BACCALAUREATE AND MASTER'S DEGREES

NEW PROPOSAL FORM: ONE-STEP PROCESS
(Submit One Copy)

REVISED FORMAL PROPOSAL

Institution: Savannah State University

Institutional Contact (President or Vice President for Academic Affairs): Dr. Earl G. Yarbrough, President

Date: March 26, 2010

School/Division: College of Sciences and Technology (COST)

Department: Department of Teacher Education (New)

Departmental Contact: TBA

Name of Proposed Program/Inscription: The Bachelor of Science in Mathematics Education

Degree: Bachelor of Science in Education

Major: Mathematics with a concentration in Secondary Education

CIP Code: 13.1311

Anticipated Starting Date: Fall 2012

Table of Contents

1. Program Description and Objectives:

The proposed Bachelor of Science degree in Mathematics develops effectiveness in communication, leadership, and other skills necessary to ensure the student is proficient in teaching at the secondary level (6-12). The plan of study curriculum requires a solid background of education classes as well as essential content courses. A strong emphasis is placed on grade-relevant field experiences throughout the program. Teacher candidates are required to demonstrate the knowledge, skills, and dispositions needed to have a positive impact on student achievement.

The Bachelor in Science in Mathematics allows the student to pursue the Mathematics major with a concentration in secondary education teaching licensure. The Mathematics Education major is grounded in the theoretical knowledge base with sound educational classroom practices. Students in the Mathematics Education major will have practicum experiences in EDUC2110 - Investigation of Critical/contemporary Issues, EDUC2130 - Exploring Socio-Culture, EDUC2130 - Exploring Teaching and Learning, Methods of Teaching, and a 16 week Student Teaching/Internship. The methods courses and related courses are integral with a common core of teaching strategies and issues. All students pursuing the Bachelor of Science in Mathematics (with a Secondary Education concentration must complete 33 credit hours of coursework in education). The total degree requirements are 125 credit hours which includes the optional university requirements.

Mathematics education is a discipline with a national accrediting body. The proposed program is designed to satisfy all the accreditation requirements of Southern Association of Colleges and Schools (SACS), National Council of Teachers of Mathematics (NCTM), Georgia Professional Standards Commission (GaPSC), and National Council for Accreditation of Teacher Education (NCATE).

a. Objectives

The program's objectives are based on multiple inputs, including recommendations of an external consultation, education committee, and faculty. The goals and objectives of the program focus on enhancing quality, increasing scholarly activities, and outreach efforts. The goals and objectives were adopted by the faculty of the College of Sciences and Technology where the new department will be located. The new goals and objectives will serve as the basis for programmatic strategic and action planning. The objectives are aligned with GaPSC and NCATE standards.

General program objectives:

- knowledgeable of disciplines taught in school and familiarity with materials in those fields;
- understand human development according to currently accepted theory and research, which implies a thorough familiarity with the developmental characteristics of students at

the stage of development at which they expect to teach, and skill in observing and understanding behavior;
- familiar with theories of learning and motivation and ability to use this knowledge in facilitating learning by students in educational settings;
- ability to organize and manage the classroom for developmentally appropriate learning and to maintain an effective learning environment taking into account the diversity of the individual and cultural differences;
- innovative teaching techniques appropriate to the learners with whom the candidate will be working;
- foster learning, growth and development in students for whose education the teacher is responsible;
- understand the organizational structures of the schools and resources at school district and state levels;
- design lessons with a global view of the function of schools in a democracy and familiarity with social, political and economic factors affecting schools and educational policy; and
- integrate the use of technology appropriate to the teaching and learning situation.

b. Needs the program will meet

National documents show that Middle School and High School teachers in the Science, Technology, Engineering, and Mathematics (STEM) programs are in high demand in many states including Georgia.

> *"According to the White House, a substantial STEM teacher shortage exists today. Overall, up to one million teachers will need to be recruited over the next five years, and vacancies in math and science are often among the hardest to fill".*

> *"Our commitment to growing the STEM teacher corps is evident by the sheer number of our members receiving awards today," said Van Roekel. Fifty-six of the 100 honorees are NEA K-12 and higher education members...* (Source http://www.nea.org/home/37542.htm)

Kelly C. Henson (2008), Executive Secretary of the Georgia Professional Standards Commission in a report stated; "By 2012, 28,749 new teachers will be needed *that year* to meet growth and replacement demands. In the same report, the Alliance of Education Agency Heads recommended:
- Georgia students must have available high-level science and mathematics courses in order to compete nationally and internationally
- Increase Science Teacher Education Programs
- Increase flexibility for institutions to design preparation programs
- Design and implement statewide intensive new teacher induction program

The USG Presidents' Science, Technology, Engineering, and Mathematics (STEM) Initiative (2009) report below shows the critical need for STEM programs.

STEM Report
MATH + SCIENCE = SUCCESS
USG Presidents' Science, Technology, Engineering, and Mathematics (STEM) Initiative

Charge: Increase the number of K-12 students interested in mathematics/science/engineering, the number of students in college who pursue the STEM disciplines, and the number of teachers prepared who are better able to keep K-12 students in the STEM pipeline.

Intended Outcomes: Excellence in the STEM Initiative is defined as meeting the following intended outcomes:

Item #	By Year	Intended Outcome of the University System of Georgia[1]	Baseline	Baseline Year
1	2013	Number of baccalaureate degrees in STEM disciplines will increase to at least 7,200[2]	4,726[3]	2006
2	2013	Number of baccalaureate degrees in engineering and engineering technology will increase to at least 2,800	1,828	2006
3	2013	Number of baccalaureate degrees with a major in mathematics will increase to at least 400	196	2006
4	2013	Number of baccalaureate degrees with majors in chemistry, geosciences, and physics will increase to at least 420, 80, and 130, respectively	215-Chm 41-Geo 67-Phys	2006
5	2013	Number of middle grades teachers with a concentration in mathematics will increase to at least 480 per year	276	2006
6	2013	Number of middle grades teachers with a concentration in science will increase to at least 350 per year	200	2006
7	2013	Number of high school mathematics teachers will increase to at least 270 per year	135	2006
8	2013	Number of high school science teachers will increase to at least 160 in Biology / 45 in Chemistry / 15 in Physics / 20 in Earth Sciences	54 / 9 / 3 / 1	2006
9	2013	Success rates with a grade of C or better in introductory STEM courses will increase to at least 75%	50%-70%	2006
10	2013	Number of high school students taking college preparatory science and mathematics courses will increase by at least 20%	67% or 55,077	2006

Source: www.usg.edu/educator_prep/documents/stemsummary.pdf - 2009-06-29

Currently, no USG programs are in the service area offering the Bachelor of Science in Mathematics Education. The proposed degree program at Savannah State University could supply additional mathematics teachers in its service area (Chatham, Bryan, and Effingham counties) and the southeastern region of Georgia. Additionally, Savannah State University (SSU) has been the main aperture through which ethnic minorities in Georgia have entered the technical professions. The University offers quality education in science, technology, engineering and mathematics (STEM). Significant challenges to maintaining the quality of academic programs have been to recruit and retain minority students in large numbers and to encourage them to continue their education in graduate schools in these disciplines.

Graduates of the new degree program can continue their education at the graduate level through the campus Minority Access to Graduate Education and Careers in Science, Technology, Engineering and Mathematics (MAGEC-STEM) program. MAGEC-STEM is designed to establish a framework for the production of a continuous stream of highly competent and well qualified minority scientists, technologists, engineers and mathematicians. This goal will be achieved through a vigorous and cost effective implementation of a number of activities, such as faculty development, curriculum review and revision, infrastructure development, student tracking and midstream interventions, career counseling and exploration, experiential training, a pre-freshman/head-start program, and selective recruitment to ensure a perpetual supply of high-ability/high-potential STEM students.

c. Brief explanation of how the program is to be delivered

The program will be delivered through innovative use of technology blended within the context of the traditional classroom and field experience format. This blended format will provide opportunities for flexible hybrid courses (combinations of face-to-face, online and virtual); online courses using Blackboard Class Management Software; and virtual classrooms using Polycom Telepresence Solutions, Wimba Classroom Suite, Skype, WizIQ, etc.) .

d. Prioritization within the institution's strategic plan

The proposed program supports the institution's strategic plan:

The university's strategic plan focuses on "value added" and demonstrates the support of expanding opportunities for the university to meet the needs of community and region. The proposed new Bachelor of Science in Mathematics Education program encompasses and is integral to the central focus of the strategic plan by providing opportunities for students (traditional and non-traditional) to add value to the community, region and across the state. Once approved and implemented, the new program aligns well with Goals 1 and 2 of the university's Strategic Plan "Vision 2018".

> Goal 1: Savannah State University will maximize its ***comparative advantage through academic excellence***, applied learning, effective educational support, and community involvement.
>
> Goal 2: Savannah State University will continue to build its institutional capacity through the continuous improvement and ***expansion of academic programs***, student support, infrastructure, technology, and community relations.

Additionally, the proposed new program aligns with the USG's vision statement, mission, and strategic goals:

> Board of Regent's Vision: "The University System of Georgia will create a more educated Georgia, well prepared for a global, technological society, by providing first-rate undergraduate and graduate education, leading-edge research, and committed public service."

The mission of the University System of Georgia is to contribute to the educational, cultural, economic, and social advancement of Georgia by …providing excellent undergraduate general education and first-rate programs leading to associate, baccalaureate, masters, professional, and doctorate degrees.

"The University System of Georgia will create a more educated Georgia, well prepared for a global, technological society, by providing first-rate undergraduate and graduate education…"

Strategic Goal One: Renew excellence in undergraduate education to meet students' 21st century educational needs.

Strategic Goal Two: Create enrollment capacity to meet the needs of 100,000 additional students by 2020.

2. Description of the program's fit with the institutional mission and nationally accepted trends in the discipline.

The proposed Bachelor of Science in Mathematics Education is integral to the nationally accredited program in the liberal arts and sciences described in the mission of the university. The proposed education program fits well within the mission of the university by developing teachers who will be productive members of a global society providing high quality instructions, scholarship, research, and service to the SSU community. The new program will use a variety of technological tools to deliver program content demonstrating strength of the university's College of Sciences and Technology.

Mission of Savannah State University:

As a unit of the University System of Georgia, Savannah State University offers nationally accredited programs in liberal learning, sciences, fine arts, and the professions. The University is committed to the development of leaders and high quality instruction, supported by scholarship, research, and environmental enrichment with emphasis on the African American heritage and culture and international interaction.

Mission of the new Department of Teacher Education:

The primary mission of the Department of Teacher Education (DOTE) is to prepare professional educators with the knowledge, skills, and dispositions to serve the diverse educational and technological needs of the region. The DOTE emphasizes efficient and successful teaching practices, policies, and procedures based on state and national standards to enhance efficiency of academic achievement of all Pre K-12 students. To fulfill this mission, faculty will: design, deliver, and continually improve highly effective programs for pre-professionals through advanced graduate and professional levels; promote and are influenced by the reciprocal relationship between scholarship and practice; collaborate with colleagues across the campus and in other professional and community settings as partners in the mission; and provide leadership

in teaching, learning, assessment, and professional development for diverse community within and outside the University.

National Trends:

The proposed Mathematics Education program will focus on national trends surrounding STEM.

> National-level assessment of U.S. students' knowledge of math and science is a relatively recent phenomenon, and assessments in other countries that provide for international comparisons are even more recent. Yet the limited information available thus far is beginning to reveal results that concern many individuals interested in the U.S. educational system and the economy's future competitiveness. The most recent assessments show improvement in U.S. pupils' knowledge of math and science; however, the large majority still fails to reach adequate levels of proficiency. Moreover, when compared to other nations, the achievement of U.S. students is seen by many as inconsistent with the nation's role as a world leader in scientific innovation http://www.fas.org/sgp/crs/misc/RL33434.pdf.

3. Description of how the program demonstrates demand and a justification of need in the discipline and geographic area and is not unnecessary program duplication.

The U.S. Department of Education (2009) data has listed mathematics education (7-12) on the critical teacher shortage list for Georgia. A few years after implementation; the proposed new degree program will help in easing the critical shortage of STEM teachers in the geographic area. There are three colleges/universities in the immediate service area of Savannah State University. After reviewing the academic program inventory from the USG's website, the proposed program will not duplicate existing degree programs at Armstrong Atlantic University, Georgia Southern University or Georgia Coastal College. Regional demographic data show public schools in the service area are offering 6-12 programs related to the proposed program.

U.S. Department of Education Office of Postsecondary Education Policy & Budget Development
   Staff (2009). Teacher shortage areas nationwide listing 1990-91 thru 2009-10. OMB No.: 1840-0595.

4. Brief description of institutional resources that will be used specifically for the program (e.g., personnel, library, equipment, laboratories, supplies & expenses, capital expenditures at program start-up and when the program undergoes its first comprehensive program review.

Personnel – Personnel needs for the proposed degree program are: One administrative position (Director); one methods faculty position (first two years; third year an additional faculty position will be requested), one assessment coordinator, and an administrative assistant. Currently, funds are available to support this position by reallocating budgeted funds and revenues generated from overall university enrollment increases. Advertisements for the methods faculty positions will indicate that applicants need to be qualified for both undergraduate and graduate assignments.

Projected cost for all personnel is discussed in the budget narrative later in this proposal. There are adequate faculty members in the content discipline to begin the program.

Library - The ASA H. Gordon Library resources are currently adequate to support the needs of the program. Gordon Library provides access to an integrated, web-based catalog of all the book collections of the University System of Georgia (over six million volumes - 60% of the titles are unique), a circulation system with self-service options, cataloging, and check-in and control functions. The library, which houses the university archives, is home to an extensive collection of material about African-Americans. As part of the library's participation in GALILEO, Georgia's statewide virtual library, students have access to over 400 full-text journal titles in the subject area of education.

The proposed degree program will need a Curriculum Materials/Media Center (CMC). The CMC will be located in the current library. The DOTE will need $20,000 to begin the process of building resources to develop a CMC. The CMC will employ modern technology in services offered to increase users' social, intellectual, and global interaction. The CMC will be integral to the library and subscribes to a limited number of CD-ROM databases and print resources from other institutions that may be accessed through interlibrary loan.

Equipment - The program will employ existing classroom technology presently available in the COST. There are no additional needs anticipated when the program undergoes the Comprehensive Program Review. There are additional available classroom spaces properly outfitted with computers, software, and digital projectors that could be used as enrollment expands.

Laboratories - As with the equipment and classroom needs cited above, existing laboratories will be sufficient to support the new program.

Supplies and Expenses – The cost of supplies and expenses will be minimal and can be absorbed in the normal budgeting for COST supplies and expenses.

Capital - All facilities and furnishing needed to support the proposed program are already in place and are sufficient to meet new program accrediting body's requirements.

Facilities – Our current College of Sciences and Technology facilities are adequate and can support the needs of the new degree program.

Start-up Costs - The primary costs for start-up of the program will focus on the purchase of library/learning resources, and marketing and advertising. Other start-up costs will be covered through Education and General (E & G) funds. Approximate start-up costs for the program will be $13,017 to cover recruitment, accreditation fees, assessment system software, and marketing.

Operating Costs - Operating costs will include consumable supplies, travel for professional development of faculty, and the purchase of additional library/learning resources for the ASA H. Gordon Library center library (see below). Approximate operating costs for the first two years

will be $7,764; fees collected from increased enrollment will defray costs not covered through E & G funds.

5. Curriculum: List the entire course of study required and recommended to complete the degree program. Provide a sample program of study that would be followed by a representative student.

==

Course of Study

Bachelor of Science
Mathematics- Secondary Education Concentration

Core Curriculum Grid

All students should complete the sixty hours of core curriculum requirements during their first two years of enrollment and prior to their enrollment in their major classes, exclusive of those specified in Area F (courses appropriate to the program of study) of the core.
In addition to the sixty hours in Areas A, B, C, D, E, and F, students may be required to complete five additional hours of required courses for a maximum total of 65 hours.

"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."

Core Area A-Essential Skills		**9 hours**
ENGL 1101	Composition I	3 hours
ENGL 1102	Composition II	3 hours
MATH 1111	College Algebra	3 hours
	(for non-science majors)	
MATH 1113	Pre-calculus	3 hours
	(for science majors)	

(Because these are "essential skills," all courses in this area must be completed with a grade of "C" or higher.)

Core Area B-Institutional Options		**5 hours**
AFRS 1501	African American History	2 hours
HUMN 1201	Critical Thinking & Communication	3 hours
	(effective Spring 2005)	

==

Core Area C-Humanities/Fine Arts		**6 hours**
Select one of the following:		
ENGL 2110	World Literature	3 hours
ENGL 2121	British Literature I	3 hours
ENGL 2122	British Literature II	3 hours
ENGL 2131	American Literature I	3 hours
ENGL 2132	American Literature II	3 hours
ENGL 2222	African American Literature	3 hours

RPHS 2101	Introduction to Philosophy	3 hours
RPHS 2241	Ethics	3 hours

Select one of the following:

ARTS 1101	Intro. to Visual Arts	3 hours
ENGL 2521	Intro. to Film Appreciation	3 hours
HUMN 2011	Humanities	3 hours
MUSC 1101	Intro. to Music	3 hours
THEA 2101	Intro. to Theatre	3 hours

===

Core Area D-Science, Mathematics and Technology

Option I- Non-Science Majors   10 hours

Select two 3-hour courses from the following:

BIOL 1103	General Biology	3 hours
BIOL 1104	Human Biology	3 hours
CISM 1130	Computer Applications	3 hours
CSCI 1130	Computer Applications	3 hours
ENVS 1140	Environmental Issues	3 hours
ISCI 1101	Integrated Science I	3 hours
PHYS 1001	Intro. to Astronomy	3 hours

Select one 4-hour course or one 3-hour course and lab from the following:

BIOL 1103	General Biology I	3 hours
BIOL 1103L	General Biology I Lab	1 hour
BIOL 1104	Human Biology II	3 hours
BIOL 1104L	Human Biology II Lab	1 hour
CHEM1101K	Intro. to Chemistry	4 hours
ISCI 1111K	Integrated Science II	4 hours
PHSC 1011K	Physical Science I	4 hours
PHYS 1111K	Introductory Physics I	4 hours

===

Area E-Social Sciences   12 hours

POLS 1101	American Government	3 hours
POLS 2401	Global Issues	3 hours

Choose one of the following:

HIST 2111	U.S. History to the Post-Civil War Period	3 hours
HIST 2112	U.S. History from the Post-Civil War	3 hours

Choose one of the following:

AFRS 2000	Intro. to Africana Studies	3 hours
ANTH 1101	Intro. to Anthropology	3 hours
ECON 2105	Principles of Macro-Economics	3 hours
GEOG 1101	Intro. to Human Geography	3 hours
HIST 1111	World Hist. to Early Modern Times	3 hours
HIST 1112	World Hist. Early Modern Times to Present	3 hours
PSYC 1101	Intro. to Psychology	3 hours
PSYC 2103	Human Growth & Development	3 hours
SOCI 1101	Intro. to Sociology	3 hours
SOCI 1160	Social Problems	3 hours

Additional University Requirements   **5 hours**

FRES 1101	Freshman Year Experience I	1 hour
FRES 1102	Freshman Year Experience II	1 hour
FRES 1103	Freshman Year Experience (Combined I and II)	2 hours

Choose additional three (3) hours from any of the approved

offerings for Additional University Requirements.

==

Area F-Courses Appropriate to the Program of Study   **18 hours**

MATH 2101	Calculus I	4 hours
MATH 2111	Calculus II	4 hours
MATH 2121	Calculus III	4 hours
MATH 2201	Elementary Statistics	3 hours
CSCI 1301	Computer Science I	3 hours

==

Upper Division English Core   **27 Hours**

MATH 3101	Linear Algebra	3 hours
MATH 3201	Probability & Statistics I	3 hours
MATH 3211	Foundation of Higher Math	3 hours
MATH 4101	Abstract Algebra I	3 hours

Pure Mathematics and Secondary Education:

MATH 3401	Modern Geometry	3 hours
MATH 4111	Abstract Algebra II	3 hours
MATH 4401	Number Theory	3 hours
MATH 4501	Introduction to Topology	3 hours
MATH 4701	History of Math	3 hours

==

Professional Education Courses   **33 hours**

EDUC 2110	Investigation of Critical/Contemporary Issues	3 hours
EDUC 2120	Exploring Socio-Culture	3 hours
EDUC 2130	Exploring Teaching & Learning	3 hours
EDUC 3030	Exploring-Exceptional Learner	3 hours
EDUC 3200	Curriculum and Assessment	3 hours
MAED4416	Methods of Teaching Math (6-12)	3 hours
MAED4417*	Teaching Math Practicum (*Taken concurrently with MAED 4416*)	3 hours
EDUC4475	Student Teaching & Seminar	12 hours

==

Total ===(120 + 5 hours University Requirements)======➔ 125 hours

Sample Plan of Study

BSED – Mathematics (Secondary Education Concentration)

FRESHMAN YEAR

FIRST SEMESTER	CR	SECOND SEMESTER	CR
ENGL 1101	3	ENGL 1102	3
*MATH 1113 Pre-Calculus	4	PSYC 1101	3
CSCI 1301	3	HUMN 1201	3
ISCI 1101	3	AFRS 1501	2
FRES 1101 Freshman Yr Exp I	1	ISCI 1111K	4
HEDU (XXXX)	2	FRES 1102 Freshman Yr Exp I	1
TOTAL HOURS	**16**	**TOTAL HOURS**	**16**

SOPHOMORE YEAR

FIRST SEMESTER	CR	SECOND SEMESTER	CR
EDUC 2110	3	MATH 2111 Calculus II	4
EDUC 2120	3	RPHS 2101	3
POLS 1101	3	HUMN 2011	3
MATH 2101 Calculus I	4	POLS 2401	3
CISM 1130	3	EDUC 2130	3
TOTAL HOURS	**16**	**TOTAL HOURS**	**16**

JUNIOR YEAR

FIRST SEMESTER	CR	SECOND SEMESTER	CR
MATH 2201	3	EDUC 3030	3
MATH 2121 Calculus III	3	MATH 3211	3
MATH 3201	3	MATH 4111	3
MATH 3101	3	MATH 4201	3
HIST 2111	3	MATH 4101	3
HEDU (XXXX)	1		
TOTAL HOURS	**16**	**TOTAL HOURS**	**15**

SENIOR YEAR

FIRST SEMESTER	CR	SECOND SEMESTER	CR
MAED4416 Methods of Teaching Math (6-12)	3	EDUC 3200 Curriculum and Assessment (Online Course)	3
MAED4417* Teaching Math Practicum (Must be taken with MAED 4416)	3	EDUC 4475 – Student Teaching	12
MATH 4401	3		
MATH 4501	3		
MATH 4701	3		
TOTAL HOURS	**15**	**TOTAL HOURS**	**15**

a. Clearly differentiate which courses are existing and which are newly developed courses. Include the course titles as well as acronyms and credit hour requirements associated with each course.

Courses Existing or New

COURSES	TITLE	HOURS	EXISTING/NEW
AFRS 1501	African American History	2	Existing
CISM 1130	Computer Applications	3	Existing
CSCI 1301	Computer Science I	3	Existing
ENGL 1101	Composition I	3	Existing
ENGL 1102	Composition II	3	Existing
HEDU (Electives)	Health Electives	3	Existing
HIST 2111	U.S. History to the Post-Civil War Period	3	Existing
HUMN 1201	Critical Thinking & Communication	3	Existing
HUMN 2011	Humanities	3	Existing
ISCI 1101	Integrated Science I	3	Existing
ISCI 1111K	Integrated Science II	4	Existing
MATH 1113	Pre-Calculus	3	Existing
MATH 2101	Calculus I	4	Existing
MATH 2111	Calculus II	4	Existing
MATH 2121	Calculus III	4	Existing
MATH 2201	Elementary Statistics	3	Existing
MATH 3101	Linear Algebra	3	Existing
MATH 3201	Probability & Statistics I	3	Existing
MATH 3211	Foundation of Higher Math	3	Existing
MATH 4101	Abstract Algebra I	3	Existing
MATH 4111	Abstract Algebra II	3	Existing
MATH 4201	Analysis I	3	Existing
MATH 4401	Number Theory	3	Existing
MATH 4501	Introduction to Topology	3	Existing
MATH 4701	History of Math	3	Existing
POLS 1101	American Government	3	Existing
POLS 2401	Global Issues	3	Existing
PSYC 1101	Behavioral Sciences	3	Existing
RPHS 2101	Introduction to Philosophy	3	Existing
FRES (Electives	Freshman Orientation	2	Exiting
EDUC 2110	Investigating Critical/Contemporary Issues	3	New
EDUC 2120	Exploring Socio-Culture	3	New
EDUC 2130	Exploring Teaching & Learning	3	New
EDUC 3030	Exploring-Exceptional Learner	3	New
EDUC 3200	Curriculum and Assessment	3	New
EDUC4475	Student Teaching & Seminar	12	New
MAED4416	Methods of Teaching Math (6-12)	3	New
MAED4417	Teaching Math Practicum	3	New
	TOTAL SEMESTER HOURS =======➔	**125**	

b. Append course descriptions for all courses (existing and new courses).

(See Appendix A)

c. When describing required or elective courses, list all course prerequisites.

(See Appendix A)

d. Provide documentation that all courses in the proposed curriculum have met all institutional requirements for approval.

The proposed new degree curriculum with new and existing courses have been reviewed and discussed at various institutional levels and has been approved for submission to the Board of Regents. Additionally, the new advisory committee for education; composed of faculty, administrators, P-12 principals, and other community leaders was integral to the development of the proposed new degree and supports the proposed new degree's curriculum. Finally, the proposed new degree curriculum has the full support and approval of the Vice President for Academic Affairs and the University President. Copies of meeting agendas and minutes are in appendix.

(See Appendix D)

e. Append materials available from national accrediting agencies or professional organizations as they relate to curriculum standards for the proposed program.

The proposed BSED in Mathematics Education will be reviewed by Georgia Professional Standards Commission and accredited by the National Council for the Accreditation of Teacher Education. In addition to aligning the six NCATE standards and the Georgia Professional Standards, the proposed degree program aligns with the NCTM Standards for Mathematics Teacher Preparation.

(See Appendix B)

f. Indicate ways in which the proposed program is consistent with national standards. All components of the proposed programs must be consistent with both state and national standards.

Program goals, objectives and student learning outcomes are consistent and based upon the standards set forth by the NCTM and NCATE accreditation standards (2003). All courses have stated goals and objectives that are listed on course syllabi.

All courses in the new program are designed to meet the professional NCTM/NCATE, and state standards identified in Appendix B. The Professional Standards Commission has adapted the *Professional Standards for the Accreditation of Schools, Colleges, and Departments of Education* published by NCATE for use in the Georgia professional education unit and preparation program approval process.

(See Appendix B)

g. If internships or field experiences are required as part of the program, provide information documenting internship availability as well as how students will be assigned and supervised.

Candidates will be required to observe and work with 6-12 students and teachers throughout the teacher education program with field experiences and student teaching internship. The field experiences for this proposed program will allow the teacher candidate to apply content and theory. Teacher candidates will observe, practice and implement effective teaching strategies for 6-12 students. As a part of their field work, candidates will reflect on their experiences through electronic portfolios and other work samples. Cooperating teachers, DOTE supervisors, and teacher candidates will evaluate their performances in assigned field experiences and internship. In addition, teacher candidates will be observed and evaluated by supervisors and faculty in each of the methods courses.

The Department of Teacher Education will appoint a Field Experience Coordinator to monitor all students' field experiences. Educational leaders in the service areas have agreed to partner with the DOTE and provide master teachers where students can complete required field experiences and internships.

h. Indicate the adequacy of core offerings to support the new program.

The current frequency of offerings for courses in the core of this proposed curriculum is adequate for the anticipated enrollment in this program. Currently there are several sections of core courses to support the new program. These courses are offered multiple times every year in Engineering Technology, Natural Sciences and Mathematics, and Liberal Arts. Initially, it is anticipated that only one or two sections of the core courses will be required for new program students.

6. Admissions criteria. Please include required minimal scores on appropriate standardized tests and grade point average requirements.

Freshman Applicant/Regular Admission:

Acceptance to the University is determined on the basis of a Freshman Index, which is calculated by using a numerical formula (See Freshmen Index below). The required Freshmen Index for Fall 2002 is 1940. The high school curriculum, ACT or SAT scores, and the high school college preparation grade point average are used to determine admissions. Applicants must be a graduate of an accredited high school (regional accrediting association or a public school regulated by a school system and state department of education) with a diploma (a certificate of attendance is not acceptable). The University requires the students' final high school transcripts before they are allowed to attend classes. Applicants graduating from high school less than 5 years or earlier, must complete requirements of the College Preparatory Curriculum (CPC) of the Board of Regents (see College Preparatory Curriculum).

Regular Admissions Requirements:
- Freshman Index of 1940
- SAT Critical Reading score of 430 SAT Math score of 400
- Or ACT English 17, ACT Math 17, and ACT Composite 17
- 2.2 GPA
- 16 CPC Units

Admissions Procedures:
- *Application form*. Applicants seeking admission must file an application for admission prior to the specified deadline as indicated in the academic calendar. An application may be obtained from the Office of Admissions or on-line at http://www.savannahstate.edu/em/admissions/apply.htm.
- *Certificate of immunization*. All applicants must submit a University System of Georgia Certificate of Immunization as a condition of enrollment. **This form must be on file before registration.**
- *Application fee*. A non-refundable processing fee of $20.00 is required with all applications.
- *Official transcript(s) of courses completed*. All documents must be on file in the Office of Admissions prior to the specified document **deadline.** Freshmen applicants should request their high school guidance department to send an official copy of their transcript. Non-traditional adult candidates must submit an official high school transcript and official college transcript(s), if applicable. Transfer candidates with fewer than 45 transferable quarter hours, or 30 transferable semester hours (students in this category must have completed two college level English courses and one college level math course) should submit official transcripts from their high schools and from all colleges previously attended.
- *Copies of test scores*. The Scholastic Aptitude Test (SAT I) or The American College Testing Program (ACT) tests are required for all freshmen applicants and transfer students not meeting transfer requirements. Transfer candidates who have attempted fewer than 45 transferable core quarter hours or 30 transferable semester hours must also submit SAT I or ACT scores and submit an official copy of their high school transcript.
- *Other requirements*. The University may require applicants to appear for a personal interview and to take any achievement, aptitude, and psychological tests it deems appropriate in order to make a decision regarding the qualification for admission to the University. Once admitted, all students are required to take a Writing Assessment. Some students may also be required to take placement tests in English, reading, and/or mathematics.

Department of Teacher Education Admission:

During the first three semesters, students interested in Secondary Education should take EDUC 2110 – Investigating Critical/Contemporary Issues in Education, EDUC 2120 – Exploring Socio-Cultural Diversity, and EDUC 2130 - Exploring Teaching & Learning. Students should also fill as many General Education requirements as possible. PSYC 1101 is a prerequisite for the Secondary Education Program and will also count as a Social Science in Core Area E requirements.

Secondary Education majors are available in the following areas of teacher certification: Biology, Mathematics, and Technology Education. A specific list of subject matter requirements for each teaching certification in Secondary Education grades 6-12 is available from the Department of Teacher Education. All prospective Secondary Education students should apply to the Department of Teacher Education during the semester that they attain 42 credits.

Applicants must have a minimum cumulative G.P.A. of 2.7, as well as a G.P.A. of 2.7 in education and the area of certification. A test of academic skills prior to admission is required. Candidates admitted into initial preparation programs at the post baccalaureate level have attained appropriate depth and breadth in both general and content studies, with a minimum of a bachelor's degree from a GaPSC accepted accredited institution.

7. **Availability of assistantships (if applicable).**
   (Not Applicable)

8. **Student learning outcomes and other associated outcomes of the proposed program.**

Teacher candidates who graduate from the proposed program will develop the knowledge, skills and dispositions to teach in grades 6-12. In order to achieve this goal, the program will focus on the following outcomes that coincide with the National and Professional Standards for professionals in the field. General Student learning outcomes from the Georgia Professional Standards Commission are:

- *Identification and education of children with special needs*

  Candidates in all teaching fields must complete three or more semester hours, or the equivalent, in the identification and education of children who have special educational needs.

- *Use, application, and integration of instructional technology*

  Candidates have demonstrated proficiency in the use, application, and integration of instructional technology, either by attaining an acceptable score on a PSC-approved test of computer skill competency or by completing a PSC-approved training course or equivalent.

- *Georgia P-12 curriculum*

  Candidates are prepared to implement the appropriate sections of any Georgia mandated curriculum (e.g. Georgia Performance Standards, GPS, Quality Core Curriculum, QCC) in each relevant content area.

- *Professional ethical standards and requirements for certification and employment*
Candidates are provided with information about professional ethical standards, criminal background check, and clearance for certification and employment.
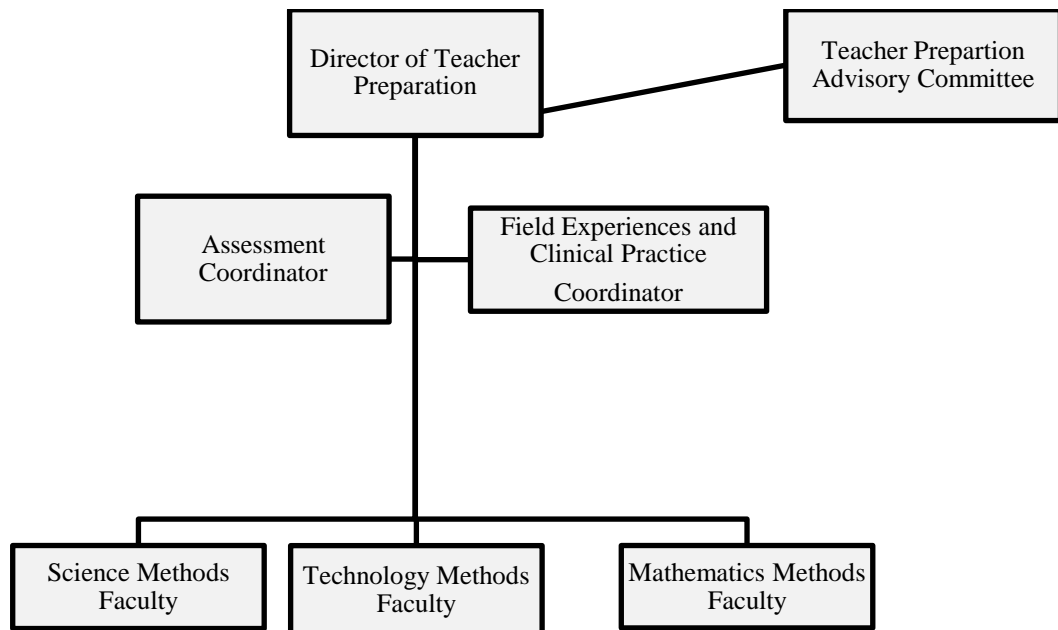
(See Appendix B for NCTM student learning outcomes/indicators for Mathematics)

9. **Administration of the program:**
   a. Indicate where the program will be housed within the academic units of the institution.
   b. Describe the administration of the program inclusive of coordination and responsibility.

The program will be housed in the College of Sciences and Technology's new Department of Teacher Education. The college currently is comprised of three departments. The new Department will be led by a director who reports directly to the Vice President for Academic Affairs. The director of the Department of Teacher Education is the unit head and is responsible for the academic management of the department. The director's major responsibility is to ensure that all programs in the department are managed in accordance to college, university, state, and national standards. An Assessment Coordinator will manage the unit's Assessment System to track all outcome performance data. A Field and Clinical Experiences Coordinator will be assigned to advise students and monitor field, clinical/internship experiences. Additionally, there will be a method faculty assigned. Other faculty responsibilities will be managed by faculty part-time to the DOTE but full-time to the content area in another university department. Oversight for this and all programs in the department is ultimately the responsibility of the Director of the Department of Teacher Education. The chart that follows, illustrates the department's organization with all proposed programs represented.

The Department of Teacher Education
Organizational Chart

```
                    ┌─────────────────┐              ┌─────────────────────┐
                    │ Director of     │              │ Teacher Prepartion  │
                    │ Teacher         │──────────────│ Advisory Committee  │
                    │ Preparation     │              │                     │
                    └─────────────────┘              └─────────────────────┘
                             │
       ┌─────────────────┐   │   ┌─────────────────────┐
       │ Assessment      │───┼───│ Field Experiences   │
       │ Coordinator     │   │   │ and Clinical        │
       │                 │   │   │ Practice            │
       └─────────────────┘   │   │ Coordinator         │
                             │   └─────────────────────┘
                             │
        ┌────────────────────┼────────────────────┐
        │                    │                    │
┌───────────────┐   ┌───────────────────┐   ┌────────────────────┐
│ Science       │   │ Technology        │   │ Mathematics        │
│ Methods       │   │ Methods           │   │ Methods            │
│ Faculty       │   │ Faculty           │   │ Faculty            │
└───────────────┘   └───────────────────┘   └────────────────────┘
```

10. Waiver to Degree-Credit Hour (if applicable): If the program exceeds the maximum credit hour requirement at a specific degree level, then provide an explanation supporting the increase in hours (Note: The maximum for bachelor's degrees is 120-semester credit hours and the maximum for master's degrees is 36-semester credit hours).

None

11. Accreditation: Describe disciplinary accreditation requirements associated with the program (if applicable).

The program is required to be accredited by National Council for the Accreditation of Teacher Education and to be nationally recognized by its specialized professional association SPA.

> The Georgia Professional Standards Commission has adapted the *Professional Standards for the Accreditation of Schools, Colleges, and Departments of Education* published by the National Council for the Accreditation of Teacher Education (NCATE) for use in the Georgia professional education unit and preparation program approval process. The adapted standards include all six of the NCATE standards, as well as two additional standards that address Georgia-specific requirements. The adapted standards, the *Georgia Standards for the Approval of Professional Education Units and Preparation Programs* (effective 09/1/08) apply to all professional education units and preparation programs in Georgia.

In addition to the GaPSC and NCATE standards, the program must meet all standards to be recognized nationally by the National Council of Teachers of Mathematics. The NCTM is the national (SPA) for mathematics teachers.

(See Appendix B)

12. Projected enrollment for the program especially during the first three years of implementation. Please indicate whether enrollments will be cohort-based.

Projected Enrollment for the Program

It is projected that approximately 15 to 20 students will initially enroll in the program. As the program develops and grows, it is anticipated that an average of 15-25 students will continue to enroll and participate as the program becomes known.

ENROLLMENT PROJECTIONS	First Year FY 2012	Second Year FY 2013	Third Year FY 2014
New	15	20	20
Existing	0	15	31
Attrition (Retention Rate = .75)	0	-4	-8
Total Majors	**15**	**31**	**53**

The enrollment projections are not cohort-based.

These projections are based on survey results which indicate that approximately 20 students will enter the program in the first two years of the program, and informal surveys of current students show that at least 15 currently-enrolled students desire to transfer in the program. As such, the projection of 20 new students per year is conservative.

13. Faculty

   a. **Provide an inventory of faculty directly involved with the administration of the program. For each faculty member, provide the following information:**

   (See Appendix C - Table for Faculty Directly Involved with Program)

   b. If it will be necessary to add faculty in order to begin the program, give the desired qualifications of the persons to be added, with a timetable for adding new faculty and plan for funding new positions.

Total Number of Faculty: 1- FTE first two years; an additional faculty will be requested for year three; see Enrollment Projections Narrative.)

Faculty Title	Qualifications	Timetable	Plan for Funding
Assistant Professor Mathematics Education (6-12) Methods	Terminal degree (Ed.D. or Ph.D.) in the content area (Mathematics Education) from an accredited institution. (Tenure-Tracked position)	One new faculty first two years. Third year of implementation, we will request an additional full-time faculty.	Funds from reallocation of existing positions, increased university enrollment resources, and from program generated funds.

14. Fiscal, Facilities, Enrollment Impact, and Estimated Budget

Provide a narrative that explains how current institutional resources will be expended specifically for this program. Provide a narrative that explains how the institution will fiscally support the establishment of the new program through the redirection of existing resources and acquisition of new resources. Indicate whether the institution will submit a request for new funds as part of its budget request. The narrative also needs to explain the basis of the institution's projections with regard to anticipated EFT, head count, student enrollment, estimated expenditures, and projected revenues.

The proposed bachelor degree program will be implemented combining existing resources, resources developed from budget redirection, and from funds due to the increased student enrollment at Savannah State University. During the third and fourth year, the program becomes more self-supporting and will reduce the need for special university funding. The following narratives explain anticipated EFT, head count, student enrollment, estimated expenditures, and projected revenues.

I. ENROLLMENT PROJECTIONS NARRATIVE YEAR 1

15 new students will enroll in Freshman Courses

Course Sections Satisfying Program Requirements
2 **NEW** courses are needed each semester
1 Sections of **EACH COURSE** is needed each semester (15 students per section)
4 Sections will be offered in Year 1
Credit Hours Generated by Those Courses
15   Students taking 4 courses per year =60 headcount/15 students/ courses =4
60x3 credit/hours = **90** credit/hours

II. EXPENDITURES
4 Course Sections in Year 1
 Faculty load =12

Reassigned Position –
(One Existing Faculty @ $50,000) 50% of Time = $25,000 + $7,750 Fringe benefits (31%) = **$32,750**

New Faculty
One full-time faculty @ $45,000 (average faculty salary) =$45,000
Administrator (Director) = $25,334
Assessment Coordinator =$13,334
 Administrative Assistant = $ 8,334
Fringe benefits calculated at 31% x ($45,000 +$25,334 +$13,334 + 8,334) = $ 28,521
*Total Personnel Expenditures: **$120,523.00***

Start-up Costs (one-time expenses)
Library Resources (CMC in the Library) = $6667
Assessment System (One Time Fee) = $5,000
 (NCATE Visit Fee) = $1,350
 *Total Start-up Cost = **$13,017.00***

Operating Costs (recurring costs -base budget)
Supplies/Expenses: $3000 +$1264 (NCATE/AACTE Annual Fee) = $4264
Travel: for one faculty to attend NCATE/AACTE Conference = $1,500
 *Total Recurring Costs=**$7,764***

GRAND TOTAL COSTS: = $174,054.00

III. REVENUE SOURCES
Reallocation of existing funds (One Existing Faculty @ $50,000) 50% of Time = $25,000 + Fringe Benefits $7750) = **$32,750**

New Tuition:
15 students taking 4 courses per year =60 headcount
60 x 3 credit/hours = 180 credit/hours
180 credit/hours x $130 /semester ($260) =**$ 46,800**

Student Fees
$102 Student Institutional Fees + $50 Technology Fee = $152
15 students take course each semester = 30 fees of $152 =**$4660.00**
Other (Funds from new enrollment increases for the University) = **$89,844**

GRAND TOTAL REVENUES: $174,054.00

I. **ENROLLMENT PROJECTIONS NARRATIVE - YEAR 2**

11 - Students will return after Year 1 (current SSU retention rate .75) (15 x .75 = 11.25)
20 – **New** students will enroll in Freshman Courses

Course Sections Satisfying Program Requirements
4 Sections of Existing Courses will be offered in Year 2

Credit Hours Generated by Those Courses
31 students taking 4 courses per year =124 headcount
124x3 credit/hours = 372 credit/hours

II. **EXPENDITURES**
4 Course Sections in Year 2

Reassigned Position –
(One Existing Faculty @ $50,000) 50% of Time = $25,000 + $7,750 Fringe benefits (31%) = **$32,750**

New Faculty
One full-time faculty @ $45,000 (average faculty salary) =$45,000
Administrator (Director) = $25,334
Assessment Coordinator =$13,334
 Administrative Assistant = $ 8,334
Fringe benefits calculated at 31% x ($45,000 +$25,334 +$13,334 + 8,334) = $ 28,521
Total Personnel Expenditures: $120,523.00

Start-up Costs (one-time expenses)
Library Resources (CMC in the Library) = 0
Assessment System (One Time Fee) = 0
 (NCATE Visit Fee) = 0
 Total Start-up Cost = 0

Operating Costs (recurring costs -base budget)
Supplies/Expenses: $3000 +$1264 (NCATE/AACTE Annual Fee) = $4264
Travel: for one faculty to attend NCATE/AACTE Conference = $1,500
 Total Recurring Costs=$7,764

GRAND TOTAL COSTS: = $161,037.00

III. **REVENUE SOURCES**

Reallocation of existing funds (One Existing Faculty @ $50,000) 50% of Time = $25,000 + Fringe
Benefits $7750) = **$32,750.00**

New Tuition:
31 students taking 4 courses per year =124 headcount
124 x 3 credit/hours = 372 credit/hours
372 credit/hours x $130 /semester ($260) =**$96,720**

Student Fees
$102 Student Institutional Fees + $50 Technology Fee = $152
31 students take course each semester = 62 fees of $152 =**$9,424**

Other (Funds from new enrollment increases for the University) = **$22,143.00**

GRAND TOTAL REVENUES: $161,037.00

I. ENROLLMENT PROJECTIONS NARRATIVE - YEAR 3
23 Students will return after Year 2 (current SSU retention rate .75) (31 x .75 = 23.25)
20 new students will enroll in Freshman Courses
43   Students are projected
43 students x 4 classes = 172 headcount

Credit Hours Generated by Courses
43 students taking 4 courses per year = 172 headcount
172 x3 credit/hours = 516 credit/hours

II. EXPENDITURES
4 Course Sections in Year 3
Faculty load =12

Reassigned Position –
(One Existing Faculty @ $50,000) 50% of Time = $25,000 + $7,750 Fringe benefits (31%) = **$32,750**

New Faculty
One full-time faculty @ $45,000 (average faculty salary) =$45,000
Request one (1) new full-time faculty position = $45,000
Administrator (Director) = $25,334
Assessment Coordinator =$13,334
Administrative Assistant = $ 8,334
Fringe benefits calculated at 31% x ($45,000 +$45,000 +$25,334 +$13,334 + 8,334) = $ 42471
Total Personnel Expenditures: $179,473.00

Start-up Costs (one-time expenses)
Library Resources (CMC in the Library) = 0
Assessment System (One Time Fee) = 0
(NCATE Visit Fee) = 0
Total Start-up Cost = 0
Operating Costs (recurring costs -base budget)
Supplies/Expenses: $3000 +$1264 (NCATE/AACTE Annual Fee) = $4264
Travel: for one faculty to attend NCATE/AACTE Conference = $1,500
Total Recurring Costs=$7,764

GRAND TOTAL COSTS: = $219,987.00

III. REVENUE SOURCES

Reallocation of existing funds (One Existing Faculty @ $50,000) 50% of Time = $25,000 + Fringe Benefits $7750) = **$32,750.00**

New Tuition:
43 students taking 4 courses per year =172 headcount
172 x 3 credit/hours = credit/hours
516 credit/hours x $130 /semester ($260) =**$ 134,160.00**
Student Fees
$102 Student Institutional Fees + $50 Technology Fee = $152
43 students take course each semester = 86 fees of $152 = **$ 13,072**

Other (Funds from new enrollment increases for the University) = **$40,005.00**

GRAND TOTAL REVENUES: $ 219,987.00

I. ENROLLMENT PROJECTIONS NARRATIVE - YEAR 4

32 Students will return after Year 2 (current SSU retention rate .75) (31 x .75 = 23.25)
20 New students will enroll in Freshman Courses
52 Students are projected

Course Sections Satisfying Program Requirements
52 Students x 4 classes=208 headcount

Credit Hours Generated by Those Courses
52 Students taking 4 courses per year = 208 headcount
208 x3 credit/hours = 624 credit/hours
Degrees Awarded (45% of Returning Students --32 x .45) = 14

II. EXPENDITURES
Reassigned Position –
(One Existing Faculty @ $50,000) 50% of Time = $25,000 + $7,750 Fringe benefits (31%) = **$32,750**

New Faculty
One full-time faculty @ $45,000 (average faculty salary) =$45,000
Request one (1) new full-time faculty position = $45,000
Administrator (Director) = $25,334
Assessment Coordinator =$13,334
Administrative Assistant = $ 8,334
Fringe benefits calculated at 31% x ($45,000 +$45,000 +$25,334 +$13,334 + 8,334) = $ 42471
Total Personnel Expenditures: $179,473.00

Start-up Costs (one-time expenses)
Library Resources (CMC in the Library) = 0
Assessment System (One Time Fee) = 0
(NCATE Visit Fee) = 0
Total Start-up Cost = 0

Operating Costs (recurring costs -base budget)
Supplies/Expenses: $3000 +$1264 (NCATE/AACTE Annual Fee) = $4264
Travel: for one faculty to attend NCATE/AACTE Conference = $1,500
Total Recurring Costs=$7,764

GRAND TOTAL COSTS: = $219,987.00

III. REVENUE SOURCES
Reallocation of existing funds (One Existing Faculty @ $50,000) 50% of Time = $25,000 + Fringe
Benefits $7750) = **$32,750.00**

New Tuition:
52 students taking 4 courses per year = 208 headcount
208 x 3 credit/hours = 624 credit/hours
624 credit/hours x $130 /semester ($260) = **$162,240.00**
Student Fees
$102 Student Institutional Fees + $50 Technology Fee = $152
52 students take course each semester = 104 fees of $152 = **$15,808**

Other (Funds from new enrollment increases for the University) = **$9,189.00**

GRAND TOTAL REVENUES: $219,987.00

	First Year FY	Second Year FY	Third Year FY	Fourth Year FY
I. ENROLLMENT PROJECTIONS				
Student Majors				
Shifted from other programs				
New to the institution	15	20	20	20
Continuing Majors	0	15	31	43
Attrition	0	-4	-8	-11
Transfers				
Total Majors	15	31	43	52
Course Sections Satisfying Program Requirements				
Previously existing	0	4	8	12
New	4	4	4	4
Total Program Course Sections	4	8	12	16
Credit Hours Generated by Those Courses				
Existing enrollments	0	88	828	1536
New enrollments	90	160	720	960
Total Credit Hours	90	744	1548	2496
DEGREES AWARDED (Graduation Rate= 35%)	0	0	10	14
II. EXPENDITURES	EFT Dollars	EFT Dollars	EFT Dollars	EFT Dollars
Personnel – reassigned or existing positions				
Faculty (One Existing Faculty @ $50,000) 50% of Time = $25,000	$25,000.00	25,000.00	$25,000.00	$25,000.00
Part-time Faculty	0	0	0	0
Graduate Assistants	0	0	0	0
Administrators	0	0	0	0
Support Staff	0	0	0	0
Fringe Benefits	7,750.00	0	7,750.00	7,750.00
Other Personnel Costs	0	0	0	0
Total Existing Personnel Costs	**$32,750.00**	**$32,750 0**	**$32,750.00**	**$32,750.00**

EXPENDITURES (Continued)				
Personnel – new positions				
Faculty (Average Full-time Faculty Salary= $45,000)	$45000.00	45,000.00	$90,000.00	$90,000.00
Part-time Faculty	0	0	0	0
Graduate Assistants	0	0	0	0
Administrators	25,334.00	25,334.00	25,334.00	25,334.00
Support Staff	8,334.00	8,334.00	8,334.00	8,334.00
Fringe Benefits	28,521.00	28521.00	42,471.00	42,471.00
Other personnel costs (Assessment Coordinator)	13,334.00	13,334.00	13,334.00	13,334.00
Total New Personnel Costs	**$120,523.00**	**$120,523.00**	**$179,473.00**	**$179,473.00**
Start-up Costs (one-time expenses)				
Library/learning resources	0	0	0	0
Equipment	0	0	0	0

Other (NCATE Program Evaluation Visit Fee)	1350.00	0	0	0
Assessment Software	5000.00	0	0	0
Media/Print Resources to establish a Curriculum Media Center (CMC) in the Library	6667.00			
Physical Facilities: construction or major renovation	0	0	0	0
Total One-time Costs	**$13,017.00**	0	0	0
	0	0	0	0
Operating Costs (recurring costs – base budget)				
Supplies/Expenses	4,264.00	4264	4264	4264
Travel	1,500.00	1500	1500	1500
Equipment	0	0	0	0
Library/learning resources	2000.00	2000	2000	2000
Other	0	0	0	0
Total Recurring Costs	**$7,764.00**	**$7,764.00**	**$7,764.00**	**$7,764.00**
GRAND TOTAL COSTS	**$174,054.00**	**$161,037.00**	**$219,987.00**	**$219,987.00**
III. REVENUE SOURCES				
Source of Funds				
Reallocation of existing funds (One Existing Faculty @ $50,000) 50% of Time = $25,000 + Fringe Benefits $7750)	$32,750.00	$32,750.00	$32,750.00	$32,750.00
New student workload			0	0
New Tuition (See narrative note)	$46,800.00	$ 96,720.00	$134,160.00	$162,240.00
Federal funds	0	0	0	0
Other grants	0	0	0	0
Student fees (Institutional Fee $102.00 + Technology Fee $50) = $152.00	4,660.00	9,424.00	13,072.00	15808.00
Other (Funds from new enrollment increases)	89,844.00	22,143.00	40,005.00	9,189.00
New state allocation requested for budget hearing	0	0	0	0
	0	0	0	0
Nature of Funds	0	0	0	0
Base budget	0	0	0	0
One-time funds	0	0	0	0
	0	0	0	0
GRAND TOTAL REVENUES				
	$174,054.00	**$161,037.00**	**$219,987.00**	**$219,987.00**

Facilities Information for New Academic Programs

Proposed Location for the Program: College of Sciences and Technology – Herty Hall

Floor area required for the program (gross and net square feet): 1820 square feet; 1050 s.f. for one classroom, 320 s.f. for the director, 450 s.f. for one assessment coordinator, and two faculty offices.

Type of spaces required:
- Number of classrooms   ____1_____
- Number of labs   _____
- Number of offices   ____5____ (Director, Math Method Faculty, Assessment Coordinator)
- Other spaces   _____

Place an "X" beside the appropriate selection:

__X_____   Existing facility will be used as is (area square footage):

_____   Existing facility will require modification (area square footage):

                  Projected renovation cost:
                  Estimated relocation cost:
                  Total funding required:
                  Source of Funding:

_____   Construction of new facilities will be required (area square footage):

                  Estimated construction cost:
                  Estimated total project cost:
                  Proposed source of funding:

List any infrastructure impacts that the program will have (i.e., parking, power, HVAC, etc.) and indicated estimated cost and source of funding.

Other comments:

Note: A system office Facilities Project Manager (through the Office of Facilities) may contact you with further questions separate from the review of the new academic program.

Appendixes

Appendix A: Course Description and Prerequisites
Appendix B: Accreditation Standards
Appendix C: Table of Faculty Directly Involved with Program
Appendix D: Endorsement Documents

Appendix A: Course Descriptions

Course Number	Course Name	Course Description	Credit Hours	Prerequisites	Existing or New
ENGL 1101	Composition I	A course designed to develop college-level reading and writing skills. Focuses on vocabulary, analysis of readings, grammar, mechanics, and the steps of the writing process. Introduces documented research and various patterns of organization and development. Minimum passing grade is "C."	3 hours	Prerequisites: Regular admission or exit from ENGL 0099 or ENG 098 and READ 0099 or RDG 098	Existing
ENGL 1102	Composition II	A course designed to further develop college-level reading and writing skills. Includes analysis of literary texts and specialized application of the research and writing skills learned in ENGL 1101. Minimum passing grade is "C."	3 hours	Prerequisite: ENGL 1101	Existing
MATH 1113	Pre-Calculus	A course designed to prepare students for a successful study of calculus. Topics include functions and their graphs, inverse functions, exponential and logarithmic functions, trigonometric functions and their inverses, analytic trigonometry, application of trigonometric functions, fundamentals of analytic geometry, and polar coordinates	3 hours	Prerequisite: MATH 1111 or a minimum score of 475 on the SAT-MAT	Existing
AFRS 1501	African American History	A survey and understanding of the cultural, economic, political, psychological and social development of African Americans and an analysis of their contemporary status.	2 hours		Existing
HUMN 1201	Critical Thinking & Communication	This course is designed to assist in the development of skills in critical reading, critical thinking, and interpersonal communication in the context of contemporary issues. This course focuses not only on improving reading comprehension and analytical skills, but also on identifying problems with logic found in one's own	3 hours		Existing

		communication and in that of others, on developing an awareness of techniques commonly used in advertising and political language, on understanding principles of interpersonal communication and public speaking, and on organizing, developing, and presenting audience-centered material.			
RPHS 2101	Introduction to Philosophy	The basic survey course of the field of philosophy. An introduction to logic, ethics, ontology, and religion, etc., as a basis for additional study in philosophy. Required for minors.	3 hours		Existing
HUMN 2011	Humanities	Designed as a multicultural, cross-disciplinary course to enable students to discover, interpret, and assess critically the intellectual and aesthetic expressions of cultures of America, Europe, Asia, and Africa.	3 hours	Prerequisite: ENGL 1102 or ENG 109	Existing
CISM 1130	Computer Applications	An introductory course specially designed to help students become computer literate. The course covers the history of computers, hardware, software, and use of the state-of-the-art technology. Another unique feature of this course is that student use Internet, MS OFFICE applications using word processing, spread sheets, and HTML language to create homepages.	3		Existing
ISCI 1101	Integrated Science I	Nature, physical properties, structure and evolution of the physical universe, nuclear energy and the atom, cosmology, the nature of energy and its conservation.	3		Existing
ISCI 1111K	Integrated Science II	The physical earth, biological evolution, ecological processes, and human development.	4		Existing

POLS 1101	American Government	A comprehensive study of the origins, principles, structures, processes, and practices of American government, emphasis on various perspectives on democratic theory and practice of governmental institutions	3 hours		Existing
POLS 2401	Global Issues	An interdisciplinary approach to selected topics in contemporary societies, using the sociological, economic, geographic, and political perspectives; an opportunity to equip students to understand and meet the challenges of a rapidly changing world community.	3 hours		Existing
HIST 2111	U.S. History to the Post-Civil War Period	An introductory survey of the formative years of the history of the United States.	3 hours		Existing
PSYC 1101	Behavioral Sciences	This introductory survey course explores the scientific study of human nature, behavior, and cognitive processes. The major areas of psychological study will be reviewed including history, biology, memory, learning, development, personality, abnormal and social psychology. Emphasis will be placed on applying psychological principles and data to life experiences.	3 hours		Existing
CSCI 1301	Computer Science I	An introduction to the principles of computer programming with emphasis on problem solving methods. The topics include an introduction to data representation, data type and control structures, procedures and functions, and programming methodology.	3 hours		Existing
EDUC 2110	Investigating Critical and Contemporary Issues in Education	This course engages potential education candidates in observations and interactions in schools, and analyses of critical and contemporary educational issues. Candidates investigate issues influencing the social and political contexts of educational settings in Georgia and the United States. Candidates actively examine the teaching profession from multiple vantage points both within and outside	3 hours		New

		the school. Against this backdrop, candidates reflect on and interpret the meaning of education and schooling in a diverse culture. Includes the use of current technologies which are directly related to effective teaching and 15 hours of observation and participation in an appropriate school setting elementary/early childhood, middle grades, secondary or P-12 environments. Verification of professional liability insurance and a criminal background check are required prior to receiving a school placement.			
EDUC 2120	Sociocultural Influences on Teaching and Learning	This course introduces teachers to fundamental knowledge of culture essential for effective teaching in increasingly diverse classrooms. Designed as a foundation course for subsequent courses focused on the preparation of culturally responsive teachers, this course examines 1) the nature and function of culture; 2) the development of individual and group cultural identity; 3) definition and implications of diversity. Includes 15 hours of observation and participation in an appropriate school setting-elementary/early childhood, middle grades, secondary or P-12 environments. Verification of professional liability insurance and a criminal background check are required prior to receiving a school placement.	3 hours		New
MATH 2101	Calculus I	An integrated approach to differential calculus and an introduction to integral calculus. Topics include functions, graphs, the derivative, applications of the derivative, maxima and minima, velocity and acceleration, rates of change, antidifferentiation, the fundamental theorem of calculus, and basic integration techniques.	4 hours	*Prerequisite: MATH 1113*	Existing

MATH 2211	Calculus II	A continuation of MATH 2101. Topics include logarithmic, exponential, and other transcendental functions, applications of integration, integration techniques. L'Hopital's rule, improper integrals, and infinite series.	4 hours	*Prerequisite: MATH 2101*	Existing
MATH 2121	Calculus III	A continuation of MATH 2111. Topics include plane curves, parametric equations, polar coordinates, vectors and geometry of space, vector-valued functions, functions of several variables, partial derivatives, and multiple integrals.	4 hours	*Prerequisite: MATH 2111*	Existing
MATH 2201	Elementary Statistics	Topics include mean, median, range, variance and standard deviation of raw and grouped data, probabilities, correlation, the normal distribution, the t-distribution, statistical inference, including the pooled t-test, the analysis of variance, chi-square test, and regression analysis.	3 hours	*Prerequisite: MATH 1111*	Existing
MATH 3101	Linear Algebra	Topics include matrix algebra, solutions of linear systems, vectors and vector spaces, linear independence, spanning sets, bases, ranks, determinants, matrix inversion, linear transformations, null space, range, and eigenvalues.	3 hours	*Prerequisite: MATH 2111 or MAT 213*	Existing
MATH 3201	Probability & Statistics I	Topics include sample spaces, elementary theorems of probability, permutations and combinations, random variables, discrete and continuous distributions and density functions, mathematical expectation, and moment generating functions of probability distributions.	3 hours	*Prerequisite: MATH 2111*	Existing

MATH 3211	Foundation of Higher Math	. Topics include sets, prepositional calculus, truth tables, predicate calculus, universal and existential quantifiers, proofs about sets, basic methods of proof, mathematical induction, relations and functions, and cardinality.	3 hours	*Prerequisite: MATH 2121*	Existing
MATH 4101	Abstract Algebra I	An introduction to groups, subgroups, homomorphisms, isomorphisms, cyclic groups, permutation groups, direct products, Abelian groups, and Sylow's theorem.	3 hours	Prerequisite: MATH 3211	Existing
MATH 4201	Analysis I	Topics include sets and functions, the real number system, elementary topology of the real line, limits of sequence, space of continuous functions, differentiation, and Riemann integration.	3 hours	*Prerequisites: MATH 2121, 3211*	Existing
MATH 4111	Abstract Algebra II	A course exploring the theory of rings, fields, integral domains, and vector spaces.	3 hours	*Prerequisite: MATH 4101*	Existing
MATH 4401	Number Theory	Topics include the theory of mathematical induction, divisibility theory in the integers, prime numbers and their distribution, the theory of congruences and modular arithmetic, Fermat's theorem, and number theoretic functions.	3 hours	*Prerequisite: MATH 3211*	Existing
MATH 4501	Introduction to Topology	Topics include fundamental concepts of topology: set theory, the real number line, continuity, compactness, connectedness, separations axioms, the axioms of choice, and metric spaces.	3 hours	*Prerequisite: MATH 3211*	Existing
MATH 4701	History of Math	The origin and development of mathematical ideas, beginning with geometry and algebra and continuing through selected topics in modern mathematics.	3	*Prerequisite: MATH 2111*	Existing

EDUC 2130	Exploring Teaching & Learning	This course explores key aspects of learning and teaching through examining your own learning processes and those of others, with the goal of applying your knowledge to enhance the learning of all students in a variety of educational settings and contexts. Includes 10 hours of observation and interaction with a learner in a naturalistic setting. Current use of technology will be integrated as communication and instructional tools. Verification of professional liability insurance is required.	3 hours	*Prerequisite: EDUC 2110*	New
EDUC 3030	Exploring-Exceptional Learner	Prepares candidates to work collaboratively with families and school personnel to have a positive impact on the educational, social and behavioral development of all students, including those with a full range of disabilities, in a diverse society. The course focuses on knowledge of legislative mandates for serving exceptional students, characteristics of exceptionality, best practice in facilitating teaching and learning, and accountability through assessment of outcomes. This course requires an observational experience in an assigned school placement. Verification of professional liability insurance is required prior to placement in the field experience. Fulfills Georgia HB 671 requirement.	3 hours	*Prerequisite: Admission to Teacher Education*	New
EDUC 3200	Curriculum and Assessment	An introduction to constructing, evaluating, and interpreting tests; descriptive and inferential statistics; state competency testing; and guidelines for state program evaluations.	3 hours	*Prerequisite: Admission to Teacher Education*	New
MAED 4416	Teaching of Mathematics (6-12)	An examination and application of curricular issues, learning theories, teaching strategies, instructional materials, and assessment procedures for teaching secondary school mathematics in the multicultural and diverse classroom of today. Includes a secondary school field experience in mathematics	3 hours	*Prerequisite: EDUC 2130, and admission to Teacher Education.*	New

		teaching and seminars. Emphasizes those practices suggested by research in mathematics education and encouraged by the NCTM and the MAA. Proof of professional liability insurance is required prior to receiving a school placement.			
MAED 4417	Teaching Math Practicum	Practicum component of MAED 4416	3	*Taking concurrently with MAED 4416*	New
EDUC4475	Student Teaching & Seminar	Full-time teaching experience in mathematics under the supervision of a public school cooperating teacher and a specialist in mathematics education. Includes a regularly scheduled seminar. Proof of professional liability insurance is required prior to receiving a school placement.	12 hours	*Prerequisite: Admitted to Teacher Education; MAED 4416/4417*	New

Appendix B: Accreditation Standards

GEORGIA STANDARDS FOR THE APPROVAL OF PROFESSIONAL EDUCATION UNITS AND EDUCATOR PREPARATION PROGRAMS
(Effective 9/1/08)

The Professional Standards Commission has adapted the Professional Standards for the Accreditation of Schools, Colleges, and Departments of Education published by the National Council for the Accreditation of Teacher Education (NCATE) for use in the Georgia professional education unit and preparation program approval process. The adapted standards include all six of the NCATE standards, as well as two additional standards that address Georgia-specific requirements. The adapted standards, the Georgia Standards for the Approval of Professional Education Units and Preparation Programs (Effective 09/1/08) apply to all professional education units and preparation programs in Georgia.

I. CANDIDATE PERFORMANCE
Standard 1: Candidate Knowledge, Skills, and Dispositions

Candidates preparing to work in schools as teachers or other school professionals know and demonstrate the content knowledge, pedagogical content knowledge and skills, pedagogical and professional knowledge and skills and professional dispositions necessary to help all students learn. Assessments indicate that candidates meet professional, state, and institution/agency standards.

Standard 2: Assessment System and Unit Evaluation

The professional education unit has an assessment system that collects and analyzes data on applicant qualifications, candidate and graduate performance, and professional education unit operations to evaluate and improve the performance of candidates, the professional education unit and its preparation programs.

II. PROFESSIONAL EDUCATION UNIT CAPACITY
Standard 3: Field Experiences and Clinical Practice

The professional education unit and its school partners design, implement, and evaluate field experiences and clinical practice so that teacher candidates and other school professionals develop and demonstrate the knowledge, skills, and professional dispositions necessary to help all students learn.

Standard 4: Diversity

The professional education unit designs, implements, and evaluates curriculum and provides experiences for candidates to acquire and demonstrate the knowledge, skills, and professional dispositions necessary to help all students learn. Assessments indicate that candidates can demonstrate and apply proficiencies related to diversity. Experiences provided for candidates include working with diverse populations, including higher education and P-12 school faculty, candidates, and students in P-12 schools.

Standard 5: Faculty Qualifications, Performance, and Development

Faculty are qualified and model best professional practices in scholarship, service, and teaching, including the assessment of their own effectiveness as related to candidate performance; they also collaborate with colleagues in the disciplines and schools. The professional education unit systematically evaluates faculty performance and facilitates professional development.

Standard 6: Professional Education Unit Governance and Resources

The professional education unit has the leadership, authority, budget, personnel, facilities, and resources, including information technology resources, for the preparation of candidates to meet professional, state, and institution/agency standards.

III. GEORGIA SPECIFIC REQUIREMENTS FOR PROFESSIONAL EDUCATION UNITS AND PREPARATION PROGRAMS

Standard 7: Requirements and Standards Specified in Rule 505-3-.01

The professional education unit ensures that all preparation programs meet all applicable requirements of Rule **505-3-.01, <u>REQUIREMENTS AND STANDARDS FOR APPROVING PROFESSIONAL EDUCATION UNITS AND EDUCATOR PREPARATION PROGRAMS</u>**, <u>Education Personnel Preparation Rules and Procedures</u>.

Elements of Standard 7

7a. ADMISSIONS REQUIREMENTS

Candidates admitted to initial preparation programs at the baccalaureate level have a minimum grade point average of 2.5 on a 4.0 scale. Candidates admitted into initial preparation programs at the post baccalaureate level have attained appropriate depth and breadth in both general and content studies, with a minimum of a bachelor's degree from a PSC accepted accredited institution. (A 2.5 is not required for entry into a post baccalaureate program.)

7b. READING METHODS

Candidates in programs in Early Childhood, Middle Grades, and the special education fields of General Curriculum, Adapted Curriculum, and General Curriculum/Early Childhood Education (P-5) are required to demonstrate competence in the knowledge of methods of teaching reading.

7c. IDENTIFICATION AND EDUCATION OF CHILDREN WITH SPECIAL NEEDS

Candidates in all teaching fields, the field of educational leadership, and/or the service fields of Media Specialist and School Counseling have completed five or more quarter hours or three or more semester hours, or the equivalent, in the identification and education of children who have special educational needs or equivalent, through a Georgia-approved professional learning program.

7d. USE, APPLICATION, AND INTEGRATION OF INSTRUCTIONAL TECHNOLOGY

Candidates have demonstrated proficiency in computer and other technology application and skills and satisfactory proficiency in integrating instructional technology into student learning. This requirement may be met through content embedded in courses and experiences throughout

the preparation program or by attaining an acceptable score on a PSC-approved computer skill competency assessment.

<div align="center">**7e. GEORGIA P-12 CURRICULUM**</div>

Candidates are prepared to implement the appropriate sections of any Georgia mandated curriculum (e.g. Georgia Performance Standards, GPS) in each relevant content area.

<div align="center">**7f. PROFESSIONAL ETHICAL STANDARDS AND REQUIREMENTS FOR CERTIFICATION AND EMPLOYMENT**</div>

Candidates are provided with information about professional ethical standards, the Georgia Code of Ethics for Educators, criminal background check, and clearance for certification and employment.

Georgia Standards for the Approval Professional Education Units Page 32 of 33 and Educator Preparation Programs (Effective 9/1/08)

<div align="center">

NCATE/NCTM Program Standards (2003)
Programs for Initial Preparation of Mathematics Teachers

Standards for Secondary Mathematics Teachers

</div>

Process Standards (Standards 1-7)

The process standards are based on the belief that mathematics must be approached as a unified whole. Its concepts, procedures, and intellectual processes are so interrelated that, in a significant sense, its "whole is greater than the sum of the parts." This approach would best be addressed by involvement of the mathematics content, mathematics education, education, and field experience faculty working together in developing the candidates' experiences.

Likewise, the response to the disposition standard will require total faculty input. This standard addresses the candidates' nature and temperament relative to being a mathematician, an instructor, a facilitator of learning, a planner of lessons, a member of a professional community, and a communicator with learners and their families.

Standard 1: Knowledge of Mathematical Problem Solving
Candidates know, understand, and apply the process of mathematical problem solving.

Indicators
> 1.1 Apply and adapt a variety of appropriate strategies to solve problems.
> 1.2 Solve problems that arise in mathematics and those involving mathematics in other contexts.
> 1.3 Build new mathematical knowledge through problem solving.

1.4 Monitor and reflect on the process of mathematical problem solving.

Standard 2: Knowledge of Reasoning and Proof
Candidates reason, construct, and evaluate mathematical arguments and develop an appreciation for mathematical rigor and inquiry.

Indicators
2.1 Recognize reasoning and proof as fundamental aspects of mathematics.
2.2 Make and investigate mathematical conjectures.
2.3 Develop and evaluate mathematical arguments and proofs.
2.4 Select and use various types of reasoning and methods of proof.

Standard 3: Knowledge of Mathematical Communication
Candidates communicate their mathematical thinking orally and in writing to peers, faculty, and others.

Indicators
3.1 Communicate their mathematical thinking coherently and clearly to peers, faculty, and others.
3.2 Use the language of mathematics to express ideas precisely.
3.3 Organize mathematical thinking through communication.
3.4 Analyze and evaluate the mathematical thinking and strategies of others.

Standard 4: Knowledge of Mathematical Connections
Candidates recognize, use, and make connections between and among mathematical ideas and in contexts outside mathematics to build mathematical understanding.

Indicators
4.1 Recognize and use connections among mathematical ideas.
4.2 Recognize and apply mathematics in contexts outside of mathematics.
4.3 Demonstrate how mathematical ideas interconnect and build on one another to produce a coherent whole.

Standard 5: Knowledge of Mathematical Representation
Candidates use varied representations of mathematical ideas to support and deepen students' mathematical understanding.

Indicators
5.1 Use representations to model and interpret physical, social, and mathematical phenomena.
5.2 Create and use representations to organize, record, and communicate mathematical ideas.
5.3 Select, apply, and translate among mathematical representations to solve problems.

Standard 6: Knowledge of Technology
Candidates embrace technology as an essential tool for teaching and learning mathematics.

Indicator
> 6.1 Use knowledge of mathematics to select and use appropriate technological tools, such as but not limited to, spreadsheets, dynamic graphing tools, computer algebra systems, dynamic statistical packages, graphing calculators, data-collection devices, and presentation software.

Standard 7: Dispositions
Candidates support a positive disposition toward mathematical processes and mathematical learning.

Indicators
> 7.1 Attention to equity
> 7.2 Use of stimulating curricula
> 7.3 Effective teaching
> 7.4 Commitment to learning with understanding
> 7.5 Use of various assessments
> 7.6 Use of various teaching tools including technology

Pedagogy (Standard 8)

In addition to knowing students as learners, mathematics teacher candidates should develop knowledge of and ability to use and evaluate instructional strategies and classroom organizational models, ways to represent mathematical concepts and procedures, instructional materials and resources, ways to promote discourse, and means of assessing student understanding. This section on pedagogy is to address this knowledge and skill.

Standard 8: Knowledge of Mathematics Pedagogy
Candidates possess a deep understanding of how students learn mathematics and of the pedagogical knowledge specific to mathematics teaching and learning.

Indicators
> 8.1 Selects, uses, and determines suitability of the wide variety of available mathematics curricula and teaching materials for all students including those with special needs such as the gifted, challenged and speakers of other languages.
> 8.2 Selects and uses appropriate concrete materials for learning mathematics.
> 8.3 Uses multiple strategies, including listening to and understanding the ways students think about mathematics, to assess students' mathematical knowledge.
> 8.4 Plans lessons, units and courses that address appropriate learning goals, including those that address local, state, and national mathematics standards and legislative mandates.
> 8.5 Participates in professional mathematics organizations and uses their print and on-line resources.
> 8.6 Demonstrates knowledge of research results in the teaching and learning of mathematics.

8.7 Uses knowledge of different types of instructional strategies in planning mathematics lessons.

8.8 Demonstrates the ability to lead classes in mathematical problem solving and in developing in-depth conceptual understanding, and to help students develop and test generalizations.

8.9 Develop lessons that use technology's potential for building understanding of mathematical concepts and developing important mathematical ideas.

Content (Standards 9-15)

Candidates' comfort with, and confidence in, their knowledge of mathematics affects both what they teach and how they teach it. Knowing mathematics includes understanding specific concepts and procedures as well as the process of doing mathematics. That knowledge is the subject of the following standards.

Standard 9: Knowledge of Number and Operation

Candidates demonstrate computational proficiency, including a conceptual understanding of numbers, ways of representing number, relationships among number and number systems, and meanings of operations.

Indicators

9.1 Analyze and explain the mathematics that underlies the procedures used for operations involving integers, rational, real, and complex numbers.

9.2 Use properties involving number and operations, mental computation, and computational estimation.

9.3 Provide equivalent representations of fractions, decimals, and percents.

9.4 Create, solve, and apply proportions.

9.5 Apply the fundamental ideas of number theory.

9.6 Make sense of large and small numbers and use scientific notation.

9.7 Compare and contrast properties of numbers and number systems.

9.8 Represent, use, and apply complex numbers.

9.9 Recognize matrices and vectors as systems that have some of the properties of the real number system.

9.10 Demonstrate knowledge of the historical development of number and number systems including contributions from diverse cultures.

Standard 10: Knowledge of Different Perspectives on Algebra

Candidates emphasize relationships among quantities including functions, ways of representing mathematical relationships, and the analysis of change.

Indicators

10.1 Analyze patterns, relations, and functions of one and two variables.

10.2 Apply fundamental ideas of linear algebra.

10.3 Apply the major concepts of abstract algebra to justify algebraic operations and formally analyze algebraic structures.

10.4 Use mathematical models to represent and understand quantitative relationships.

10.5 Use technological tools to explore algebraic ideas and representations of information and in solving problems.

10.6 Demonstrate knowledge of the historical development of algebra including contributions from diverse cultures.

Standard 11: Knowledge of Geometries
Candidates use spatial visualization and geometric modeling to explore and analyze geometric shapes, structures, and their properties.

Indicators
11.1 Demonstrate knowledge of core concepts and principles of Euclidean and non-Euclidean geometries in two and three dimensions from both formal and informal perspectives.

11.2 Exhibit knowledge of the role of axiomatic systems and proofs in geometry.

11.3 Analyze characteristics and relationships of geometric shapes and structures.

11.4 Build and manipulate representations of two- and three- dimensional objects and visualize objects from different perspectives.

11.5 Specify locations and describe spatial relationships using coordinate geometry, vectors, and other representational systems.

11.6 Apply transformations and use symmetry, similarity, and congruence to analyze mathematical situations.

11.7 Use concrete models, drawings, and dynamic geometric software to explore geometric ideas and their applications in real-world contexts.

11.8 Demonstrate knowledge of the historical development of Euclidean and non-Euclidean geometries including contributions from diverse cultures.

Standard 12: Knowledge of Calculus
Candidates demonstrate a conceptual understanding of limit, continuity, differentiation, and integration and a thorough background in the techniques and application of the calculus.

Indicators
12.1 Demonstrate a conceptual understanding of and procedural facility with basic calculus concepts.

12.2 Apply concepts of function, geometry, and trigonometry in solving problems involving calculus.

12.3 Use the concepts of calculus and mathematical modeling to represent and solve problems taken from real-world contexts.

12.4 Use technological tools to explore and represent fundamental concepts of calculus.

12.5 Demonstrate knowledge of the historical development of calculus including contributions from diverse cultures.

Standard 13: Knowledge of Discrete Mathematics
Candidates apply the fundamental ideas of discrete mathematics in the formulation and solution of problems.

Indicators

13.1 Demonstrate knowledge of basic elements of discrete mathematics such as graph theory, recurrence relations, finite difference approaches, linear programming, and combinatorics.

13.2 Apply the fundamental ideas of discrete mathematics in the formulation and solution of problems arising from real-world situations.

13.3 Use technological tools to solve problems involving the use of discrete structures and the application of algorithms.

13.4 Demonstrate knowledge of the historical development of discrete mathematics including contributions from diverse cultures.

Standard 14: Knowledge of Data Analysis, Statistics, and Probability

Candidates demonstrate an understanding of concepts and practices related to data analysis, statistics, and probability.

Indicators

14.1 Design investigations, collect data, and use a variety of ways to display data and interpret data representations that may include bivariate data, conditional probability and geometric probability.

14.2 Use appropriate methods such as random sampling or random assignment of treatments to estimate population characteristics, test conjectured relationships among variables, and analyze data.

14.3 Use appropriate statistical methods and technological tools to describe shape and analyze spread and center.

14.4 Use statistical inference to draw conclusions from data.

14.5 Identify misuses of statistics and invalid conclusions from probability.

14.6 Draw conclusions involving uncertainty by using hands-on and computer-based simulation for estimating probabilities and gathering data to make inferences and conclusions.

14.7 Determine and interpret confidence intervals.

14.8 Demonstrate knowledge of the historical development of statistics and probability including contributions from diverse cultures.

Standard 15: Knowledge of Measurement

Candidates apply and use measurement concepts and tools.

Indicators

15.1 Recognize the common representations and uses of measurement and choose tools and units for measuring.

NCTM Standards (2003) – Secondary Mathematics Teachers

Appendix C: Faculty Directly Involved With the New Degree Program

Faculty Name	Rank	Highest Degree	Degrees Earned	Academic Discipline	Current Workload
Jonathan Lambright	Associate Professor	Ph.D. of Philosophy Mechanical Engineering	B.S. Mechanical Engineering, M.S. Mechanical Engineering	Civil/Mechanical Engineering	12 hours
Asad Yousuf	Professor	EdD. Occupational Studies	B.S. Electronics Engineering M.S. Electrical Engineering	Electronics Engineering Technology	12 hours
Hetty B. Jones	Professor	Ph.D. Zoology	B.S. Biology, Secondary Education M. Ed. Math and Science	General Biology	12 hours
Johnny Johnson	Assistant Professor	Ph.D. of Philosophy Physiology & Biophysics Plan	B.S. Biology	Biology	12 hours
Sujin Kim	Assistant Professor	Ph.D. Applied Mathematics	B.S. Mathematics M.S. Mathematics	Mathematics	12 hours

Current faculty load and recently tenured faculty reduces the need for any increase in workload for existing faculty and will allow for additional required and elective courses to be offered in the new degree program,. As the program grows in the next several years, it is anticipated that the need will arise for additional part-time and full-time faculty.

Expected responsibilities in the program: Existing full-time tenured and tenure-track faculty will provide instructions in the core content for the program. All current faculty members are qualified to teach related content except teaching methods and education foundation courses required of the major.

Appendix D: Endorsement Documents

Box 20411
3219 College Street
Savannah, GA 31404
P: (912) 356 - 2204
F: (912) 356 - 2529

March 26, 2010

Dr. Earl G. Yarbrough, Sr., President
Savannah State University
3219 College Street
Hill Hall, Office of the President
Savannah, GA 31404

Dear President Yarbrough:

It is with great humility that I write this letter in support of establishing a Teacher Education Program at Savannah State University. As a former teacher educator, I have a full appreciation for the teaching profession. The opportunity to join forces with other institutions in the University System of Georgia to prepare teachers will play a major role in creating a more educated Georgia. This I consider a privilege. There continues to be a need for a talented teacher workforce prepared to educate our children. I view teaching as the most important profession of all. As a major force in preparing teachers, Savannah State University will make a greater impact on the Savannah-Chatham County area. These teachers will add value to the lives of the students they touch. It is crucial that our teachers are prepared with the skills, attitudes and knowledge desired to prepare our children to be society ready and able to compete with the great minds in our global, technological and ever changing world.

I support this initiative and will work diligently to provide and seek the resources necessary to offer a quality program that is NCATE accredited and PSC approved. The approval of Teacher Education at Savannah State University will do much to aid in meeting the teaching needs in Georgia and it will open up the door for increased career opportunities for our students. Contact me if I can be of further assistance. Thank you.

Sincerely,

Mary C. Wyatt, P.D., CFCS
Vice President for Academic Affairs

A unit of the University System of Georgia - an equal opportunity/affirmative action employer.

University System of Georgia
3219 College Street
Box 20389
Savannah, GA 31404
P: (912) 356 - 2151
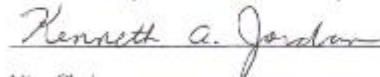F: (912) 692 - 4558

March 12, 2010

Dr. Mary Wyatt
Vice President for Academic Affairs
Savannah State University
Savannah, GA 31404

Dear Dr. Wyatt:

The Executive Committee of The Faculty Senate wishes to express its full support of the proposed degree programs in educations in the areas of Technology, English and History. It is our conviction that the proposed degree program is long overdue. The degree program will close the gap between the minority student and minority teacher ratio in the Savannah Chatham County School System, as well as surrounding areas in the low country of Southeastern Georgia, including Effingham County and coastal South Carolina.

The Executive Committee of the Faculty Senate enjoins the Savannah State University National Alumni Association, Faculty, Staff and Students in bringing this innovative curriculum based educational program to fruition. This will allow Savannah State University to play a pivotal role and to have a significant impact in adhering to the Chancellor's initiative of an educated Georgia.

I implore your support in the endorsement of this cutting edge program. We, along with the university and community look forward to the implementation of this instructional strategy with great anticipation.

Kenneth a. Jordan

Vice Chair

L J Reddick

Parliamentarian

Annette K. Brock
3114 Whatley Avenue
Savannah, Georgia 31404
(912) 354-4650   brockotis@aol.com

March 12, 2010

Dr. Mary C. Wyatt
Vice President for Academic Affairs
Savannah State University
3219 College Street
Suite 221
Box 30411
Savannah, Georgia 31404

Dear Dr. Wyatt:

The opportunity for Savannah State University to propose and hopefully implement a Teacher Education Program is not only fortuitous for the university but for the immediate City of Savannah and State of Georgia. It also addresses the larger national issue of the dearth of teachers, especially minority teachers. Never has the need for teachers who are fully prepared to deliver integrative instruction, which addresses the multifaceted issues of a global, technological world and changing social paradigms, been so critical. The attainment of post secondary education by more of the nation's citizens will, in my view, be more transformative than any other single initiative in addressing societal ills. I am strongly supportive of this effort.

The recent passage by Chatham County of the Educational Local Option Sales Tax (E-SPLOST) with ongoing implementation is producing the construction of new schools and redrawing school district lines to accommodate an increase in the school age population in the county. This excellent opportunity must be met by concomitant educational initiatives to assure that a high quality education will be available. Savannah State is to be commended for preparing the proposal to provide Teacher Preparation. It augurs well for our community and beyond.

As an alumnus of Savannah State University's (College) teacher education program, I developed a lifelong appreciation for the value a teacher adds to the strong growth and development of youth. To this day I believe teaching to be a noble profession. I not only support Savannah State University's proposal for Teacher Preparation, I support it unequivocally and urge its approval.

Sincerely,

Annette K. Brock, Ph.D.
Professor Emeritus
Savannah State University

SCCPSS

Savannah-Chatham County Public School System
208 Bull Street / Savannah, Georgia 31401 / 912.201.5600

March 12, 2010

Dr. Mary C. Wyatt, Ph.D.
Vice President for Academic Affairs
Savannah State University
3219 College Street, Suite 221
Savannah, GA 31404

RE: Savannah State University Teacher Education Program Proposal

Dear Dr. Wyatt:

On behalf of the Savannah Chatham County Public School System (SCCPSS), I wish to express my full support for Savannah State University's (SSU) proposal for the Teacher Education Program. The Teacher Education Program will enable SSU to train students through innovative and alternative methods. This program will recruit and develop pipeline programs and inform students of the benefits and opportunities for professional advancement through teaching careers.

The Teacher Education Program will develop enrichment and teaching/pedagogy training for its students in order to develop and strengthen their teaching competencies, including hands-on, in-the-classroom teaching experiences. This program will also provide immediate teaching employment for qualified BA/BS graduates.

We are excited about this program which will directly meet our needs and will provide incentives and support for more SCCPSS students.

We hope the Teacher Education Program proposal will meet with your favorable consideration. If you have any questions, please do not hesitate to contact me.

Thank you.

Sincerely,

Thomas B. Lockamy Jr.

Thomas B. Lockamy, Jr., Ed.D.
Superintendent of Schools

TBL/cw

Mission - To ignite a passion for learning and teaching at high levels
Vision - From school to the world. ALL students prepared for productive futures
AN EQUAL OPPORTUNITY EMPLOYER

Virginia A. Edwards
15 Purple Martin Lane
Savannah, Georgia 31419
virginiaedw@msn.com
(912) 925-0068

March 12, 2010

Dr. Mary C. Wyatt, Ph.D., CFCS
Vice President for Academic Affairs
Savannah State University
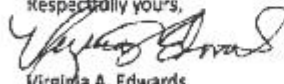3219 College Street
Suite 221
Box 20411
Savannah, Georgia 31404

Dear Dr. Wyatt:

It is my very great pleasure to offer this letter in support of the reinstatement of the Teacher Education Program at Savannah State University. As a former teacher, school administrator, district director of middle and high schools and superintendent of schools, I observed and experienced situations that clearly indicate the need to restore the school of teacher education at Savannah State University. I believe Savannah State can resume its historical place in this community as one of the premier schools for teacher preparation and in particular serve as a definitive road map to increasing a well qualified core of minority teachers.

I strongly recommend the restoration of the program as well as the necessary funding to ensure full implementation and programmatic sustenance. The approval of this request is critical given the current demand to provide qualified teachers to serve the children in school districts across the nation.

I fully support without reservation your efforts to restore with full funding the Teacher Education Program at Savannah State University.

Respectfully yours,

Virginia A. Edwards

Box 20059
3219 College Street
Savannah, GA 31404
P: (912) 356 - 2208
F: (912) 356 - 2449

March 10, 2010

Dr. Mary C. Wyatt, Ph.D., CFCS
Vice President for Academic Affairs
Savannah State University
3219 College Street, Suite 221, Box 20411
Savannah, GA 31404

Dear Dr. Wyatt

American education is this nation's greatest strength and most powerful force for advancing the common good. A major challenge in transforming our educational system lies in erasing disparities in educational attainment among low-income students and underrepresented minorities. Just 26 percent of African Americans, 18 percent of Latino and Hispanic Americans, and 24 percent of Native Americans and Pacific Islanders have at least an associate degree. To compete in a demanding, global, knowledge-based economy, and to succeed we must provide educational training beyond high school and associate degree to a significantly greater proportion of Americans than ever before. This demand increases the need for teachers. The National Center for Educational Statistics predicted the need for public school teachers needed by 2008-2009 ranges from 1.7 million to 2.7 million.

The need for teachers in Georgia is well documented, and is addressed by several USG initiatives, most notably, the 20,000 by 2020 Initiative to meet 80% of the state's need for K-12 teachers by the year 2020. Savannah State University is strongly committed to achieving the 20,000 by 2020 Initiative. On behalf of the College of Liberal Arts and Social Sciences, I am pleased to write in support of the proposed Teacher Education Program at Savannah State University. This proposed program will meet national, state and local needs to increase the number of qualified teachers in the state of Georgia and beyond.

Sincerely,

Jane McBride Gates, Ph.D.
Dean and Professor

Meeting Agendas and Minutes

Agenda

New Programs and Curriculum Committee
March 25, 2010

Call Meeting to Order

Review minutes from March 11, 2010

Request for new agenda items

Teacher Education Program

COST
1. Bachelor of Science in Marine Science — (program change)
2. Bachelor of Environmental Science — (program change)
3. Introduction to Genomics — (new course)
4. Molecular Evolution — (new course)
5. FYE (Freshman Year Experience) — (new course)
6. Forensic Science class — (new course)

CLASS
1. Master of Social Work (GRE) — (program change)
2. Master of Urban Studies and Planning — (program change)
3. Bachelor of Social Work — (program change)
4. Addition of language in Area C — (program change)
5. Bachelor of Arts in English (major/minor) — (program change)
6. The Bible as Literature — (course change)
7. Philosophy and Psychology of Love — (course change)
8. Forensic Photography — (new course)
9. Master of Arts in Mass Communications — (new degree program)
10. Master of Science in Community Policing Administration — (new degree program)

Announcements and comments

Adjourn

Savannah State University's Education Team Meeting

Thursday, February 18, 2010 at 10:00 am
Hill Hall, Seminar Room

Dr. Elazer Barnette - Presenter

In attendance: Dr. Mary Wyatt, Dr. Larry Stokes, Dr. Yonpae Park, Dr. Dorothy Gardner-Martin, Mrs. Hope Cranford, Dr. Asad Yousuf, Dr. Virginia Edwards, Dr. Cecil Jones, Ms. Lauren Kirkland, Ms. Bernadette Ball-Oliver, Dr. Jane Gates, Dr. Mostafa Sarhan, Ms. Gloria Dukes

Handouts given:
- Student Survey Form
- University System of Georgia Baccalaureate and Master's Degree Procedures: Criteria and Procedures for New Programs

Proposed Bachelor of Science in Education Degree Requirements (handouts):
- Biology
- Mathematics
- English
- Technology Education
- Family and Consumer Science
- Business Education

- Introduction and biographical information given by Dr. Elazer Barnette, who has a background in Technology Education;
- Brief introduction and background information given by attendees;
- Board of Regents will not allow a degree program to be brought on board if it is being offered at a nearby institution;
- Six degree tracks were chosen based on programs being offered at other local institutions, programs that would be successful and programs that would be approved by the BOR based on areas of need;
- Presentation entitled: Planning Proposal for New Baccalaureate Degree in Education presented by Dr. Barnette (see copy of slides)
- Student Survey Form passed out to all attendees; purpose of the form is to survey students to see how many would change their major or be interested in an education program if it was available at Savannah State?
- Regional demographics are needed to determine the need for the selected degree programs. For example, if SSU graduates ten (10) Technology Education majors, how many can be placed in the surrounding area due to a need for Technology Education teachers?
- What type of structure will SSU have or implement, a Dean of Education, a director, a department head? Decision needs to be made early on to set up the structure of the program so questions and problems can be addressed on an immediate basis. NCATE will also be looking at the faculty structure of the proposed program.
- Some states require that you be licensed in the content area in which you are teaching. SSU needs to look into whether or not you are required to be licensed to teach a particular content area within the state of Georgia?
- Several of the degree curriculums being presented already have endorsements from persons

in the local community. Letters of endorsement have been written and more will be forthcoming.

- Team members present were charged with reviewing the six degree programs to make sure courses listed will cover what a student needs to graduate with a solid education degree. Recommendations are welcomed from those present as well as information shared by colleagues within departments and the local school system.

- Dr. Barnette also said to look at programs/universities that you know are strong and pull ideas from their programs that may be incorporated into Savannah State's program. Deadline set for next Wednesday to return feedback.

Questions presented to Dr. Barnette:

Q1.   What is the rationale behind moving forward baccalaureate degree proposals as opposed to the model of the MAT hen in fact it seems as if, nationally, when looking across Georgia, for example Georgia College and others, you have that and already moving toward a graduate degree that is inclusive of that baccalaureate degree?

A1.   That path could have been chosen, but you need to have an inventory of the faculty SSU has now because in order to   move forward an MAT program, you need to have enough faculty that are identified as graduate level faculty. Dr.   Barnette stated that he prefers a traditional capacity over MAT models and once SSU gets a program on board, then   SSU can move forward with that model, but his recommendation as the consultant is to stay with the model that SSU   has now because   there is a future need for those particular areas.

        Dr. Barnette called the Board of Education and spoke with the consultants for Technology Education and Family and   Consumer Science and found that there was a great need for Technology Education, Family and Consumer Science   and Business Education programs. The consultants are more than willing to lend a helping hand to SSU to get those   programs onboard.

        Basically, Dr. Barnette is choosing to start off on an avenue where SSU can get the programs approved versus some of   the other models that can be seen in the University System of Georgia.

Q2.   An education program is already established in this city at Armstrong Atlantic State University, so how do you   perceive in the future, in our city, that we compete with them in recruitment or enrollment?

A2.   You have had a relationship with Armstrong in the past, but right now there is no relationship, so you are really starting new and the programs we have on the list, Armstrong is not looking at that population of students. Right now Dr. Barnette is looking at what they are approved to offer and he has chosen programs that AASU is not offering. Students that would have normally have chosen Armstrong, will now choose SSU. So the important thing is to look at the quality of the programs. You want the students to come out saying they were ready when they started their first job.

Q3.   Participant did not see anything listed as a part of orientation to teaching. She would like to think that teacher   preparation candidates would need to know something about the population they are being prepared to serve and they   are not looking at one race of students and those who come out unprepared, they may be prepared to teach their particular discipline but they are not prepared to present and interact with the population of students who are waiting   for their skill.

A3.   Everything is gender neutral and race neutral to allow for passing of NCATE approval standard four which deals with   diversity. When students exit SSU as new teachers, they will be prepared to teach students in Savannah, in China or wherever they may go. Proper field placements are important to properly prepare teachers for real world scenarios   once they graduate. Orientation is a built-in part of many courses, orienting the students to deal with a diverse   group is very important. The second part is orienting future teachers so that they may be introduced to technology so   new technology can be brought to their students.

 Q4.   One thing that we see from many of our new teachers the school system is lack of classroom management even after   taking classroom management courses, especially in secondary education where the environment is very challenging,   how do you propose to deal with that?

A4.   Again, placements are very important. You cannot take the easy route; you must place students in a variety of situations so they get exposed to all sorts of environments by the time they reach senior year. You want them to be exposed to numerous situations so they know how to deal with a wide range of situations when they graduate and enter the classroom.

Q5.   We have a degree program in behavior analysis, and when we talk to people in the community, particularly educators   in different counties one thing they said was that they didn't have the tools even after completing the courses, it would   be a good idea if we were to use the existing behavior analysis tools we have to manage the behavior in the classroom,   that is one of the reasons we moved forward the behavior analysis degree.

A5.   Since we know this upfront, as we begin to infuse things in to the program, we need to try and insure that classroom management courses are high priority. Make sure classroom management courses are structured to deal with secondary as well as elementary school age children.

Q6.   What is the correct number of student teaching hours? In some institutions it is 9 and others 12.

A6.   Dr. Barnette stated that he is awaiting an answer from the Board of Regents. He has also found that at different institutions throughout Georgia, that the requirements are different at each institution.

Q7.   There seems to be a mention of competition between Savannah State and Armstrong. How will we compete with   Armstrong with the program we are proposing to offer?

A7.   There are ways that Savannah State can set itself apart by choosing different methods of delivery, like perhaps offering   weekend classes, or offering online classes. You have to think about delivery and innovative ways that your peers have not thought of offering. You also have to prepare your faculty to be enthusiastic about new delivery methods, such as   blackboard and online classes.

Q8.   Out of curiosity, I saw the education courses that are listed and we have a large number of young teachers that are   entering the profession and are professionalism and professional etiquette embedded in these courses?

A8.   Professional disposition is the name of such courses, but they are not listed. Each institution has a conceptual   framework and integral to that framework are courses like diversity, professionalism and ethics.

Savannah State University
Office of the Vice Chancellor for Academic Affairs

The Proposed New Bachelor of Science in Education Degree (BSED)
with a Concentration In Secondary Education
(Biology Education, Business Education, English Education, Family and Consumer Science
Education, Mathematics Education, or Technology Education)

The secondary education curriculum leads to the Bachelor of Science degree that develops effectiveness in communication, leadership, and other skills necessary for teaching at the high school level, community college/technical colleges, management trainer in industry, and other teaching related careers.

Survey Form

Survey Key:

 5= Strongly Agree; 4= Agree; 3=Undecided; 2=Disagree; 1=Strongly Disagree

Check the survey number of each question that _best reflects_ your opinion.

	Survey Numbers				
1. I support the development of the BSED Degree with a concentration in Biology Education, Business Education, English Education, Family and Consumer Science Education, Mathematics Education, or Technology Education	5	4	3	2	1
2. I would consider adding a BSED in Secondary Education degree concentration to my current major.	5	4	3	2	1
3. I would change my current major to the Bachelor of Science in Secondary Education.	5	4	3	2	1
4. As an undecided major, I would choose the BSED Degree with a Concentration in Secondary Education.	5	4	3	2	1

5. If you checked you would consider
   The BS in Secondary Education Degree,
   Choose your preferred concentration area.

		5	4	3	2	1
a.	Biology Education	5	4	3	2	1
b.	Business Education	5	4	3	2	1
c.	English Education	5	4	3	2	1
d.	Family & Consumer Sciences Education	5	4	3	2	1
e.	Mathematics Education	5	4	3	2	1
f.	Technology Education	5	4	3	2	1

| | | Occurrence of Each Number |
		5	4	3	2	1
1	I support the development of the BSED Degree with a concentration in Biology Education, Business Education, English Education, Family and Consumer Science Education, Mathematics Education, or Technology Education.	243	96	50	9	3
2	I would consider adding BSED in Secondary Education degree concentration to my current major	108	114	82	39	41
3	I would change my current major to the Bachelor of Science in Secondary Education	66	48	94	68	122
4	As an undecided major, I would choose the BSED degree with a Concentration in Secondary Education.	96	83	94	46	87
5	Choose your preferred concentration area.					
a.	Biology Education	69	59	62	42	78
b.	Business Education	116	93	41	25	43
c.	English Education	55	69	59	58	62
d.	Family and Consumer Science Education	62	82	68	36	52
e.	Mathematics Education	114	58	57	33	57
f.	Technology Education	123	89	38	19	46

The table above is titled:

Savannah State University
Office Of the Vice Chancellor for Academic Affairs
Savannah, Georgia 31404
Education Program Survey Results