# MS Bioinformatics Sample Schedule
## Thesis Option

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<th>Fall</th>
<th>Spring</th>
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<tr>
<td><strong>Year 1</strong></td>
<td>RCRS (UNIV 370) (0 cr hrs)</td>
<td>Proteomics (CHEM 465) (3 cr hrs)</td>
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<td></td>
<td>Bioinformatics (BIOL 488) (3 cr hrs)</td>
<td>Bioinformatics Research (4 cr hrs)</td>
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<td>Bioinformatics Elective (3 cr hrs)</td>
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<td></td>
<td>Bioinformatics Research Design (BIOI 494) (1 cr hr)</td>
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<td><strong>Total Credit Hours: 7</strong></td>
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<td><strong>Year 2</strong></td>
<td>Advanced Bioinformatics (BIOI 500) (2 cr hrs)</td>
<td>Quant Bioinformatics (STAT 437) (4 cr hrs)</td>
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<td></td>
<td>Bioinformatics Seminar (BIOI 501) (1 cr hr)</td>
<td>Computational Biology (COMP 483) (4 cr hrs)</td>
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<td>Bioinformatics Research (BIOI 499) (4 cr hrs)</td>
<td>Thesis (BIOI 595) (1 cr hr)</td>
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<td><strong>Total Credit Hours: 7</strong></td>
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<td><strong>Total Credit Hours: 9</strong></td>
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### Core Courses:
- Bioinformatics
- Proteomics
- Computational Biology
- Quantitative Methods in Bioinformatics
- Advanced Bioinformatics
- Bioinformatics Seminar
- Bioinformatics Research Design
- Bioinformatics Research
- Thesis Supervision

### Electives:
One elective is required.

**Biology**
- Genomics (BIOL 495)
- Human Molecular Genetics (BIOL 495)
- Metagenomics (BIOL 495)
- Microbiology (BIOL 488)
- Molecular Genetics (BIOL 482)
- Scientific Logic and Critical Thinking (BIOL 495)

**Chemistry**
- Computational Biochemistry (CHEM 435)
- Enzymology (CHEM 465)
- Introduction to Spectroscopy (CHEM 455)
- Medicinal Chemistry (CHEM 425)
- Plant Biochemistry (CHEM 465)
- Protein Crystallography (CHEM 465)

**Computer Science**
- Algorithms and Complexity (COMP 460)
- Computational Neuroscience (COMP 486)
- Data Warehousing and Data Mining
- Database Programming (COMP 453)
- Distributed Systems (COMP 439)
- Intermediate O0 Development (COMP 413)
- Theory of Programming Languages (COMP 471)

**Statistics**
- Applied Regression Analysis (STAT 408)
- Categorical Data Analysis (STAT 410)
- Statistical Design and Analysis of Experiments (STAT 407)
- Stochastic Processes (STAT 406)
- Topics in Biostatistics (STAT 436)