

Integrated Engineering and Business Option

September 2024 (for students who *entered first year* in September 2023 or later)

<p>Year 2:</p> <p>Term A</p> <p>IE 2298 Integrated System Engineering & Design</p> <p>NMM 2270a Applied Mathematics for Engineering II</p> <p>CEE 2220a Introduction to Structural Theory</p> <p>ECE 2277a Digital Logic Systems</p> <p>MSE 2214a Thermodynamics I</p> <p>Bus 2257 Accounting and Business Analysis</p> <p>Term B</p> <p>IE 2298 Integrated System Engineering & Design</p> <p>NMM 2276b Applied Mathematics for Elect. and Mech. Engineering III</p> <p>CBE 2221b Fluid Flow</p> <p>MME 2285b Engineering Experimentation</p> <p>SS 2143b Applied Statistics and Data Analysis for Engineers</p> <p>Bus 2257 Accounting and Business Analysis</p> <p>Year 3: HBA 1</p> <p>Year 4:</p> <p>Term A</p> <p>ELI 3000a Managing the Innovation Process</p> <p>CBE 2220a Chemical Process Calculations</p> <p>CBE 3322a Heat Transfer Operations</p> <p>CEE 2202a Mechanics of Materials</p> <p>MME 3374a Electrical Eng. Foundations for Mechanical Engineering</p> <p>Bus 4569 Ivey Field Project</p> <p>Term B</p> <p>ELI 3100b Engineering Planning and Project Management*</p> <p>MSE 2213b Engineering Dynamics</p> <p>CBE 2291b Computational Methods</p> <p>MSE 3360b Finite Element Methods for Mechanical Engineering</p> <p>ELI 4110g The Ethical Engineer**</p> <p>Bus 4569 Ivey Field Project</p> <p>Year 5:</p> <p>Term A</p> <p>IE 4499 Interdisciplinary Engineering Design Project</p> <p>ELI 4100a Engineering Leadership</p> <p>0.5 technical elective</p> <p>1.5 HBA required courses***</p> <p>Term B</p> <p>IE 4499 Interdisciplinary Engineering Design Project</p> <p>Two 0.5 technical electives</p> <p>1.5 Business electives chosen from 4000 level Business courses.</p>	<p>NOTES:</p> <p>*ELI 3200 New Venture Creation is an acceptable alternative to ELI 3100. BA 4558 is an acceptable alternative to ELI 3200 if taken prior to Year 4 as an overload elective, e.g. during intersession.</p> <p>**ELI 4110 may be taken in a different semester in order to accommodate desired technical electives and their pre-requisites.</p> <p>***1.5 HBA required courses:</p> <ul style="list-style-type: none"> International Perspective Requirement: Business 4505a/b Corporations and Society Requirement: 0.5 course from Business Administration – Corporations and Society offered during the academic year to satisfy this requirement. Managerial Accounting Requirement: Business 4624a/b <p>Technical Elective List:</p> <p>Some technical electives may not be offered in a given academic year. Consult the Department for accurate listing.</p> <table border="1"> <thead> <tr> <th colspan="2">Chemical and Biochemical Engineering :</th> </tr> </thead> <tbody> <tr> <td>CBE 2290a/b</td> <td>Fundamentals of Biochemical and Environmental Engineering</td> </tr> <tr> <td>CBE 3310a/b</td> <td>Process Dynamics and Control</td> </tr> <tr> <td>CBE 3324a/b</td> <td>Mass Transfer Operations</td> </tr> <tr> <td>CBE 4409a/b</td> <td>Wastewater Treatment</td> </tr> <tr> <td>CBE 4421a/b</td> <td>Introduction to Biomaterials Engineering</td> </tr> <tr> <th colspan="2">Civil and Environmental Engineering:</th> </tr> <tr> <td>CEE 3348a/b</td> <td>Project Management and Engineering Cases</td> </tr> <tr> <td>CEE 3362a/b</td> <td>Drinking Water Quality and Treatment</td> </tr> <tr> <td>CEE 4405a/b</td> <td>Air Pollution</td> </tr> <tr> <td>CEE 4418a/b</td> <td>Systems Approach for Civil and Environmental Engineering</td> </tr> <tr> <td>CEE 4458a/b</td> <td>Risk Analysis and Decision Making in Engineering</td> </tr> <tr> <td>CEE 4465a/b</td> <td>Environmental Design for Waste Disposal</td> </tr> <tr> <td>CEE 4477a/b</td> <td>Environmental Applications of Nanotechnology</td> </tr> <tr> <th colspan="2">Electrical and Computer Engineering:</th> </tr> <tr> <td>ECE 3349a/b</td> <td>Introduction of VLSI</td> </tr> <tr> <td>ECE 3375a/b</td> <td>Microprocessors and Microcomputers</td> </tr> <tr> <td>ECE 4436a/b</td> <td>Networking: Principles, Protocols, and Architecture</td> </tr> <tr> <td>ECE 4468a/b</td> <td>Systems Optimization</td> </tr> <tr> <td>SE 3314a/b</td> <td>Computer Networks Applications</td> </tr> <tr> <th colspan="2">Mechanical and Materials Engineering:</th> </tr> <tr> <td>MME 3348a/b</td> <td>Manufacturing Processes</td> </tr> <tr> <td>MME 3379a/b</td> <td>Materials Selection</td> </tr> <tr> <td>MME 3381a/b</td> <td>Kinematics and Dynamics of Machines</td> </tr> <tr> <td>MME 4452a/b</td> <td>Robotics and Manufacturing Automation</td> </tr> <tr> <td>MME 4473a/b</td> <td>Computer Integrated Manufacturing (CIM)</td> </tr> <tr> <td>MME 4487a/b</td> <td>Mechatronic System Design</td> </tr> <tr> <td>MME 4492a/b</td> <td>Production Management for Engineers</td> </tr> </tbody> </table>	Chemical and Biochemical Engineering :		CBE 2290a/b	Fundamentals of Biochemical and Environmental Engineering	CBE 3310a/b	Process Dynamics and Control	CBE 3324a/b	Mass Transfer Operations	CBE 4409a/b	Wastewater Treatment	CBE 4421a/b	Introduction to Biomaterials Engineering	Civil and Environmental Engineering:		CEE 3348a/b	Project Management and Engineering Cases	CEE 3362a/b	Drinking Water Quality and Treatment	CEE 4405a/b	Air Pollution	CEE 4418a/b	Systems Approach for Civil and Environmental Engineering	CEE 4458a/b	Risk Analysis and Decision Making in Engineering	CEE 4465a/b	Environmental Design for Waste Disposal	CEE 4477a/b	Environmental Applications of Nanotechnology	Electrical and Computer Engineering:		ECE 3349a/b	Introduction of VLSI	ECE 3375a/b	Microprocessors and Microcomputers	ECE 4436a/b	Networking: Principles, Protocols, and Architecture	ECE 4468a/b	Systems Optimization	SE 3314a/b	Computer Networks Applications	Mechanical and Materials Engineering:		MME 3348a/b	Manufacturing Processes	MME 3379a/b	Materials Selection	MME 3381a/b	Kinematics and Dynamics of Machines	MME 4452a/b	Robotics and Manufacturing Automation	MME 4473a/b	Computer Integrated Manufacturing (CIM)	MME 4487a/b	Mechatronic System Design	MME 4492a/b	Production Management for Engineers
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