# Computer Science (MS)

## Master of Science Degree Requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
<th>Counts towards</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Core Courses</strong></td>
<td></td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Select a minimum of one course per category under &quot;Core Courses&quot; listed below</td>
<td></td>
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</tr>
<tr>
<td></td>
<td><strong>Required Courses</strong></td>
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<td>7</td>
</tr>
<tr>
<td>CSC 600</td>
<td>Computer Science Graduate Orientation</td>
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<td></td>
</tr>
<tr>
<td>CSC 695</td>
<td>Master's Thesis Research</td>
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<tr>
<td></td>
<td><strong>Elective Courses</strong></td>
<td></td>
<td>9</td>
</tr>
<tr>
<td>CSC 500 or 700-level courses</td>
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<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Minor Courses, CSC Graduate Electives or Restricted Electives</strong></td>
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<td>9</td>
</tr>
<tr>
<td>&quot;Minor Courses, CSC Graduate Electives or Restricted Electives&quot; will be approved in conjunction with the academic committee</td>
<td></td>
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<tr>
<td></td>
<td><strong>Total Hours</strong></td>
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<td>31</td>
</tr>
</tbody>
</table>

### Core Courses

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
<th>Counts towards</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Theory Category</strong></td>
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<td>6</td>
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<tr>
<td>CSC 503</td>
<td>Computational Applied Logic</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>CSC 505</td>
<td>Design and Analysis Of Algorithms</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>CSC 512</td>
<td>Compiler Construction</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>CSC 514</td>
<td>Foundations of Cryptography</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CSC 565</td>
<td>Graph Theory</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>CSC 579</td>
<td>Introduction to Computer Performance Modeling</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>CSC 580</td>
<td>Numerical Analysis I</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td><strong>Systems Category</strong></td>
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<tr>
<td>CSC 501</td>
<td>Operating Systems Principles</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>CSC 506</td>
<td>Architecture Of Parallel Computers</td>
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<td>3</td>
</tr>
</tbody>
</table>

### Accelerated Bachelor's/Master's Degree Requirements

The Accelerated Bachelors/Master's (ABM) degree program allows exceptional undergraduate students at NC State an opportunity to complete the requirements for both the Bachelor’s and Master’s degrees at an accelerated pace. These undergraduate students may double count up to 12 credits and obtain a non-thesis Master’s degree in the same field within 12 months of completing the Bachelor’s degree, or obtain a thesis-based Master’s degree in the same field within 18 months of completing the Bachelor’s degree.

This degree program also provides an opportunity for the Directors of Graduate Programs (DGPs) at NC State to recruit rising juniors in their major to their graduate programs. However, permission to pursue an ABM degree program does not guarantee admission to the Graduate School. Admission is contingent on meeting eligibility requirements at the time of entering the graduate program.

### Faculty

**Full Professors**

Tiffany M. Barnes  
Donald L. Bitzer  
Rada Yuryevna Chirkova  
Jon Doyle  
Rudra Dutta  
Edward F. Gehringer  
Xiaohui Gu  
Christopher Graham Healey  
James C. Lester II  
Timothy James Menzies  
Rainer Frank Mueller  
Harilaos George Perros
Michael A. Rappa
Douglas S. Reeves
Gregg Evan Rothermel
Georgios N. Rouskas
Nagiza Faridovna Samatova
Carla Diane Savage
Xipeng Shen
Munindar P. Singh
Matthias F. M. Stallmann
Mladen Alan Vouk
Laurie A. Williams

**Associate Professors**
Dennis R. Bahler
Min Chi
William H. Enck
Vincent W. Freeh
Khaled Abdel Hamid Harfoush
Steffen Heber
Arnab Harish Jhala
Noboru Matsuda
K. Anyanwu Ogan
David L. Roberts
Donald R. Sheehy
Ranga Raju Vatsavai
Benjamin Allen Watson

**Assistant Professors**
Anupam Das
Guoliang Jin
Alexandros Kapravelos
Xu Liu
Collin Francis Lynch
Christopher Robin Martens
John-Paul William Ore
Christopher Joseph Parnin
Thomason William Price
Bradley Galloway Reaves
Alessandra Scafuro
Muhammad Shahzad
Kathryn Thomasset Stolee
Ruozhou Yu

**Practice/Research/Teaching Professors**
Bita Akram
Suzanne M. Balk
Tzvetelina Battestilli
Ignacio Xavier Dominguez
Patrick A. Dreher
Sarah Smith Heckman
Jamie Allison Jennings
Shuyin Jiao
Jason Tyler King
Jessica Young Schmidt
David Brian Sturgill

**Lecturers**
Ketchiozo Thierry Wandji

**Emeritus Faculty**
Wu-show Chou
Edward Willmore Davis Jr.
Robert Joseph Fornaro
Thomas Lynn Honeycutt
David Franklin McAllister
Woodrow Robbins
William James Stewart
Alan Lee Tharp
David J. Thuente

**Adjunct professor**
Robert Loftin