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>9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Select at least three courses from “Core Courses” listed below</td>
<td></td>
<td></td>
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</tbody>
</table>

| Theory Courses | 3 | | |
| Select at least one course from “Theory Courses” listed below | | | |

| Required Courses | 4 | | |
| CSC 600 | Computer Science Graduate Orientation or ECE 600 ECE Graduate Orientation | | |
| Select at least one 700-level course | | | |

| Concentration Requirement | 3 | | |
| ECE 650 Internship | | | |

| Additional Courses | 12 | | |
| “Additional Courses” are approved in conjunction with the academic committee | | | |

| Thesis Option Courses | | | |
| CSC 630 | Master’s Independent Study (Non-Thesis Option) or ECE 634 Individual Studies In Electrical Engineering | | |

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>
<th>Counts towards</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSC/ECE 570</td>
<td>Computer Networks</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>CSC/ECE 573</td>
<td>Internet Protocols</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>CSC/ECE 574</td>
<td>Computer and Network Security</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>CSC/ECE 575</td>
<td>Introduction to Wireless Networking</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>CSC/ECE 577</td>
<td>Switched Network Management</td>
<td>3</td>
<td></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>
<th>Counts towards</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSC 505</td>
<td>Design and Analysis Of Algorithms</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>or ECE 579</td>
<td>Introduction to Computer Performance Modeling</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CSC/ECE 776</td>
<td>Design and Performance Evaluation of Network Systems and Services</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>ECE 766</td>
<td>Signal Processing for Communications &amp; Networking</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>CSC/ECE 777</td>
<td>Telecommunications Network Design</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>
Faculty
B. Jayant Baliga
Mesut E. Baran
Salah M. A. Bedair
Subhashish Bhattacharya
Alper Yusuf Bozkurt
Gregory T. Byrd
Rada Yuryevna Chirkova
Mo-Yuen Chow
Huaiyu 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
Jonathan Wierer
Huiyang Zhou
Jacob James Adams
Dror Zeev Baron
Michela Becchi
Aranya Chakrabortty
Alexander G. Dean
Qing Gu
Ismail Guvenc
Khaled Abdel Hamid Harfoush
Michael W. Kudenov
Edgar Lobaton
Zeljko Pantic
Nuria Gonzalez Prelcic
David Ricketts
Nitin Sharma
Cranos M. Williams
Chengying Xu
Aydin Aysu
Amay Jairaj Bandodkar
Michael Daniele
Yaoyao Jia
Shih-Chun Lin