# 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><strong>Core Courses</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Select a minimum of one course per category under &quot;Core Courses&quot; listed below</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Required Courses</strong></td>
<td></td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>CSC 600</td>
<td>Computer Science Graduate Orientation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CSC 695</td>
<td>Master's Thesis Research</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Elective Courses</strong></td>
<td></td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>CSC 500 or 700-level courses</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Minor Courses, CSC Graduate Electives or Restricted Electives</strong></td>
<td></td>
<td>9</td>
<td></td>
</tr>
<tr>
<td></td>
<td>&quot;Minor Courses, CSC Graduate Electives or Restricted Electives&quot; will be approved in conjuction with the academic committee</td>
<td></td>
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</tr>
<tr>
<td><strong>Total Hours</strong></td>
<td></td>
<td>31</td>
<td></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>Select minimum of two courses, one from each category</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Theory Category</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CSC 503</td>
<td>Computational Applied Logic</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>CSC 505</td>
<td>Design and Analysis Of Algorithms</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>CSC 512</td>
<td>Compiler Construction</td>
<td>3</td>
<td></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>3</td>
<td></td>
</tr>
<tr>
<td>CSC 579</td>
<td>Introduction to Computer Performance Modeling</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>CSC 580</td>
<td>Numerical Analysis I</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td><strong>Systems Category</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CSC 501</td>
<td>Operating Systems Principles</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>CSC 506</td>
<td>Architecture Of Parallel Computers</td>
<td>3</td>
<td></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

**Department Head**

Gregory E. Rothermel, *Professor*

**Distinguished University Research Professor**

Donald L. Bitzer

**Distinguished Professors**

Tiffany M. Barnes

Miaden A. Vouk, *Vice Chancellor for Research Development*

Laurie A. Williams, *Co-Director - NCSU Science of Security Lablet*
Distinguished University Professor
James C. Lester II, *Director of the Center for Educational Informatics*
Michael A. Rappa, *Director, Institute for Advanced Analytics*

Alumni Distinguished Graduate Professor
Georgios N. Rouskas, *Director of Graduate Programs*
Munindar P. Singh, *Co-Director - NCSU Science of Security Lablet*

Full Professor
Min Chi
Rada Y. Chirkova
Huaiyu Dai
Rudra Dutta, *Associate Department Head*
William H. Enck, *Director of Wolfpack Security & Privacy Research (WSPR) Laboratory*
Edward F. Gehringer
Xiaohui (Helen) Gu
Christopher G. Healey, *Goodnight Distinguished Professor Analytics, Institute for Advanced Analytics*
Steffen Heber
Timothy J. Menzies
R. Frank Mueller
Xipeng Shen
Matthias F. M. Stallmann
R. Raju Vatsavai

Associate Professors
Wesley K. G. Assunção
Marcelo d’Amorim
Zhishan Guo
Khaled Harfoush
Arnav H. Jhala
Alexandros Kapravelos
Sandeep K. Kuttal
Xu Liu
Collin F. Lynch
Noboru Matsuda
Kemafor Anyanwu Ogan
Bradley G. Reaves
David L. Roberts, *Assistant Director of Undergraduate Programs*
Alessandra Scafuro
Muhammad Shahzad
Donald R. Sheehy
Kathryn T. Stolee
Sharma Vallin Thankachan
Benjamin A. Watson
Wuje Wen

Assistant Professors
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Veronica M. Cateté
Anupam Das
Shiyan Jiang
Jung-Eun Kim
Chin Ho Lee
Jialia Li
Jianqing Liu
Xiaorui Liu
Yuchen Liu
John-Paul Ore
Thomason W. Price
Dongkuan (DK) Xu
Dominik Wermke
Bowen Xu
Chenhan Xu
Man Ki Yoon
Ruozhou Yu

Teaching Professor
Sarah S. Heckman, *Director of Undergraduate Programs*
**Teaching Associate Professors**
Kimberly J. Titus
Tzvetelina (Lina) Battestilli
Jamie A Jennings
Jason T. King
Chandrika Satyavolu
Jessica Y. Schmidt
David B. Sturgill

**Teaching Assistant Professors**
Suzanne M. Balik
Abida Haque
Caio Batista de Melo
Alexander Card
Ignacio X. Dominguez
Adam Gaweda
Shuyin Jiao
Sterling M. McLeod

**Lecturers**
B. Jasmine Adams, *Director of Undergraduate Advising*
Margaret Heil, *Director of Senior Design Center*
ToniAnn Marini, *Assistant Director of Undergraduate Advising*

**Research Professor**
Franc Brglez

**Assistant Research Professor**
Bita Akram

**Director**
Leslie Rand-Pickett, *Graduate Career Services*

**Emeritus Faculty**
Dennis R. Bahler