

MSIS-INSY-B : Information Systems, MSIS—Bridge (Vancouver)

The Master of Science in Information Systems—Bridge (<https://coe.northeastern.edu/academics-experiential-learning/academic-departments/mgen/ms-insy-bridge/>) (MSIS-Bridge) addresses the needs of the digital revolution by preparing students with non-STEM, nontechnical bachelor's degrees to become information systems professionals. MSIS-Bridge students are the link between business users and technologists. As industries launch into a digitized future, professionals with a clear understanding of how technology can be used to address significant societal challenges are in demand. The MSIS-Bridge program closes the gaps between business management, software engineering, and information technology to help students solve complex real-world issues in business and society. It also upskills and reskills to help individuals or businesses identify organizational skills gaps and create a tactical training plan to fill them with new skills and knowledge. Through specially created and selected core courses, students gain the engineering foundation needed to excel in the classroom and in the IT sector.

Program Requirements

Bridge Coursework

Code	Title	Hours
INFO 5001	Application Modeling and Design	4
INFO 5002	Introduction to Python for Information Systems	4

Core Requirements

Code	Title	Hours
INFO 5100 and INFO 5101	Application Engineering and Development and Lab for INFO 5100	4

Project or Thesis Options

Complete one of the following options:

PROJECT OPTION

Code	Title	Hours
INFO 7976	Directed Study	4

THESIS OPTION

Code	Title	Hours
Complete the following course twice:		8
INFO 7990	Thesis	

In addition to completing the thesis course, students must successfully complete the thesis submission process, including securing Committee and Graduate School of Engineering signatures and submission of an electronic copy of their MS Thesis to ProQuest.

General Information Systems Concentration

Code	Title	Hours
Complete 16 semester hours from any of the courses listed below:		16
CSYE 6225	Network Structures and Cloud Computing	
CSYE 7280	User Experience Design and Testing	
DAMG 7245	Big-Data Systems and Intelligence Analytics	
INFO 6150	Web Design and User Experience Engineering	
INFO 6245	Planning and Managing Information Systems Development	
INFO 6350	Smartphones-Based Web Development	
INFO 7250	Engineering of Big-Data Systems	
INFO 7375	Special Topics in Artificial Intelligence Engineering and Applications	
INFO 7390	Advances in Data Sciences and Architecture	
INFO 7500	Cryptocurrency and Smart Contract Engineering	
INFO 7510	Smart Contract Application Engineering and Development	
INFO 7520	Engineering of Advanced Cryptocurrency Systems	
INFO 7525	Regulatory Aspects of Smart Contract Automation	
INFO 7535	Digital Smart Contracts Product Innovations	
INFO 7610	Special Topics in Natural Language Engineering Methods and Tools	

Electives

Code	Title	Hours
Complete the remaining semester hours from the following:		
CSYE 6225	Network Structures and Cloud Computing	
CSYE 7105	High-Performance Parallel Machine Learning and AI	
CSYE 7280	User Experience Design and Testing	
CSYE 7374	Special Topics in Computer Systems Engineering	
DAMG 6105	Data Science Engineering with Python	
DAMG 6210	Data Management and Database Design	
DAMG 7245	Big-Data Systems and Intelligence Analytics	
DAMG 7275	Advanced Database Management Systems	
DAMG 7350	Systems and Cybersecurity Fundamentals	
DAMG 7370	Designing Advanced Data Architectures for Business Intelligence	
INFO 6105	Data Science Engineering Methods and Tools	
INFO 6150	Web Design and User Experience Engineering	
INFO 6205	Program Structure and Algorithms	
INFO 6215	Business Analysis and Information Engineering	
INFO 6245	Planning and Managing Information Systems Development	
INFO 6250 and INFO 6251	Web Development Tools and Methods and Lab for INFO 6250	
INFO 6255	Software Quality Control and Management	
INFO 6350	Smartphones-Based Web Development	
INFO 7110	High-Performance Coding for Fintech	
INFO 7225	Accounting and Budgetary Systems for Engineers	
INFO 7245	Agile Software Development	
INFO 7250	Engineering of Big-Data Systems	
INFO 7255	Advanced Big-Data Applications and Indexing Techniques	
INFO 7285	Organizational Change and IT	
INFO 7375	Special Topics in Artificial Intelligence Engineering and Applications	
INFO 7385	Managerial Communications for Engineers	
INFO 7390	Advances in Data Sciences and Architecture	
INFO 7500	Cryptocurrency and Smart Contract Engineering	
INFO 7510	Smart Contract Application Engineering and Development	
INFO 7520	Engineering of Advanced Cryptocurrency Systems	
INFO 7525	Regulatory Aspects of Smart Contract Automation	
INFO 7535	Digital Smart Contracts Product Innovations	
INFO 7610	Special Topics in Natural Language Engineering Methods and Tools	

Optional Co-op Experience

Code	Title	Hours
Complete the following. Students must complete ENCP 6000 to qualify for co-op experience:		
ENCP 6000	Career Management for Engineers	1

Program Credit/GPA Requirements

40 total semester hours required (41 with optional co-op)

Minimum 3.000 GPA required