BA and BS Degrees in Informatics
Effective Fall 2020

Degree Requirements
All informatics students complete the informatics core, one (BA) or two (BS) electives, a statistics course, and a set of courses in their chosen cognate area. Required number of semester hours for the major depends on the choice of cognate area. Students are expected to possess an appropriate background in mathematics when starting the program -- meaning the completion of a college-level course in trigonometry, finite mathematics or pre-calculus, or a satisfactory score on the math placement exam. The second course in the informatics core, CS 2110 Programming for Informatics, makes this pre-requisite explicit.

Informatics Core
The informatics core consists of six required computing courses (at least 18 s.h.) that emphasize data manipulation, databases, and networking. It provides more applications-oriented content than the traditional computer science curriculum yet is designed to offer students a sound basis in underlying computer sciences themes and techniques.

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>CS 1110 Introduction to Computer Science</td>
<td>3 s.h.</td>
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<tr>
<td>CS 2110 Programming for Informatics</td>
<td>4 s.h.</td>
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<tr>
<td>CS 2420 Databases for Informatics</td>
<td>3 s.h.</td>
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<tr>
<td>(alternate: MSCI 3200 Applications Database Management</td>
<td>3 s.h.</td>
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<tr>
<td>CS 2520 Human-Computer Interaction</td>
<td>3 s.h.</td>
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<tr>
<td>CS 2620 Networking and Security for Informatics</td>
<td>3 s.h.</td>
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<tr>
<td>CS 3910 Informatics Project</td>
<td>3 s.h.</td>
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Informatics Course Sequence

Note: A solid arrow indicates a clear prerequisite course that must be taken before the next course; a dotted arrow indicates a course that must be taken before or with the other course.
Informatics Electives

BA students must complete at least one course (3 s.h.) and BS students must complete at least two (6 s.h.) from a list of approved computing informatics electives. Course selection must be approved by a faculty advisor or by the informatics program director. In addition to the courses listed below, students may have additional choices from the Department of Electrical and Computer Engineering, the Department of Management Sciences, and the School of Library and Information Science; consult the informatics program director for additional choices.

- CS 3210 Programming Languages and Tools (with departmental approval)  3 s.h.
- CS 3980 Topics in Computer Science I (with departmental approval)  3 s.h.
- MSCI 4220 Database Management II  3 s.h.
- CS 4980 Topics in Computer Science II (with departmental approval)  3 s.h.
- Any CS course numbered 4000 or above  3 s.h.

Statistics Course

BA and BS students must complete one introductory statistics course. Some cognates require a specific statistics course or an alternative statistics course not on this list (e.g., SOC 2160 Quantitative Data Analysis for the sociology area of the human-computer interaction cognate). Students should consult with their advisor to choose a statistics course appropriate for their cognate area.

One of these (3-4 s.h.):
- STAT 1020 Elementary Statistics and Inference  3 s.h.
- STAT 1030 Statistics for Business  4 s.h.
- STAT 2010 Statistical Methods and Computing  3 s.h.
- STAT 2020 Probability and Statistics for the Engineering and Physical Sciences  3 s.h.
- SOC 2160 Quantitative Data Analysis  3 s.h.
- STAT 3120 Probability and Statistics  4 s.h.
- STAT 3510 Biostatistics  3 s.h.
- STAT 5543 Introduction to Statistical Methods  3 s.h.

Cognate Areas

Informatics majors can choose their cognate area from one of the following fields:

- Fine and Applied Arts: Art, Music (BA)
- Human-Computer Interaction (BA)
- Linguistics (BA)
- Social Sciences: Social Informatics, Economics, Geoinformatics (BA)
- Bioinformatics (BS)
- Health Informatics (BA) and Medical Informatics (BS)
- Media (BA)
- Individualized cognates (BA, BS)

The requirements for each cognate area are listed on the Department of Computer Science website:  https://www.cs.uiowa.edu/undergraduate-programs/informatics-ba-bs/requirements