

**CURRICULUM IN BIOLOGICAL SCIENCES  
INTEGRATIVE BIOLOGY CONCENTRATION**

YEAR: 2022 / 2023

YEAR ENTERED SLU: \_\_\_\_\_

NAME: \_\_\_\_\_

W# \_\_\_\_\_

**MAJOR HOURS (41) C or Better<sup>2</sup>**

**Core Requirements (21 hrs)**

GBIO 151 \_\_\_\_\_ 3 \_\_\_\_\_  
 BIOL 152 \_\_\_\_\_ 1 \_\_\_\_\_  
 GBIO 153 \_\_\_\_\_ 3 \_\_\_\_\_  
 BIOL 154 \_\_\_\_\_ 1 \_\_\_\_\_  
 MIC 205 \_\_\_\_\_ 3 \_\_\_\_\_  
 MICL 207 \_\_\_\_\_ 1 \_\_\_\_\_  
<sup>2</sup>GBIO 200 \_\_\_\_\_ 3 \_\_\_\_\_  
<sup>2</sup>GBIO 312 \_\_\_\_\_ 3 \_\_\_\_\_  
 GBIO 241 \_\_\_\_\_ 1 \_\_\_\_\_  
 GBIO 341 \_\_\_\_\_ 1 \_\_\_\_\_  
 GBIO 441\*\* \_\_\_\_\_ 1 \_\_\_\_\_

**Upper-level Courses (20 hrs) page 2**

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**CHEMISTRY (16)**

<sup>2</sup>CHEM 121 \_\_\_\_\_ 3 \_\_\_\_\_  
 CLAB 123 \_\_\_\_\_ 1 \_\_\_\_\_  
 CHEM 122 \_\_\_\_\_ 3 \_\_\_\_\_  
 CLAB 124 \_\_\_\_\_ 1 \_\_\_\_\_  
<sup>3</sup>CHEM 261 \_\_\_\_\_ 3 \_\_\_\_\_  
<sup>3</sup>CLAB 263 \_\_\_\_\_ 1 \_\_\_\_\_  
<sup>3</sup>CHEM 281 \_\_\_\_\_ 3 \_\_\_\_\_  
<sup>3</sup>CLAB 283 \_\_\_\_\_ 1 \_\_\_\_\_

**MATHEMATICS (9)**

<sup>1,2</sup>MATH 161 \_\_\_\_\_ 3 \_\_\_\_\_  
 MATH 162 \_\_\_\_\_ 3 \_\_\_\_\_  
 MATH 163 \_\_\_\_\_ 3 \_\_\_\_\_

or <sup>1</sup>MATH 175 and 200 (10)

MATH 175 \_\_\_\_\_ 5 \_\_\_\_\_  
 MATH 200 \_\_\_\_\_ 5 \_\_\_\_\_

**ENGLISH (12)**

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

**FOR. LANGUAGES (6)**

\_\_\_\_\_ 101 \_\_\_\_\_ 3 \_\_\_\_\_  
 \_\_\_\_\_ 102 \_\_\_\_\_ 3 \_\_\_\_\_

**<sup>4</sup>ELECTIVES (10)**

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
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**<sup>4</sup>SOCIAL SCIENCES (6)**

(Anth, Econ, Geog, Psys, Poli, Soc, CJ)

\_\_\_\_\_ 3 \_\_\_\_\_  
 \_\_\_\_\_ 3 \_\_\_\_\_

**PHYSICS (8)**

PHYS 191 \_\_\_\_\_ 3 \_\_\_\_\_  
 PLAB 193 \_\_\_\_\_ 1 \_\_\_\_\_  
 PHYS 192 \_\_\_\_\_ 3 \_\_\_\_\_  
 PLAB 194 \_\_\_\_\_ 1 \_\_\_\_\_

**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:** <sup>1</sup>Students 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).

<sup>2</sup>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.

<sup>3</sup>NOTE: 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.

<sup>4</sup>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:**

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**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 458 General Mycology 3 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

**CURRICULUM IN BIOLOGICAL SCIENCES  
MICROBIOLOGY / MOLECULAR BIOLOGY CONCENTRATION**

YEAR: 2022 / 2023

YEAR ENTERED SLU: \_\_\_\_\_

NAME: \_\_\_\_\_

W# \_\_\_\_\_

**MAJOR HOURS (41) C or Better<sup>2</sup>**

**Core Requirements (21 hrs)**

GBIO 151 \_\_\_\_\_ 3 \_\_\_\_\_  
 BIOL 152 \_\_\_\_\_ 1 \_\_\_\_\_  
 GBIO 153 \_\_\_\_\_ 3 \_\_\_\_\_  
 BIOL 154 \_\_\_\_\_ 1 \_\_\_\_\_  
 MIC 205 \_\_\_\_\_ 3 \_\_\_\_\_  
 MICL 207 \_\_\_\_\_ 1 \_\_\_\_\_  
<sup>2</sup>GBIO 200 \_\_\_\_\_ 3 \_\_\_\_\_  
<sup>2</sup>GBIO 312 \_\_\_\_\_ 3 \_\_\_\_\_  
 GBIO 241 \_\_\_\_\_ 1 \_\_\_\_\_  
 GBIO 341 \_\_\_\_\_ 1 \_\_\_\_\_  
 GBIO 441\*\* \_\_\_\_\_ 1 \_\_\_\_\_

**MATHEMATICS (9)**

<sup>1,2</sup>MATH 161 \_\_\_\_\_ 3 \_\_\_\_\_  
 MATH 162 \_\_\_\_\_ 3 \_\_\_\_\_  
 MATH 163 \_\_\_\_\_ 3 \_\_\_\_\_

or <sup>1</sup>MATH 175 and 200 (10)

MATH 175 \_\_\_\_\_ 5 \_\_\_\_\_  
 MATH 200 \_\_\_\_\_ 5 \_\_\_\_\_

**SOCIAL SCIENCES (6)**

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

\_\_\_\_\_ 3 \_\_\_\_\_  
 \_\_\_\_\_ 3 \_\_\_\_\_

**Upper-level Courses (20 hrs) page 2**

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**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 (20)**

<sup>2</sup>CHEM 121 \_\_\_\_\_ 3 \_\_\_\_\_  
 CLAB 123 \_\_\_\_\_ 1 \_\_\_\_\_  
 CHEM 122 \_\_\_\_\_ 3 \_\_\_\_\_  
 CLAB 124 \_\_\_\_\_ 1 \_\_\_\_\_  
 CHEM 265 \_\_\_\_\_ 3 \_\_\_\_\_  
 CLAB 267 \_\_\_\_\_ 1 \_\_\_\_\_  
 CHEM 266 \_\_\_\_\_ 3 \_\_\_\_\_  
 CLAB 268 \_\_\_\_\_ 1 \_\_\_\_\_  
 CHEM 481 \_\_\_\_\_ 3 \_\_\_\_\_  
 CLAB 485 \_\_\_\_\_ 1 \_\_\_\_\_

**FOR. LANGUAGES (6)**

\_\_\_\_\_ 101 \_\_\_\_\_ 3 \_\_\_\_\_  
 \_\_\_\_\_ 102 \_\_\_\_\_ 3 \_\_\_\_\_

**ELECTIVES (6)**

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**OTHER (12)**

ART ELECTIVE (Mus, Art, Dnc, Thea)

\_\_\_\_\_ 3 \_\_\_\_\_  
 LS 102 \_\_\_\_\_ 1 \_\_\_\_\_  
 COMM211 \_\_\_\_\_ 3 \_\_\_\_\_  
 HIST \_\_\_\_\_ 3 \_\_\_\_\_  
 SE 101 \_\_\_\_\_ 2 \_\_\_\_\_

SE 101 is not required for transfer or readmitted students with 30 hrs or more. These students are required to take two additional hrs of electives (i.e., 8 hrs instead of 6 hrs)

TOTAL HOURS 120

**NOTES:** <sup>1</sup>Students 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., 5 hrs instead of 6 hrs).

<sup>2</sup>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.

\*\*GBIO 441 fulfills requirement for computer literacy

ADDITIONAL COURSES:

\_\_\_\_\_  
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 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

AVERAGES

HA HE QP Average

CUM: \_\_\_\_\_  
 (Adj) \_\_\_\_\_  
 MAJOR \_\_\_\_\_  
 (Adj) \_\_\_\_\_  
 SLU: \_\_\_\_\_  
 (Adj) \_\_\_\_\_

## **MICROBIOLOGY / MOLECULAR 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 Microbiology and Molecular Biology Concentration.**

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

**GROUP A: Fundamental courses** – total 8 hrs – the following two courses are required

MIC 325 Advanced General Microbiology 4 hrs

MIC 461 Bacterial Metabolism 4 hrs

**GROUP B: Electives** – minimum 12 hrs

MIC 313 Microbial Ecology 3 hrs

MIC 338 Soil Microbiology 4 hrs

MIC 423 Environmental Microbiology 4 hrs

MIC 436 Pathogenic Bacteria 4 hrs

MIC 457 Dairy and Food Microbiology 4 hrs

MIC 460 Immunology 4 hrs

MIC 463 Virology 4 hrs

MIC 465 Recombinant DNA Techniques 4 hrs

CHEM 482 Biochemistry II 3 hrs

CLAB 486 Biochemistry II Laboratory 1 hr

BOT 401 Plant Pathology 4 hrs

BOT 426 Plant Physiology 4 hrs

BOT 458 General Mycology 3 hrs

GBIO 314 Genetics Laboratory 2 hrs

GBIO 377 Applied Biostatistics 4hrs

GBIO 408 Computational Biology 4 hrs

GBIO 434 Molecular Biology and Biotechnology 4 hrs

GBIO 495 Electron Microscopy 4 hrs

ZOO 392 Animal Physiology 4 hrs

ZOO 455 Medical Parasitology 4hrs

ZOO 465 Animal Development 4 hrs

ZOO 471 Comparative Endocrinology 4hrs

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

**CURRICULUM IN BIOLOGICAL SCIENCES  
PLANT SCIENCE CONCENTRATION**

YEAR: 2022 / 2023

YEAR ENTERED SLU: \_\_\_\_\_

NAME: \_\_\_\_\_

W# \_\_\_\_\_

**MAJOR HOURS (41) C or Better<sup>2</sup>**

**Core Requirements (21 hrs)**

GBIO 151 \_\_\_\_\_ 3 \_\_\_\_\_  
 BIOL 152 \_\_\_\_\_ 1 \_\_\_\_\_  
 GBIO 153 \_\_\_\_\_ 3 \_\_\_\_\_  
 BIOL 154 \_\_\_\_\_ 1 \_\_\_\_\_  
 MIC 205 \_\_\_\_\_ 3 \_\_\_\_\_  
 MICL 207 \_\_\_\_\_ 1 \_\_\_\_\_  
<sup>2</sup>GBIO 200 \_\_\_\_\_ 3 \_\_\_\_\_  
<sup>2</sup>GBIO 312 \_\_\_\_\_ 3 \_\_\_\_\_  
 GBIO 241 \_\_\_\_\_ 1 \_\_\_\_\_  
 GBIO 341 \_\_\_\_\_ 1 \_\_\_\_\_  
 GBIO 441\*\* \_\_\_\_\_ 1 \_\_\_\_\_

**Upper-level Courses (20 hrs) page 2**

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**CHEMISTRY (16)**

<sup>2</sup>CHEM 121 \_\_\_\_\_ 3 \_\_\_\_\_  
 CLAB 123 \_\_\_\_\_ 1 \_\_\_\_\_  
 CHEM 122 \_\_\_\_\_ 3 \_\_\_\_\_  
 CLAB 124 \_\_\_\_\_ 1 \_\_\_\_\_  
<sup>3</sup>CHEM 261 \_\_\_\_\_ 3 \_\_\_\_\_  
<sup>3</sup>CLAB 263 \_\_\_\_\_ 1 \_\_\_\_\_  
<sup>3</sup>CHEM 281 \_\_\_\_\_ 3 \_\_\_\_\_  
<sup>3</sup>CLAB 283 \_\_\_\_\_ 1 \_\_\_\_\_

**MATHEMATICS (9)**

<sup>1,2</sup>MATH 161 \_\_\_\_\_ 3 \_\_\_\_\_  
 MATH 162 \_\_\_\_\_ 3 \_\_\_\_\_  
 MATH 163 \_\_\_\_\_ 3 \_\_\_\_\_

or **<sup>1</sup>MATH 175 and 200 (10)**

MATH 175 \_\_\_\_\_ 5 \_\_\_\_\_  
 MATH 200 \_\_\_\_\_ 5 \_\_\_\_\_

**ENGLISH (12)**

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

**FOR. LANGUAGES (6)**

\_\_\_\_\_ 101 \_\_\_\_\_ 3 \_\_\_\_\_  
 \_\_\_\_\_ 102 \_\_\_\_\_ 3 \_\_\_\_\_

**ELECTIVES (10)**

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**SOCIAL SCIENCES (6)**

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

\_\_\_\_\_ 3 \_\_\_\_\_  
 \_\_\_\_\_ 3 \_\_\_\_\_

**PHYSICS (8)**

PHYS 191 \_\_\_\_\_ 3 \_\_\_\_\_  
 PLAB 193 \_\_\_\_\_ 1 \_\_\_\_\_  
 PHYS 192 \_\_\_\_\_ 3 \_\_\_\_\_  
 PLAB 194 \_\_\_\_\_ 1 \_\_\_\_\_

**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:** <sup>1</sup>Students 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).

<sup>2</sup>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.

<sup>3</sup>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. Also, CHEM 265/267 can NOT be used as prerequisites for CHEM 281/283. Also, GBIO 434 or MIC 461 may be taken in place of CHEM 281/283.

\*\*GBIO 441 fulfills requirement for computer literacy

**ADDITIONAL COURSES:**

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

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

## PLANT SCIENCE CONCENTRATION

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

**II. Upper-level Courses for Plant Science Concentration.**

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

Electives – 20 hrs

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 458 General Mycology 3 hrs  
BOT 481 Plant Ecology 4 hrs  
BOT 482 Plant Anatomy 4 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 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 485 Conservation Biology 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  
HORT 490 Survey of the Horticulture Industry 4 hrs  
ZOO 409 General Entomology 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

\*HORT 495 Seminar – 1 hour

**CURRICULUM IN BIOLOGICAL SCIENCES  
BIOLOGY EDUCATION CONCENTRATION**

2022 - 2023

Date: \_\_\_\_\_

Student: \_\_\_\_\_

Advisor: \_\_\_\_\_

W# \_\_\_\_\_

<b><u>BIOLOGY (41) C or Better*</u></b>	(41)
<b>Core Requirements (21 hrs)</b>	
*GBIO 151	3
*BIOL 152	1
*GBIO 153	3
*BIOL 154	1
*MIC 205 or 223	3
*MICL 207 or 224	1
* <sup>1</sup> GBIO 200	3
* <sup>1</sup> GBIO 312	3
*GBIO 241	1
*GBIO 341	1
*GBIO 441	1

**Upper-level Courses (20 hrs) page 2**

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<b><u>CHEMISTRY</u></b>	(14)
* <sup>1</sup> CHEM 121	3
*CLAB 123	1
*CHEM 122	3
*CLAB 124	1
*CHEM 261	3
*CHEM 281	3

<b><u>ENGLISH</u></b>	(9)
ENGL 101	3
*ENGL 102	3
ENGL 230 or 231 or 232	3

<b><u><sup>1</sup>MATHEMATICS</u></b>	(6)
* <sup>1</sup> MATH 161 (or MATH 151)	3
*MATH 162 or 165	3

<b><u>EDUCATION</u></b>	(33)
**EDUC 202	3
*EDUC 407	3
*EDUC 472	3
*EDUC 453	6
*EDUC 485	3
*EDUC 486	9
*EDUC 316	3
*SPED 200	3

<b><u>SOCIAL SCIENCES</u></b>	(6)
PSYC 101	3
Social Science elective	3

<b><u>OTHER</u></b>	(11)
HIST 417 <sup>G</sup>	3
SE 101	2
COMM 210	3
ART elective (Mus,Art,Dnc,Thea)	3

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<b>TOTAL HOURS</b>	120
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SE 101 is not required for transfer or readmitted Southeastern students with 30 hours or more. These students are required to take two hours of electives.

\*A grade of C or better is required in these courses.

\*\*A grade of B or better is required in these courses.

<sup>1</sup>CHEM 121 and MATH 151 or 161 are prerequisites for GBIO 200, and GBIO 200 is a prerequisite for GBIO 312.

**I. Core Courses (page 1): 21 CREDIT HOURS**

**II. Upper-level Courses for the Biology Education Concentration  
20 CREDIT HOURS required**

\*A grade of C or better is required in these courses

\*GBIO 395 General Ecology 3 hrs

\*GBIO 397 General Ecology Laboratory 2 hrs

\*GBIO 405 Evolutionary Biology 4 hrs

\*GBIO 498 Biological Science for Teachers 3 hrs

\*ZOO 302 Comparative Anatomy 4 hrs

\*ZOO 392 Animal Physiology 4 hrs



**CURRICULUM IN BIOLOGICAL SCIENCES  
BUSINESS CONCENTRATION**

YEAR: 2018 / 2019

YEAR ENTERED SLU: \_\_\_\_\_

NAME: \_\_\_\_\_

W# \_\_\_\_\_

**MAJOR HOURS (41) C or Better<sup>2</sup>**

**Core Requirements (21 hrs)**

GBIO 151 \_\_\_\_\_ 3 \_\_\_\_\_  
 BIOL 152 \_\_\_\_\_ 1 \_\_\_\_\_  
 GBIO 153 \_\_\_\_\_ 3 \_\_\_\_\_  
 BIOL 154 \_\_\_\_\_ 1 \_\_\_\_\_  
 MIC 205 \_\_\_\_\_ 3 \_\_\_\_\_  
 MICL 207 \_\_\_\_\_ 1 \_\_\_\_\_  
<sup>2</sup>GBIO 200 \_\_\_\_\_ 3 \_\_\_\_\_  
<sup>2</sup>GBIO 312 \_\_\_\_\_ 3 \_\_\_\_\_  
 GBIO 241 \_\_\_\_\_ 1 \_\_\_\_\_  
 GBIO 341 \_\_\_\_\_ 1 \_\_\_\_\_  
 GBIO 441\*\* \_\_\_\_\_ 1 \_\_\_\_\_

**MATHEMATICS (9)**

<sup>1,2</sup>MATH 161 \_\_\_\_\_ 3 \_\_\_\_\_  
 MATH 162 \_\_\_\_\_ 3 \_\_\_\_\_  
 MATH 163 \_\_\_\_\_ 3 \_\_\_\_\_

or <sup>1</sup>MATH 165 and 200 (8 hrs)

MATH 165 \_\_\_\_\_ 3 \_\_\_\_\_  
 MATH 200 \_\_\_\_\_ 5 \_\_\_\_\_

**<sup>4</sup>SOCIAL SCIENCES (6)**

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

\_\_\_\_\_ ECON 201 \_\_\_\_\_ 3 \_\_\_\_\_  
 \_\_\_\_\_ ECON 202 \_\_\_\_\_ 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 \_\_\_\_\_

**ELECTIVE (1)**

\_\_\_\_\_ (1)

**CHEMISTRY (16)**

<sup>2</sup>CHEM 121 \_\_\_\_\_ 3 \_\_\_\_\_  
 CLAB 123 \_\_\_\_\_ 1 \_\_\_\_\_  
 CHEM 122 \_\_\_\_\_ 3 \_\_\_\_\_  
 CLAB 124 \_\_\_\_\_ 1 \_\_\_\_\_  
<sup>3</sup>CHEM 261 \_\_\_\_\_ 3 \_\_\_\_\_  
<sup>3</sup>CLAB 263 \_\_\_\_\_ 1 \_\_\_\_\_  
<sup>3</sup>CHEM 281 \_\_\_\_\_ 3 \_\_\_\_\_  
<sup>3</sup>CLAB 283 \_\_\_\_\_ 1 \_\_\_\_\_

**FOR. LANGUAGES (6)**

\_\_\_\_\_ 101 \_\_\_\_\_ 3 \_\_\_\_\_  
 \_\_\_\_\_ 102 \_\_\_\_\_ 3 \_\_\_\_\_

**CONCENT. COURSES (9)**

<sup>2</sup>ACCT 200 (3) \_\_\_\_\_  
<sup>2</sup>FIN 381 (3) \_\_\_\_\_  
<sup>2</sup>MRKT 303 or MGMT 351 (3) \_\_\_\_\_

**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:** <sup>1</sup>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).  
<sup>2</sup>Grade of "C" or better in CHEM 121, MATH 151/161, ACCT 200, FIN 381, and MRKT 303 or MGMT 351, and all Biology courses is required. CHEM 121 and MATH 151/161 are prerequisites for GBIO 200, and GBIO 200 is a prerequisite for GBIO 312.  
<sup>3</sup>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.  
<sup>4</sup>Students in the Business Concentration should take ECON 201 and ECON 202 for the Social Sciences requirement.  
 \*\*GBIO 441 fulfills requirement for computer literacy

**ADDITIONAL COURSES:**

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

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

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

**II. Upper-level Courses: 20 CREDIT HOURS from the following courses with approval of advisor (Grade of "C" or better required in all courses)**

**GBIO 377 is required for the Business Concentration**

GBIO 377 Applied Biostatistics 4 hrs

**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 482 Plant Anatomy 4 hrs

GBIO 281 Environmental Awareness 3 hrs

GBIO 314 Genetics Laboratory 2 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

GBIO 410 Introduction to Population Genetics 4 hrs

GBIO 418 Community Ecology 4 hrs

GBIO 439 Introduction to Fresh Water & Estuarine Biology 4 hrs

GBIO 434 Molecular Biology and Biotechnology 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

**CURRICULUM IN BIOLOGICAL SCIENCES  
 ECOLOGY, ENVIRONMENTAL, and EVOLUTIONARY BIOLOGY CONCENTRATION**

YEAR: 2018 / 2019

YEAR ENTERED SLU: \_\_\_\_\_

NAME: \_\_\_\_\_

W# \_\_\_\_\_

**MAJOR HOURS (41) C or Better<sup>2</sup>**

**Core Requirements (21 hrs)**

GBIO 151 \_\_\_\_\_ 3 \_\_\_\_\_  
 BIOL 152 \_\_\_\_\_ 1 \_\_\_\_\_  
 GBIO 153 \_\_\_\_\_ 3 \_\_\_\_\_  
 BIOL 154 \_\_\_\_\_ 1 \_\_\_\_\_  
 MIC 205 \_\_\_\_\_ 3 \_\_\_\_\_  
 MICL 207 \_\_\_\_\_ 1 \_\_\_\_\_  
<sup>2</sup>GBIO 200 \_\_\_\_\_ 3 \_\_\_\_\_  
<sup>2</sup>GBIO 312 \_\_\_\_\_ 3 \_\_\_\_\_  
 GBIO 241 \_\_\_\_\_ 1 \_\_\_\_\_  
 GBIO 341 \_\_\_\_\_ 1 \_\_\_\_\_  
 GBIO 441\*\* \_\_\_\_\_ 1 \_\_\_\_\_

**MATHEMATICS (9)**

<sup>1,2</sup>MATH 161 \_\_\_\_\_ 3 \_\_\_\_\_  
 MATH 162 \_\_\_\_\_ 3 \_\_\_\_\_  
 MATH 163 \_\_\_\_\_ 3 \_\_\_\_\_

or <sup>1</sup>MATH 165 and 200 (8)

MATH 165 \_\_\_\_\_ 3 \_\_\_\_\_  
 MATH 200 \_\_\_\_\_ 5 \_\_\_\_\_

**SOCIAL 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)**

<sup>2</sup>CHEM 121 \_\_\_\_\_ 3 \_\_\_\_\_  
 CLAB 123 \_\_\_\_\_ 1 \_\_\_\_\_  
 CHEM 122 \_\_\_\_\_ 3 \_\_\_\_\_  
 CLAB 124 \_\_\_\_\_ 1 \_\_\_\_\_  
<sup>3</sup>CHEM 261 \_\_\_\_\_ 3 \_\_\_\_\_  
<sup>3</sup>CLAB 263 \_\_\_\_\_ 1 \_\_\_\_\_  
<sup>3</sup>CHEM 281 \_\_\_\_\_ 3 \_\_\_\_\_  
<sup>3</sup>CLAB 283 \_\_\_\_\_ 1 \_\_\_\_\_

**FOR. LANGUAGES (6)**

\_\_\_\_\_ 101 \_\_\_\_\_ 3 \_\_\_\_\_  
 \_\_\_\_\_ 102 \_\_\_\_\_ 3 \_\_\_\_\_

**OTHER (12)**

ART ELECTIVE (Mus, Art, Dnc, Thea)

\_\_\_\_\_ 3 \_\_\_\_\_  
 LS 102 \_\_\_\_\_ 1 \_\_\_\_\_  
 COMM211 \_\_\_\_\_ 3 \_\_\_\_\_  
 HIST \_\_\_\_\_ 3 \_\_\_\_\_  
 SE 101 \_\_\_\_\_ 2 \_\_\_\_\_

**ELECTIVES (10)**

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

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

**TOTAL HOURS 120**

**NOTES:** <sup>1</sup>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).

<sup>2</sup>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.

<sup>3</sup>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.

\*\*GBIO 441 fulfills requirement for computer literacy

ADDITIONAL COURSES:

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

AVERAGES

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

**ECOLOGY, ENVIRONMENTAL, and EVOLUTIONARY 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 Ecology, Environmental, Evolutionary Biology Concentration:**

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

**Group A: Fundamental Courses** – total 13 hrs – the following four courses are required

- GBIO 377 Biostatistics 4 hrs
- GBIO 395 General Ecology 3 hrs
- GBIO 397 General Ecology Laboratory 2 hrs
- GBIO 405 Evolutionary Biology 4 hrs

**Group B: Electives** – minimum 7 hrs from these electives. Only one 200 level course may be selected.

- BOT 205 Introduction to Botany 4 hrs
  - BOT 347 Vascular Plant Systematics 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 482 Plant Anatomy 4 hrs
  - GBIO 281 Environmental Awareness 3 hrs
  - GBIO 404 Ecological Methods 3 hrs
  - GBIO 406 Wetlands Ecology 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 Freshwater & Estuary Biology 4 hrs
  - GBIO 442 Marine Biology 4 hrs
  - GBIO 481 Biogeography 3 hrs
  - GBIO 485 Conservation Biology 4 hrs
  - ZOO 301 Invertebrate Zoology 4 hrs
  - ZOO 302 Comparative Anatomy of the Vertebrates 4 hrs
  - ZOO 392 Animal Physiology 4 hrs
  - ZOO 352 Field Zoology 4 hrs
  - ZOO 409 General Entomology 4 hrs
  - ZOO 456 Ichthyology 4 hrs
  - ZOO 458 Fisheries Ecology & Mgmt 4 hrs
  - ZOO 457 Invertebrate Ecology 4 hrs
  - ZOO 470 Ornithology 4 hrs
  - ZOO 465 Animal Development 4 hrs
  - ZOO 475 Animal Behavior 4 hrs
  - MIC 313 Microbial Ecology 3 hrs
  - MIC 438 Soil Microbiology 4 hrs
  - MIC 423 Environmental Microbiology 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 four credit hours from these courses may be applied to concentration elective requirements.

- CMPS 450 Spatial Database & Applications 3 hrs
- GEOG 495 Introduction to GIS 3 hrs
- POLI 446 Politics & the Environment 3 hrs
- SOC 360 Environmental Sociology 3 hrs

**CURRICULUM IN BIOLOGICAL SCIENCES  
INTEGRATIVE BIOLOGY CONCENTRATION**

YEAR: 2018 / 2019

YEAR ENTERED SLU: \_\_\_\_\_

NAME: \_\_\_\_\_

W# \_\_\_\_\_

**MAJOR HOURS (41) C or Better<sup>2</sup>**

**Core Requirements (21 hrs)**

GBIO 151 \_\_\_\_\_ 3 \_\_\_\_\_  
 BIOL 152 \_\_\_\_\_ 1 \_\_\_\_\_  
 GBIO 153 \_\_\_\_\_ 3 \_\_\_\_\_  
 BIOL 154 \_\_\_\_\_ 1 \_\_\_\_\_  
 MIC 205 \_\_\_\_\_ 3 \_\_\_\_\_  
 MICL 207 \_\_\_\_\_ 1 \_\_\_\_\_  
<sup>2</sup>GBIO 200 \_\_\_\_\_ 3 \_\_\_\_\_  
<sup>2</sup>GBIO 312 \_\_\_\_\_ 3 \_\_\_\_\_  
 GBIO 241 \_\_\_\_\_ 1 \_\_\_\_\_  
 GBIO 341 \_\_\_\_\_ 1 \_\_\_\_\_  
 GBIO 441\*\* \_\_\_\_\_ 1 \_\_\_\_\_

**Upper-level Courses (20 hrs) page 2**

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**CHEMISTRY (16)**

<sup>2</sup>CHEM 121 \_\_\_\_\_ 3 \_\_\_\_\_  
 CLAB 123 \_\_\_\_\_ 1 \_\_\_\_\_  
 CHEM 122 \_\_\_\_\_ 3 \_\_\_\_\_  
 CLAB 124 \_\_\_\_\_ 1 \_\_\_\_\_  
<sup>3</sup>CHEM 261 \_\_\_\_\_ 3 \_\_\_\_\_  
<sup>3</sup>CLAB 263 \_\_\_\_\_ 1 \_\_\_\_\_  
<sup>3</sup>CHEM 281 \_\_\_\_\_ 3 \_\_\_\_\_  
<sup>3</sup>CLAB 283 \_\_\_\_\_ 1 \_\_\_\_\_

**MATHEMATICS (9)**

<sup>1,2</sup>MATH 161 \_\_\_\_\_ 3 \_\_\_\_\_  
 MATH 162 \_\_\_\_\_ 3 \_\_\_\_\_  
 MATH 163 \_\_\_\_\_ 3 \_\_\_\_\_

or <sup>1</sup>MATH 165 and 200 (8 hrs)

MATH 165 \_\_\_\_\_ 3 \_\_\_\_\_  
 MATH 200 \_\_\_\_\_ 5 \_\_\_\_\_

**ENGLISH (12)**

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

**FOR. LANGUAGES (6)**

\_\_\_\_\_ 101 \_\_\_\_\_ 3 \_\_\_\_\_  
 \_\_\_\_\_ 102 \_\_\_\_\_ 3 \_\_\_\_\_

**<sup>4</sup>ELECTIVES (10)**

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**<sup>4</sup>SOCIAL SCIENCES (6)**

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

\_\_\_\_\_ 3 \_\_\_\_\_  
 \_\_\_\_\_ 3 \_\_\_\_\_

**PHYSICS (8)**

PHYS 191 \_\_\_\_\_ 3 \_\_\_\_\_  
 PLAB 193 \_\_\_\_\_ 1 \_\_\_\_\_  
 PHYS 192 \_\_\_\_\_ 3 \_\_\_\_\_  
 PLAB 194 \_\_\_\_\_ 1 \_\_\_\_\_

**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:** <sup>1</sup>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).

<sup>2</sup>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.

<sup>3</sup>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.

<sup>4</sup>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:

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**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 481 Plant Ecology 4 hrs

BOT 482 Plant Anatomy 4 hrs

GBIO 281 Environmental Awareness 3 hrs

GBIO 314 Genetics Laboratory 2 hrs

<sup>4</sup>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

**CURRICULUM IN BIOLOGICAL SCIENCES  
MICROBIOLOGY / MOLECULAR BIOLOGY CONCENTRATION**

YEAR: 2018 / 2019

YEAR ENTERED SLU: \_\_\_\_\_

NAME: \_\_\_\_\_

W# \_\_\_\_\_

**MAJOR HOURS (41) C or Better<sup>2</sup>**

**Core Requirements (21 hrs)**

GBIO 151 \_\_\_\_\_ 3 \_\_\_\_\_  
 BIOL 152 \_\_\_\_\_ 1 \_\_\_\_\_  
 GBIO 153 \_\_\_\_\_ 3 \_\_\_\_\_  
 BIOL 154 \_\_\_\_\_ 1 \_\_\_\_\_  
 MIC 205 \_\_\_\_\_ 3 \_\_\_\_\_  
 MICL 207 \_\_\_\_\_ 1 \_\_\_\_\_  
<sup>2</sup>GBIO 200 \_\_\_\_\_ 3 \_\_\_\_\_  
<sup>2</sup>GBIO 312 \_\_\_\_\_ 3 \_\_\_\_\_  
 GBIO 241 \_\_\_\_\_ 1 \_\_\_\_\_  
 GBIO 341 \_\_\_\_\_ 1 \_\_\_\_\_  
 GBIO 441\*\* \_\_\_\_\_ 1 \_\_\_\_\_

**MATHEMATICS (9)**

<sup>1,2</sup>MATH 161 \_\_\_\_\_ 3 \_\_\_\_\_  
 MATH 162 \_\_\_\_\_ 3 \_\_\_\_\_  
 MATH 163 \_\_\_\_\_ 3 \_\_\_\_\_

or <sup>1</sup>MATH 165 and 200 (8)

MATH 165 \_\_\_\_\_ 3 \_\_\_\_\_  
 MATH 200 \_\_\_\_\_ 5 \_\_\_\_\_

**SOCIAL SCIENCES (6)**

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

\_\_\_\_\_ 3 \_\_\_\_\_  
 \_\_\_\_\_ 3 \_\_\_\_\_

**Upper-level Courses (20 hrs) page 2**

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
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**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 (20)**

<sup>2</sup>CHEM 121 \_\_\_\_\_ 3 \_\_\_\_\_  
 CLAB 123 \_\_\_\_\_ 1 \_\_\_\_\_  
 CHEM 122 \_\_\_\_\_ 3 \_\_\_\_\_  
 CLAB 124 \_\_\_\_\_ 1 \_\_\_\_\_  
 CHEM 265 \_\_\_\_\_ 3 \_\_\_\_\_  
 CLAB 267 \_\_\_\_\_ 1 \_\_\_\_\_  
 CHEM 266 \_\_\_\_\_ 3 \_\_\_\_\_  
 CLAB 268 \_\_\_\_\_ 1 \_\_\_\_\_  
 CHEM 481 \_\_\_\_\_ 3 \_\_\_\_\_  
 CLAB 485 \_\_\_\_\_ 1 \_\_\_\_\_

**FOR. LANGUAGES (6)**

\_\_\_\_\_ 101 \_\_\_\_\_ 3 \_\_\_\_\_  
 \_\_\_\_\_ 102 \_\_\_\_\_ 3 \_\_\_\_\_

**ELECTIVES (6)**

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**OTHER (12)**

ART ELECTIVE (Mus, Art, Dnc, Thea)

\_\_\_\_\_ 3 \_\_\_\_\_  
 LS 102 \_\_\_\_\_ 1 \_\_\_\_\_  
 COMM211 \_\_\_\_\_ 3 \_\_\_\_\_  
 HIST \_\_\_\_\_ 3 \_\_\_\_\_  
 SE 101 \_\_\_\_\_ 2 \_\_\_\_\_

SE 101 is not required for transfer or readmitted students with 30 hrs or more. These students are required to take two additional hrs of electives (i.e., 8 hrs instead of 6 hrs)

TOTAL HOURS 120

**NOTES:** <sup>1</sup>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., 7 hrs instead of 6 hrs).

<sup>2</sup>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.

\*\*GBIO 441 fulfills requirement for computer literacy

ADDITIONAL COURSES:

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

AVERAGES

HA HE QP Average

CUM: \_\_\_\_\_  
 (Adj) \_\_\_\_\_  
 MAJOR \_\_\_\_\_  
 (Adj) \_\_\_\_\_  
 SLU: \_\_\_\_\_  
 (Adj) \_\_\_\_\_

## **MICROBIOLOGY / MOLECULAR 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 Microbiology and Molecular Biology Concentration.**

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

**GROUP A: Fundamental courses** – total 8 hrs – the following two courses are required

MIC 325 Advanced General Microbiology 4 hrs

MIC 461 Bacterial Metabolism 4 hrs

**GROUP B: Electives** – minimum 12 hrs

MIC 313 Microbial Ecology 3 hrs

MIC 336 Pathogenic Microbiology 4 hrs

MIC 338 Soil Microbiology 4 hrs

MIC 423 Environmental Microbiology 4 hrs

MIC 457 Dairy and Food Microbiology 4 hrs

MIC 460 Immunology 4 hrs

MIC 463 Virology 4 hrs

MIC 465 Recombinant DNA Techniques 4 hrs

CHEM 482 Biochemistry II 3 hrs

CLAB 486 Biochemistry II Laboratory 1 hr

BOT 401 Plant Pathology 4 hrs

BOT 426 Plant Physiology 4hrs

GBIO 314 Genetics Laboratory 2 hrs

GBIO 377 Applied Biostatistics 4hrs

GBIO 408 Computational Biology 4 hrs

GBIO 434 Molecular Biology and Biotechnology 4 hrs

GBIO 495 Electron Microscopy 4 hrs

ZOO 392 Animal Physiology 4 hrs

ZOO 455 Medical Parasitology 4hrs

ZOO 465 Animal Development 4 hrs

ZOO 471 Comparative Endocrinology 4hrs

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



**CURRICULUM IN BIOLOGICAL SCIENCES  
PLANT SCIENCE CONCENTRATION**

YEAR: 2018 / 2019

YEAR ENTERED SLU: \_\_\_\_\_

NAME: \_\_\_\_\_

W# \_\_\_\_\_

**MAJOR HOURS (41) C or Better<sup>2</sup>**

**Core Requirements (21 hrs)**

GBIO 151 \_\_\_\_\_ 3 \_\_\_\_\_  
 BIOL 152 \_\_\_\_\_ 1 \_\_\_\_\_  
 GBIO 153 \_\_\_\_\_ 3 \_\_\_\_\_  
 BIOL 154 \_\_\_\_\_ 1 \_\_\_\_\_  
 MIC 205 \_\_\_\_\_ 3 \_\_\_\_\_  
 MICL 207 \_\_\_\_\_ 1 \_\_\_\_\_  
<sup>2</sup>GBIO 200 \_\_\_\_\_ 3 \_\_\_\_\_  
<sup>2</sup>GBIO 312 \_\_\_\_\_ 3 \_\_\_\_\_  
 GBIO 241 \_\_\_\_\_ 1 \_\_\_\_\_  
 GBIO 341 \_\_\_\_\_ 1 \_\_\_\_\_  
 GBIO 441\*\* \_\_\_\_\_ 1 \_\_\_\_\_

**Upper-level Courses (20 hrs) page 2**

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**CHEMISTRY (16)**

<sup>2</sup>CHEM 121 \_\_\_\_\_ 3 \_\_\_\_\_  
 CLAB 123 \_\_\_\_\_ 1 \_\_\_\_\_  
 CHEM 122 \_\_\_\_\_ 3 \_\_\_\_\_  
 CLAB 124 \_\_\_\_\_ 1 \_\_\_\_\_  
<sup>3</sup>CHEM 261 \_\_\_\_\_ 3 \_\_\_\_\_  
<sup>3</sup>CLAB 263 \_\_\_\_\_ 1 \_\_\_\_\_  
<sup>3</sup>CHEM 281 \_\_\_\_\_ 3 \_\_\_\_\_  
<sup>3</sup>CLAB 283 \_\_\_\_\_ 1 \_\_\_\_\_

**MATHEMATICS (9)**

<sup>1,2</sup>MATH 161 \_\_\_\_\_ 3 \_\_\_\_\_  
 MATH 162 \_\_\_\_\_ 3 \_\_\_\_\_  
 MATH 163 \_\_\_\_\_ 3 \_\_\_\_\_

or <sup>1</sup>MATH 165 and 200 (8 hrs)

MATH 165 \_\_\_\_\_ 3 \_\_\_\_\_  
 MATH 200 \_\_\_\_\_ 5 \_\_\_\_\_

**ENGLISH (12)**

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

**FOR. LANGUAGES (6)**

\_\_\_\_\_ 101 \_\_\_\_\_ 3 \_\_\_\_\_  
 \_\_\_\_\_ 102 \_\_\_\_\_ 3 \_\_\_\_\_

**ELECTIVES (10)**

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**SOCIAL SCIENCES (6)**

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

\_\_\_\_\_ 3 \_\_\_\_\_  
 \_\_\_\_\_ 3 \_\_\_\_\_

**PHYSICS (8)**

PHYS 191 \_\_\_\_\_ 3 \_\_\_\_\_  
 PLAB 193 \_\_\_\_\_ 1 \_\_\_\_\_  
 PHYS 192 \_\_\_\_\_ 3 \_\_\_\_\_  
 PLAB 194 \_\_\_\_\_ 1 \_\_\_\_\_

**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:** <sup>1</sup>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).

<sup>2</sup>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.

<sup>3</sup>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.

\*\*GBIO 441 fulfills requirement for computer literacy

**ADDITIONAL COURSES:**

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

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

## PLANT SCIENCE CONCENTRATION

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

**II. Upper-level Courses for Plant Science Concentration.**

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

Electives – 20 hrs

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 482 Plant Anatomy 4 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 408 Computational Biology 4 hrs  
GBIO 418 Community Ecology 4 hrs  
GBIO 434 Molecular Biology and Biotechnology 4 hrs  
GBIO 485 Conservation Biology 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  
HORT 490 Survey of the Horticulture Industry 4 hrs  
ZOO 409 General Entomology 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

\*HORT 495 Seminar – 1 hour

**CURRICULUM IN BIOLOGICAL SCIENCES  
BUSINESS CONCENTRATION**

YEAR: 2022 / 2023

YEAR ENTERED SLU: \_\_\_\_\_

NAME: \_\_\_\_\_

W# \_\_\_\_\_

**MAJOR HOURS (41) C or Better<sup>2</sup>**

**Core Requirements (21 hrs)**

GBIO 151 \_\_\_\_\_ 3 \_\_\_\_\_  
 BIOL 152 \_\_\_\_\_ 1 \_\_\_\_\_  
 GBIO 153 \_\_\_\_\_ 3 \_\_\_\_\_  
 BIOL 154 \_\_\_\_\_ 1 \_\_\_\_\_  
 MIC 205 \_\_\_\_\_ 3 \_\_\_\_\_  
 MICL 207 \_\_\_\_\_ 1 \_\_\_\_\_  
<sup>2</sup>GBIO 200 \_\_\_\_\_ 3 \_\_\_\_\_  
<sup>2</sup>GBIO 312 \_\_\_\_\_ 3 \_\_\_\_\_  
 GBIO 241 \_\_\_\_\_ 1 \_\_\_\_\_  
 GBIO 341 \_\_\_\_\_ 1 \_\_\_\_\_  
 GBIO 441\*\* \_\_\_\_\_ 1 \_\_\_\_\_

**Upper-level Courses (20 hrs) page 2**

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 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**CHEMISTRY (16)**

<sup>2</sup>CHEM 121 \_\_\_\_\_ 3 \_\_\_\_\_  
 CLAB 123 \_\_\_\_\_ 1 \_\_\_\_\_  
 CHEM 122 \_\_\_\_\_ 3 \_\_\_\_\_  
 CLAB 124 \_\_\_\_\_ 1 \_\_\_\_\_  
<sup>3</sup>CHEM 261 \_\_\_\_\_ 3 \_\_\_\_\_  
<sup>3</sup>CLAB 263 \_\_\_\_\_ 1 \_\_\_\_\_  
<sup>3</sup>CHEM 281 \_\_\_\_\_ 3 \_\_\_\_\_  
<sup>3</sup>CLAB 283 \_\_\_\_\_ 1 \_\_\_\_\_

**MATHEMATICS (9)**

<sup>1,2</sup>MATH 161 \_\_\_\_\_ 3 \_\_\_\_\_  
 MATH 162 \_\_\_\_\_ 3 \_\_\_\_\_  
 MATH 163 \_\_\_\_\_ 3 \_\_\_\_\_

or **<sup>1</sup>MATH 175 and 200 (10)**

MATH 175 \_\_\_\_\_ 5 \_\_\_\_\_  
 MATH 200 \_\_\_\_\_ 5 \_\_\_\_\_

**ENGLISH (12)**

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

**FOR. LANGUAGES (6)**

\_\_\_\_\_ 101 \_\_\_\_\_ 3 \_\_\_\_\_  
 \_\_\_\_\_ 102 \_\_\_\_\_ 3 \_\_\_\_\_

**<sup>2</sup>CONCENT. COURSES (15)**

(Anth, Econ, Geog, Psys, Poli, Soc, CJ)

<sup>4</sup>ECON 201 \_\_\_\_\_ 3 \_\_\_\_\_  
<sup>4</sup>ECON 202 \_\_\_\_\_ 3 \_\_\_\_\_  
 ACCT 200 \_\_\_\_\_ 3 \_\_\_\_\_  
 FIN 381 \_\_\_\_\_ 3 \_\_\_\_\_  
 MRKT 303 or MGMT 351 \_\_\_\_\_ 3 \_\_\_\_\_

**PHYSICS (8)**

PHYS 191 \_\_\_\_\_ 3 \_\_\_\_\_  
 PLAB 193 \_\_\_\_\_ 1 \_\_\_\_\_  
 PHYS 192 \_\_\_\_\_ 3 \_\_\_\_\_  
 PLAB 194 \_\_\_\_\_ 1 \_\_\_\_\_

**ELECTIVE (1)**

\_\_\_\_\_ (1)

**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:** <sup>1</sup>Students 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 not required to take the one hour of electives (i.e., 0 hr instead of 1 hr).

<sup>2</sup>Grade of "C" or better in CHEM 121, MATH 151/161, ECON 201, 202, ACCT 200, FIN 381, MRKT 303 or MGMT 351, and all Biology courses is required. CHEM 121 and MATH 151/161 are prerequisites for GBIO 200, and GBIO 200 is a prerequisite for GBIO 312.

<sup>3</sup>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. Also, CHEM 265/267 can NOT be used as prerequisites for CHEM 281/283. Also, GBIO 434 or MIC 461 may be taken in place of CHEM 281/283.

<sup>4</sup>ECON 201 and ECON 202 fulfill the Social Sciences requirement.

\*\*GBIO 441 fulfills requirement for computer literacy

**ADDITIONAL COURSES:**

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

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

### BUSINESS CONCENTRATION

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

**II. Upper-level Courses: 20 CREDIT HOURS from the following courses with approval of advisor (Grade of "C" or better required in all courses)**

**GBIO 377 is required for the Business Concentration**

GBIO 377 Applied Biostatistics 4 hrs

**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 458 General Mycology 3 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 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 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 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 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

**CURRICULUM IN BIOLOGICAL SCIENCES  
 ECOLOGY, ENVIRONMENTAL, and EVOLUTIONARY BIOLOGY CONCENTRATION**

YEAR: 2022 / 2023

YEAR ENTERED SLU: \_\_\_\_\_

NAME: \_\_\_\_\_

W# \_\_\_\_\_

**MAJOR HOURS (41) C or Better<sup>2</sup>**

**Core Requirements (21 hrs)**

GBIO 151 \_\_\_\_\_ 3 \_\_\_\_\_  
 BIOL 152 \_\_\_\_\_ 1 \_\_\_\_\_  
 GBIO 153 \_\_\_\_\_ 3 \_\_\_\_\_  
 BIOL 154 \_\_\_\_\_ 1 \_\_\_\_\_  
 MIC 205 \_\_\_\_\_ 3 \_\_\_\_\_  
 MICL 207 \_\_\_\_\_ 1 \_\_\_\_\_  
<sup>2</sup>GBIO 200 \_\_\_\_\_ 3 \_\_\_\_\_  
<sup>2</sup>GBIO 312 \_\_\_\_\_ 3 \_\_\_\_\_  
 GBIO 241 \_\_\_\_\_ 1 \_\_\_\_\_  
 GBIO 341 \_\_\_\_\_ 1 \_\_\_\_\_  
 GBIO 441\*\* \_\_\_\_\_ 1 \_\_\_\_\_

**MATHEMATICS (9)**

<sup>1,2</sup>MATH 161 \_\_\_\_\_ 3 \_\_\_\_\_  
 MATH 162 \_\_\_\_\_ 3 \_\_\_\_\_  
 MATH 163 \_\_\_\_\_ 3 \_\_\_\_\_

or **<sup>1</sup>MATH 175 and 200 (10)**

MATH 175 \_\_\_\_\_ 5 \_\_\_\_\_  
 MATH 200 \_\_\_\_\_ 5 \_\_\_\_\_

**SOCIAL SCIENCES (6)**

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

\_\_\_\_\_ 3 \_\_\_\_\_  
 \_\_\_\_\_ 3 \_\_\_\_\_

**PHYSICS (8)**

PHYS 191 \_\_\_\_\_ 3 \_\_\_\_\_  
 PLAB 193 \_\_\_\_\_ 1 \_\_\_\_\_  
 PHYS 192 \_\_\_\_\_ 3 \_\_\_\_\_  
 PLAB 194 \_\_\_\_\_ 1 \_\_\_\_\_

**Upper-level Courses (20 hrs) page 2**

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 \_\_\_\_\_  
 \_\_\_\_\_  
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**ENGLISH (12)**

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

**CHEMISTRY (16)**

<sup>2</sup>CHEM 121 \_\_\_\_\_ 3 \_\_\_\_\_  
 CLAB 123 \_\_\_\_\_ 1 \_\_\_\_\_  
 CHEM 122 \_\_\_\_\_ 3 \_\_\_\_\_  
 CLAB 124 \_\_\_\_\_ 1 \_\_\_\_\_  
<sup>3</sup>CHEM 261 \_\_\_\_\_ 3 \_\_\_\_\_  
<sup>3</sup>CLAB 263 \_\_\_\_\_ 1 \_\_\_\_\_  
<sup>3</sup>CHEM 281 \_\_\_\_\_ 3 \_\_\_\_\_  
<sup>3</sup>CLAB 283 \_\_\_\_\_ 1 \_\_\_\_\_

**FOR. LANGUAGES (6)**

\_\_\_\_\_ 101 \_\_\_\_\_ 3 \_\_\_\_\_  
 \_\_\_\_\_ 102 \_\_\_\_\_ 3 \_\_\_\_\_

**OTHER (12)**

ART ELECTIVE (Mus, Art, Dnc, Thea)

\_\_\_\_\_ 3 \_\_\_\_\_  
 LS 102 \_\_\_\_\_ 1 \_\_\_\_\_  
 COMM211 \_\_\_\_\_ 3 \_\_\_\_\_  
 HIST \_\_\_\_\_ 3 \_\_\_\_\_  
 SE 101 \_\_\_\_\_ 2 \_\_\_\_\_

**ELECTIVES (10)**

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

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

**TOTAL HOURS 120**

**NOTES:** <sup>1</sup>Students 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).

<sup>2</sup>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.

<sup>3</sup>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. Also, CHEM 265/267 can NOT be used as prerequisites for CHEM 281/283. Also, GBIO 434 or MIC 461 may be taken in place of CHEM 281/283.

\*\*GBIO 441 fulfills requirement for computer literacy

ADDITIONAL COURSES:

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

AVERAGES

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

**ECOLOGY, ENVIRONMENTAL, and EVOLUTIONARY 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 Ecology, Environmental, Evolutionary Biology Concentration:**

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

**Group A: Fundamental Courses** – total 13 hrs – the following four courses are required

- GBIO 377 Biostatistics 4 hrs
- GBIO 395 General Ecology 3 hrs
- GBIO 397 General Ecology Laboratory 2 hrs
- GBIO 405 Evolutionary Biology 4 hrs

**Group B: Electives** – minimum 7 hrs from these electives. Only one 200 level course may be selected.

- BOT 205 Introduction to Botany 4 hrs
  - BOT 347 Vascular Plant Systematics 4 hrs
  - BOT 426 Plant Physiology 4 hrs
  - BOT 427 Plant Stress Ecophysiology 4 hrs
  - BOT 429 Native Plants of Louisiana 4 hrs
  - BOT 458 General Mycology 3 hrs
  - BOT 481 Plant Ecology 4 hrs
  - BOT 482 Plant Anatomy 4 hrs
  - GBIO 281 Environmental Awareness 3 hrs
  - GBIO 404 Ecological Methods 3 hrs
  - GBIO 406 Wetlands Ecology 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 Freshwater & Estuary Biology 4 hrs
  - GBIO 442 Marine Biology 4 hrs
  - GBIO 481 Biogeography 3 hrs
  - GBIO 485 Conservation Biology 4 hrs
  - ZOO 301 Invertebrate Zoology 4 hrs
  - ZOO 302 Comparative Anatomy of the Vertebrates 4 hrs
  - ZOO 352 Field Zoology 4 hrs
  - ZOO 392 Animal Physiology 4 hrs
  - ZOO 409 General Entomology 4 hrs
  - ZOO 438 Mammology 4 hrs
  - ZOO 456 Ichthyology 4 hrs
  - ZOO 457 Invertebrate Ecology 4 hrs
  - ZOO 458 Fisheries Ecology & Mgmt 4 hrs
  - ZOO 465 Animal Development 4 hrs
  - ZOO 470 Ornithology 4 hrs
  - ZOO 475 Animal Behavior 4 hrs
  - MIC 313 Microbial Ecology 3 hrs
  - MIC 423 Environmental Microbiology 4 hrs
  - MIC 438 Soil Microbiology 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 four credit hours from these courses may be applied to concentration elective requirements.

- CMPS 450 Spatial Database & Applications 3 hrs
- GEOG 495 Introduction to GIS 3 hrs
- POLI 446 Politics & the Environment 3 hrs
- SOC 360 Environmental Sociology 3 hrs