# MODEL ROUTE

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| **School:** | School of Engineering Technology and Applied Science | **Program Number:** | 3402 |
| **Program Title:** | **Software Engineering Technology - Artificial Intelligence** | **Credential:** | ☐ Certificate ☐ Graduate Certificate ☐ Degree<br>☐ Diploma ☑ Advanced Diploma |
| **Program Delivery Mode:** | ☐ Co-Op ☐ Online<br>☐ Fast Track ☐ Hybrid<br>☑ Non Co-op | **Duration :** | ☐ 2 Semesters ☐ 3 Semesters<br>☐ 4 Semesters ☑ 6 Semesters<br>☐ 8 Semesters |
| **Campus:** | **Progress** | | |
| **Intake:** | **Fall 2020 and Winter 2021** | | |

| Course Code | Course Title | Co/Pre Requisite (Course Code) | Lab Hours | Lecture Hours | Field Placement Hours | Course Delivery ODL=Online BLD=Blended HYB = Hybrid | Total Course Hrs (Lab + Lecture + Field) | Weeks (14) | Total Hours |
|---|---|---|---|---|---|---|---|---|---|
| Semester 1 | **Fall 2020 or Winter 2021** | | | | | | | | |
| COMM160/161 | College Communications 1 | | | 3 | | | 3 | 14 | 42 |
| COMP100 | Programming 1 | | 2 | 2 | | | 4 | 14 | 56 |
| COMP120 | Software Engineering Fundamentals | | 2 | 2 | | | 4 | 14 | 56 |
| COMP213 | Web Interface Design | | 4 | | | | 4 | 14 | 56 |
| GNED◈ | General Education Elective | | | 3 | | ODL | 3 | 14 | 42 |
| MATH175 | Functions and Number Systems | | | 3 | | | 3 | 14 | 42 |
| | | | | | | | | **Total** | 294 |
| Semester 2 | **Winter 2021 or Summer 2021** | | | | | | | | |
| COMM170/171 | College Communications 2 | P=COMM160/161 | | 3 | | | 3 | 14 | 42 |
| COMP122 | Introduction to Database Concepts | | 2 | 2 | | | 4 | 14 | 56 |
| COMP123 | Programming 2 | P=COMP100 | 2 | 2 | | | 4 | 14 | 56 |
| COMP125 | Client-Side Web Development | P=COMP100, COMP213 | 2 | 2 | | | 4 | 14 | 56 |
| COMP225◈ | Software Engineering Methodologies 1 | P=COMP100, and, COMP120 or COMP391 | 2 | 2 | | HYB | 4 | 14 | 56 |
| COMP301 | UNIX/Linux Operating Systems | P=COMP100 | 2 | 2 | | | 4 | 14 | 56 |
| MATH185 | Discrete Mathematics | | | 3 | | | 3 | 14 | 42 |
| | | | | | | | | **Total** | 364 |
| Break (Summer 2021) | | | | | | | | | |
| | | | | | | | | | |
| Semester 3 | **Fall 2021** | | | | | | | | |
| COMP228 | Java Programming | P=COMP123 | 2 | 2 | | | 4 | 14 | 56 |
| COMP229 | Web Application Development | P=COMP123 and COMP125 | 2 | 2 | | | 4 | 14 | 56 |
| COMP237 | Introduction to Artificial Intelligence | C=MATH210 P=COMP123 and MATH175 and MATH185 | 2 | 2 | | | 4 | 14 | 56 |
| COMP246 | Software Systems Design | P=COMP123 and COMP225 | 2 | 2 | | | 4 | 14 | 56 |
| GNED500◈ | Global Citizenship: from Social Analysis to Social Action | | | 3 | | ODL | 3 | 14 | 42 |
| MATH210 | Linear Algebra and Statistics | P=MATH175 and MATH185 | 2 | 2 | | | 4 | 14 | 56 |
| | | | | | | | | **Total** | 322 |
| Semester 4 | **Winter 2022** | | | | | | | | |
| COMP214 | Advanced Database Concepts | P=COMP122 | 2 | 2 | | | 4 | 14 | 56 |
| COMP216 | Networking for Software Developers | P=COMP100 | 2 | 2 | | | 4 | 14 | 56 |
| COMP247 | Supervised Learning | P= COMP228 and COMP237 and MATH210 | 2 | 2 | | | 4 | 14 | 56 |
| COMP254 | Data Structures and Algorithms | P=COMP228 | 2 | 2 | | | 4 | 14 | 56 |
| COMP311 | Software Testing and Quality Assurance | P=COMP123 | 2 | 2 | | | 4 | 14 | 56 |
| ENGL253 | Advanced Business Communications | P=COMM170 or COMM171 | | 3 | | | 3 | 14 | 42 |
| | | | | | | | | **Total** | 322 |
| Break (Summer 2022) | | | | | | | | | |
| | | | | | | | | | |
| Semester 5 | **Fall 2022** | | | | | | | | |
| CNET307◈ | IT Project Management | P=COMM170 or COMM 171, and, CNET229 or COMP246 | 1 | 2 | | ODL | 3 | 14 | 42 |
| COMP251 | Big Data Tools for Machine Learning | P=COMP247 and COMP254 | 2 | 2 | | | 4 | 14 | 56 |
| COMP255◈ | Business and Entrepreneurship for Software Engineering Technology | P=COMP225 | 3 | | | ODL | 3 | 14 | 42 |

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| COMP257 | Unsupervised and Reinforcement Learning | P=COMP247 and COMP254 | 2 | 2 | | | 4 | 14 | 56 |
| COMP258 | Neural Networks | P=COMP247 and COMP254 | 2 | 2 | | | 4 | 14 | 56 |
| COMP304 | Mobile Apps Development | P=COMP228 | 2 | 2 | | | 4 | 14 | 56 |
| | | | | | | | | **Total** | 308 |
| Semester 6 | **Winter 2023** | | | | | | | | |
| COMP261 | AI Ethics and Data Governance | P=COMP247 and COMP254 | 1 | 2 | | | 3 | 14 | 42 |
| COMP262 | Natural Language Processing and Recommender Systems | P=COMP247 and COMP254 | 2 | 2 | | | 4 | 14 | 56 |
| COMP263 | Deep Learning | P= COMP258 | 2 | 2 | | | 4 | 14 | 56 |
| COMP264 | Cloud Machine Learning | P = COMP247 | 2 | 1 | | | 3 | 14 | 42 |
| COMP313◈ | Software Development Project 2 | P=COMP231 and COMP303 and COMP304, or, COMP231 and COMP381, or, COMP231 and COMP305 and COMP391, or, COMP246 and COMP258 | 2 | 2 | | HYB | 4 | 14 | 56 |
| EMPS102 | Employment Skills 2 | P=COMM170 or COMM171 | | 2 | | | 2 | 14 | 28 |
| GNED◈ | General Education Elective | | | 3 | | ODL | 3 | 14 | 42 |
| | | | | | | | | **Total** | 322 |
| **Minimum Grade Required: D** | | | | | | | | | |
| | | | | | | | | **Total Program Hours:** | **1932** |
| **C = Co-Requisite; P = Pre-Requisite** | | | | | | | | | |

**Notes:**

◈This course may be offered in one of the following modalities (Online, Hybrid or Blended)