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**Cell/Molecular Professional**

**62 credit min**

**Effective for Spring 2013**

**Biology Core Courses (11-12 Credits)**

|  |  |  |  |
| --- | --- | --- | --- |
| BIO 105 | Biological Concepts(NS)(XL) | B | (4) \_\_\_\_ |
| **OR** |  |  |  |
| BIO 108 | Honors: Concepts in Bio(NS)(XL) | F | (5) \_\_\_\_ |
| BIO 323 | Intro Molecular & Cell Bio  (Bio 105, Chem 105 and/or C/Chem 106, or Chem 101,102 w/B) | B | (3) \_\_\_\_ |
| BIO 343 | Genetics (NS)(Bio 323) | B | (4) \_\_\_\_ |
| BIO 491 | Senior Survey\*\*\* | B | (0) \_\_\_\_ |

**Required Courses (21 Credits)**

|  |  |  |  |
| --- | --- | --- | --- |
| CHEM 105 | General Chemistry I (NS)(XL) | B | (5) \_\_\_\_ |
| CHEM 106 | General Chemistry II (NS)(XL) | B | (5) \_\_\_\_ |
| CHEM 234 | Organic Chemistry I Lab (NS)(Chem 106 w/C) | B | (1) \_\_\_\_ |
| CHEM 235 | Organic Chemistry I (NS)(Chem 106 w/C) | B | (3) \_\_\_\_ |
| CHEM 303 | Biochemistry: Clinical Emphasis (Chem 335) | B | (3) \_\_\_\_ |
| CHEM 334 | Organic Chemistry II Lab (NS)(Chem 235 w/C) | B | (1) \_\_\_\_ |
| CHEM 335 | Organic Chemistry II (NS)(Chem 235 w/C) | B | (3) \_\_\_\_ |
| MATH | As specified by COLS requirements |  |  |

**Additional Required Courses (24-29 Credits)**

|  |  |  |  |
| --- | --- | --- | --- |
| BIO 230 | Biology of Animals (NS)(XL)(Bio 105) | B | (4) \_\_\_\_ |
| **AND** |  |  |  |
| BIO 231 | Biology of Plants and Microbes (NS)(XL)(Bio 105) | B | (4) \_\_\_\_ |
| **OR** |  |  |  |
| BIO 106 | Biological Concepts – Diversity (NS) | B | (4) \_\_\_\_ |
| **AND** |  |  |  |
| BIO 349 | Ecology and Evolution (1 term general Bio) | B | (3) \_\_\_\_ |
| **OR** |  |  |  |
| BIO 351 | Evolution (1 term general bio) | S | (3) \_\_\_\_ |
| **AND** |  |  |  |
| BIO 372 | Medical & Environ Apps of Cell Bio & Genetics | S | (3) \_\_\_\_ |

**AND Two of the following advanced lab courses**

|  |  |  |  |
| --- | --- | --- | --- |
| BIO 374 | Cell/Immunology Lab (NS)(Bio 341 or 372) | F | (3) \_\_\_\_ |
| **OR** |  |  |  |
| BIO 390 | Biotechnology Lab (NS)(Bio 309) | S | (2) \_\_\_\_ |
| **AND** |  |  |  |
| BIO 375 | Microbial Genetics (Bio 309, C/375) | F | (3) \_\_\_\_ |
| BIO 377 | Microbial Genetics Lab (NS) | F | (2) \_\_\_\_ |
| **OR** |  |  |  |
| BIO 389 | Principles of Biotechnology (Bio 323, 343) | S | (3) \_\_\_\_ |
| BIO 390 | Biotechnology Lab (NS)(Bio 309) | S | (2) \_\_\_\_ |
| **OR** |  |  |  |
| BIO 350 | Electron Microscopy (NS) | F | (4) \_\_\_\_ |

**One of the following three**

|  |  |  |  |
| --- | --- | --- | --- |
| BIO 319 | General Animal Physiology (Bio 323) | B | (5) \_\_\_\_ |
| BIO 345 | Plant Physiology (Bio 231) | S | (5) \_\_\_\_ |
| BIO 450 | Microbial Physiology (NS)(Bio 309) | F | (5) \_\_\_\_ |

**Biology Electives (Two of the following courses if not used to fill preceding requirements)**

|  |  |  |  |
| --- | --- | --- | --- |
| BIO 306 | Neurobiology (Bio 105) | S | (3) \_\_\_\_ |
| BIO 309 | Bacteriology (NS)(Bio 105, 1 year Chem) | B | (5) \_\_\_\_ |
| BIO 315 | Virology (Bio 323) | S | (3) \_\_\_\_ |
| BIO 316 | Developmental Biology (Bio 323) | S | (3) \_\_\_\_ |
| BIO 321 | Mycology (NS)(1 term general Bio) | F | (3) \_\_\_\_ |
| BIO 341 | Immunology (Bio 233, 309) | F | (3) \_\_\_\_ |
| BIO 350 | Electron Microscopy (NS) | F | (4) \_\_\_\_ |
| BIO 354 | Parasitology (NS)(1 term gen Bio and Bio 230) | S | (3) \_\_\_\_ |
| BIO 374 | Cell/Immunology Lab (NS)(Bio 341 or 372) | F | (3) \_\_\_\_ |
| BIO 375 | Microbial Genetics (Bio 309, 343) | F | (3) \_\_\_\_ |
| BIO 377 | Microbial Genetics Lab (NS)(Bio 309, 375) | F | (2) \_\_\_\_ |
| BIO 389 | Principles of Biotechnology (Bio 323 and 343) | S | (3) \_\_\_\_ |
| BIO 390 | Biotechnology Lab (NS)(Bio 309) | S | (2) \_\_\_\_ |

Pre-requisites are in parentheses

S = Spring

F = Fall

B = Both Fall & Spring

C/ = Concurrent enrollment

\*\*\*During their last semester senior students will take the senior survey course assessment exam and fill out a survey regarding their experience in the program. This will be taken in the Testing Center at the student’s convenience (during normal Testing Center hours). Completion is a graduation requirement.

**Must meet General Education and Degree Requirements to earn BS Degree**

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