CURRICULUM IN BIOLOGICAL SCIENCES BIOLOGY EDUCATION CONCENTRATION 2017 - 2018

2017 - 2018		
	Student:	

D	2017 - 2010 Ct. 1
Date:	Student:
Advisor:	W#
BIOLOGY (41) C or Better* (41)	
Core Requirements (21 hrs)	$\underline{\mathbf{EDUCATION}}\tag{33}$
*GBIO 151 3	**EDUC 203 2
*BIOL 152	**EDUC 212
*GRIO 153	*EDUC 407 3
*BIOL 154	*EDUC 472 3
*MIC 205 or 223	*EDUC 475
*MICL 207 or 224	*EDUC 490 6
*2GBIO 200 3	*EDUC 486 9
*2GBIO 3123	*EDUC 315 3
*GBIO 241 1	*EPSY 311 3
*BIOL 154 *MIC 205 or 223 *MICL 207 or 224 * ² GBIO 200 * ² GBIO 312 *GBIO 241 *GBIO 341 *GBIO 341 *GBIO 341 *GBIO 341	*SPED 2102
*GBIO 441	_ _ _
_	SOCIAL STUDIES (6)
Upper-level Courses (20 hrs) page 2	HIST 4173
	Social Science3
$ \underline{\mathbf{CHEMISTRY}} \tag{16} $	OTHER (0)
* ² CHEM 1213	$ \underbrace{\mathbf{OTHER}}_{\mathbf{OT}} \tag{9} $
*CLAB 1231	SE 1012
*CHEM 1223 *CLAB 1241	LS 1021
*CLAB 1241	COMM 210 APT place of the CM and App Date Theory
*CHEM 261 3	ART elective (Mus,Art,Dnc,Thea)3
*CLAB 2631	
*CHEM 2813	
*CHEM 2831	TOTAL HOURS 120
ENGLISH (9)	TOTAL HOURS 120
ENGL 101 3	
*ENGL 1013	
ENGL 230 or 231 or 232	
1	
$^{1}MATHEMATICS $ (6)	
* ^{1, 2} MATH 161 (or MATH 151)3	-
*N/A 1 1 1 1 6 7 am 1 6 6	

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.

*MATH 162 or 165

^{*}A grade of C or better is required in these courses.

^{**}A grade of B or better is required in these courses.

¹Students with Math ACT score of 19 – 20 take MATH 151 in place of MATH 161. Students with Math ACT score of ≥ 21 take MATH 161.

²CHEM 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 from the following courses with approval of the Biology Education Advisor

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

GROUP A – required courses (12 hrs)

*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

GROUP B: Electives (8 hrs)

*ZOO 302 Comparative Anatomy 4 hrs

*ZOO 392 Animal Physiology 4 hrs

*PHYS 191 General Physics 3 hrs

*PLAB 193 General Physics Laboratory 1 hr

*PHYS 192 General Physics 3 hrs

*PLAB 194 General Physics Laboratory 1 hr

CURRICULUM IN BIOLOGICAL SCIENCES BUSINESS CONCENTRATION

YEAR: 2017 / 2018				YEAR E	NTERE	O SLU:
NAME:		_		W#		
MAJOR HOURS (41) <u>C or Better</u> Core Requirements (21 hrs) GBIO 1513 BIOL 1521 GBIO 1533	MATHEMATIO 1,2 MATH 161 MATH 162 MATH 163	3		(Anth, Econ	n,Geog, Ps	NCES (6) yc, Poli, Soc) 3 3 3
BIOL 1541 MIC 2053 MICL 2071 ² GBIO 2003 ² GBIO 3123 GBIO 2411 GBIO 3411	or ¹ MATH 165 a MATH 165 MATH 200	_35		PHYSIC PHYS 19 PLAB 19	01	1
GBIO 441**11 Upper-level Courses (20 hrs) page 2	ENGL 101 or 121H ENGL 102	3		PHYS 19 PLAB 19		3 <u> </u>
	or 122H ENGL 230 or 23 ENGL 322	1 or 232		ELECTI		
					CTIVE (M	fus,Art,Dnc,Thea)
CHEMISTRY (16) ² CHEM 121 3 CLAB 123 1 CHEM 122 3	FOR. LANGUA 101 102	AGES (6) _3 _3		LS 102 COMM2 HIST SE 101	11	2
CHEM 122 3 3 3 4 4 4 4 4 1 4 1 4 1 4 1 4 1 4 1 4	CONCENT. CO ² ACCT 200 (3) ² FIN 381 (3) ² MRKT 303 or 1			with 30 h students a	or readm nours or nare required to the second to the secon	itted students more. These red to take two of electives (i.e.,
TOTAL HOURS 120				12 1115 1115	sicad of	10 1113)
NOTES: ¹ Students with Math ACT <21 ta take MATH 165 and 200 (8 credit hours) in MATH 165 and 200 are required to take or ² Grade of "C" or better in CHEM 121, MA all Biology courses is required. CHEM 12 prerequisite for GBIO 312.	n place of MATH 1 ne additional hour of TH 151/161, ACC 1 and MATH 151/	61, 162, a of electives T 200, FIN 161 are pre	nd 163 (i (i.e., 11 i 381, ar erequisit	9 credit ho hrs insteand MRKT es for GBI	ours). S ad of 10 303 or I IO 200, a	tudents who take hrs). MGMT 351, and and GBIO 200 is a
 ³Students planning on attending medical, deminor in Chemistry, should take CHEM 26 prerequisites for CHEM 281/283. ⁴Students in the Business Concentration shows a concentration of the composition of the statement of the composition of the compositio	5/267 and CHEM ould take ECON 20	266/268.	Also, CI	HEM 265/2	267 can	NOT be used as
ADDITIONAL COURSES:	ater meracy	CUM: (Adj)			QP	<u> </u>
		MAJOR				<u>-</u>

(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 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 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: 2017/2018		YEAR ENTERED SLU:
NAME:	<u> </u>	W#
MAJOR HOURS (41) <u>C or Better</u> ² Core Requirements (21 hrs) GBIO 151 3 BIOL 152 1 GBIO 153 3 BIOL 154	MATHEMATICS (9) 1,2MATH 161 3 MATH 162 3 MATH 163 3	(Anth, Econ, Geog, Psyc, Poli, Soc)
BIOL 1541	or ¹ MATH 165 and 200 (8) MATH 1653 MATH 2005	PHYSICS (8) PHYS 1913 PLAB 193 1
GBIO 441**1 Upper-level Courses (20 hrs) page 2	ENGLISH (12) ENGL 101 or 121H3 ENGL 102 or 122H3 ENGL 230 or 231 or 2323 ENGL 3223	
CHEMISTRY (16) ² CHEM 1213 CLAB 1231 CHEM 1223 CLAB 1241 ³ CHEM 2613 ³ CLAB 2631 ³ CHEM 2813 CLAB 2831	FOR. LANGUAGES (6)10131023 ELECTIVES (10)	OTHER (12) ART ELECTIVE (Mus,Art,Dnc,Thea)
TOTAL HOURS 120		hrs instead of 10 hrs).
MATH 165 and 200 are required to take of ² Grade of "C" or better in CHEM 121, MA and MATH 151 or 161 are prerequisites for ³ Students planning on attending medical, described to take or ³ Country of the control o	n place of MATH 161, 162, and additional hour of electives. ATH 151 or 161, and all Biologr GBIO 200, and GBIO 200 idental, or other professional or 65/267 and CHEM 266/268.	nd 163 (9 credit hours). Students who take s (i.e., 11 hrs instead of 10 hrs). ogy courses is required. Also, CHEM 121

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 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: 2017/2018		YEAR ENTERED SLU:
NAME:		W#
MAJOR HOURS (41) <u>C or Better²</u> Core Requirements (21 hrs) GBIO 1513 BIOL 1521 GBIO 1533 BIOL 1541	MATHEMATICS (9) 1,2 MATH 161 3 MATH 162 3 MATH 163 3	3
MIC 205 3 MICL 207 1 2 ² GBIO 200 3 2 ² GBIO 312 3 GBIO 241 1 1 GBIO 341 1 GBIO 441** 1 1 Upper-level Courses (20 hrs) page 2	or ¹ MATH 165 and 200 (8 MATH 1653 MATH 2005 ENGLISH (12) ENGL 101 or 121H3 ENGL 102	PHYSICS (8) PHYS 1913 PLAB 1931 PHYS 1923 PLAB 1941
	or 122H3 ENGL 230 or 231 or 232 3 ENGL 3223	
CHEMISTRY (16) ² CHEM 1213	FOR. LANGUAGES (6) 10131023 4ELECTIVES (10)	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
TOTAL HOURS 120		
MATH 165 and 200 are required to take o ² Grade of "C" or better in CHEM 121, MA and MATH 151 or 161 are prerequisites fo ³ Students planning on attending medical, c minor in Chemistry, should take CHEM 20 prequisites for CHEM 281/283.	n place of MATH 161, 162, ne additional hour of elective ATH 151 or 161, and all Biol or GBIO 200, and GBIO 200 lental, or other professional of 65/267 and CHEM 266/268. of Business Administration (ement, must take ACCT 200 take GBIO 377 as an upper-	and 163 (9 credit hours). Students who take es (i.e., 11 hrs instead of 10 hrs). ogy courses is required. Also, CHEM 121 is a prerequisite for GBIO 312. or graduate schools, and students pursuing a Also, CHEM 265/267 can NOT be used as MBA) program at SELU should take ECON and FIN 381 and should also take MRKT
ADDITIONAL COURSES:	HA	HE QP Average
	CUM: (Adj) MAJOR (Adj) SUU:	

(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

⁴ 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 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 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: 2017/2018		YEAR ENTERED SLU:
NAME:		W#
MAJOR HOURS (41) <u>C or Better²</u> Core Requirements (21 hrs) GBIO 151 3 BIOL 152 1 GBIO 153 3 BIOL 154	MATHEMATICS (9) 1.2 MATH 161 3 MATH 162 3 MATH 163 3	(Anth, Econ, Geog, Psyc, Poli, Soc)
BIOL 154	or ¹ MATH 165 and 200 (8) 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	PHYSICS (8) PHYS 1913 PLAB 1931 PHYS 1923 PLAB 1941
CHEMISTRY (20) 2CHEM 121	FOR. LANGUAGES (6) 10131023 ELECTIVES (6)	ART ELECTIVE (Mus,Art,Dnc,Thea)
TOTAL HOURS 120 NOTES: ¹ Students with Math ACT <21 take MATH 165 and 200 (8 credit hours) MATH 165 and 200 are required to take of ² Grade of "C" or better in CHEM 121, M. and MATH 151 or 161 are prerequisites ff **GBIO 441 fulfills requirement for comparison.	in place of MATH 161, 162, a one additional hour of electives ATH 151 or 161, and all Biolo or GBIO 200, and GBIO 200 i	and 163 (9 credit hours). Students who take is (i.e., 7 hrs instead of 6 hrs). 1. Students who take is (i.e., 7 hrs instead of 6 hrs). 1. Students who take is (i.e., 7 hrs instead of 6 hrs).
ADDITIONAL COURSES:	CUM: (Adj)	AVERAGES HA HE QP Average

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 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: 2017 / 2018		YEAR ENTERED SLU:
NAME:		W#
MAJOR HOURS (41) <u>C or Better²</u> Core Requirements (21 hrs) GBIO 151 3_ BIOL 152 1_ GBIO 153 3_	MATHEMATICS (9) 1,2MATH 161 3 MATH 162 3 MATH 163 3	SOCIAL SCIENCES (6) (Anth, Econ,Geog, Psyc, Poli, Soc) 3 3 3
BIOL 154 1 1	or ¹ MATH 165 and 200 (8 hrs) MATH 1653 MATH 2005 ENGLISH (12) ENGL 101 or 121H3 ENGL 102 or 122H3 ENGL 230 or 231 or 232	PHYSICS (8) PHYS 191 3 PLAB 193 1 PHYS 192 3 PLAB 194 1
CHEMISTRY (16)	FOR. LANGUAGES (6) 101 3 102 3	OTHER (12) ART ELECTIVE (Mus,Art,Dnc,Thea)
² CHEM 121 3 1 1 CHEM 122 3 1 1 CHEM 122 3 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	ELECTIVES (10)	SE 1012 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).
NOTES: ¹ Students with Math ACT <21 take MATH 165 and 200 (8 credit hours) MATH 165 and 200 are required to take ² Grade of "C" or better in CHEM 121, M and MATH 151 or 161 are prerequisites ³ Students planning on attending medical, minor in Chemistry, should take CHEM 2 prequisites for CHEM 281/283.	in place of MATH 161, 162, and 1 one additional hour of electives (i.e IATH 151 or 161, and all Biology of GBIO 200, and GBIO 200 is a p dental, or other professional or grad 265/267 and CHEM 266/268. Also	63 (9 credit hours). Students who take ., 11 hrs instead of 10 hrs). ourses is required. Also, CHEM 121 rerequisite for GBIO 312. duate schools, and students pursuing a
**GBIO 441 fulfills requirement for com ADDITIONAL COURSES:	HA CUM: (Adj) MAJOR	AVERAGES HE QP Average

(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 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