## CURRICULUM IN BIOLOGICAL SCIENCES
### INTEGRATIVE BIOLOGY CONCENTRATION

**YEAR:** 2018 / 2019

**NAME:** _____________________________

**W#** _____________________________

**MAJOR HOURS (41) C or Better**

<table>
<thead>
<tr>
<th>Core Requirements (21 hrs)</th>
<th>MAJOR HOURS (41) C or Better</th>
<th><strong>MATHEMATICS (9)</strong></th>
<th><strong>SOCIAL SCIENCES (6)</strong></th>
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</thead>
<tbody>
<tr>
<td>GBIO 151 3</td>
<td>1-2 MATH 161 3</td>
<td>(Anth, Econ, Geog, Psyc, Poli, Soc) 3</td>
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<tr>
<td>BIOL 152 1</td>
<td>MATH 162 3</td>
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<tr>
<td>GBIO 153 3</td>
<td>MATH 163 3</td>
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<tr>
<td>BIOL 154 1</td>
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<tr>
<td>MIC 205 3</td>
<td>or 1 MATH 165 and 200 (8 hrs)</td>
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<tr>
<td>MICL 207 1</td>
<td>MATH 165 3</td>
<td></td>
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<tr>
<td>2 GBIO 200 3</td>
<td>MATH 200 5</td>
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<tr>
<td>2 GBIO 312 3</td>
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<tr>
<td>GBIO 241 1</td>
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<td>GBIO 341 1</td>
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<tr>
<td>GBIO 441** 1</td>
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**Upper-level Courses (20 hrs) page 2**

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**CHEMISTRY (16)**

| CHEM 121 3               |                  |                  |                        |
| CLAB 123 1              |                  |                  |                        |
| CHEM 122 3              |                  |                  |                        |
| CLAB 124 1              |                  |                  |                        |
| 3 CHEM 261 3            |                  |                  |                        |
| 3 CLAB 263 1            |                  |                  |                        |
| 3 CHEM 281 3            |                  |                  |                        |
| 3 CLAB 283 1            |                  |                  |                        |

**TOTAL HOURS 120**

**NOTES:** 1. Students with Math ACT <21 take MATH 151 in place of MATH 161. Students who are eligible may take MATH 165 and 200 (8 credit hours) in place of MATH 161, 162, and 163 (9 credit hours). Students who take MATH 165 and 200 are required to take one additional hour of electives (i.e., 11 hrs instead of 10 hrs).

2. Grade of “C” or better in CHEM 121, MATH 151 or 161, and all Biology courses is required. Also, CHEM 121 and MATH 151 or 161 are prerequisites for GBIO 200 and GBIO 200 is a prerequisite for GBIO 312.

3. Students planning on attending medical, dental, or other professional or graduate schools, and students pursuing a minor in Chemistry, should take CHEM 265/267 and CHEM 266/268. Also, CHEM 265/267 can NOT be used as prerequisites for CHEM 281/283.

4. Students planning to apply to the Master of Business Administration (MBA) program at SELU should take ECON 201 and 202 for the Social Sciences requirement, must take ACCT 200 and FIN 381 and should also take MRKT 303 or MGMT 351 as Electives, and must take GBIO 377 as an upper-level Biology elective.

****GBIO 441 fulfills requirement for computer literacy

**ADDITIONAL COURSES:**

|                           |                  |                  |                        |

**FOR. LANGUAGES (6)**

|                           |                  |                  |                        |

**ELECTIVES (10)**

|                           |                  |                  |                        |

**OTHER (12)**

| ART ELECTIVE (Mus, Art, Dnc, Thea) |                  |                  |                        |

**AVGERSAGE**

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**FOR. LANGUAGES (6)**

|                           |                  |                  |                        |

**ELECTIVES (10)**

|                           |                  |                  |                        |

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INTEGRATIVE BIOLOGY CONCENTRATION

I. Core Courses (page 1): 21 CREDIT HOURS (Grade of "C" or better required in all courses)

II. Upper-level Courses for the Integrative Biology Concentration.

20 CREDIT HOURS from the following courses with approval of advisor (Grade of "C" or better required in all courses)

GROUP A – minimum one required – Ecology or Evolution
Ecology – GBIO 395 General Ecology 3 hrs and GBIO 397 General Ecology Laboratory 2 hrs
Evolution – GBIO 405 Evolutionary Biology 4 hrs

GROUP B – Electives
BOT 205 Introduction to Botany 4 hrs
BOT 347 Vascular Plant Systematics 4 hrs
BOT 401 Plant Pathology 4 hrs
BOT 426 Plant Physiology 4 hrs
BOT 427 Plant Stress Ecophysiology 4 hrs
BOT 429 Native Plants of Louisiana 4 hrs
BOT 481 Plant Ecology 4 hrs
BOT 492 Plant Anatomy 4 hrs
GBIO 281 Environmental Awareness 3 hrs
GBIO 314 Genetics Laboratory 2 hrs
’GBIO 377 Applied Biostatistics 4 hrs
GBIO 395 General Ecology 3 hrs
GBIO 397 General Ecology Laboratory 2 hrs
GBIO 404 Ecological Methods 3 hrs
GBIO 405 Evolutionary Biology 4 hrs
GBIO 406 Wetland Ecology 4 hrs
GBIO 407 Forensic Biology 4 hrs
GBIO 408 Computational Biology 4 hrs
GBIO 410 Introduction to Population Genetics 4 hrs
GBIO 418 Community Ecology 4 hrs
GBIO 434 Molecular Biology and Biotechnology 4 hrs
GBIO 439 Introduction to Fresh Water & Estuarine Biology 4 hrs
GBIO 481 Biogeography 3 hrs
GBIO 485 Conservation Biology 4 hrs
GBIO 492 History of Biology 3 hrs
GBIO 495 Biological Electron Microscopy 4 hrs
HORT 301 Introductory Soils 4 hrs
HORT 315 Plant Materials I 3 hrs
HORT 320 Plant Materials II 4 hrs
HORT 328 Plant Propagation 3 hrs
HORT 412 Turf Management 3 hrs
HORT 424 Arboriculture 3 hrs
HORT 426 Coastal Plant Production 3 hrs
HORT 428 Organic Gardening 3 hrs
MIC 313 Microbial Ecology 3 hrs
MIC 325 Advanced General Microbiology 4 hrs
MIC 423 Environmental Microbiology 4 hrs
MIC 436 Pathogenic Bacteria 4 hrs
MIC 457 Dairy & Food Microbiology 4 hrs
MIC 460 Immunology 4 hrs
MIC 461 Bacterial Metabolism 4 hrs
MIC 463 Virology 4 hrs
MIC 465 Recombinant DNA Techniques 4 hrs
ZOO 301 Invertebrate Zoology 4 hrs
ZOO 302 Comparative Anatomy 4 hrs
ZOO 332 Animal Histology 4 hrs
ZOO 352 Field Zoology 4 hrs
ZOO 392 Animal Physiology 4 hrs
ZOO 409 General Entomology 4 hrs
ZOO 453 Ecological Parasitology 4 hrs
ZOO 455 Medical Parasitology 4 hrs
ZOO 456 Ichthyology 4 hrs
ZOO 457 Invertebrate Ecology 4 hrs
ZOO 458 Fisheries Ecology and Management 4 hrs
ZOO 465 Animal Development 4 hrs
ZOO 471 Comparative Endocrinology 4 hrs
ZOO 475 Animal Behavior 4 hrs
ZOO 488 Cytology 3 hrs
ZOO 499 Neurobiology 4 hrs

(NOTE: * these electives require PRIOR approval of student’s advisor and Department Head.)

*GBIO 409 Internship – Variable credits, 1 to 3 hours (Max 3 hours total)
*GBIO 450 Research Problems – Variable credits, 1 to 4 hours (Max 4 hours total)
*GBIO 493 Special Topics in Biology – Variable credits, 2 to 4 hours

Maximum of four credit hours of Biochemistry may be used for concentration elective requirements. NOTE: If CHEM 281 and CLAB 283 are taken to fulfill Chemistry requirements, they may not be used for elective requirements.

CHEM 281 Survey of Biochemistry 3 hrs
CLAB 283 Survey of Biochemistry Laboratory 1 hr
CHEM 481 Biochemistry I 3 hrs
CLAB 485 Biochemistry I Laboratory 1 hr
CHEM 482 Biochemistry II 3 hrs
CLAB 486 Biochemistry II Laboratory 1 hr