MSCS DEGREE REQUIREMENTS FORM (before Fall 2024) last revised (04/14/2025)

First Name:	Last Name:		N number:		_NYU Email:
Required: 36 credits of a	approved coursework				
• 21 credits - standard	l graduate CS classroom-bas	ed courses.			
Course	-	Semester	Grade	Credits:	
Course		Semester	Grade	Credits:	
Course		Semester	Grade	Credits:	
Course		Semester	Grade	Credits:	
Course		Semester	Grade	Credits:	
Course		Semester	Grade	Credits:	
Course		Semester	Grade	Credits:	
Course	ge 2 under Requirement C).	Semester	Grade	Credits:	
Course		Semester	Grade	Credits:	
Course		Semester	Grade	Credits:	
graduate courses. A approval. Course	t most 6 credits of external i	nternship. Re Semester	levant graduate	courses and exCredits:	xternal internships require DGS
Course		Semester	Grade	Credits:	
Course		Semester	Grade	Credits:	
Requirement A: A stud	lent must take the three foun	dational cour	ses and maintain	n a GPA of 2.6	667 or better in the courses:
CSCI-GA 1170-001	Fundamental Algorithms S	Semester	Grade	_Credits:	Notes
CSCI-GA 2110-001	Programming Languages S	Semester	Grade	Credits:	Notes
CSCI-GA 2250-001	Operating Systems	Semester	Grade	_Credits:	Notes
Requirement B: A stud	lent must pass ONE course i	n TWO of th	e following four	r designated a	pplication areas
Course		Semester	Grade_	Credits:	
Course		Semester	Grade	Credits:	
Requirement C: A stud list). Alternatively, subj advanced lab.	lent must complete a designa ect to requirements and prior	ated capstone approval of	course with the the DGS, a stude	grade of B (3) ent may comp	.0) or better (see page 2 for the lete a master's thesis or a capstone

Course _____ Grade ___ Credits: ____

Graphics

- Advanced Computer Graphics
- Advanced Computer Vision
- Computational Geometry
- Computer Graphics
- Computer Vision
- Computer Vision for Science and Engineering
- Geometric Modeling

Computation for Science and Society

- Applied Cryptography and Network Security
- Bioinformatics and Genomics
- Blockchain and Its Applications
- Convex and Nonsmooth Optimization
- Cryptocurrencies and Decentralized Ledgers
- Data Analytics and Visualization in Healthcare
- Data Science for Health
- Encrypted Computation
- Financial Software Projects
- High Performance Computing
- Immersed Boundary Method
- Introduction to Agent-Based Modeling
- Introduction to Cryptography
- Linear Programming
- Machine Learning for Healthcare
- Monte Carlo Methods
- Music Software Projects

Intelligent Systems

- Advanced Computer Vision
- Advanced Machine Learning
- Advanced Topics in Natural Language Processing
- Artificial Intelligence
- Bayesian Machine Learning
- Big Data and ML Systems
- Big Data Science
- Big Data: Large Scale Machine Learning
- Cloud and Machine Learning
- Computer Vision
- Computer Vision for Science and Engineering
- Conceptual Gaps in Modern Machine Learning
- Data Analytics and Visualization in Healthcare
- Data Mining
- Data Science for Health
- Deep Decision Making & Reinforcement Learning
- Deep Generative Models
- Deep Learning
- Efficient AI and Hardware Accelerator Design
- Embodied Learning and Vision
- Emerging Topics in Natural Language Processing
- Foundations of Deep Learning Theory
- Foundations of Machine Learning

Databases

- Advanced Database Systems
- Big Data
- Big Data Application Development
- Database Systems

Capstone

- Advanced Computer Graphics
- Advanced Database Systems
- Big Data and ML Systems
- Cloud and Machine Learning
- Cloud Computing
- Compiler Construction
- Cryptography of Blockchains
- Deep Decision Making & Reinforcement Learning
- Deep Learning
- Distributed Systems
- Embodied Learning and Vision
- Geometric Modeling

- Graphics Processing Units (GPUs): Architecture and Programming
- Integrating Machine Learning to Computer Vision
- Introduction to Computer Vision
- Learning with Large Language and Vision Models
- Social Multiplayer Games
- Virtual Reality
- Vision Meets Machine Learning
- Nonlinear Optimization
- Numerical Methods I & II
- Numerical Optimization
- Practical Computer Security
- Public Interest Technology
- Quantum Computation
- Randomized Numerical Linear Algebra
- Responsible Data Science
- Scientific Computing
- Security and Privacy
- Social Networks
- Speech Recognition
- Stochastic Modeling and Uncertainty Quantification in Complex Systems

Mathematical Foundations of Deep Learning & Large Language Models

Graphics Processing Units (GPUs): Architecture & Programming

- Technologies for Finance
- Topics in Digital Media
- Topics in Numerical Analysis
- Values Embodied in Information & Communications Technology
- Heuristic Problem Solving
- High Performance Machine Learning
- Integrating Machine Learning to Computer Vision
- Introduction to Data Science
- Introduction to Deep Learning Systems
- Introduction to Machine Learning

Machine Learning for Healthcare

Mathematics of Deep Learning

Natural Language Processing

Probabilistic Graphical Models

Responsible Data Science

Social Multiplayer Games

Robot Motion Planning

Web Search Engines

Distributed Systems

Learning with Large Language and Vision Models

Reinforcement Learning with Foundation Models

Statistical Natural Language Processing

Vision Meets Machine Learning

Programming Parallel Algorithms

Realtime & Big Data Analytics

High Performance Computing

Networks & Mobile Systems

Monte Carlo Methods

Software Engineering

Virtual Reality

Technologies for Finance

Information Technology Projects

High Performance Machine Learning

Multicore Processors: Architecture & Programming

Reinforcement Learning with Foundation Models

Logic in Computer ScienceMachine Learning

Predictive Analytics

Protein Design