## Computer Science (PhD)

### Doctor of Philosophy in Computer Science (PhD)

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
<th>Counts towards</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>12</td>
<td></td>
</tr>
</tbody>
</table>

**Core Courses**

Select four courses - two from each category - within "Core Courses" listed below.

**Required Courses**

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
<th>Counts towards</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSC 600</td>
<td>Computer Science Graduate Orientation</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>CSC 890</td>
<td>Doctoral Preliminary Exam</td>
<td>3</td>
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</tbody>
</table>

CSC 700-level Courses (two or more)

**Elective / Research Courses**

"Elective / Research Courses" are approved in conjunction with the academic committee.

**Total Hours**

72

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### Core Courses

<table>
<thead>
<tr>
<th>Code</th>
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<th>Hours</th>
<th>Counts towards</th>
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</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>12</td>
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</tbody>
</table>

**Theory Category**

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
<th>Counts towards</th>
</tr>
</thead>
<tbody>
<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>3</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>CSC 707</td>
<td>Automata, Languages and Computability Theory</td>
<td>3</td>
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</table>

**Systems Category**

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
<th>Counts towards</th>
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</thead>
<tbody>
<tr>
<td>CSC 501</td>
<td>Operating Systems Principles</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

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### Faculty

**Department Head**

Gregory E. Rothermel, *Professor*

---

**Distinguished University Research Professor**

Donald L. Bitzer

---

**Distinguished Professors**

Tiffany M. Barnes

Mladen 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

**Assistant Professors**

Samira Mirbagher Ajorpaz
Veronica M. Cateté
Anupam Das
Shiyan Jiang
Jung -Eun Kim
Chin Ho Lee
Jiajia Li
Jianqiq 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
Wu-show Chou
Jon Doyle
Edward W. Davis, Jr.
Robert J. Fornaro
Thomas L. Honeycutt
David F. McAllister
Harry Perros
Douglas S. Reeves
Woodrow Robbins

Carla D. Savage
William J. Stewart
Alan L. Tharp
David J. Thuente

Adjunct Faculty
Ram Chillarege
Aldo Dagnino
Steven Hunter
Chris Martens
Wookhee Min
Peng Ning
Christopher Parmin
Injong Rhee
Robert St. Amant
Xiaogang (Cliff) Wang
Tao Xie