

**CURRICULUM IN BIOLOGICAL SCIENCES
INTEGRATIVE BIOLOGY CONCENTRATION**

YEAR: 2011/2012

YEAR ENTERED SLU: _____

NAME: _____

W# _____

MAJOR HOURS (41) C or Better*

Core Requirements (21 hrs)

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

¹MATHEMATICS (9)

¹MATH 161 _____ 3 _____
 MATH 162 _____ 3 _____
 MATH 163 _____ 3 _____

or ¹MATH 165 and 200 (8 hrs)

MATH 165 _____ 3 _____
 MATH 200 _____ 5 _____

²SOCIAL SCIENCES (6)

(Anth,Econ,Geog,Gov,Psyc,PoliSoc)

_____ 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)

CHEM 121 _____ 3 _____
 CLAB 123 _____ 1 _____
 CHEM 122 _____ 3 _____
 CLAB 124 _____ 1 _____
 CHEM 265 or 261 _____ 3 _____
 CLAB 267 or 263 _____ 1 _____
 CHEM 266 or 281 _____ 3 _____
 CLAB 268 or 283 _____ 1 _____

FOR. LANGUAGES (12)

_____ 101 _____ 3 _____
 _____ 102 _____ 3 _____
 _____ 201 _____ 3 _____
 _____ 202 _____ 3 _____

ELECTIVES (4)

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., 6 hrs instead of 4 hrs)

TOTAL HOURS 120

NOTES: ¹Students with Math ACT <21 take MATH 155 (5 hrs) in place of MATH 161 (3 hrs); only 3 hrs from MATH 155 count towards the 120 hr degree requirement. MATH 165 and 200 (8 credit hours) may be taken 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., 5 hrs instead of 4 hrs).

²One social science course (3 hrs) must be at the 200 level or above.

*Grade of "C" or better in all Biology courses is required in order for the course to count towards the B.S. degree in Biological Sciences

**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

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

20 CREDIT HOURS from the following courses with approval of advisor

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 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 418 Community Ecology 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
 ECOLOGY, ENVIRONMENTAL, and EVOLUTIONARY BIOLOGY CONCENTRATION**

YEAR: 2011/2012

YEAR ENTERED SLU: _____

NAME: _____

W# _____

MAJOR HOURS (41) C or Better*

Core Requirements (21 hrs)

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

Upper-level Courses (20 hrs) page 2

¹MATHEMATICS (9)

¹MATH 161 _____ 3 _____
 MATH 162 _____ 3 _____
 MATH 163 _____ 3 _____

or ¹MATH 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 _____

FOR. LANGUAGES (12)

_____ 101 _____ 3 _____
 _____ 102 _____ 3 _____
 _____ 201 _____ 3 _____
 _____ 202 _____ 3 _____

ELECTIVES (4)

CHEMISTRY (16)

CHEM 121 _____ 3 _____
 CLAB 123 _____ 1 _____
 CHEM 122 _____ 3 _____
 CLAB 124 _____ 1 _____
 CHEM 265 or 261 _____ 3 _____
 CLAB 267 or 263 _____ 1 _____
 CHEM 266 or 281 _____ 3 _____
 CLAB 268 or 283 _____ 1 _____

²SOCIAL SCIENCES (6)

(Anth,Econ,Geog,Gov,Psyc,PoliSoc)

_____ 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 hrs or more. These students are required to take two additional hrs of electvies (i.e., 6 hrs instead of 4 hrs).

TOTAL HOURS 120

NOTES: ¹Students with Math ACT <21 take MATH 155 (5 hrs) in place of MATH 161 (3 hrs); only 3 hrs from MATH 155 count towards the 120 hr degree requirement. MATH 165 and 200 (8 credit hours) may be taken 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., 5 hrs instead of 4 hrs).
²One social science course (3 hrs) must be at the 200 level or above.

*Grade of "C" or better in all Biology courses is required in order for the course to count towards the B.S. degree in Biological Sciences

**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

**II. Upper-level courses for the Ecology, Environmental, Evolutionary Biology Concentration:
20 CREDIT HOURS from the following courses with approval of advisor**

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 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 418 Community Ecology 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 General 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
MICROBIOLOGY / MOLECULAR BIOLOGY CONCENTRATION**

YEAR: 2011/2012

YEAR ENTERED SLU: _____

NAME: _____

W# _____

MAJOR HOURS (41) C or Better*

Core Requirements (21 hrs)

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

¹MATHEMATICS (9)

¹MATH 161 _____ 3 _____
 MATH 162 _____ 3 _____
 MATH 163 _____ 3 _____

or ¹MATH 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 _____

²SOCIAL SCIENCES (6)

(Anth,Econ,Geog,Gov,Psyc,PoliSoc)

_____ 3 _____
 _____ 3 _____

PHYSICS (8)

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

Upper-level Courses (20 hrs) page 2

CHEMISTRY (20)

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 (12)

_____ 101 _____ 3 _____
 _____ 102 _____ 3 _____
 _____ 201 _____ 3 _____
 _____ 202 _____ 3 _____

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 hrs of electives

TOTAL HOURS 120

NOTES: ¹Students with Math ACT <21 take MATH 155 (5 hrs) in place of MATH 161 (3 hrs); only 3 hrs from MATH 155 count towards the 120 hr degree requirement. MATH 165 and 200 (8 credit hours) may be taken in place of MATH 161, 162, and 163 (9 credit hours). Students who take MATH 165 and 200 are required to take one hour of electives

²One social science course (3 hrs) must be at the 200 level or above.

*Grade of "C" or better in all Biology courses is required in order for the course to count towards the B.S. degree in Biological Sciences

**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

**II. Upper-level courses for the Microbiology and Molecular Biology Concentration.
20 CREDIT HOURS from the following courses with approval of advisor**

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

BIOL 314 Genetics Laboratory 2 hrs

GBIO 377 Applied Biostatistics 4hrs

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: 2011/2012

YEAR ENTERED SLU: _____

NAME: _____

W# _____

MAJOR HOURS (41) C or Better*

Core Requirements (21 hrs)

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

Upper-level Courses (20 hrs) page 2

CHEMISTRY (16)

CHEM 121 _____ 3 _____
 CLAB 123 _____ 1 _____
 CHEM 122 _____ 3 _____
 CLAB 124 _____ 1 _____
 CHEM 265 or 261 _____ 3 _____
 CLAB 267 or 263 _____ 1 _____
 CHEM 266 or 281 _____ 3 _____
 CLAB 268 or 283 _____ 1 _____

¹MATHEMATICS (9)

¹MATH 161 _____ 3 _____
 MATH 162 _____ 3 _____
 MATH 163 _____ 3 _____

or ¹MATH 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 (12)

_____ 101 _____ 3 _____
 _____ 102 _____ 3 _____
 _____ 201 _____ 3 _____
 _____ 202 _____ 3 _____

ELECTIVES (4)

²SOCIAL SCIENCES (6)

(Anth,Econ,Geog,Gov,Psyc,PoliSoc)

_____ 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., 6 hrs instead of 4 hrs).

TOTAL HOURS 120

NOTES: ¹Students with Math ACT <21 take MATH 155 (5 hrs) in place of MATH 161 (3 hrs); only 3 hrs from MATH 155 count towards the 120 hr degree requirement. MATH 165 and 200 (8 credit hours) may be taken 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., 5 hrs instead of 4 hrs).

²One social science course (3 hrs) must be at the 200 level or above.

*Grade of "C" or better in all Biology courses is required in order for the course to count towards the B.S. degree in Biological Sciences

**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

II. Upper-level Courses for Plant Science Concentration.

20 CREDIT HOURS from the following courses with approval of advisor

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 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 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
2011 - 2012**

Date: _____

Student: _____

Advisor: _____

W# _____

<u>BIOLOGY (41) C or Better*</u>	(41)
Core Requirements (21 hrs)	
*GBIO 151	___3___
*BIOL 152	___1___
*GBIO 153	___3___
*BIOL 154	___1___
*MIC 205 or 223	___3___
*MICL 207 or 224	___1___
*GBIO 200	___3___
*GBIO 312	___3___
*GBIO 241	___1___
*GBIO 341	___1___
*GBIO 441	___1___

<u>EDUCATION</u>	(33)
**EDUC 203	___1___
**EDUC 212	___2___
*EDUC 407	___3___
*EDUC 472	___3___
*EDUC 475	___1___
*EDUC 490	___6___
*EDUC 486	___9___
*EPSY 311	___3___
*EPSY 315	___3___
*SPED 210	___2___

<u>SOCIAL STUDIES</u>	(6)
HIST 417	___3___
² Social Science	___3___

<u>CHEMISTRY</u>	(16)
*CHEM 121	___3___
*CLAB 123	___1___
*CHEM 122	___3___
*CLAB 124	___1___
*CHEM 261	___3___
*CLAB 263	___1___
*CHEM 281	___3___
*CHEM 283	___1___

<u>OTHER</u>	(9)
SE 101	___2___
LS 102	___1___
COMM 210	___3___
ART elective (Mus,Art,Dnc,Thea)	___3___

<u>ENGLISH</u>	(9)
ENGL 101	___3___
*ENGL 102	___3___
ENGL 230 or 231 or 232	___3___

TOTAL HOURS 120

<u>¹MATHEMATICS</u>	(6)
* ¹ MATH 161 (or MATH 155)	___3___
*MATH 162 or 165	___3___

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.

¹Students with Math ACT <21 take MATH 155 (5 hrs) in place of MATH 161 (3 hrs); only 3 hrs from MATH 155 count towards the 120 hr degree requirement.

²One course (3 hrs) selected from ECON, GEOG, ANTH, POLI, PSYC, or SOC. The 200 level or above requirement for social sciences is fulfilled with EPSY311

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