

University Council Athens, Georgia 30602

September 7, 2011

UNIVERSITY CURRICULUM COMMITTEE – 2011-2012

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Dear Colleagues:

The attached proposal to offer the existing major in Biological Science (B.S.A.) as an external degree on the Tifton Campus will be an agenda item for the September 14, 2011, Full University Curriculum Committee meeting.

Sincerely,

David E. Shipley, Chair

University Curriculum Committee

cc:

Provost Jere W. Morehead

Dr. Laura D. Jolly

Executive Committee, Benefits Committee on Facilities, Committee on Intercollegiate Athletics, Committee on Statutes, Bylaws, and Committees, Committee on Student Affairs, Curriculum Committee, Educational Affairs Committee, Faculty Admissions Committee, Faculty Affairs Committee, Faculty Grievance Committee, Faculty Post-Tenure Review Appeals Committee,

Faculty/ Staff Parking Appeals Committee, Strategic Planning Committee, University Libraries Committee, University Promotion and Tenure Appeals Committee

An Equal Opportunity/Affirmative Action Institution

APPROVAL PAGE COLLEGE OF AGRICULTURAL AND ENVIRONMENTAL SCIENCES CURRICULUM PROPOSALS

Proposal: To offer the Biological Science Major on the UGA Tifton Campus		
Department Head	3 28 1\ Date	
Willing L. U www. Faculty Council Curriculum Committee Chair	28 Mark 2011 Date	
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Associate Dean for Academic Affairs	3/3°/11 Date	
Dean and Director	3/30/// Date	

Proposal to Offer the Biological Science Major on the UGA Tifton Campus February 01, 2011

This proposal describes how the Biological Science major, which is presently being offered at the main University of Georgia campus in Athens and at the Griffin campus, can be offered at UGA's Tifton Campus.

Description of Biological Science Major

Biology encompasses the study of all living organisms, including microbes, plants, and animals. The study of biology includes various aspects of life, including basic organization (molecular, cellular, tissues, organs), how organisms function, their roles in the natural environment, how hereditary information is transferred, and development of biotechnology. The Biological Science major provides a flexible program of study integrating both biological and agricultural sciences. The major is an excellent fit for students interested in biology, biochemistry, chemistry, molecular biology, genetics, microbiology, cellular biology, and/or ecology.

Career Opportunities

This major provides preparation for graduate or professional study, including both medical and veterinary studies, as well as for employment in business, industry, or government positions requiring a broad background in the biological sciences. Opportunities for work in biology and agriculture are expected to grow as an increasing human population demands more food, fiber, and wood products, health care, and environmental stewardship.

Employment opportunities for U.S. college graduates with expertise in food, renewable energy, and environment are expected to remain strong during the next five years according to the latest projections¹. During 2010–2015, five percent more college graduates with expertise in these areas will be needed when compared to 2005–2010. There will be 54,400 job opportunities with 53,000 available graduates per year for this period. Employers have expressed a preference for graduates from colleges of agriculture and life sciences, forestry and natural resources, and veterinary medicine who tend to have relatively stronger interests and more extensive work experiences for careers in food, renewable energy, and the environment than those from allied fields of study. These graduates will likely continue to be preferred by many employers, but it is important to note that there were nearly 10 percent fewer agriculture and life sciences, forestry and natural resources, and veterinary medicine graduates produced in U.S. colleges and universities in 2008 than in 2002.

Of those 54,400 job opportunities, 31% will be in agricultural and life sciences and associated fields of engineering with the most opportunities in the areas of genomics and bioinformatics,

¹ Source: Goecker, Allan D., et al. Employment Opportunities for College Graduates in Food, Renewable Energy, and Environment 2010-2015. USDA NIFA and Purdue University, 2010.

food quality and nutraceuticals, environmental quality, forest ecosystem management, specialty crops, green spaces, food system security, land and water use, and consumer information. The Occupational Outlook Handbook published every two years by the US Bureau of Labor Statistics currently contains over 45 job descriptions that match the keyword "biology." ²

According to the Georgia Department of Labor, Workforce Information and Analysis Division, the demand for educated workers in careers related to the biological sciences are expected to increase between 30-50% during the next decade. Specifically, the demand for workers educated at the Doctoral degree level as Biological Scientists and Wildlife Biologists are expected to increase 30% within the next decade.

The agribusiness industry in Georgia contributes more than \$75 billion in economic activity and employs almost 400,000 workers. Nationally, this sector generates almost \$2.0 trillion in output and employs more than 12 million individuals according to a 2008 report prepared for the Office of Economic Development, Board of Regents, University of Georgia, by the UGA Center for Agribusiness and Economic Development (CAED)³. In this report, the authors projected an annual shortfall of about 500 graduates per year for Georgia agribusiness and related industries. Of this 500 person deficit, approximately 20 percent (100 graduates) of this need could be met by students with a degree in the biological sciences.

Students have recognized this opportunity and as a result, the Biological Science major is one of the fastest growing majors in the CAES. Enrollment during fall semester 2010 was 455 – a 26% increase from fall semester 2009. At this level of enrollment, between 110 and 120 students will graduate per year. Of those graduates, between 40 and 50 will attend graduate or professional schools with the remainder (about 70 graduates) entering the job market.

Need for a Biological Science major in Tifton

During 2009, the College of Agriculture and Environmental Sciences (CAES) commissioned a needs assessment to evaluate prospective interest in new transfer programs that could be offered at UGA's Tifton Campus. The needs assessment was conducted by Dr. Kay Zimmerman who is the Associate Vice Provost for Marketing and Partnership Development at North Carolina State University. Dr. Zimmerman is responsible for marketing management and partnership development in support of Distance Education & Learning Technology Applications and NC State's Land Grant educational outreach mission. This includes directing the marketing, promoting, and recruiting for NC State Distance Education with the goal of successfully distinguishing and positioning programs, cultivating new and existing corporate relationships, and meeting enrollment targets.

The needs assessment consisted of an environmental scan report, competitive analysis and marketing/co-marketing partnership plans which examined various aspects of the following components of the environment: local, regional and inter-state academic competition for

² Source: Occupational Outlook Handbook (OOH), 2010-11 Edition, http://stats.bls.gov/oco/home.htm.

³ Source: Brooks, Rusty, et al. A Study of the Workforce Training Needs for the Agribusiness Industry in Georgia. UGA Center for Agribusiness and Economic Development, 2009.

prospective students; measurement of potential interest in new CAES undergraduate degree offerings; student interest in various course delivery methods; prospective student preferences for course scheduling; and their need for financial aid. A survey of respondent's' academic preparation versus current employment status was also conducted.

The Environmental Scan assessed individuals interested in taking upper level (junior and senior) college classes to obtain a Bachelor's degree at UGA's Tifton Campus. 47.7% of the individuals who responded to the survey either strongly agreed (30.5%) or agreed (17.2%) that they have an interest in taking upper level college courses to obtain a Bachelor's degree. This is an excellent percentage rate. According to Dr. Zimmerman, those individuals are the potential 'low hanging fruit'. Additionally, a greater opportunity lies within the 'Not Sure' group of individuals who may not have considered a B.S. from UGA Tifton prior to this survey. 33.6% of those who responded as 'Not Sure' are individuals who know about UGA's Tifton campus, may already have some college coursework, and may be considering going back to complete a degree. Together, the market share of 80% is well above the average to consider as a viable target audience. According to Dr. Zimmerman, the high response rate indicates that UGA's Tifton Campus will have a higher success rate by determining the appropriate new transfer degree offerings, correctly marketing to the target audience, and securing qualified enrollments within a two-year period of starting new 2+2 undergraduate degree completion academic partnerships.

Measuring the interest in specific CEAS degrees provides insight into prospective student academic interests. Ag Education at 50% was rated as the first choice, followed by Biological Sciences (Pre-med/Pre-vet) at 45.3%, and Agricultural and Environmental Sciences at 27.5%. Ag Education and Agriscience and Environmental Systems majors are already offered on the Tifton Campus.

Dr. Zimmerman's recommendations for new degree offering on the Tifton Campus were Biological Science and Agribusiness. The Agribusiness major at the Tifton Campus was recently approved by the Board of Regents and will be offered beginning Fall 2011.

To ensure high enrollment and future growth of the existing and new majors at the Tifton Campus, Dr. Zimmerman also recommended that CAES develop 2+2 agreements with feeder schools in southern Georgia. Within UGA, these agreements are called Transfer Agreement Guarantees or TAGs. TAGs offer potential transfer students a road-map for successfully transferring to UGA and greatly increase the preparedness of these students.

TAGs have already been signed with Abraham Baldwin Agricultural College (ABAC) for the Ag Education, Agribusiness, and Agriscience and Environmental Systems (AES) majors and with Waycross College for the AES and Ag Education majors. AES and Ag Education TAGs agreements are currently being developed for South Georgia College and Darton College.

TAG agreements will be developed for the Biological Science major with ABAC, Darton College, South Georgia College, and Waycross College. All four of these schools have large enrollments in their biology programs. A large percentage of these students expressed an interest in transferring to a 4-year program in the biological sciences but few currently transfer to UGA. For example, only three Waycross College students transferred to UGA for the 2010-2011 academic year. One of those students transferred to the Tifton AES program. The TAGs will

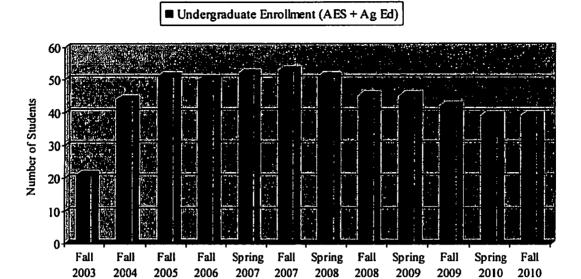


Figure 1. Undergraduate Enrollment at UGA's Tifton Campus from 2003-2010.

provide a vehicle for increasing the number of transfers to all Tifton Campus majors. Dr. Mark Van Den Hende, Vice-President for Academic Affairs at Waycross College offered the opinion that there is great potential for an increase in the number of Waycross College students who transfer to UGA if they can remain in South Georgia and attend the Tifton campus.

Success of Academic Programs on UGA's Tifton Campus

Undergraduate academic programs on the Tifton campus have been successfully delivered since fall 2003. These programs target both traditional and nontraditional students who desire a UGA degree but cannot, for a variety of reasons, pursue their career goals on the Athens Campus. Currently there are two undergraduate and two graduate programs offered on the Tifton Campus. The undergraduate programs operate as transfer programs with the vast majority of past and current students being transfers from ABAC. Nevertheless, a Tifton Campus record 21 students graduated at the end of spring semester 2010. Included in that group was the Tifton Campus'100th graduate.

It is worth noting that undergraduate enrollment numbers have declined in recent years (Figure 1). This may be due to several factors, but the most significant factor is the introduction of the four-year Diversified Agriculture (DA) degree offered at ABAC since fall semester 2008. The DA degree results in a terminal Bachelors of Applied Science. Even though the DA degree is not the same as the AES degree offered at UGA's Tifton Campus, it has offered a less rigorous alternative to ABAC students seeking a 4-year degree in agriculture and has reduced the number of ABAC students transferring into the AES program and to all CAES majors.

This should not be the case for the proposed Biological Science degree for two reasons: ABAC does not offer a four-year degree in the biological sciences and the Biological Science major will draw students from three other colleges in addition to ABAC.

Program Requirements for the Biological Science Major leading to a Bachelor of Science in Agriculture (BSA) degree

The proposed Biological Science major for the Tifton campus is an upper-division program, consisting primarily of third- and fourth-year courses. The upper-division requirements for the Biological Science major in Tifton are identical to the requirements for the Biological Science major in Athens and Griffin. Six of the courses required for the Biological Science major will be delivered to the Tifton Campus Biological Science students via distance education from the Griffin or Athens Campus. A 2000 level crop production course which is required for the Plant Science Area of Emphasis is currently not taught on the Tifton Campus. The lecture component of the course will be delivered to the Tifton Campus via distance education from the Athens Campus while the laboratory will be taught locally. This course is also needed for students transferring to the AES major from colleges which do not offer agricultural courses. Courses which will be delivered via distance education from the Griffin Campus are indicated with (*). Courses which will be delivered via distance education from the Athens Campus are indicated with (**). Degree requirements are as follows:

Entrance Requirements

Applicants must meet UGA transfer admission requirements. Eight hours of physics (PHYS 1111-1111L or PHYS 1211-1211L; PHYS 1112-1112L.) General Education Core Curriculum

Major Requirements

A baccalaureate degree program must require at least 21 semester hours of upper division courses in the major field and at least 39 semester hours of upper division work overall.

Required Courses (22-26 hours)

BCMB(BIOL)(CHEM) 3100 - Introductory Biochemistry and Molecular Biology *
GENE(BIOL) 3200 - Genetics *
MIBO 3500 - Introductory Microbiology *

Select six to seven hours from the following:

BIOL(WILD) 3700 - Animal Behavior
CBIO(BIOL) 3300 - Developmental Biology
CBIO(BIOL) 3400 - Cell Biology *
CBIO(BIOL) 3800 - Neurobiology

CBIO(MIBO)(IDIS) 4100/6100 - Immunology

CBIO 4730/6730 - Endocrinology

GENE(BIOL) 3000 - Evolutionary Biology *

MIBO 4700/6700 - Medical Mycology

POUL(BIOL) 4060/6060 - Physiology of Avian Reproduction

<u>VPHY 3100</u> - Elements of Physiology

Select six to eight hours from the following:

ADSC 3300 - Animal Nutrition and Metabolism

ADSC 3310-3310L - Feeds and Feeding

ADSC 3400 - Physiology of Reproduction in Domestic Animals

BIOL 3110L - Basic Skills in the Laboratory

CBIO 3000-3000L - Comparative Vertebrate Anatomy

CBIO(BIOL) 3410L - Laboratory in Cellular and Developmental Biology

ECOL(BIOL) 3500-3500L - Ecology

ECOL(BIOL) 3510 - Ecology Laboratory

ENTO 4000/6000-4000L/6000L - General Entomology

MARS 3450-3450L - Marine Biology

MIBO 3510L - Introductory Microbiology Laboratory

PATH 3530-3530L - Introductory Plant Pathology

POUL 3050 - Molecular Diagnostic and Research Tools in Avian Biology

POUL 3750 - Poultry Nutrition

POUL 4200/6200-4200L/6200L - Avian Anatomy and Physiology

Major Electives

Students may choose to major in "General" Biological Science or major in Biological Science with an Area of Emphasis in Plant Science or Entomology.

Biological Science Major (General):

PHYS 1112-1112L - Introductory Physics (required for transfer)

Fifteen hours of upper division courses in the College of Agricultural and Environmental Sciences not already selected for required courses. At minimum, Tifton Campus students will have the following courses to select from as all are currently offered on the Tifton Campus.

AAEC 3010 - Farm Organization and Management

AAEC 3040 - Agribusiness Marketing

ADSC 3660-3660L - Warmwater Aquaculture

ADSC 3910 - Internship in Animal and Dairy Science

ADSC 4010 - Issues in Animal Agriculture

ADSC 4350-4350L - Grazing Animal Production

AESC 3510 - Digital Imaging and Computer Applications in Agriculture

AESC 3910 - International Agriculture Internship

AESC 3920 - Agricultural and Environmental Sciences Internship

AESC 4520 - Application of Technology in Production Agriculture

AESC 4530 - Agriscience and Environmental Systems Study Tour

AESC 4960 - Undergraduate Research in Agricultural and Environmental Sciences

APTC(CRSS) 3030-3030L - Principles of Precision Agriculture

APTC(EHSC) 3080 - Introduction to Environmental Sciences and Engineering

APTC(CRSS) 4010 - Principles of Sustainable Management

APTC(CRSS) 4050 - GIS for Decision Support in Agricultural Applications

CRSS(FANR) 3060-3060L - Soils and Hydrology

CRSS 3910 - Crop Science Internship

CRSS 4300 - Crop Production and Management

<u>CRSS 4310/6310-4310L/6310L</u> - Seed Technology

CRSS 4340/6340 - Weed Science

CRSS(HORT) 4400/6400 - Agro-Ecology

CRSS 4580/6580-4580L/6580L - Soil Erosion and Conservation

ECOL 3700 - Organic Agriculture: Ecological Agriculture and the Ethics of Sustainability (Maymester course)

ENVM 3060 - Principles of Resource Economics

ENTO(CRSS)(PATH) 4250/6250-4250L/6250L -

ENTO 4350-4350L - Crop-Specific Insect Management

ENTO 4500/6500-4500L/6500L - Biological Control of Pests

ENTO(CRSS)(PATH) 4740/6740-4740L/6740L - Integrated Pest Management

<u>HORT 3010</u> - Introduction to Vegetable Crops

HORT 3910 - Horticulture Internship

HORT 4050/6050 - Greenhouse Management I

HORT(CRSS) 4800/6800 - Agricultural Biotechnology

PATH 3530-3530L - Introductory Plant Pathology

PATH 3910 - Plant Pathology Internship

PATH 4280/6280-4280L/6280L - Diagnosis and Management of Plant Diseases

PATH 4300/6300 - Clinical Plant Pathology

Plant Science Area of Emphasis:

Required:

CRSS 2010-2010L - Crop Science **

PATH 3530-3530L - Introductory Plant Pathology

PHYS 1112-1112L - Introductory Physics (required for transfer)

Thirteen (13) hours of upper division courses in the Plant Science Area of Emphasis from the following list. Courses already taken to fulfill major requirements are not eligible.

CRSS(AGCM) 3100 - Career Preparation and Professionalism

CRSS(ENTO)(PATH) 3500 - Turfgrass Pest Management

CRSS(PBIO) 4210/6210 - Seed Physiology

CRSS 4260/6260 - Forage Management and Utilization

CRSS 4340/6340 - Weed Science *

CRSS 4340L/6340L - Weed Science Lab *

CRSS(HORT) 4400/6400 - Agro-Ecology *

CRSS(HORT)(ECOL) 4590/6590 - Soil Fertility and Plant Nutrition

CRSS(HORT) 4590L/6590L - Soil Fertility and Plant Nutrition Laboratory

CRSS(HORT)(ANTH)(ECOL)(GEOG) 4930/6930 - Agroecology of Tropical America

ENTO(CRSS)(PATH) 4250/6250-4250L/6250L - Pesticides and Transgenic Crops *

ENTO(CRSS)(PATH) 4740/6740-4740L/6740L - Integrated Pest Management *

PATH(ANTH)(PBIO) 3010 - Fungi: Friends and Foes

PATH(PBIO) 4200/6200-4200L/6200L - Introductory Mycology

PATH 4280/6280-4280L/6280L - Diagnosis and Management of Plant Diseases *

PATH 4300/6300 - Clinical Plant Pathology *

PBGG(CRSS)(HORT) 4140/6140 - Plant Breeding

PGEN 3580 - Principles of Genetics

Entomology Area of Emphasis:

Required:

PHYS 1112-1112L - Introductory Physics (required for transfer)

Fifteen hours of upper division courses in the Entomology Area of Emphasis from the following list. Courses already taken to fulfill major requirements are not eligible.

<u>ANTH(BIOL)(ECOL)(ENTO)(PBIO) 4260/6260-4260L/6260L</u> - Natural History Collections Management

<u>ANTH(BIOL)(ECOL)(EETH)(ENTO)(FANR)(GEOL)(PATH)(PBIO) 4261</u> – Museum of Natural History Internship

BCMB(ENTO)(BTEC) 4200/6200 - Biotechnology

CRSS(ENTO)(PATH) 3500 - Turfgrass Pest Management

ENTO 3140-3140L - Insect Natural History

ENTO(EHSC)(BIOL)(ECOL)(LAND) 3590-3590L - Urban Entomology

ENTO 3650-3650L - Medical Entomology

ENTO 4000/6000-4000L/6000L - General Entomology (if not used to fulfill Required Course)

ENTO 3820-3820L - Forest Protection Entomology

ENTO 3900 - Special Problems in Entomology

<u>ENTO 4000/6000-4000L/6000L</u> - General Entomology

ENTO(CRSS)(PATH) 4250/6250-4250L/6250L - Pesticides and Transgenic Crops *

ENTO 4350-4350L - Crop-Specific Insect Management *

ENTO 4500/6500-4500L/6500L - Biological Control of Pests *

ENTO(CRSS)(PATH) 4740/6740-4740L/6740L - Integrated Pest Management *

ENTO 4820/6820-4820L/6820L - Entomology in Natural Resources Management

ENTO 4960 - Undergraduate Research in Entomology

ENTO 5730/7730-5730L/7730L - Entomology for Teachers

ENTO 8010-8010L - Insect Taxonomy

PATH(ENTO) 4360/6360 - Ornamental Pest Management

A grade of "C" (2.0) or higher is required for the following course:

ENTO 4000/6000-4000L/6000L — General EntomologyYou may use a maximum of 4 credit hours of ENTO 4960 and 3 credit hours of ENTO 3900 and ANTH(BIOL)(ECOL)(EETH)(ENTO)(FANR)(GEOL)(PATH)(PBIO) 4261Availability of Other Required Courses

- 1. The Biological Science major requires at least 21 semester hours of upper division courses in the major field and at least 39 semester hours of upper division work overall. Enough upper-division courses are available on the Tifton Camps to meet these requirements.
- 2. <u>PHYS 1112-1112L</u> is a prerequisite for all three pathways in the Biological Science major. Students transferring to the program will be expected to take the PHYS 1111-1111L or PHYS 1211-1211L; PHYS 1112-1112L sequence or equivalent prior to transferring. In the event that a student selects that Biological Science major after he/she has already transferred into a Tifton Campus program, the physics sequence can be taken at the adjacent ABAC campus without undue hardship to the student.

Faculty Required for the Biological Science Major at Tifton

The majority of the courses for the Biological Science major at UGA's Tifton Campus are already being taught for the existing majors (AES, Ag Ed, Agribusiness). Six courses (BCMB(BIOL)(CHEM) 3100, GENE(BIOL) 3200, MIBO 3500, CBIO(BIOL) 3400, GENE(BIOL) 3000, and ENTO 3740-3740L will be delivered to the Tifton Campus via distance education from the Griffin or Athens Campus. The lecture component of CRSS 2010-2010L will be delivered to the Tifton Campus via distance education from the Athens Campus while the laboratory will be taught locally. This course is also needed for students transferring to the AES major from colleges which do not offer agricultural courses (Darton College, South Georgia College, Waycross College, etc.) Resources to implement these distance education needs will be provided by the CAES Associate Dean for Academic Affairs.

Appendix A Proposal for an External Degree The University of Georgia

Institution: University of C	eorgia	Date: _	01 February 2011
College/School/Division: Q	College of Agricultural	& Envir	onmental Sciences
Department: Poultry Science	<u>ee</u>		
Degree: Bachelor of Science	ce in Agriculture (BSA)		
Major: Biological Science			
CIP Code:			_

Proposed Start Date: Fall 2012

The proposal for an external degree must include a brief narrative that addresses the following points and completion of the attached Addendum for Distance Education Delivery of New Programs.

1. Assessment

During 2009, the College of Agriculture and Environmental Sciences (CAES) commissioned a needs assessment to evaluate prospective interest in new transfer programs in southern Georgia that could be offered at UGA's Tifton Campus. The needs assessment was conducted by Dr. Kay Zimmerman who is the Associate Vice-Provost for Marketing and Partnership Development at North Carolina State University. Dr. Zimmerman is responsible for marketing management and partnership development in support of Distance Education & Learning Technology Applications and NC State's Land Grant educational outreach mission. Her specific responsibilities include directing the marketing, promoting, and recruiting for NC State Distance Education with the goal of successfully distinguishing and positioning programs, cultivating new and existing corporate relationships, and meeting enrollment targets.

The needs assessment consisted of an environmental scan report, competitive analysis and marketing/co-marketing partnership plans which examined various aspects of the following components of the environment: local, regional and inter-state academic competition for prospective students; measurement of potential interest in new CAES undergraduate degree offerings; student interest in various course delivery methods; prospective student preferences for course scheduling; and their need for financial aid. A survey of respondent's' academic preparation versus current employment status was also conducted.

The Environmental Scan assessed individuals interested in taking upper level (junior and senior) college classes to obtain a Bachelor's degree at UGA's Tifton Campus. 47.7% of the individuals

who responded to the survey either strongly agreed (30.5%) or agreed (17.2%) that they have an interest in taking upper level college courses to obtain a Bachelor's degree. This is an excellent percentage rate. According to Dr. Zimmerman, those individuals are the potential 'low hanging fruit'. Additionally, a greater opportunity lies within the 'Not Sure' group of individuals who may not have considered a B.S. from UGA Tifton prior to this survey. 33.6% of those who responded as 'Not Sure' are individuals who know about UGA's Tifton campus, may already have some college coursework, and may be considering going back to complete a degree. Together, the market share of 80% is well above the average to consider as a viable target audience. According to Dr. Zimmerman, the high response rate indicates that UGA's Tifton Campus will have a higher success rate by determining the appropriate new transfer degree offerings, correctly marketing to the target audience, and securing qualified enrollments within a two-year period of starting new 2+2 undergraduate degree completion academic partnerships.

Measuring the interest in specific CEAS degrees provides insight into prospective student academic interests. Ag Education at 50% was rated as the first choice, followed by Biological Sciences (Pre-med/Pre-vet) at 45.3%, and Agricultural and Environmental Sciences at 27.5%. Ag Education and Agriscience and Environmental Systems majors are already offered on the Tifton Campus.

Dr. Zimmerman's recommendations for new degree offering on the Tifton Campus were Biological Science and Agribusiness. The Agribusiness major at the Tifton Campus was recently approved by the Board of Regents and will be offered beginning Fall 2011.

To ensure high enrollment and future growth of the existing and new majors at the Tifton Campus, Dr. Zimmerman also recommended that CAES develop 2+2 agreements with feeder schools in southern Georgia. Within UGA, these agreements are called Transfer Agreement Guarantees or TAGs. TAGs offer potential transfer students a road-map for successfully transferring to UGA and greatly increase the preparedness of these students.

TAGs have already been signed with Abraham Baldwin Agricultural College (ABAC) for the Ag Education, Agribusiness, and Agriscience and Environmental Systems (AES) majors and with Waycross College for the AES and Ag Education majors. AES and Ag Education TAGs are currently being developed for South Georgia College and Darton College.

TAG agreements will be developed for the Biological Science major with ABAC, Darton College, South Georgia College, and Waycross College. All four of these schools have large enrollment in their biology programs. A large percentage of these students express an interest in transferring to a 4-year program in the biological sciences but few currently transfer to UGA. For example, only three Waycross College students transferred to UGA for the 2010-2011 academic year. One of those students transferred to the Tifton AES program. The TAGs will provide a vehicle for increasing the number of transfers to all Tifton Campus majors.

2. Admission Requirements

All requirements for admission to an external academic degree program will be the same as those for the same degree at an authorized unit. Students applying to the Biological Science major at

Tifton will be required to meet the transfer admissions requirements established by the University of Georgia for admission to the Biological Science major in Athens except that "PHYS 1112-1112L — Introductory Physics" will be required before admission since that course and its prerequisite are not offered on the Tifton Campus. Transfer students will be expected to transfer into the program after having completed 60 semester hours and all other UGA entrance requirements.

3. Program Content

The proposed Biological Science major for the Tifton campus is an upper-division program, consisting primarily of third- and fourth-year courses. The upper-division requirements for the Biological Science major in Tifton are identical to the requirements for the Biological Science major in Athens and Griffin although availability of elective courses is different across the campuses. Seven of the courses required for the Biological Science major are currently not taught on the Tifton Campus. These courses will be delivered to Tifton Campus Biological Science students via distance education from the Griffin Campus. A 2000 level crop production course which is required for the Plant Science Area of Emphasis is currently not taught on the Tifton Campus. The lecture component of the course will be delivered to the Tifton Campus via distance education from the Athens Campus while the laboratory will be taught locally. This course is also needed for students transferring to the AES major from colleges which do not offer agricultural courses (Darton College, South Georgia College, Waycross College, etc.) A complete list of course requirements and offerings is provided in the main body of the proposal.

4. Student Advising

Each student must have reasonable access to an advisor. There are currently three Ph.D.-holding tenure-track Tifton Campus faculty members who advise students in the AES major. All three teach in the program. An additional 3 faculty members who teach will be identified to serve as advisors for the Biological Science major students.

5. Residence Requirements

Candidates for the Biological Science degree must earn at least 45 of their last 60 semester credit hours in residence at UGA. In addition, 15 of the semester credit hours required for a student's major must be earned in residence.

6. Program Management

The Biological Science major at Tifton will be managed by the Department of Poultry Science. Dr. Michael Lacy, Department Head, will be responsible for maintaining program quality and teaching assignments. He will be assisted by The Tifton Campus Academic Programs Coordinator who will be the primary contact person for this program on the Tifton Campus.

Additional contacts include Dr. Joe West, Assistant Dean of the Tifton Campus, and Dr. George Vellidis, Chair of the Tifton Campus Curriculum Committee.

The Biological Science major at Tifton is scheduled to be offered in the fall of 2012, pending faculty approval. An application process for students applying to the program is currently being developed with the expectation that the Tifton Campus will not be subject to the enrollment caps of the Athens campus. Course offerings will be scheduled over a two-year basis to accommodate the student cohorts as they move through the program. Courses are expected to be taught on the Tifton Campus and be supplemented through distance education as described earlier. The major will be subject to the University Program Review and Assessment process and is not thought to duplicate other programs in the immediate area.

7. Library and Laboratory Resources

The CAES Tifton Campus Library, a branch of the University of Georgia Libraries, houses a representative collection of publications on agricultural engineering, agronomy, animal science, entomology, horticulture, plant pathology, and related subjects. There are over 8,000 cataloged monographs with subscriptions to approximately 60 print periodicals. Additionally, there are about 500 theses and dissertations on peanuts and related topics and one room of USDA and experiment station publications from 25 states. The library has access to all of the major electronic resources (Galileo, electronic journals, and the GIL online catalog) available on the main campus in Athens. Document delivery article requests for items found in Athens but not Tifton are typically filled in less than one business day. This library is a GIL Express location allowing patrons to request monographs from any of the cooperating institutions and have the item delivered to this library for pickup. One librarian provides reference assistance while three computers, two printers, and two photocopiers are available for students.

In addition to the UGA Tifton Campus Library, students enrolled in an AGB program at Tifton will have access to the Baldwin Library at ABAC. The following description of the Baldwin Library was obtained from the ABAC on-line student handbook: "The Baldwin Library, located on the second and third floors of the Carlton Center, serves as the central learning center for the College. Its collections include approximately 74,000 volumes, 24,000 pieces of microfilm, an audiovisual collection, the Georgiana Collection, the College archives, and subscriptions to approximately 300 magazines and newspapers. GALILEO, an electronic resource, allows access to over 100 databases, internet, the library catalogs of all University System of Georgia libraries, and other Georgia libraries. GALILEO also provides access to information for ABAC students taking courses at off-campus sites. Computers for student use are located throughout the library. Individual or small group study rooms are available on the third floor. The library offers extended hours of operation during final exam week."

8. Budget Required for the Agribusiness Major at Tifton

Courses for the Biological Science major at Tifton will be taught by faculty on the Tifton Campus and the Griffin and Athens Campuses via distance education. Resources to implement

these distance education needs will be provided by the CAES Associate Dean for Academic Affairs.

Upper-division general and restricted electives will be taken from courses currently being taught on the Tifton campus. Approximately \$15,000 will be required to increase the capacity of the laboratory components of Tifton Campus courses to accommodate Biological Science majors.

Students enrolling in the Biological Science major at Tifton will be eligible for CAES and Tifton Campus scholarships and internship opportunities.

9. Program Costs Assessed to Students

No additional program costs are anticipated for Biological Science majors on the Tifton campus above those paid by the same majors on the Athens campus.

10. Accreditation

Biological Science programs at the University of Georgia are not subject to external accreditation.

11. Projected Enrollment and Recruiting

Projected enrollment for the Biological Science major at the Tifton Campus is given in Table 1. The data are estimated from discussions with administrators, faculty, and students at ABAC, Darton College, South Georgia College, and Waycross College.

The enrollment goals will be achieved through intensive recruiting by a half-time recruiter. The

recruiter will be dedicated to Tifton Campus academic programs and has a projected start date of December 1, 2010. The recruiter will target high school students and high school counselors in southern Georgia and potential transfer students at ABAC, Darton College, South Georgia College, and Waycross College. The TAGs discussed earlier have proven to be a powerful recruiting tool and will be used extensively. Advising workshops will be held annually at ABAC, Darton College, South Georgia College, and Waycross College by the

Table 1. Projected enrollment in the Biological Science major at UGA's Tifton Campus.

Year	Projected Enrollment
2012	10
2013	20
2014	30
2015	30
2016 and beyond	30

Tifton Campus Academic Programs Coordinator to ensure that advisors at those colleges are aware of and understand the TAGs and UGA transfer requirements