

**CURRICULUM IN BIOLOGICAL SCIENCES
INTEGRATIVE BIOLOGY CONCENTRATION**

YEAR: 2021 / 2022

YEAR ENTERED SLU: _____

NAME: _____

W# _____

MAJOR HOURS (41) C or Better²

Core Requirements (21 hrs)

GBIO 151 _____ 3 _____
 BIOL 152 _____ 1 _____
 GBIO 153 _____ 3 _____
 BIOL 154 _____ 1 _____
 MIC 205 _____ 3 _____
 MICL 207 _____ 1 _____
²GBIO 200 _____ 3 _____
²GBIO 312 _____ 3 _____
 GBIO 241 _____ 1 _____
 GBIO 341 _____ 1 _____
 GBIO 441** _____ 1 _____

MATHEMATICS (9)

^{1,2}MATH 161 _____ 3 _____
 MATH 162 _____ 3 _____
 MATH 163 _____ 3 _____

or ¹MATH 175 and 200 (10)

MATH 175 _____ 5 _____
 MATH 200 _____ 5 _____

⁴SOCIAL SCIENCES (6)

(Anth, Econ, Geog, Psyc, Poli, Soc)

_____ 3 _____
 _____ 3 _____

Upper-level Courses (20 hrs) page 2

ENGLISH (12)

ENGL 101
 or 121H _____ 3 _____
 ENGL 102
 or 122H _____ 3 _____
 ENGL 230 or 231 or 232
 _____ 3 _____
 ENGL 322 _____ 3 _____

PHYSICS (8)

PHYS 191 _____ 3 _____
 PLAB 193 _____ 1 _____
 PHYS 192 _____ 3 _____
 PLAB 194 _____ 1 _____

CHEMISTRY (16)

²CHEM 121 _____ 3 _____
 CLAB 123 _____ 1 _____
 CHEM 122 _____ 3 _____
 CLAB 124 _____ 1 _____
³CHEM 261 _____ 3 _____
³CLAB 263 _____ 1 _____
³CHEM 281 _____ 3 _____
³CLAB 283 _____ 1 _____

FOR. LANGUAGES (6)

_____ 101 _____ 3 _____
 _____ 102 _____ 3 _____

⁴ELECTIVES (10)

OTHER (12)

ART ELECTIVE (Mus, Art, Dnc, Thea)

_____ 3 _____
 LS 102 _____ 1 _____
 COMM211 _____ 3 _____
 HIST _____ 3 _____
 SE 101 _____ 2 _____

SE 101 is not required of transfer or readmitted students with 30 hours or more. These students are required to take two additional hours of electives (i.e., 12 hrs instead of 10 hrs)

TOTAL HOURS 120

NOTES: ¹Students with Math ACT <21 take MATH 151 in place of MATH 161. Students who are eligible may take MATH 175 and 200 (10 credit hours) in place of MATH 161, 162, and 163 (9 credit hours). Students who take MATH 175 and 200 are required to take one less hour of electives (i.e., 9 hrs instead of 10 hrs).

²Grade 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.

³NOTE: CHEM 265/267 can NOT be used as prerequisites for CHEM 281/283. Other possible sequence of courses include: CHEM 261/CLAB 263 or CHEM 265/CLAB 267 followed by MIC 461 or GBIO 434. Also, GBIO 434 or MIC 461 may be taken in place of CHEM 281/283. 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 in place of CHEM 261/263 and CHEM 281/283.

⁴Students 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:

AVERAGES

| | | | |
|-------|-------|-------|---------|
| HA | HE | QP | Average |
| CUM: | _____ | _____ | _____ |
| (Adj) | _____ | _____ | _____ |
| MAJOR | _____ | _____ | _____ |
| (Adj) | _____ | _____ | _____ |
| SLU: | _____ | _____ | _____ |
| (Adj) | _____ | _____ | _____ |

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 433 Phycology 4 hrs

BOT 481 Plant Ecology 4 hrs

BOT 482 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 442 Marine 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 438 Soil Microbiology 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 331 Embryology 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 428 Waterfowl Management 3 hrs

ZOO 438 Mammology 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 470 Ornithology 4 hrs

ZOO 471 Comparative Endocrinology 4 hrs

ZOO 475 Animal Behavior 4 hrs

ZOO 483 Introduction to Paleontology 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