials for Civil Engineering
AISE 3020A	AI: Ethics, Bias & Privacy

Term B
CEE 3322B	Introduction to Geotechnical Engineering
CEE 3343B	Finite Element Methods & Application to Lateral Analysis of Buildings
CEE 3344B	Structural Dynamics I
CEE 3346B	Steel Design
CEE 3358B	Reinforced & Prestressed Concrete Design
AISE 4010B	Deep Learning for Time Series Data

NOTES:
Note: CEE 3324a (Surveying). Offered each August (10 days) and must be completed before a student may graduate.

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:
http://www.eng.uwo.ca/undergraduate/upper_year/electives.html

Technical Elective List:
Some technical electives may not be offered in a given academic year. Consult the Academic Timetable for a current listing.

CEE 3355A/B	Municipal Engineering Design
CEE 4414 A/B	Machine Learning for Water Resources
CEE 4417A/B	Smart Buildings
CEE 4428A/B	Selected Topics in Civil Engineering I
CEE 4429A/B	Selected Topics in Civil Engineering II
CEE 4438A/B	Introduction to Wood Design
CEE 4440	Civil Engineering Thesis (full year course - cour as two technical electives)
CEE 4458A/B	Risk Analysis and Decision Making in Engineeri
CEE 4459A/B	Design of Lateral Load Structural Systems
CEE 4465A/B	Environmental Design for Waste Disposal
CEE 4476A/B	Environmental Hydraulics Design
CEE 4480A/B	Wind Engineering: Modelling, Assessment and Mitigation
CEE 4485A/B	Cities: Resilience and Sustainability
EarthSci 3340A/B	Watershed Hydrology
EarthSci 4440A/B	Hydrogeology: Principles, Processes, and Professional Practice

Year 5:

Term A

CEE 4420A **or**	Data Science in Geotechnical Engineering or
AISE 4020A	Artificial Intelligence Systems Engineering Design I
CEE 4413a	Building Information Modelling
CEE 4426a	Geotechnical Engineering Design
CEE 4491a	Structural Dynamics II
AISE 4050	Artificial Intelligence Systems Engineering Design
ECE 4450a	Data Driven Control of Cyber-Physical Systems

Term B

CEE 4415B	Structural Health Monitoring
CEE 4478b	Case Studies in Civil Engineering
ELI 4110G	Engineering Ethics, Sustainable Development and the Law
AISE 4050	Artificial Intelligence Systems Engineering Design
0.5 technical elective	
0.5 non-technical elective	

The official version of the academic calendar can be found at: www.westerncalendar.uwo.ca