Complete all courses listed below unless otherwise indicated. Also complete any corequisite labs, recitations, clinicals, or tools courses where specified.

### Required Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS 2500</td>
<td>Fundamentals of Computer Science 1</td>
<td>5</td>
</tr>
<tr>
<td>CS 2501</td>
<td>Lab for CS 2500 (A grade of C– or higher is required)</td>
<td></td>
</tr>
<tr>
<td>CS 2510</td>
<td>Fundamentals of Computer Science 2</td>
<td>5</td>
</tr>
<tr>
<td>CS 2511</td>
<td>Lab for CS 2510 (A grade of C– or higher is required)</td>
<td></td>
</tr>
<tr>
<td>IS 2000</td>
<td>Principles of Information Science</td>
<td>4</td>
</tr>
</tbody>
</table>

### Information Science Electives

Complete two from the following: 8

- IS 2000 to IS 4989
- CS 3200 Database Design
- One course from CCIS Meaningful Minors (see below)

### CCIS Meaningful Minors

The concept of “CCIS Meaningful Minors” allows students the chance to personalize a computer or information science minor to meet individual academic needs and interests. Students may take one elective related to computation or information from a pre-approved list of courses offered across the university rather than from within CCIS. This allows students to integrate the minor with a course in their own major or with a course in another area of interest. Students may of course choose to take all electives in the minor within CCIS if they wish.

#### Bouve Health Sciences:

- HINF 5101: Introduction to Health Informatics and Health Information Systems
- HINF 5102: Data Management in Healthcare
- HINF 5300: Personal Health Interface Design and Development
- HINF 5301: Personal Health Technologies: Field Deployment and System Evaluation

#### Arts, Media, and Design:

- ARTD 2200: Interactive Narrative
- ARTD 2360: Photo Basics
- ARTD 2370: Animation Basics
- ARTD 2380: Video Basics
- ARTG 2260: Programming Basics
- ARTG 2400: Interaction Design 1: Responsive
- ARTG 3250: Physical Computing
- ARTG 3352: Interaction Design Basics
- ARTG 3451: Information Design 1
- ARTG 3700: Interaction Design 2: Mobile
- ARTG 4552: Information Design 2
- ARTG 5100: Information Design Studio 1—Principles
- ARTG 5110: Information Design History
- ARTG 5120: Information Design Research Methods
- COMM 2105: Social Networks
- GAME 4355: Game Scripting

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>JRNL 3610</td>
<td>Digital Storytelling and Social Media</td>
</tr>
<tr>
<td>JRNL 3615</td>
<td>Advanced Digital Storytelling</td>
</tr>
<tr>
<td>JRNL 5214</td>
<td>The Online Newsroom Experience</td>
</tr>
<tr>
<td>MSCR 2500</td>
<td>Digital Media Research</td>
</tr>
<tr>
<td>MUST 1220</td>
<td>Introduction to Music Technology</td>
</tr>
<tr>
<td>MUST 3421</td>
<td>Digital Audio Processing</td>
</tr>
</tbody>
</table>

#### Computer and Information Science:

- CS 1100: Computer Science and Its Applications
- CS 1800: Discrete Structures
- IS 1500: Introduction to Web Development

#### Engineering:

- BIOE 2365: Bioengineering Measurement, Experimentation, and Statistics
- EECE 2160: Embedded Design Enabling Robotics
- EECE 3324: Computer Architecture and Organization
- EECE 4542: Advanced Engineering Algorithms
- EECE 5639: Computer Vision
- EECE 5640: High-Performance Computing
- EECE 5644: Introduction to Machine Learning and Pattern Recognition
- IE 4615: Expert Systems and Neural Networks

#### Science:

- BIOL 2301: Genetics and Molecular Biology
- BIOL 3405: Neurobiology
- BIOL 5587: Comparative Neurobiology
- BINF 6200: Bioinformatics Programming
- BINF 6308: Bioinformatics Computational Methods 1
- BINF 6309: Bioinformatics Computational Methods 2
- CHEM 5638: Molecular Modeling
- ENVR 3300: Geographic Information Systems
- ENVR 3302: Introduction to Remote Sensing
- ENVR 4563: Advanced Spatial Analysis
- LING 3450: Syntax
- LING 3452: Semantics
- MATH 1260: Math Fundamentals for Games
- MATH 2250: Programming Skills for Mathematics
- MATH 2331: Linear Algebra
- MATH 2341: Differential Equations and Linear Algebra for Engineering
- MATH 3530: Numerical Analysis
- MATH 4535: Mathematical Topics in Computer Vision
- MATH 4606: Mathematical and Computational Methods for Physics
- PHYS 1130: Computing, Data, and Science
- PHYS 4606: Mathematical and Computational Methods for Physics
Information Science, Minor

**PSYC 3452**  Sensation and Perception
**PSYC 3458**  Biological Psychology
**PSYC 3464**  Psychology of Language
**PSYC 3466**  Cognition

Social Science and Humanities:

**ANTH 3418**  Wired/Unwired: Cybercultures and Technopolitics
**ECON 1250**  Game Theory in the Social Sciences
**ECON 3560**  Applied Econometrics
**ECON 4653**  Mathematics for Economics
**ENGL 3340**  Technologies of Text
**PHIL 1105**  Science and Pseudoscience
**PHIL 1114**  Reason, Risk, and Evidence
**PHIL 1115**  Introduction to Logic
**PHIL 1145**  Technology and Human Values
**PHIL 1215**  Symbolic Logic
**PHIL 2001**  Ethics and Evolutionary Games
**PHIL 4510**  Philosophy of Science
**PHIL 4515**  Advanced Logic
**PHIL 4520**  Philosophy of Logic
**PPUA 6302**  Information Design and Visual Analytics
**SOCL 3485**  Environment, Technology, and Society
**SOCL 4528**  Computers and Society

D’Amore-McKim School of Business:

**ACCT 3403**  Accounting Information Systems
**ENTR 3410**  Entrepreneurship and Intrapreneurship in Innovation-Driven Markets
**ENTR 4501**  Business Planning for Technology Ventures
**FINA 4608**  Advanced Financial Strategy
**MISM 2301**  Management Information Systems
**MISM 3305**  Information Resource Management
**MISM 3404**  Data Communications
**MKTG 3401**  Marketing Research
**MKTG 3501**  Marketing Analytics
**MKTG 4508**  Digital Marketing

Statistics Courses:

**CRIM 3700**  Criminal Justice Statistics
**ECON 2350**  Statistics
**ECON 5105**  Math and Statistics for Economists
**ENVR 2500**  Biostatistics
**IE 3412**  Engineering Probability and Statistics
**INSH 2104**  Statistics in the Social and Political World
**MATH 2280**  Statistics and Software
**MATH 2285**  Introduction to Multisample Statistics
**MATH 3081**  Probability and Statistics
**MATH 4581**  Statistics and Stochastic Processes
**MATH 5104**  Basics and Probability and Statistics
**MATH 5105**  Basics of Statistics and Stochastic Processes
**ME 2315**  Statistical and Economical Analyses in Engineering
**MGSC 2301**  Business Statistics

**PHMD 3450**  Research Methodology and Biostatistics
**PHTH 2210**  Foundations of Biostatistics
**POLS 2400**  Quantitative Techniques
**PPUA 6301**  Introduction to Computational Statistics
**PSYC 2320**  Statistics in Psychological Research
**SOCL 2320**  Statistical Analysis in Sociology

**GPA Requirement**

20 semester hours required

2.000 GPA required in the minor