# 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><strong>Core Courses</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Select four courses - two from each category within “Core Courses” listed below</td>
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<tr>
<td></td>
<td><strong>Required Courses</strong></td>
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</tr>
<tr>
<td>CSC 600</td>
<td>Computer Science Graduate Orientation</td>
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<tr>
<td>CSC 890</td>
<td>Doctoral Preliminary Exam</td>
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<tr>
<td>CSC 700-level Courses (two or more)</td>
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<tr>
<td></td>
<td><strong>Elective / Research Courses</strong></td>
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<td></td>
<td>“Elective / Research Courses” are approved in conjunction with the academic committee</td>
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<tr>
<td></td>
<td><strong>Total Hours</strong></td>
<td>72</td>
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</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>Select four courses with two from each category</strong></td>
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<tr>
<td></td>
<td><strong>Theory Category</strong></td>
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<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>
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<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>
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<tr>
<td>CSC 707</td>
<td>Automata, Languages and Computability Theory</td>
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<td></td>
<td><strong>Systems Category</strong></td>
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<tr>
<td>CSC 501</td>
<td>Operating Systems Principles</td>
<td>3</td>
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## Required Courses

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSC 506</td>
<td>Architecture Of Parallel Computers</td>
<td>3</td>
</tr>
<tr>
<td>CSC 510</td>
<td>Software Engineering</td>
<td>3</td>
</tr>
<tr>
<td>CSC 520</td>
<td>Artificial Intelligence I</td>
<td>3</td>
</tr>
<tr>
<td>or CSC 720</td>
<td>Artificial Intelligence II</td>
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<tr>
<td>CSC 540</td>
<td>Database Management concepts and Systems</td>
<td>3</td>
</tr>
<tr>
<td>CSC 561</td>
<td>Principles of Computer Graphics</td>
<td>3</td>
</tr>
<tr>
<td>CSC 570</td>
<td>Computer Networks</td>
<td>3</td>
</tr>
<tr>
<td>or CSC 573</td>
<td>Internet Protocols</td>
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<tr>
<td>CSC 574</td>
<td>Computer and Network Security</td>
<td>3</td>
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</table>

## Elective / Research Courses

- CSC 501 Operating Systems Principles

## 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
Arnav 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

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

**Practice/Research/Teaching Professors**
Bita Akram
Suzanne M. Balik