Information Systems, MSIS—Bridge (Arlington)

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

Complete all courses and requirements listed below unless otherwise indicated.

Core Requirements

Code	Title	Hours
INFO 5001	Application Modeling and Design	4
INFO 5002	Introduction to Python for Information Systems	4
INFO 5100 and INFO 5101	Application Engineering and Development and Lab for INFO 5100	4

Restricted Electives

Code	Title	Hours
Complete 12 semester hours from the following:		12
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 7245	Agile Software Development	
INFO 7385	Managerial Communications for Engineers	

Electives

Code	Title	Hours
Complete 16 SH from the Electives list for this program below. (p. 1)		

Program Credit/GPA Requirements

40 total semester hours required
Minimum 3.000 GPA required

Electives

Code	Title	Hours
CSYE 6202	Concepts of Object-Oriented Design with C#	
CSYE 6205	Concepts of Object-Oriented Design with C++	
CSYE 6220	Enterprise Software Design	
CSYE 6225	Network Structures and Cloud Computing	
CSYE 6230	Operating Systems	
CSYE 6305	Introduction to Quantum Computing with Applications	
CSYE 6700	Technical Writing and Professional Development	
CSYE 7105	High-Performance Parallel Machine Learning and AI	
CSYE 7125	Advanced Cloud Computing	
CSYE 7200	Big-Data System Engineering Using Scala	
CSYE 7215	Foundations of Parallel, Concurrent, and Multithreaded Programming	
CSYE 7220	Deployment and Operation of Software Applications	
CSYE 7230	Software Engineering	

CSYE 7270	Building Virtual Environments
CSYE 7374	Special Topics in Computer Systems Engineering
CSYE 7470	Advanced Game Analytics
CSYE 7550	Distributed Intelligent Agents in the Metaverse
CSYE 7990	Thesis
DAMG 6105	Data Science Engineering with Python
DAMG 6210	Data Management and Database Design
DAMG 7105	Intelligent Data Modeling and Presentation for Engineers
DAMG 7245	Big-Data Systems and Intelligence Analytics
DAMG 7250	Big Data Architecture and Governance
DAMG 7275	Advanced Database Management Systems
DAMG 7325	Introduction to Information Technology Auditing
DAMG 7350	Systems and Cybersecurity Fundamentals
DAMG 7370	Designing Advanced Data Architectures for Business Intelligence
DAMG 7374	Special Topics in Data Architecture and Management
INFO 6105	Data Science Engineering Methods and Tools
INFO 6106	Neural Modeling Methods and Tools
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 6660	Business Ethics and Intellectual Property for Engineers
INFO 7110	High-Performance Coding for Fintech
INFO 7205	Advanced Application Engineering Project
INFO 7225	Accounting and Budgetary Systems for Engineers
INFO 7260	Business Process Engineering
INFO 7330	Information Systems for Healthcare Services Delivery
INFO 7374	Special Topics in Information Systems
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 7405	Advances in Engineering Medical Information Systems
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
INFO 7990	Thesis