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: ____
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  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       * Computer Vision and Tracking       * Visualization
* Advanced Computer Vision         * Experiments in Motion Capture
* Computational Geometry           * Geometric Modeling
* Computational Photography        * Interactive Shape Modeling
* Computer Games                   * Motion Capture for Gaming & Urban Sensing
* Computer Graphics                * Multimedia
* Computer Vision                  * User Interfaces
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 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
- Database Warehousing
- Distributed Storage Systems

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

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<th>Course</th>
<th>Semester</th>
<th>Grade</th>
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<td>Advanced Database Systems</td>
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<td>Heuristic Problem Solving</td>
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<td>High Perform Comp Architecture</td>
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<td>Interactive Shape Modeling</td>
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<td>Production Quality Software</td>
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<td>What if a Computer Lies?</td>
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