MSCS DEGREE REQUIREMENTS FORM PRIOR TO FALL 2009 *last revised (5/21/10)*

Name: _____   **ID #:**_____

Requirement A: 36 credits of approved coursework

- **21** credits - standard CS graduate classroom-based 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: _____

- **6** credits - standard graduate CS & Math courses; independent study; MS thesis (no external internships) Independent study and master's thesis require DGS approval.

  Course _____ Semester_____ Grade_____ Credits: _____

  Course _____ Semester_____ Grade_____ Credits: _____

- Remaining **9** credits from any of above or: credits transferred from graduate study in CS; external internship; and relevant graduate courses. At most, 6 credits of external internship. Relevant graduate courses and external internships require DGS approval.

  Course _____ Semester_____ Grade_____ Credits: _____

  Course _____ Semester_____ Grade_____ Credits: _____

  Course _____ Semester_____ Grade_____ Credits: _____

Requirement B: A student must pass the Core Exam. Alternatively, a student may instead choose to write a master's thesis if the following conditions are satisfied: the student has a cumulative GPA of 3.75 after six courses; the student has completed all three core courses with at least a B+ in each; the student has found a full-time faculty member to serve as a thesis advisor; and the student has received approval from the DGS.

Option: _____   **Completion date:** _____

Requirement C: A student must pass one course in two of following four designated application areas.

  Course _____ Semester_____ Grade_____ Credits: _____

  Course _____ Semester_____ Grade_____ Credits: _____

Graphics
- ✳ Advanced Computer Graphics
- ✳ Advanced Computer Vision
- ✳ Computational Geometry
- ✳ Computational Photography
- ✳ Computer Games
- ✳ Computer Graphics
- ✳ Computer Vision

- ✳ Computer Vision and Tracking
- ✳ Experiments in Motion Capture
- ✳ Geometric Modeling
- ✳ Interactive Shape Modeling
- ✳ Multimedia
- ✳ User Interfaces
- ✳ Visualization

Computation for Science and Society
✶ Advanced Topics in Numerical Analysis: Convex & Nonsmooth Optimization
✶ Advanced Cryptography
✶ Applied Cryptography & Network Security
✶ Bioinformatics
✶ Bioinformatics and Genomics
✶ Computational Biology
✶ Computational Fluid Dynamics
✶ Computational PDEs
✶ Computational Systems Biology
✶ Cryptographic Tools in Deployed Systems: What Does the Padlock Mean?
✶ Financial Computing I
✶ Financial Computing Projects
✶ Financial Software Projects
✶ High Performance Scientific Computing
✶ Immersed Boundary Method
✶ Information & Communication Technology for Developing Countries
✶ Introduction to Cryptography
✶ Introduction to Finance for CS
✶ Linear Programming
✶ Monte Carlo Methods
✶ Numerical Methods I
✶ Numerical Methods II
✶ Numerical Methods for Time-Dependant PDEs
✶ Scientific Computing
✶ Speech Recognition
✶ Topics in Numerical Analysis
✶ Values Embodied in Information and Communications Technology

Intelligent Systems
✶ Advanced Computer Vision
✶ Advanced Topics in Natural Language Processing
✶ Artificial Intelligence
✶ Computer Vision
✶ Data Mining
✶ Data Warehousing and Mining
✶ Deductive Verification of Reactive Systems
✶ Foundations of Machine Learning
✶ Heuristic Problem Solving
✶ Information Science of Marketing
✶ Logic in Computer Science
✶ Machine Learning
✶ Mobile Robots
✶ Natural Language Processing
✶ Optimization in Machine Learning
✶ Programming Semantics, Analysis & Verification by Abstract Interpretation
✶ Topics in Automated Deduction
✶ Web Search Engines

Databases
✶ Advanced Database Systems
✶ Data Mining
✶ Data Warehousing
✶ Database Systems
✶ Distributed Storage Systems

Requirement D: A student must pass **ONE** of the following designated large scale programming project courses.

Course _____ Semester_____ Grade_____ Credits: _____

✶ Advanced Database Systems
✶ Compiler Construction
✶ Distributed Storage Systems
✶ Distributed Systems
✶ Finance Projects
✶ Heuristic Problem Solving
✶ High Perform Computer Architecture
✶ Honors Compilers
✶ Info Tech Projects
✶ Interactive Shape Modeling
✶ Networks and Distributed Systems
✶ Production Quality Software
✶ Software Engineering
✶ What if a Computer Lies?