## Division of Biological Sciences: Course Prerequisites & Restrictions

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<tr>
<th>Course</th>
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### BILD

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### BIBC

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*The following duplicate courses may be used to satisfy prerequisites: Chem 114A in lieu of BIBC 100; Chem 114B in lieu of BIBC 102; BENG 120 in lieu of Chem 40A and Chem 40B.

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**BIEB 140** Biodiversity
**BIEB 143** Computer Modeling in Evolution & Ecology
**BIEB 146** Genome Diversity and Dynamics
**BIEB 150** Evolution
**BIEB 152** Evolution of Infectious Diseases
**BIEB 154** Evolutionary Inquiry
**BIEB 166** Animal Behavior & Communication
**BIEB 167** Animal Communication Lab
**BIEB 174** Ecosystems/Global Change
**BIEB 176** Biology of Conservation and the Human Predicament
**BIEB 182** Biology of Global Change
**BIEB 194** Adv. Topics in Modern Biology-Ecology, Behavior & Evolution

**BIMM 100** Molecular Biology
**BIMM 101** Recombinant DNA Techniques Lab
**BIMM 110** Molecular Basis of Human Disease
**BIMM 112** Regulation of Eukaryotic Gene Expression
**BIMM 114** Virology
**BIMM 116** Circadian Rhythms-Biological Clocks
**BIMM 118** BioClocks Studio
**BIMM 121** Microbiology Laboratory
**BIMM 122** Microbial Genetics
**BIMM 124** Medical Microbiology
**BIMM 130** Microbial Physiology
**BIMM 134** Biology of Cancer
**BIMM 140** Quantitative Principles in Biology
**BIMM 143** Bioinformatics Laboratory
**BIMM 162** 3D Cryo-Electron Microscopy of Macromolecules & Cells
**BIMM 169** Genomics Research Initiative Lab II
**BIMM 170** Genomics Research Initiative Lab II
**BIMM 177** Genome Science
**BIMM 178** Genomics, Big Data and Human Health
**BIMM 181** Molecular Sequence Analysis
**BIMM 182** Biological Databases
**BIMM 184** Computational Molecular Biology
**BIMM 185** Bioinformatics Lab (Adv)
**BIMM 194** Adv. Topics in Modern Biology-Molecular Biology

**BIPN 100** Human Physiology I
**BIPN 102** Human Physiology II
**BIPN 105** Human Physiology Lab
**BIPN 106** Comparative Physiology
**BIPN 108** Biology and Medicine of Exercise
**BIPN 120** Endocrinology
**BIPN 134** Human Reproduction
**BIPN 140** Cellular Neurobiology
**BIPN 142** Systems Neurobiology
**BIPN 144** Developmental Neurobiology
**BIPN 146** Neurobiology Laboratory
**BIPN 147** Computational Systems Neurobiology
**BIPN 148** Cellular Basis of Learning and Memory
**BIPN 150** Diseases of the Nervous System
**BIPN 152** Healthy and Diseased Brain
**BIPN 154** Neurobiology of Stress and Mental Disorders
**BIPN 156** Glat Neurobiology
**BIPN 160** Neuroanatomy
**BIPN 162** Neural Data Science
**BIPN 164** Computational Models and Theories in Neuroscience
**BIPN 189** Brain, Behavior, and Evolution

*The following duplicate courses may be used to satisfy prerequisites: Chem 114A in lieu of BIBC 103; Chem 114B in lieu of BIBC 102; BENG 120 in lieu of Chem 40A and Chem 40B

Students will not receive credit for both BIPN 189 and PSYC 198

Students will not receive credit for both BIMM 100 and Chem 114C

Students will not receive credit for both BIMM 101 and Chem 109 or BIMM 101 and BIEB 123

Students will not receive credit for both BIMM 170 and BIMM 171B

Students will not receive credit for both BIMM 100 and Chem 114C

Students will not receive credit for both BIPN 189 and BENG 140A

Students will not receive credit for both BIPN 105 and BENG 140B

Students will not receive credit for both BIPN 100 and BENG 140A

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Students will not receive credit for both BIPN 100 and BENG 140A

Upper-division standing; can be taken a total of 4 times as topics vary.

Upper-division standing: Students will not receive credit for both BIMM 162 and CHEM 165

Upper-division standing; students will not receive credit for both BIMM 162 and CHEM 165

Open to Bioinformatics majors only.

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Upper-division standing; can be taken a total of 4 times as topics vary. Students will not receive credit for the same topic.

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<tr>
<td>BISP 194</td>
<td>Adv. Topics in Modern Biology-Physiology &amp; Neuroscience</td>
<td>BISP 100 or BISP 140 Upper-division standing; can be taken a total of 4 times as topics vary. Students will not receive credit for the same topic.</td>
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**BISP: Please check with Biology Student & Instructional Services for restrictions**

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<tr>
<td>BISP 170</td>
<td>Bioscholars Seminar: From Bench to Bedside and Beyond</td>
<td>BILD 1; BILD 2 Upper-division standing; Intended for new transfer students</td>
</tr>
<tr>
<td>BISP 191</td>
<td>Biology Transfers: Strategies for Success</td>
<td></td>
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<tr>
<td>BISP 192</td>
<td>Senior Seminar in Biology</td>
<td>Upper-division standing; can be taken a total of 4 times as topics vary. Students will not receive credit for the same topic. Divisional Approval</td>
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<tr>
<td>BISP 193</td>
<td>Biology Education Research</td>
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<tr>
<td>BISP 194</td>
<td>Advanced Topics in Modern Biology</td>
<td>Upper-division standing; can be taken a total of 4 times as topics vary. Students will not receive credit for the same topic.</td>
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<tr>
<td>BISP 195</td>
<td>Instructional Apprentice: Biology</td>
<td>Upper-division standing; 3.0 GPA; Divisional Approval (application required)</td>
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<tr>
<td>BISP 196</td>
<td>Honors Thesis in Biological Sciences</td>
<td>Upper-division standing; 3.5 major and overall GPA; Divisional Approval (application required); 3 quarter commitment</td>
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<tr>
<td>BISP 197</td>
<td>Biology Internship Program</td>
<td>Upper-division standing; 2.5 GPA; Divisional Approval (application required)</td>
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<tr>
<td>BISP 199</td>
<td>Individual Research</td>
<td>Upper-division standing; 2.5 GPA; Divisional Approval (application required)</td>
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