## Major Core

<table>
<thead>
<tr>
<th>Course #</th>
<th>Course Name</th>
<th>Units</th>
<th>Prerequisite</th>
<th>Fall</th>
<th>Winter</th>
<th>Spring</th>
<th>Summer</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 102</td>
<td>Introduction to Genetics</td>
<td>4</td>
<td>BIOL 005B with grades of &quot;C-&quot; or better</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>BIOL 107A*</td>
<td>Molecular Biology</td>
<td>4</td>
<td>BIOL5C; MATH 7B or MATH 009B; PHYS 002C, PHYS 02LC; BCH 100 or BCH 110A</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>CBNS 101</td>
<td>Fundamentals of Cell Biology</td>
<td>4</td>
<td>CHEM 8C; BCH 100 or BCH 110A (may be taken concurrently)</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>CBNS 108</td>
<td>Introduction to Developmental Biology</td>
<td>4</td>
<td>BIOL102, CHEM 8C/LC, or consent of instructor</td>
<td>✓</td>
<td>✓</td>
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</tbody>
</table>

### Major Electives - Cellular Emphasis (pick at least 1, need 24 Major Elective units total)

<table>
<thead>
<tr>
<th>Course #</th>
<th>Course Name</th>
<th>Units</th>
<th>Prerequisite</th>
<th>Fall</th>
<th>Winter</th>
<th>Spring</th>
<th>Summer</th>
</tr>
</thead>
<tbody>
<tr>
<td>BCH 180G</td>
<td>Cell Signaling</td>
<td>2</td>
<td>BCH 197 or BIOL107A or BCH 110C (C- or better)</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>BIOL/MCBL 121</td>
<td>Introductory Microbiology</td>
<td>4</td>
<td>BIOL 5C, MATH7B or BBPHYS 2A2LA; BCH 100 or 110A (may be taken concurrently), STAT10</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>BIOL/CBNS 128</td>
<td>Immunology</td>
<td>3</td>
<td>BIOL 005C; PHYS2C/LC; BCH 100 or BCH 110A</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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</tr>
<tr>
<td>BPSC 135</td>
<td>Plant Cell Biology</td>
<td>4</td>
<td>BIOL 005C; BCH 100 or BCH 110A or consent of instructor</td>
<td>✓</td>
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<tr>
<td>CBNS 106</td>
<td>Intro to Neuroscience</td>
<td>4</td>
<td>BIOL005B (C- or better), CHEM1C/LC</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>CBNS 116</td>
<td>Human Neuroanatomy: Structure-Function Relationships</td>
<td>4</td>
<td>CBNS 106 with a grade of &quot;C-&quot; or better</td>
<td>✓</td>
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<tr>
<td>CBNS/PSYC 120</td>
<td>Cellular Neuroscience: Membrane and Synaptic Phenomena</td>
<td>4</td>
<td>CBNS 106</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>CBNS 165</td>
<td>Stem Cell Biology</td>
<td>4</td>
<td>CBNS 101 or consent of instructor</td>
<td>✓</td>
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<tr>
<td>MCBL 129</td>
<td>Host Responses to Viral Pathogens</td>
<td>4</td>
<td>BIOL5C, CHEM 8C/LC, MATH 7B or MATH 009B, PHYS2C/LC, BCH 100 or BCH 110A (may be taken concurrently)</td>
<td>✓</td>
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*BCH 110C can substitute for BIOL107A

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## Tentative Course Offerings

### Major Electives - Molecular Emphasis (pick at least 1)

<table>
<thead>
<tr>
<th>Course #</th>
<th>Course Name</th>
<th>Units</th>
<th>Prerequisite</th>
<th>Fall</th>
<th>Winter</th>
<th>Spring</th>
<th>Summer</th>
</tr>
</thead>
<tbody>
<tr>
<td>BCH 180E</td>
<td>Advanced Methods in Biochemistry: Gene Regulation</td>
<td>2</td>
<td>upper-division standing, concurrent enrollment in BCH 197 or equivalent or BCH 110C with grade of &quot;C-&quot; or better or BIOL 107A with grade of &quot;C-&quot; or better</td>
<td>✓</td>
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<tr>
<td>BIOL 107B</td>
<td>Advanced Molecular Biology</td>
<td>3</td>
<td>BIOL 107A or BCH 110C or equivalents</td>
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<td>✓</td>
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<tr>
<td>BIOL 119</td>
<td>Introduction to Genomics and Bioinformatics</td>
<td>4</td>
<td>BIOL 005C with a grade of &quot;C-&quot; or better, BIOL 102, CHEM 8C/LC, MATH 7B or MATH 009B, PHYS 2C/LC, BCH 100 or BCH 110A</td>
<td>✓</td>
<td>✓</td>
<td></td>
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<tr>
<td>BIOL/MCBL 124</td>
<td>Pathogenic Microbiology</td>
<td>4</td>
<td>BIOLSC, CHEM 8C/LC; MATH 007B or MATH 009B; PHYS 2C/LC; BCH 100 or BCH 110A</td>
<td></td>
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<td>✓</td>
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<tr>
<td>BIOL/BPSC 155</td>
<td>Chromosomes</td>
<td>4</td>
<td>BIOL5C, CHEM 8C/LC, MATH 7B or MATH 009B, PHYS 2C/LC, BCH 100 or BCH 110A (BCH 100 or BCH 110A may be taken concurrently), or consent of instructor</td>
<td></td>
<td></td>
<td>✓</td>
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<tr>
<td>BPSC/CBNS 109</td>
<td>Epigenetics</td>
<td>4</td>
<td>BIOL 102</td>
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<tr>
<td>CBNS/ENTX 150</td>
<td>Cancer Biology</td>
<td>4</td>
<td>BCH 110C or BIOL 107A or CBNS 101 (may be taken concurrently with consent of instructor)</td>
<td>✓</td>
<td>✓</td>
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### Major Electives - Developmental Emphasis (pick at least 1)

<table>
<thead>
<tr>
<th>Course #</th>
<th>Course Name</th>
<th>Units</th>
<th>Prerequisite</th>
<th>Fall</th>
<th>Winter</th>
<th>Spring</th>
<th>Summer</th>
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<tbody>
<tr>
<td>BCH /BPSC 183</td>
<td>Plant Biochemistry and Pharmacology</td>
<td>4</td>
<td>BCH 110A, BCH 110B; or BCH 100</td>
<td>✓</td>
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<tr>
<td>BIOL 115</td>
<td>Human Genetics</td>
<td>4</td>
<td>BIOL 102, BCH 100 or 110A</td>
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<tr>
<td>BIOL/MCBL 123</td>
<td>Introduction to Comparative Virology</td>
<td>4</td>
<td>BIOL5C, CHEM 8C/LC, MATH 7B or MATH 009B, PHYS 2C/LC, BCH 100 or BCH 110A, one course in statistics</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>BIOL/BPSC 132</td>
<td>Plant Anatomy</td>
<td>4</td>
<td>BIOL5B; BPSC 104 or BIOL 104, or consent of instructor</td>
<td>✓</td>
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<tr>
<td>CBNS/PSYC 121</td>
<td>Developmental Neuroscience</td>
<td>4</td>
<td>CBNS 106</td>
<td>✓</td>
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<td>✓</td>
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<tr>
<td>CBNS 169</td>
<td>Human Embryology</td>
<td>4</td>
<td>BIOL5C</td>
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## Cell, Molecular, and Developmental Biology (CMDB)
### Tentative Course Offerings

<table>
<thead>
<tr>
<th>Major Electives - Laboratory Courses (pick at least 2)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Course #</strong></td>
</tr>
<tr>
<td>-------------</td>
</tr>
<tr>
<td>BIEN 155</td>
</tr>
<tr>
<td>BIOL/BPSC 104</td>
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<tr>
<td>BIOL 118</td>
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<tr>
<td>BIOL/MCBL 121L</td>
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<tr>
<td>BIOL/BPSC 132</td>
</tr>
<tr>
<td>BIOL/BPSC 143</td>
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<tr>
<td>BIOL 161A</td>
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<tr>
<td>CBNS/PSYC 120L</td>
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<tr>
<td>MCBL 125</td>
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<tr>
<td>PHIL 9 or 167</td>
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<tr>
<td>Research*</td>
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</table>

*Three units of BCH 197, BIOL 197, BMSC 197L, BPSC 197, CBNS 197, ENTM 197, PLPA 197, MCBL 197, NEM 197, BCH 199, BIOL 199, BPSC 199, CBNS 199, ENTM 199, PLPA 199, MCBL199, or NEM 199 may substitute for one required lab course.

A maximum of 8 units of 190-199 courses, including no more than 4 units of 198 courses, may counted toward the major elective requirement. An additional 1 unit may apply to the depth area.

Schedule subject to change

Please consult catalog.ucr.edu for full list of pre-requisites and course descriptions