

**MSCS DEGREE REQUIREMENTS FORM (30 CREDITS)** *last revised (11/26/2025)*

First Name: \_\_\_\_\_ Last Name: \_\_\_\_\_ N number: \_\_\_\_\_ NYU Email: \_\_\_\_\_

**Required: 30 credits with Capstone course (effective Fall 2024)**

- **21 credits** – Standard graduate CS classroom-based courses

Course _____	Semester _____	Grade _____	Credits: _____
Course _____	Semester _____	Grade _____	Credits: _____
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Course _____	Semester _____	Grade _____	Credits: _____
Course _____	Semester _____	Grade _____	Credits: _____
Course _____	Semester _____	Grade _____	Credits: _____
Course _____	Semester _____	Grade _____	Credits: _____

- **6 credits** – related electives from CS, Math and Data Science classroom-based courses (3 or 6 credits)

Course _____	Semester _____	Grade _____	Credits: _____
Course _____	Semester _____	Grade _____	Credits: _____

- Remaining **3 credits** - credits transferred from graduate study in CS; external internship; and relevant graduate courses. At most 3 credits of external internship. Relevant graduate courses and external internships require DGS approval.

Course _____	Semester _____	Grade _____	Credits: _____
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**Requirement A:** A student must take the three foundational courses and maintain a GPA of 2.667 or higher in the courses:

CSCI-GA 1170-001 Fundamental Algorithms	Semester _____	Grade _____	Credits: _____	Notes _____
CSCI-GA 2110-001 Programming Languages	Semester _____	Grade _____	Credits: _____	Notes _____
CSCI-GA 2250-001 Operating Systems	Semester _____	Grade _____	Credits: _____	Notes _____

**Requirement B:** A student must pass **ONE** of the following four designated application areas computation for Computation Science and Society; Graphics; Intelligent Systems; and Databases (see page 2 for the list of application areas):

Course _____	Semester _____	Grade _____	Credits: _____
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**Requirement C:** A student must complete a Capstone project course with the grade of B (3.0) or better (see page 2 for the list of Capstone courses marked in asterisk\*)

Course _____	Semester _____	Grade _____	Credits: _____
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## Application Courses

CSCI-GA.2112 Scientific Computing  
CSCI-GA.2130 Compiler Construction\*  
CSCI-GA.2270 Computer Graphics  
CSCI-GA.2271 Computer Vision  
CSCI-GA.2274 Advanced Computer Graphics\*  
CSCI-GA.2420 Numerical Methods I  
CSCI-GA.2421 Numerical Methods II  
CSCI-GA.2433 Database Systems  
CSCI-GA.2434 Advanced Database Systems\*  
CSCI-GA.2436 Realtime & Big Data Analytics  
CSCI-GA.2437 Big Data Application Development  
CSCI-GA.2520 Bioinformatics & Genomes  
CSCI-GA.2560 Artificial Intelligence  
CSCI-GA.2565 Machine Learning  
CSCI-GA.2566 Foundations of Machine Learning  
CSCI-GA.2568 Big Data  
CSCI-GA.2572 Deep Learning\*  
CSCI-GA.2590 Natural Language Processing  
CSCI-GA.2591 Advanced Topics in Natural Language Processing  
CSCI-GA.2620 Networks & Mobile Systems\*  
CSCI-GA.2621 Distributed Systems\*  
CSCI-GA.2750 Nonlinear Optimization  
CSCI-GA.2945 Convex & Nonsmooth Optimization  
CSCI-GA.2945 High Performance Computing\*  
CSCI-GA.2945 Immersed Boundary Method  
CSCI-GA.2945 Monte Carlo Methods\*  
CSCI-GA.2945 Numerical Optimization  
CSCI-GA.2965 Heuristic Problem Solving  
CSCI-GA.3033 Advanced Computer Vision  
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 Big Data Science  
CSCI-GA.3033 Big Data: Large Scale Machine Learning  
CSCI-GA.3033 Blockchain & Its Applications  
CSCI-GA.3033 Building LLM Reasoners  
CSCI-GA.3033 Cloud & Machine Learning\*  
CSCI-GA.3033 Cloud Computing\*  
CSCI-GA.3033 Computer Vision for Science & Engineering  
CSCI-GA.3033 Conceptual Gaps in Modern Machine Learning  
CSCI-GA.3033 Cryptocurrencies & Decentralized Ledgers  
CSCI-GA.3033 Cryptography of Blockchains\*  
CSCI-GA.3033 Data Analytics & Visualization in Healthcare  
CSCI-GA.3033 Data Science for Health  
CSCI-GA.3033 Deep Decision Making & Reinforcement Learning\*  
CSCI-GA.3033 Deep Generative Models  
CSCI-GA.3033 Efficient AI Computing: Algorithm and Implementation  
CSCI-GA.3033 Efficient AI & Hardware Accelerator Design  
CSCI-GA.3033 Embodied Learning & Vision\*  
CSCI-GA.3033 Emerging Topics in Natural Language Processing  
CSCI-GA.3033 Encrypted Computation  
CSCI-GA.3033 Foundations of Deep Learning Theory  
CSCI-GA.3033 Geometric Modeling\*  
CSCI-GA.3033 Graphics Processing Units (GPUs): Architecture & Programming\*  
CSCI-GA.3033 High Performance Machine Learning\*  
CSCI-GA.3033 Integrating Machine Learning to Computer Vision  
CSCI-GA.3033 Introduction to Computer Vision  
CSCI-GA.3033 Introduction to Deep Learning & LLM based Gen. AI Systems  
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 Mathematics of Deep Learning  
CSCI-GA.3033 Multicore Processors: Architecture & Programming\*  
CSCI-GA.3033 Practical Computer Security  
CSCI-GA.3033 Predictive Analytics  
CSCI-GA.3033 Programming Parallel Algorithms  
CSCI-GA.3033 Protein Design  
CSCI-GA.3033 Public Interest Technology  
CSCI-GA.3033 Quantum Computation  
CSCI-GA.3033 Randomized Numerical Linear Algebra  
CSCI-GA.3033 Reinforcement Learning with Foundation Models\*  
CSCI-GA.3033 Security & Privacy  
CSCI-GA.3033 Social Networks  
CSCI-GA.3033 Statistical Natural Language Processing  
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  
CSCI-GA.3210 Introduction to Cryptography  
CSCI-GA.3812 Information Technology Projects\*  
DS-GA 1001 Introduction to Data Science  
DS-GA.1017 Responsible Data Science

\* Capstone courses