## **MODEL ROUTE** School of Engineering Technology and 3412 School: **Program Number: Applied Science** ☐ Certificate ☐ Graduate Certificate Degree Software Engineering Technology -**Program Title:** Credential: ☐ Centennial College Certificate Diploma ☑ Advanced Diploma **Artificial Intelligence** ☐ Online ✓ Co-Op ☐1 Semesters ☐4 Semesters **Program Delivery** Fast Track ☐ Hybrid **Duration:** 2 Semesters ✓ 6 Semesters Mode: ☐ Non Co-op $\square$ 3 Semesters ■ 8 Semesters Campus: **PROGRESS Department Code:** 3515 Intake: Fall 2021 and Winter 2022 Course Total Course Hrs Field Delivery Co/Pre Requisite Lab Weeks Lecture Course Code Course Title Placement ODL=Online (Lab + Total Hours (Course Code) Hours Hours (14)BLD=Blended Lecture + Hours HYB = Hybrid Field) **Fall 2021 or Winter 2022** Semester 1 COMM160/161 14 42 College Communications 1 3 3 COMP100 Programming 1 2 2 4 14 56 COMP120 Software Engineering Fundamentals 2 2 4 14 56 COMP213 Web Interface Design 14 56 4 4 **General Education Elective GNED**♦ 3 ODL 3 14 42 MATH175 **Functions and Number Systems** 42 3 3 14 Total 294 Winter 2022 or Summer 2022 Semester 2 P=COMM160 or COMM170/171 College Communications 2 3 14 42 COMM161 3 COMP122 Introduction to Database Concepts 2 2 4 14 56 COMP123 P=COMP100 4 Programming 2 2 2 14 56 P=COMP100 and COMP125 Client-Side Web Development COMP213 2 2 4 14 56 P=COMP100, and, COMP225♦ Software Requirements Engineering COMP120 or COMP391 2 2 HYB 4 14 56 COMP301 P=COMP100 56 **UNIX/Linux Operating Systems** 2 2 4 14 MATH185 **Discrete Mathematics** 3 3 14 42 Total 364 Summer 2022 **Break** Fall 2022 Semester 3 COMP228 P=COMP123 2 2 4 14 56 Java Programming P=COMP123 and Web Application Development COMP229 2 2 COMP125 4 14 56 C=MATH210 P=COMP123 and COMP237 Introduction to Artificial Intelligence 2 2 MATH175 and **MATH185** 4 14 56 P=COMP123 and 2 COMP246 Software Systems Design 2 COMP225 4 14 56 P=COMM170/171 minimum"C" grade; COOP321/421� ODL **Employment Preplacement** 1 CGPA 2.5; 80% year 1 courses completed 1 14 14 Global Citizenship: from Social Analysis GNED500◆ 3 to Social Action ODL 3 14 42 P=MATH175 and MATH210 Linear Algebra and Statistics 2 2 MATH185 Δ 14 56 336 Total Work Term 1 Winter 2023 COOP222 Co-op Work Placement 1 Summer 2023 Semester 4 COMP214 **Advanced Database Concepts** P=COMP122 2 4 14 56 COMP216 Networking for Software Developers P=COMP100 2 2 4 14 56 P= COMP228 and COMP247 COMP237 and 2 Supervised Learning 2 MATH210 14 56 4 COMP254 **Data Structures and Algorithms** P=COMP228 2 2 4 14 56 2 2 COMP311 Software Testing and Quality Assurance P=COMP123 4 14 56 P=COMM170 or ENGL253 **Advanced Business Communications** 3 COMM171 3 14 42 Total 322 Work Term 2 Fall 2023 COOP331 Co-op Work Placement 2 Semester 5 Winter 2024

CNET307�	IT Project Management	P=COMM170 or COMM171, and, CNET229 or COMP225	1	2		ODL	3	14	42
COMP255�	Business and Entrepreneurship for Software Engineering Technology	P=COMP225	3			ODL	3	14	42
COMP258	Neural Networks	P=COMP247 and COMP254	2	2			4	14	56
COMP261	Al Ethics and Data Governance	P=COMP247 and COMP254	1	2			3	14	42
COMP264	Cloud Machine Learning	P=COMP247	2	1			3	14	42
COMP304	Mobile Apps Development	P=COMP228	2	2			4	14	56
								Total	280
Work Term 3	Summer 2024								
COOP332	Co-op Work Placement 3								
Semester 6	Fall 2024								
COMP251	Big Data Tools for Machine Learning	P=COMP247 and COMP254	2	2			4	14	56
COMP257	Unsupervised and Reinforcement Learning	P=COMP247 and COMP254	2	2			4	14	56
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
COMP313�	Software Development Project 2	P=COMP231 and COMP303 and COMP304, or, COMP231 and COMP231 and COMP305 and COMP305 and COMP391, or, COMP246 and COMP258	2	2		нүв	4	14	56
GNED❖	General Education Elective			3		ODL	3		42
								Total	322
Minimum Grade Required: D									
Total Program Hours:									1918
C = Co-Requisite; P = Pre-Requisite									

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