MSCS DEGREE REQUIREMENTS FORM PRIOR TO FALL 2009 *last revised (6/3/10)*

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
- ✷Motion Capture for Gaming & Urban Sensing
- ✷ 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 Fluids
✷ 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
✷ Formal Methods
✷ 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 Comp Architecture
✷ Honors Compilers
✷ Info Tech Projects
✷ Interactive Shape Modeling
✷ Networks and Distributed Systems
✷ Production Quality Software
✷ Software Engineering
✷ What if a Computer Lies?