MSCEI DEGREE REQUIREMENTS FORM (last revised on 09/18/2025)

First Name: _____ Last Name:_____ N number#:_____ NYU Email:_____

The MSCEI degree requires 33 credits to graduate.

Computer Science/Courant Part of the Program

Courant Core Courses: Students must complete the two following courses:

CSCI-GA 2810 Design and Innovation Semester _____ Grade ____ Credits ____

CSCI-GA 2830 Lean Launch Pad Semester _____ Grade ____ Credits ____

CS Requirement A: Mathematical Techniques and Statistics Elective

Course: _____ Semester _____ Grade ____ Credits ____

CS Requirement B: Systems Engineering Elective

Course: _____ Semester _____ Grade ____ Credits ____

Course: _____ Semester _____ Grade ____ Credits ____

CS Requirement C: Applications Elective (maximum of **one** external internship only for 3 credits)

Course: _____ Semester _____ Grade ____ Credits ____

Course: _____ Semester _____ Grade ____ Credits ____

Course: _____ Semester _____ Grade ____ Credits ____

Leonard N. Stern School of Business (Stern) Part of the Program: Students must complete the following four courses (6 credits total)

Stern Requirement A:
COR1-GB 1102 Leadership Semester _____ Grade ____ Credits ____

Stern Requirement B:
COR1-GB 2101 Strategy Semester _____ Grade ____ Credits ____

Stern Requirement C:
MGMT-GB 2129 Entrepreneurship Semester _____ Grade ____ Credits ____

Stern Requirement D:
COR1-GB 2105 Communication Semester _____ Grade ____ Credits ____

Capstone Requirement: Students must complete CSCI-GA 2840 Entrepreneurship Capstone

CSCI-GA 2840 Entrepreneurship Capstone Semester _____ Grade ____ Credits ____

Computer Science Electives

Mathematical Techniques and Statistics

CSCI-GA 1180 Mathematical Techniques for CS Applications
CSCI-GA 2112 Scientific Computing
CSCI-GA 2271 Computer Vision
CSCI-GA 2565 Machine Learning
CSCI-GA 2566 Foundations of Machine Learning
CSCI-GA 2572 Deep Learning
CSCI-GA 2965 Heuristic Problem Solving
CSCI-GA 3033 Advanced Machine Learning
CSCI-GA.3033 Artificial Intelligence in Genomics
CSCI-GA 3033 Bayesian Machine Learning
CSCI-GA 3033 Big Data & ML Systems
CSCI-GA 3033 Complexity
CSCI-GA 3033 Computer Vision
CSCI-GA 3033 Deep Decision Making & Reinforcement Learning
CSCI-GA 3033 Data Science for Healthcare
CSCI-GA 3033 Deep Generative Models
CSCI-GA 3033 Embodied Learning & Vision
CSCI-GA 3033 Encrypted Computation
CSCI-GA 3033 Generative Models & Decision Making
CSCI-GA 3033 Introduction to Computer Vision
CSCI-GA 3033 Introduction to Cryptography
CSCI-GA 3033 Learning with Large Language & Vision Models
CSCI-GA 3033 Mathematical Foundations of Deep Learning & LLM
CSCI-GA 3033 Quantum Computation
CSCI-GA 3033 Randomized Algorithms
CSCI-GA 3033 Reinforcement Learning with Foundation Models
CSCI-GA 3033 Space Robotics
CSCI-GA 3033 Statistical NLP
CSCI-GA 3033 Vision Meets Machine Learning
CSCI-GA 3210 Introduction to Cryptography
CSCI-GA 3520 Honors Analysis of Algorithms ***permission required**

Systems Engineering

CSCI-GA.2110 Programming Languages ***permission required**
CSCI-GA 2130 Compiler Construction
CSCI-GA 2434 Advanced Database Systems
CSCI-GA 2436 Realtime & Big Data Analytics
CSCI-GA 2437 Big Data Application Development
CSCI-GA 2620 Networks & Mobile Systems
CSCI-GA 2621 Distributed Systems
CSCI-GA 2630 Foundations of Networks & Mobile Systems
CSCI-GA 2820 DevOps & Agile Methodologies
CSCI-GA 3033 Abstract Interpretation
CSCI-GA 3033 Big Data & ML Systems
CSCI-GA 3033 Cryptocurrencies & Decentralized Ledgers
CSCI-GA 3033 Efficient AI Computing: Algorithm & Implementation
CSCI-GA 3033 Efficient AI & Hardware Accelerator Design
CSCI-GA 3033 Multicore Processors: Architecture & Programming
CSCI-GA 3033 Programming Parallel Algorithms
CSCI-GA 3110 Honors Programming Languages ***permission required**

Applications

CSCI-GA 2270 Computer Graphics
CSCI-GA 2271 Computer Vision
CSCI-GA 2274 Advanced Computer Graphics
CSCI-GA 2433 Database Systems
CSCI-GA 2436 Realtime & Big Data Analytics
CSCI-GA 2437 Big Data Application Development
CSCI-GA 2560 Artificial Intelligence
CSCI-GA 2565 Machine Learning
CSCI-GA 2566 Foundations of Machine Learning
CSCI-GA 2590 Natural Language Processing
CSCI-GA 2965 Heuristic Problem Solving
CSCI-GA.3033 Artificial Intelligence in Genomics
CSCI-GA 3033 Bayesian Machine Learning
CSCI-GA 3033 Big Data Science
CSCI-GA 3033 Big Data & ML Systems
CSCI-GA 3033 Blockchain & Its Applications
CSCI-GA 3033 Cloud & Machine Learning
CSCI-GA 3033 Cloud Computing
CSCI-GA 3033 Complexity
CSCI-GA 3033 Computer Vision for Science & Engineering
CSCI-GA 3033 Cryptocurrencies & Decentralized Ledgers
CSCI-GA 3033 Data Science for Healthcare
CSCI-GA 3033 Deep Decision Making & Reinforcement Learning
CSCI-GA 3033 Efficient AI Computing: Algorithm & Implementation
CSCI-GA 3033 Embodied Learning & Vision
CSCI-GA 3033 Encrypted Computation
CSCI-GA 3033 Generative Models & Decision Making
CSCI-GA 3033 Geometric Modeling
CSCI-GA 3033 GPUs: Architecture & Programming
CSCI-GA 3033 High Performance Machine Learning
CSCI-GA 3033 Introduction to Computer Vision
CSCI-GA 3033 Introduction to Cryptography
CSCI-GA 3033 Introduction to Deep Learning & LLM
CSCI-GA 3033 Learning with Large Language & Vision Models
CSCI-GA 3033 Machine Learning for Healthcare
CSCI-GA 3033 Mathematical Foundations of Deep Learning & LLM
CSCI-GA 3033 Multicore Processors: Architecture & Programming
CSCI-GA 3033 Predictive Analytics
CSCI-GA 3033 Protein Design
CSCI-GA 3033 Public Interest Technology
CSCI-GA 3033 Quantum Computation
CSCI-GA 3033 Randomized Algorithms
CSCI-GA 3033 Reinforcement Learning with Foundation Models
CSCI-GA 3033 Search Engine Architecture
CSCI-GA 3033 Social Networks
CSCI-GA 3033 Space Robotics
CSCI-GA 3033 Statistical NLP
CSCI-GA 3033 Technologies for Finance
CSCI-GA 3033 Virtual Reality
CSCI-GA 3033 Vision Meets Machine Learning
CSCI-GA 3205 Applied Cryptography & Network Security