Computer Networking (MS): Internship Concentration

Degree Requirements

This concentration will require an Internship of at least four months duration (maximum of seven months) and the student to take 3 credit hours of ECE 650 and obtain a Satisfactory grade. An internship of at least four calendar months duration would require that it span at least one semester and possibly part of summer. The credits for ECE 650 would be taken during the semester that includes the internship. The student would be considered as being enrolled full time during that semester.

A student would not enroll in this concentration in their first semester. They would switch to it in a later semester if they secure a suitable internship. Per normal CPT rules, International students studying on an F-1 visa would have to be present on a US campus for two full semesters (a full academic year), and present at NC State for one semester, before using CPT privileges to take an internship. If a student switches to this concentration but does not start the internship, they will switch back to the original plan.

This will be a concentration only for on-campus students. Students enrolled in our distance education – Engineering Online (EOL) - option will not be eligible.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
<th>Counts towards</th>
</tr>
</thead>
<tbody>
<tr>
<td>Core Courses</td>
<td></td>
<td>9</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Select at least three courses from &quot;Core Courses&quot; listed below</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Theory Courses</td>
<td></td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Select at least one course from &quot;Theory Courses&quot; listed below</td>
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<td></td>
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<tr>
<td>Required Courses</td>
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<td>4</td>
<td></td>
</tr>
<tr>
<td>CSC 600</td>
<td>Computer Science Graduate Orientation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>or ECE 600</td>
<td>ECE Graduate Orientation</td>
<td></td>
<td></td>
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<tr>
<td>Concentration Requirement</td>
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<td></td>
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</tr>
<tr>
<td>ECE 650</td>
<td>Internship</td>
<td></td>
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</tr>
<tr>
<td>Additional Courses</td>
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</tr>
<tr>
<td>&quot;Additional Courses&quot; are approved in conjunction with the academic committee</td>
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<td></td>
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</tr>
<tr>
<td>Thesis Option Courses</td>
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<td></td>
</tr>
<tr>
<td>CSC 630</td>
<td>Master's Independent Study (Non-Thesis Option)</td>
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<td></td>
</tr>
<tr>
<td>or ECE 634</td>
<td>Individual Studies In Electrical Engineering</td>
<td></td>
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</tbody>
</table>

ECE 650 requires that a written report be submitted and accepted by an ECE faculty examiner as meeting the standards required by the course. The written report should cover both technical and non-technical aspects of what the student did and learned during the internship. The report should not disclose company proprietary information.

Core Courses

Select at least three courses from the following:

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSC/ECE 570</td>
<td>Computer Networks</td>
<td>3</td>
</tr>
<tr>
<td>CSC/ECE 573</td>
<td>Internet Protocols</td>
<td>3</td>
</tr>
<tr>
<td>CSC/ECE 574</td>
<td>Computer and Network Security</td>
<td>3</td>
</tr>
<tr>
<td>CSC/ECE 575</td>
<td>Introduction to Wireless Networking</td>
<td>3</td>
</tr>
<tr>
<td>CSC/ECE 577</td>
<td>Switched Network Management</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Hours 31

Theory Courses

Select a minimum of one course below:

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSC 505</td>
<td>Design and Analysis Of Algorithms</td>
<td>3</td>
</tr>
<tr>
<td>CSC 565</td>
<td>Graph Theory</td>
<td>3</td>
</tr>
<tr>
<td>CSC 579</td>
<td>Introduction to Computer Performance Modeling</td>
<td>3</td>
</tr>
<tr>
<td>or ECE 579</td>
<td>Introduction to Computer Performance Modeling</td>
<td>3</td>
</tr>
<tr>
<td>CSC/ECE 776</td>
<td>Design and Performance Evaluation of Network Systems and Services</td>
<td>3</td>
</tr>
<tr>
<td>ECE 766</td>
<td>Signal Processing for Communications &amp; Networking</td>
<td>3</td>
</tr>
<tr>
<td>CSC/ECE 777</td>
<td>Telecommunications Network Design</td>
<td>3</td>
</tr>
</tbody>
</table>
### Faculty

#### Full Professors

B. Jayant Baliga  
Mesut E. Baran  
Salah M. A. Bedair  
Subhashish Bhattacharya  
Alper Yusuf Bozkurt  
Gregory T. Byrd  
Rada Yuryevna Chirkova  
Mo-Yuen Chow  
Huaïyu Dai  
William Rhett Davis  
Alexandra Duel-Hallen  
Michael James Escuti  
Do Young Eun  
Brian Allan Floyd  
Paul D. Franzon  
John J. Grainger  
Edward Grant  
Robert Wendell Heath  
Brian L Hughes  
Iqbal Husain  
Ki Wook Kim  
Frederick Anthony Kish Jr.  
Robert Michael Kolbas  
Hamid Krim  
Ning Lu  
Srdjan Miodrag Lukic  
Leda Lunardi  
Thomas Kenan Miller III  
Veena Misra  
Rainer Frank Mueller  
John F. Muth  
H. Troy Nagle Jr.  
Arne Nilsson  
Omer Oralkan  
Mehmet Cevdet Ozturk  
Harlaos George Perros  
Douglas Stephen Reeves  
Eric Rotenberg  
Mihail Lorin Sichitiu  
Daniel D. Stancil  
Michael B. Steer  
J K Townsend  
James Tuck  
Daryoosh Vashaee  
John Victor Veliadis  
Ioannis Viniotis  
Wenyue Wang  
Huiyang Zhou

#### Associate Professors

Jacob James Adams  
Dror Zeev Baron  
Michela Becchi  
Aranya Chakrabortty  
Alexander G. Dean  
Ismail Guvenc  
Khaled Abdel Hamid Harfoush  
Michael W. Kudenov  
Edgar Lobaton  
Zeljko Pantic  
Nuria Gonzalez Prelcic  
David Ricketts  
Cranos M. Williams  
Chengying Xu

#### Assistant Professors

Aydin Aysu  
Amay Jairaj Bandodkar  
Michael Daniele
Yaoyao Jia
Shih-Chun Lin
Spyridon Pavlidis
Bradley Galloway Reaves
Muhammad Shahzad
Wenyuan Tang
Chau-Wai Wong
Tianfu Wu

**Practice/Research/Teaching Professors**
Gregory Edward Bottomley
Laura J. Bottomley
James Paul Dieffenderfer
Robert Joseph Evans
Rachana Ashok Gupta
Douglas C. Hopkins
Steven Wade Hunter
Steven D. Jackson
Bongmook Lee
David Lee Lubkeman
Robert Dwight Oden Jr.
Hatice Orun Ozturk
Veety, Elena Nicolescu
Tania Milkova Paskova
Andrew J. Rindos III
Elena Nicolescu Veety
Leonard Wilson White
Donna G. Yu
Wensong Yu

**Emeritus Faculty**
Winser E. Alexander
George F. Bland
David H. Covington
Tildon H. Glisson Jr.
John R. Hauser