BS-MS Program

Informational Seminar

Steve Herzog, Coordinator of Undergrad Programs
Rhonda McElroy, Asst. Director of CS Grad Programs
The BS-MS & BS-MCS Programs combines two degrees -

- B.S. in Computer Science
- M.S. (with thesis) in Computer Science or M.C.S. (non-thesis) in Computer Science
Why Stay One More Year?

With a 1-year Investment

Your Potential Starting Salary may increase roughly $11,000!
What’s the Difference

- BS-MS degree is a research based master’s degree that can lead onto the PhD program.

- BS-MCS degree is a non-research program – straight coursework – for students interested in industry positions.
BS-MS Program Eligibility

- Students must have at least one year left of their undergraduate program.
- Students must be enrolled in the Illinois Computer Science program through the College of Engineering.
- Students must maintain superior academic performance – 3.5 or higher GPA.
BS-MCS Program Eligibility

- Students must have at least one year left of their undergraduate program.
- Students must be enrolled in the Illinois Computer Science program through the College of Engineering.
- Students must maintain an excellent academic performance – 3.0 or higher GPA.
BS-MCS Program Eligibility

GREAT NEWS!

Students who have a technical GPA of 3.2 and overall GPA of 3.0 will receive automatic admission by submitting just the application.
BS-MCS Program Eligibility

No Worries...

Students with a technical GPA less than 3.2 but at least 3.0 and whose overall GPA is 3.0 may apply through the application process administered by the Department’s Graduate Academic Office.
Application Process for both Programs

- Complete the application form.
- Submit three letters of recommendation.
- Complete a statement of purpose.
  - Include your name, UIN number, date of birth on each page.
- Complete a "Jump Trading Scholars Program" statement *(only for applicants who want to be considered for this scholarship)*
BS-MCS Application Process

For BS-MCS Applicants Only!

If you hold a 3.2 technical GPA and an overall 3.0 GPA, then you just need to

Submit the application to inform us that you want to complete this joint program!
Admission Review Process

The Admissions Committee evaluates applicants on the following criteria:

- Demonstration of strong communication skills through written application materials and letters of recommendations.
- Strong letters of recommendations that highlight applicant's research (for BS-MS only), leadership, and communication skills as well as academic ability.
- Informative "Statement of Purpose“ that explains applicant's background, experiences, career goals, research interests (BS-MS only), research experiences and abilities (BS-MS only), leadership, and attraction to the program.
Application Deadline

March 15, 2014

- Applicants must submit their completed application by 4:45 p.m. to the Academic Office, 1210 Siebel Center.

- Applicants who do not have a completed application by the deadline will not be considered for that term's program entry.

NOTE: There is only a fall term entry.
## Program Requirements – B.S. Part

This part is the same for both the BS-MS and BS-MCS

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BS Credit Hours</td>
<td>120</td>
</tr>
<tr>
<td>Shared Coursework between BS and MS Degree</td>
<td>9 - 12</td>
</tr>
<tr>
<td>Total Credit Hours Required for BS Degree Conferral</td>
<td>129+</td>
</tr>
</tbody>
</table>

Must maintain a **3.0 undergrad GPA**
### Program Requirements – M.S. Part

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MS Credit Hours</td>
<td>32</td>
</tr>
<tr>
<td>Shared Coursework between BS and MS Degree</td>
<td>9 - 12</td>
</tr>
<tr>
<td>Additional Coursework Hours Required</td>
<td>16 - 19</td>
</tr>
<tr>
<td>Thesis Credit Hours (599)</td>
<td>4</td>
</tr>
<tr>
<td><strong>Total Credit Hours Required for MS Degree Conferral</strong></td>
<td><strong>32</strong></td>
</tr>
</tbody>
</table>

**Must maintain a 3.0 undergrad GPA**
# Program Requirements – M.C.S. Part

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MCS Credit Hours</td>
<td>32</td>
</tr>
<tr>
<td>Shared Coursework between BS and MS Degree</td>
<td>9 - 12</td>
</tr>
<tr>
<td>Additional Coursework Hours Required</td>
<td>20-23</td>
</tr>
<tr>
<td><strong>Total Credit Hours Required for MCS Degree Conferral</strong></td>
<td>32</td>
</tr>
</tbody>
</table>

**Must maintain a 3.0 undergrad GPA**
## Breadth Requirement

- MS – Must complete three different courses, each from a different core area
- MCS – Must complete four different courses, each from a different core area
- Grades in “Core” coursework must be a B- or higher

### Core Area

<table>
<thead>
<tr>
<th>Architecture, Compilers, Parallel Computing</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS 426, 431, 433, 435, 462, 483, 526, 533, 536</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Artificial Intelligence</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS 440, 443, 446, 543, 546, 548, 549</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Database, Information Systems, Bioinformatics</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS 410, 411, 412, 466, 511, 512</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Formal Methods, Programming Languages, Software Engineering</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS 421, 422, 427, 428, 476, 477, 522, 528, 524, 527, 576</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Graphics/HCI</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS 417, 418, 419, 465, 467, 519, 565</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Systems and Netowrking (includes real-time systems &amp; security)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS 414, 423, 424, 425, 438, 439, 461, 463, 523, 525, 538, 541, 545, 563</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Scientific Computing</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS 450, 457, 482, 554, 555, 556, 558</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Theoretical Computer Science</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS 475, 571, 573, 574, 579, 583</td>
</tr>
</tbody>
</table>
MS students will complete their three “core” courses while in their senior year. These courses will be shared between the BS and MS degree.

MCS students will complete three out of the four “core” courses while in their senior year. These courses will be shared between the BS and MCS degree.

Remaining master’s coursework will be completed as a graduate student once you are official admitted to the Graduate College.
### Sample Degree Audits

#### Student Worksheet for the BS-MS Degree Program

<table>
<thead>
<tr>
<th>Name</th>
<th>COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>BS Credit Hours</td>
<td>120</td>
</tr>
<tr>
<td>Shared Coursework between BS and MS Degree</td>
<td>8 - 12</td>
</tr>
<tr>
<td>Total Credit Hours Required for BS Degree Conferred</td>
<td>139+ Must have 3.0 GPA</td>
</tr>
<tr>
<td>MS Credit Hours</td>
<td>32</td>
</tr>
<tr>
<td>Shared Coursework between BS and MS Degree</td>
<td>9 - 12</td>
</tr>
<tr>
<td>Additional Coursework Hours Required</td>
<td>16 - 19</td>
</tr>
<tr>
<td>Thesis Credit Hours (090)</td>
<td>4</td>
</tr>
<tr>
<td>Total Credit Hours Required for MS Degree Conferred</td>
<td>32 Must have a 3.0 GPA</td>
</tr>
</tbody>
</table>

**Breadth Requirement- 9-12 HRS - B- or Higher CREDIT HRS GRADE COMMENTS**

- Architecture, Compilers, Parallel Computing
- CS 425, 431, 433, 435, 467, 493, 526, 533, 556
- Artificial Intelligence
- CS 440, 443, 448, 543, 545, 549
- Database, Information Systems, Bioinformatics
- CS 410, 411, 413, 415, 483, 511, 512
- Formal Methods, Programming Languages, Software Engineering
- CS 421, 422, 431, 432, 438, 439, 441, 463, 483, 523, 533, 538, 541, 545, 563
- Graphics/HCI
- CS 417, 418, 419, 465, 493, 513, 565
- Systems and Networking (includes real-time systems & security)
- CS 414, 423, 424, 425, 438, 439, 461, 463, 483, 523, 525, 538, 541, 545, 563
- Scientific Computing
- CS 450, 457, 462, 554, 555, 556, 558
- Theoretical Computer Science
- CS 476, 571, 573, 574, 576, 583

**Total Credit Hours from Distribution Coursework - 9 to 12 credit hours**

#### Student Worksheet for the BS-MCS Degree Program

<table>
<thead>
<tr>
<th>Name</th>
<th>COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>BS Credit Hours</td>
<td>120</td>
</tr>
<tr>
<td>Shared Coursework between BS and MCS Degree</td>
<td>9 - 12</td>
</tr>
<tr>
<td>Total Credit Hours Required for BS Degree Conferred</td>
<td>128+ Must have 3.0 GPA</td>
</tr>
<tr>
<td>MCS Credit Hours</td>
<td>32</td>
</tr>
<tr>
<td>Shared Coursework between BS and MCS Degree</td>
<td>8 - 12</td>
</tr>
<tr>
<td>Additional Coursework Hours Required</td>
<td>20 - 22</td>
</tr>
<tr>
<td>Total Credit Hours Required for MCS Degree Conferred</td>
<td>32 Must have a 3.0 GPA</td>
</tr>
</tbody>
</table>

**Breadth Requirement- 12-16 HRS - B- or Higher CREDIT HRS GRADE COMMENTS**

- Architecture, Compilers, Parallel Computing
- CS 425, 431, 433, 435, 483, 493, 526, 533, 556
- Artificial Intelligence
- CS 440, 443, 448, 543, 545, 549
- Database, Information Systems, Bioinformatics
- CS 410, 411, 413, 415, 483, 511, 512
- Formal Methods, Programming Languages, Software Engineering
- CS 421, 422, 423, 424, 425, 438, 439, 461, 463, 483, 523, 533, 538, 541, 545, 563
- Graphics/HCI
- CS 417, 418, 419, 465, 493, 513, 565
- Systems and Networking (includes real-time systems & security)
- CS 414, 423, 424, 425, 438, 439, 461, 463, 483, 523, 525, 538, 541, 545, 563
- Theoretical Computer Science
- CS 476, 571, 573, 574, 576, 578

**Total Credit Hours from Distribution Coursework - 12 to 16 credit hours**

**ADVANCED COURSES (12 HRS) (CS 500-599 or 598) CREDIT HRS GRADE COMMENTS**

One 500-level course must be the second course from one of the three chosen core areas above in the “Breadth Requirement”. The other two courses may be chosen from any 500-level CS course (500-599 or 558).

**Total Credit Hours from Advanced Courses - 12 credit hours**

**ADDITIONAL COURSEWORK (4 to 7 hours) CREDIT HRS GRADE COMMENTS**

| Note: up to 4 credit hours of CS 591 may count towards the additional coursework. |
| Total Credit Hours from Additional Courses - 4 to 7 credit hours |

| Deposit of MS Thesis |
| Yes | No |

Degree requirements must be completed within 5 years for both degrees (up to 4 yrs for BS and 1 yr for MS).
Feedback: Current BS-MS Students

- The program is great if your main goal is to cut down the time needed to get a graduate degree.
- It may not be the best way to build your research if you want to obtain a Ph.D. in the future due to limited time.
- Work closely with the advisors to ensure you are on track.
- It is an intense program. You are completing courses and working on research all at the same time.
- Hard to explore all the opportunities of graduate school if you want to go on for a Ph.D.
- Start your research early! Writing a thesis is a new experience and can be difficult.
- Plan your coursework wisely so you don’t end up with a full load your last semester when you are writing your thesis.
For more information, visit

BS-MS Program -
http://cs.illinois.edu/current-students/graduate-students/bs-ms-5-year-program

BS-MCS Program –
http://cs.illinois.edu/current-students/graduate-students/bs-mcs-5-year-program

Email: admission@cs.illinois.edu
Call: 333-4197