

III. PROPOSED PROGRAM CHANGES,  
REQUIRING NO RANKING

EAST CAROLINA UNIVERSITY  
UNC-GA Mission Review  
Academic Program Development Form

COLLEGE/SCHOOL: Arts and Sciences DEPARTMENT: Mathematics

API DISCIPLINE SPECIALITY TITLE: Mathematics, General

API DISCIPLINE SPECIALTY NUMBER: 1701

LEVEL: Bachelor  Master  1st professional  Doctoral

PROPOSED YEAR OF: Establishment 1992 Deletion  Redesign

DESCRIPTION OF PROGRAM AND RELATIONSHIP TO INSTITUTIONAL MISSION AND UNIT VISION:

A basic goal for East Carolina University is to improve teacher education and stimulate improvement in public schooling. This University is the major supplier of teachers for Eastern North Carolina; the Department of Mathematics offers training at the bachelor's and master's levels in support of the effort. There exists substantial need for a Certification of Advanced Study in Mathematics; this need was acknowledged when authorization to plan was granted in April, 1985.

RATIONALE FOR PROGRAM ADDITION/DELETION/REDESIGN:

See attached request for authorization to Plan a Certification of Advanced Study.

ENROLLMENT PROJECTIONS:

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Black		2	1	1	0	0	0	0	0	0
White		6	3	4	0	0	0	0	0	0
Other		2	1	0	0	0	0	0	0	0
Total	-	10	15	20	20	20	20	20	20	20

Percent non-resident: 0%

ADDITIONAL FACULTY AND STAFF REQUIREMENTS:

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Faculty										
Staff										
Total	-	0	0	0	0	0	0	0	0	0

BUDGETARY IMPLICATIONS:

YEAR: 1993

Category	Reallocation of Unit Resources	Self-supporting funds (grants and contracts)	Additional Allocations	Total
Personnel	\$50K			\$50K
Operating				
Library			\$5K	\$5K
Computing				
Other				
Total	\$50K		\$5K	\$55K

BUDGETARY IMPLICATIONS: (Continued)

YEAR: 1994-2000

Category	Reallocation of Unit Resources	Self-supporting funds (grants and contracts)	Additional Allocations	Total
Personnel				
Operating				
Library				
Computing				
Other				
Total	0	0	0	0

YEAR: \_\_\_\_\_

Category	Reallocation of Unit Resources	Self-supporting funds (grants and contracts)	Additional Allocations	Total
Personnel				
Operating				
Library				
Computing				
Other				
Total				

YEAR: \_\_\_\_\_

Category	Reallocation of Unit Resources	Self-supporting funds (grants and contracts)	Additional Allocations	Total
Personnel				
Operating				
Library				
Computing				
Other				
Total				

REQUEST FOR AUTHORIZATION TO PLAI A CERTIFICATION OF ADVANCED STUDY  
(C.A.S.) PROGRAM (SIXTH-YEAR PROGRAM)  
THE UNIVERSITY OF NORTH CAROLINA

Date: October 1, 1984

Constituent Institution: East Carolina University

HEGIS Discipline Specialty Title: Mathematics, General

HEGIS Discipline Specialty Number: 1701

1. Describe the proposed new sixth-year program and indicate how it differs from the master's degree upon which it is to be based.

The proposed sixth-year program in mathematics is an extension of one of the major and historical missions of East Carolina University—the education of qualified teachers. The program will be designed especially for teachers of mathematics and will be open to persons who have completed a master's degree in Mathematics or in Secondary Education with a Major in Mathematics at an accredited institution. Persons must possess the G-certificate in order to be issued a sixth-year certificate upon completion of the program. The satisfactory completion of thirty semester hours of course work beyond the master's degree will be required. Eighteen hours of this work must consist of courses at the 6000 level or above. Candidates for the Certificate of Advanced Study in Mathematics will be required to take a minimum of eighteen semester hours in the Department of Mathematics and a minimum of six hours in the School of Education; the remaining six hours may be in the Department of Mathematics, in the School of Education, or, with the permission of the Mathematics Department's Graduate Advisor, in another academic area. Final comprehensive oral and written examinations will be required.

The program of advanced study will be designed to broaden, deepen, and enrich the preparation of teachers of mathematics. It will enhance and complement

the present master's degree program for mathematics teachers. Teachers will be able to update their education and become better prepared to teach in this age of rapidly changing technology. An opportunity and challenge will be provided for those who wish to continue their professional growth beyond the master's degree and, at the same time, increase their professional status and earning capacity.

2. List all other sixth-year programs currently operating at your institution (C.A.S. and Ed.S. Programs).

0826 C.A.S. Counselor Education  
 0802 C.A.S. Elementary Education  
 0830 C.A.S. Reading Education  
 0834 C.A.S. Science Education  
 0893 Ed.S. Educational Administration (Level II)  
 0893 Ed.S. Educational Supervision (Level II)  
 1275 C.A.S. Home Economics Education  
 1004 C.A.S. Music Education  
 1501 C.A.S. English, Secondary Education and Two-Year College Teaching  
 2097 C.A.S. School Psychology (Level II)  
 2205 C.A.S. History Education

3. List all other institutions in the University of North Carolina currently offering sixth-year programs similar to the one being proposed.

0833 C.A.S. Mathematics Education - North Carolina State University

4. Document the need for the proposed new sixth-year program. Project enrollment and productivity during the first three years of operation.

Numerous mathematics teachers in high schools, technical institutes, and community colleges around the state have inquired about a program of advanced study and expressed a desire to enter such a program if it were established. A recent report of the Committee on Science and Mathematics Education of the North Carolina Board of Science and Technology stresses the importance of improving the quality of instructional programs in mathematics in order to meet the

needs of a sophisticated technological age. Mathematics teachers need to increase their knowledge, especially with respect to microcomputers, in order to be competent in teaching technological concepts and to move toward master teacher status.

Response to a survey of a sample of community college mathematics departments revealed interest in a program of advanced study in mathematics at East Carolina University for their faculty holding master's degrees. The respondents pointed out a Southern Association accreditation requirement that 40% of their faculty have study beyond the master's degree and that in North Carolina an advanced certificate is recognized by a salary increment.

A substantial number of secondary mathematics teachers in North Carolina hold master's degrees. These teachers would benefit from additional study to broaden, enrich, and refresh their education as well as to receive a salary increment which accompanies an advanced certificate. If positions become available, they will be qualified to serve as supervisors of mathematics teaching. The proposed program would enable East Carolina University to meet the needs of such teachers.

A state committee recently recommended that some mathematics teachers be employed during the summer months. Such employment would be used in several ways, one of which is to upgrade the teachers' qualifications in mathematics. If such a recommendation is implemented, the proposed sixth-year program could meet the needs of those teachers who hold master's degrees and are selected for summer employment or for stipends, if that avenue of compensation is chosen. The Math/Science Education Center established at East Carolina University in 1984 can serve as an avenue to make this advanced study more available to teachers in eastern North Carolina. It is estimated that ten students would enroll in advanced study of mathematics the first year and that enrollment would increase to twelve the second year and fifteen the third year.

## Projected productivity:

Year 1 0\*

Year 2 8

Year 3 10

\*It will probably take two years for a teacher to complete this program.

5. Provide the following information on the existing master's degree program on which the proposed new sixth-year program is to be based:

- a. Enrollment and productivity for each of the past three years:

ENROLLMENT*		PRODUCTIVITY	
Spring - 1984	<u>39</u>	1984	<u>7</u>
Fall - 1983	<u>39</u>	1983	<u>3</u>
Spring - 1983	<u>41</u>	1982	<u>1</u>
Fall - 1982	<u>35</u>		
Spring - 1982	<u>34</u>		
Fall - 1981	<u>18</u>		

\*These numbers include many graduate students holding teaching assistantships and many teachers taking only 1 course.

- b. Average GRE and MAT scores of students enrolled this year:

MAT 45GRE 940

- c. Average NTE scores of students who graduated in mathematics for each of the past three years:

	COMMON		MATH	
	No.	Score	No.	Score
1981	7	633	7	663
1982	9	576	9	636
1983	6	605	6	645

6. List additional faculty, space, library resources and any additional financial resources required to establish the proposed new sixth-year program. Indicate the expected source of any additional required state funds.

The present faculty in the Department of Mathematics is adequate to provide for the additional students anticipated to enroll, and no additional space will be needed to establish the program. Assurance has been made by the School of Education that no additional faculty, space, or library resources will be required to support the proposed new sixth-year program.

7. Indicate any plans to offer the proposed new sixth-year program as a degree-related extension activity.

No plans are currently being made to offer the proposed new sixth-year program as a degree-related extension instruction activity.

8. Indicate the dates of expected establishment by your institution and approval by the State Board of Education.

It is expected that the program will be established at East Carolina University and approved by the State Board of Education by May, 1985.

---

Chancellor

RAYMOND H. DAWSON  
Vice President — Academic Affairs

*Handwritten notes:*  
K...  
F...  
V...  
C...  
B...  
M...  
S...  
J...

THE UNIVERSITY OF NORTH CAROLINA

General Administration

P.O. BOX 2688

CHAPEL HILL 27514

TELEPHONE: (919) 962-6981

April 2, 1985

RECEIVED

APR 5 1985

CHANCELLOR'S OFFICE  
E. C. U.

Chancellor John M. Howell  
East Carolina University  
Greenville, NC 27834

Dear Chancellor Howell:

This letter is to approve your request for authorization to plan two new Certificate of Advanced Study (CAS) programs in Mathematics and Special Education at East Carolina University.

Please advise this office when the programs have been approved by the State Board of Education.

Sincerely yours,

*Raymond H. Dawson*  
Raymond H. Dawson

RHD/cw

cc: Dr. Carroll  
Dr. Stedman  
Ms. Vernon

RECEIVED

OCT 03 1990

College of Arts & Sciences

EAST CAROLINA UNIVERSITY  
UNC-GA Mission Review  
Academic Program Development Form

COLLEGE/SCHOOL: Arts and Sciences DEPARTMENT: Chemistry

API DISCIPLINE SPECIALTY TITLE: Chemistry, General

API DISCIPLINE SPECIALTY NUMBER: 1905

LEVEL: Bachelor  Master  1st professional  Doctoral

PROPOSED YEAR OF: Establishment 1992 Deletion  Redesign

DESCRIPTION OF PROGRAM AND RELATIONSHIP TO INSTITUTIONAL  
MISSION AND UNIT VISION:

We propose a master of arts in chemistry which would provide a nonthesis option for nontraditional students. Two tracks are proposed -- one in applied chemistry and one in chemical education. The chemical education track will be designed to serve the needs of those students who wish to teach chemistry in two-year colleges. The applied chemistry track is designed for those students who are already working in the chemical industry and who wish to pursue advanced studies to broaden their backgrounds and enhance their skills.

The degree program is directly related to the educational mission of East Carolina University and to the chemistry department's vision of offering the very best graduate education at the masters level.

RATIONALE FOR PROGRAM ADDITION/DELETION/REDESIGN:

The proposed master of arts degree program responds to the critical national and regional needs for the training of science teachers as well as the diverse needs of technical employees of chemical industries. It will fill a need that we have seen for the past several years. Professional chemists in local chemical industry desiring to increase their knowledge of chemical theory, techniques, and research skills have enrolled in our M.S. program, but are frequently unable to commit the time required to complete the research necessary for the M.S. thesis. We also have masters students whose primary goal is to teach at the junior college level. We could better serve these students by offering an M.A. program that would require more courses and less basic research than are required in the M.S. program. The chemical education aspect of this program has the potential to greatly enhance the quality of chemical education in eastern North Carolina.

The addition of this degree program is expected to increase the retention rate in our program by 2 or 3 students per year while serving to attract additional nontraditional students into the program.

ENROLLMENT PROJECTIONS:

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Black		0	1	1	1	2	2	2	2	2
White		2	2	3	4	4	4	4	4	4
Other										
Total		2	3	4	5	6	6	6	6	6

Percent non-resident: \_\_\_\_\_

ADDITIONAL FACULTY AND STAFF REQUIREMENTS:

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Faculty	0	0	0	0	1	0	0	0	0	0
Staff	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	1	0	0	0	0	0

BUDGETARY IMPLICATIONS:

YEAR: 1992

Category	Reallocation of Unit Resources	Self-supporting funds (grants and contracts)	Additional Allocations	Total
Personnel	0		14,400	14,400
Operating	5,000			5,000
Library			500	500
Computing			2,000	2,000
Other				
Total	5,000	0	16,900	21,900

BUDGETARY IMPLICATIONS: (Continued)

YEAR: 1993

Category	Reallocation of Unit Resources	Self-supporting funds (grants and contracts)	Additional Allocations	Total
Personnel	0		7,200	7,200
Operating	2,000			2,000
Library				
Computing				
Other				
Total	2,000		7,200	9,200

YEAR: 1994

Category	Reallocation of Unit Resources	Self-supporting funds (grants and contracts)	Additional Allocations	Total
Personnel	0		7,200	7,200
Operating	2,000			2,000
Library				
Computing				
Other				
Total	2,000		7,200	9,200

YEAR: 1995

Category	Reallocation of Unit Resources	Self-supporting funds (grants and contracts)	Additional Allocations	Total
Personnel	0		7,200	7,200
Operating	2,000			2,000
Library				
Computing				
Other				
Total	2,000		7,200	9,200

BUDGETARY IMPLICATIONS: (Continued)

YEAR: 1996

Category	Reallocation of Unit Resources	Self-supporting funds (grants and contracts)	Additional Allocations	Total
Personnel	30,000		7,200	37,200
Operating	4,000			4,000
Library			1,000	1,000
Computing			5,000	5,000
Other				
Total	34,000		13,200	47,200

YEAR: 1997

Category	Reallocation of Unit Resources	Self-supporting funds (grants and contracts)	Additional Allocations	Total
Personnel				
Operating	2,000			2,000
Library				
Computing			1,000	1,000
Other				
Total	2,000		1,000	3,000

YEAR: 1998

Category	Reallocation of Unit Resources	Self-supporting funds (grants and contracts)	Additional Allocations	Total
Personnel				
Operating				
Library				
Computing				
Other				
Total				0

BUDGETARY IMPLICATIONS: (Continued)

YEAR: 1999 \_\_\_\_\_

Category	Reallocation of Unit Resources	Self-supporting funds (grants and contracts)	Additional Allocations	Total
Personnel				
Operating				
Library				
Computing				
Other				
Total				0

YEAR: 2000 \_\_\_\_\_

Category	Reallocation of Unit Resources	Self-supporting funds (grants and contracts)	Additional Allocations	Total
Personnel				
Operating				
Library				
Computing				
Other				
Total				0

YEAR: \_\_\_\_\_

Category	Reallocation of Unit Resources	Self-supporting funds (grants and contracts)	Additional Allocations	Total
Personnel				
Operating				
Library				
Computing				
Other				
Total				

EAST CAROLINA UNIVERSITY  
UNC-GA Mission Review  
Academic Program Development Form

COLLEGE/SCHOOL: Arts and Sciences DEPARTMENT: Economics

API DISCIPLINE SPECIALTY TITLE: Economics

API DISCIPLINE SPECIALTY NUMBER: 2204

LEVEL: Bachelor  Master  1st professional  Doctoral

PROPOSED YEAR OF: Establishment 1992 Deletion  Redesign

**DESCRIPTION OF PROGRAM AND RELATIONSHIP TO INSTITUTIONAL MISSION AND UNIT VISION:**

The proposed master of science in Economics would train students in applied microeconomic theory and the techniques of applied econometrics to study problems in coastal and marine resources, health economics, and regional development. The course of study would require 33 semester hours of credit including 6 hours for thesis or major research paper. The program would combine the research strengths of the Department into a course of study which is both germane to the needs of the mid-Atlantic region and consistent with the University's existing strengths in coastal studies. It is responsive to the specific research goal of the University to "Engage in research, scholarship, and creative activity that contributes to the improvement of the human condition with an emphasis on health, rural, coastal, and environmental issues".

**RATIONALE FOR PROGRAM ADDITION/DELETION/REDESIGN:**

Eastern North Carolina has grown substantially during the last decade and East Carolina University has shared in and responded to that growth. Program developments in the College of Arts and Sciences and in the Schools of Medicine, Business, and Education reflect the University's commitment to provide leadership and direction for responsible growth in the mid-Atlantic region. The University's proximity to one of the most significant marine and coastal resource areas of the state, its medical school, and its location in a regional area of growth and change provide a natural laboratory for study: the area courses of the master of science in Economics will focus on issues of coastal and marine resources, health economics, and regional development. These concentrations are a logical complement to the University's existing strengths and will support and strengthen the goal of development of a Ph.D. in Coastal and Marine Resource Management.

ENROLLMENT PROJECTIONS:

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Black		1	1							
White		7	2	2	2					
Other										
Total	0	8	3	2	2	0	0	0	0	0

Percent non-resident: 20

ADDITIONAL FACULTY AND STAFF REQUIREMENTS:

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Faculty	1	1	1	1						
Staff		1								
Total	1	2	1	1	0	0	0	0	0	0

BUDGETARY IMPLICATIONS:

(A: Annual continuation dollars; B: One-time dollars)

YEAR: 1991

Category	Reallocation of Unit Resources		Self-supporting funds (grants and contracts)		Additional Allocations		Total	
	A	B	A	B	A	B	A	B
Personnel	39,000		6000				45,000	
Operating	1000				1000		2000	
Library	1000				1000		2000	
Computing		2000		3000				5000
Other								
Total	41,000	2000	6000	3000	2000		49,000	5000

BUDGETARY IMPLICATIONS:

YEAR: 1992

Category	Reallocation of Unit Resources		Self-supporting funds (grants and contracts)		Additional Allocations		Total	
	A	B	A	B	A	B	A	B
Personnel	23,000		15,000		22,000		60,000	
Operating	2000		2000				4000	
Library	1000						1000	
Computing		3000		4000				7000
Other			5000				5000	
Total	26,000	3000	22,000	4000	22,000		70,000	7000

YEAR: 1993

Category	Reallocation of Unit Resources		Self-supporting funds (grants and contracts)		Additional Allocations		Total	
	A	B	A	B	A	B	A	B
Personnel	22,000		23,000				45,000	
Operating	1000		1000				2000	
Library	1000						1000	
Computing		2000		5000				7000
Other			10,000				10,000	
Total	24,000	2000	34,000	5000			58,000	7000

YEAR: 1994

Category	Reallocation of Unit Resources		Self-supporting funds (grants and contracts)		Additional Allocations		Total	
	A	B	A	B	A	B	A	B
Personnel	15,000		30,000				45,000	
Operating	1000		1000				2000	
Library	1000						1000	
Computing		2000		5000				7000
Other			50,000				50,000	
Total	17,000	2000	81,000	5000			98,000	7000

EAST CAROLINA UNIVERSITY  
UNC-GA Mission Review  
Academic Program Development Form

COLLEGE/SCHOOL: Arts and Sciences DEPARTMENT: English

API DISCIPLINE SPECIALTY TITLE: \_\_\_\_\_

API DISCIPLINE SPECIALTY NUMBER: \_\_\_\_\_

LEVEL: Bachelor \_\_\_ Master X 1st professional \_\_\_ Doctoral \_\_\_

PROPOSED YEAR OF: Establishment \_\_\_\_\_  
Deletion 1992  
Redesign \_\_\_\_\_

DESCRIPTION OF PROGRAM AND RELATIONSHIP TO INSTITUTIONAL  
MISSION AND UNIT VISION:

MA English, College Teaching Option. Established in 1974, the College Teaching Option was designed to prepare teachers of English for two-year colleges. This option requires a minimum of 10 s.h. of work in addition to the MA in English. Deleting the MA English, College Teaching Option would allow the Department of English to reallocate resources to Goals 4 and 5 of *Strategies for Distinction* at the University, Division, and Unit levels.

RATIONALE FOR PROGRAM ADDITION/DELETION/REDESIGN:

Deleting the MA English, College Teaching Option would allow the Department of English to its reallocate resources to the proposed PhD in English with an emphasis in Rhetoric and Composition.

## ENROLLMENT PROJECTIONS: None

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Black										
White										
Other										
Total										

Percent non-resident: \_\_\_\_\_

## ADDITIONAL FACULTY AND STAFF REQUIREMENTS: None

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Faculty										
Staff										
Total										

## BUDGETARY IMPLICATIONS:

(A: Annual continuation dollars; B: One-time dollars)

YEAR: 1992-2000

Category	Reallocation of Unit Resources		Self-supporting funds (grants and contracts)		Additional Allocations		Total	
	A	B	A	B	A	B	A	B
Personnel	\$30,000						\$30,000	
Operating	300						300	
Library	50						50	
Computing								
Other								
Total	\$30,350						\$30,350	

Revised 9/20/90

EAST CAROLINA UNIVERSITY  
UNC-GA Mission Review  
Academic Program Development Form

COLLEGE/SCHOOL: Arts and Sciences DEPARTMENT: English

API DISCIPLINE SPECIALTY TITLE: \_\_\_\_\_

API DISCIPLINE SPECIALTY NUMBER: \_\_\_\_\_

LEVEL: Bachelor  Master  1st professional  Doctoral

PROPOSED YEAR OF: Establishment 1993  
Deletion \_\_\_\_\_  
Redesign \_\_\_\_\_

DESCRIPTION OF PROGRAM AND RELATIONSHIP TO INSTITUTIONAL  
MISSION AND UNIT VISION:

MA English with a track in Multicultural Literature. This track would focus on the study of literatures not usually well-represented in graduate English programs. The graduate faculty in English would correlate existing courses and create new courses focusing on ethnic and minority literatures in the United States and literatures in English worldwide. This program would help to fulfill Goals 3 and 5 of *Strategies for Distinction* at the University, Division, and Unit levels.

Because these courses would focus on ethnic/minority literatures and world literatures in English, they would add significant "international, multiethnic, and gender perspectives" to the department's graduate program as a whole in addition to providing initial scholarly credentials for those students wishing to pursue PhDs in these areas.

RATIONALE FOR PROGRAM ADDITION/DELETION/REDESIGN:

An MA track in multicultural literature would be a natural outgrowth of disparate courses that now exist in English Graduate Studies. These courses would form the basis for the new track and, with some additions, would provide scholarly and cultural experiences in accord with the University's emphasis on research and international studies.

ENROLLMENT PROJECTIONS:

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Black	0	0	1	1	2	2	3	3	3	3
White	0	0	2	3	3	3	4	4	4	5
Other	0	0	1	1	1	2	2	2	2	2
Total	0	0	4	5	6	7	9	9	9	10

Percent non-resident: \_\_\_\_\_

ADDITIONAL FACULTY AND STAFF REQUIREMENTS:

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Faculty	0	0	1	0	0	0	1	0	0	1
Staff	0	0	0	0	0	0	1	0	0	0
Total	0	0	0	0	0	0	2	0	0	1

BUDGETARY IMPLICATIONS:

(A: Annual continuation dollars; B: One-time dollars)

YEAR: 1993

Category	Reallocation of Unit Resources		Self-supporting funds (grants and contracts)		Additional Allocations		Total	
	A	B	A	B	A	B	A	B
Personnel	0	0			0	0	0	0
Operating	0	0	UNABLE		5,000	0	5,000	0
Library	0	0	TO		1,000	0	1,000	0
Computing	0	0	FORECAST		0	0	0	0
Other	0	0			1,000	0	1,000	0
Total	0	0			7,000	0	7,000	0

BUDGETARY IMPLICATIONS:

YEAR: 1994

Category	Reallocation of Unit Resources		Self-supporting funds (grants and contracts)		Additional Allocations		Total	
	A	B	A	B	A	B	A	B
Personnel	0	0			25,000	0	25,000	0
Operating	0	0	UNABLE		5,000	5,000	5,000	5,000
Library	0	0	TO		1,000	0	1,000	0
Computing	0	0	FORECAST		0	0	0	0
Other	0	0			0	0	0	0
Total	0	0			31,000	5,000	31,000	5,000

YEAR: 1995

Category	Reallocation of Unit Resources		Self-supporting funds (grants and contracts)		Additional Allocations		Total	
	A	B	A	B	A	B	A	B
Personnel	0	0			0	0	0	0
Operating	0	0	UNABLE		5,000	0	5,000	0
Library	0	0	TO		1,500	0	1,500	0
Computing	0	0	FORECAST		0	0	0	0
Other	0	0			0	0	0	0
Total	0	0			6,500	0	6,500	0

YEAR: 1996

Category	Reallocation of Unit Resources		Self-supporting funds (grants and contracts)		Additional Allocations		Total	
	A	B	A	B	A	B	A	B
Personnel	0	0			0	0		0
Operating	0	0	UNABLE		8,000	0	8,000	0
Library	0	0	TO		1,500	0	1,500	0
Computing	0	0	FORECAST		0	0	0	0
Other	0	0			0	0	0	0
Total	0	0			9,500	0	9,500	0

BUDGETARY IMPLICATIONS:

YEAR: 1997

Category	Reallocation of Unit Resources		Self-supporting funds (grants and contracts)		Additional Allocations		Total	
	A	B	A	B	A	B	A	B
Personnel	0	0			50,000	0	50,000	0
Operating	0	0	UNABLE		5,000	5,000	5,000	5,000
Library	0	0	TO		1,500	0	1,500	0
Computing	0	0	FORECAST		0	0	0	0
Other	0	0			0	0	0	0
Total	0	0			56,500	5,000	56,500	5,000

YEAR: 1998

Category	Reallocation of Unit Resources		Self-supporting funds (grants and contracts)		Additional Allocations		Total	
	A	B	A	B	A	B	A	B
Personnel	0	0			0	0	0	0
Operating	0	0	UNABLE		5,000	5,000	5,000	5,000
Library	0	0	TO		2,000	0	2,000	0
Computing	0	0	FORECAST		0	0	0	0
Other	0	0			0	0	0	0
Total	0	0			7,000	5,000	7,000	5,000

YEAR: 1999

Category	Reallocation of Unit Resources		Self-supporting funds (grants and contracts)		Additional Allocations		Total	
	A	B	A	B	A	B	A	B
Personnel	0	0			0	0	0	0
Operating	0	0	UNABLE		5,000	5,000	5,000	5,000
Library	0	0	TO		2,000	0	2,000	0
Computing	0	0	FORECAST		0	0	0	0
Other	0	0			0	0	0	0
Total	0	0			7,000	5,000	7,000	5,000

BUDGETARY IMPLICATIONS:

YEAR: 2000

Category	Reallocation of Unit Resources		Self-supporting funds (grants and contracts)		Additional Allocations		Total	
	A	B	A	B	A	B	A	B
Personnel	0	0	UNABLE		30,000	0	30,000	0
Operating	0	0	TO		5,000	5,000	5,000	5,000
Library	0	0	FORECAST		2,000	0	2,000	0
Computing	0	0			0	0	0	0
Other	0	0			0	0	0	0
Total	0	0			37,000	5,000	37,000	5,000

\*\*\*ADDITIONAL OFFICE SPACE FOR 3 FACULTY MEMBERS

YEAR: \_\_\_\_\_

Category	Reallocation of Unit Resources		Self-supporting funds (grants and contracts)		Additional Allocations		Total	
	A	B	A	B	A	B	A	B
Personnel								
Operating								
Library								
Computing								
Other								
Total								

YEAR: \_\_\_\_\_

Category	Reallocation of Unit Resources		Self-supporting funds (grants and contracts)		Additional Allocations		Total	
	A	B	A	B	A	B	A	B
Personnel								
Operating								
Library								
Computing								
Other								
Total								

EAST CAROLINA UNIVERSITY  
UNC-GA Mission Review  
Academic Program Development Form

COLLEGE/SCHOOL: Arts and Sciences DEPARTMENT: Library and Information Studies

API DISCIPLINE SPECIALTY TITLE: Library Science

API DISCIPLINE SPECIALTY NUMBER: 1601

LEVEL: Bachelor  Master  1st professional  Doctoral

PROPOSED YEAR OF: Establishment  Deletion 1990/91 Redesign

DESCRIPTION OF PROGRAM AND RELATIONSHIP TO INSTITUTIONAL MISSION AND UNIT VISION:

As a part of its mission of preparing individuals to work in all types of libraries, information centers, and related settings as information professionals, the Department of Library and Information Studies began offering the Master of Library Science (MLS) degree program in 1970. Earlier, in 1957, the Master of Arts in Education (MAEd) in library science/ media had been established with the more limited purpose of preparing only school library/ media coordinators. For several years the two degree programs existed comfortably side-by-side; however, in recent years, department enrollments have shifted almost completely from the MAEd to the MLS, in recognition of the fact that the MLS is the more widely recognized professional credential among librarians. The last MAEd will graduate in December 1990.

RATIONALE FOR PROGRAM ADDITION/DELETION/REDESIGN:

The MAEd is a specialized degree devoted entirely to the preparation of school library/ media coordinators. This same specialization is available within the MLS for which the Department is seeking accreditation by the Committee on Accreditation of the American Library Association. Accreditation of the MAEd is not being sought, since this would be a redundant effort. In fact, the MAEd in library science/ media has become redundant itself, and it is time that it be put out to pasture.

ENROLLMENT PROJECTIONS:

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Black	<i>Not applicable</i>									
White										
Other										
Total										

Percent non-resident: \_\_\_\_\_

ADDITIONAL FACULTY AND STAFF REQUIREMENTS:

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Faculty	<i>Not applicable</i>									
Staff										
Total										

BUDGETARY IMPLICATIONS:

(A: Annual continuation dollars; B: One-time dollars)

YEAR: 1990/91

Category	Reallocation of Unit Resources		Self-supporting funds (grants and contracts)		Additional Allocations		Total	
	A	B	A	B	A	B	A	B
Personnel	20,000	0	0	0	0	0	20,000	0
Operating	2,000	0	0	0	0	0	2,000	0
Library	0	0	0	0	0	0	0	0
Computing	500	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0
Total	22,500	0	0	0	0	0	22,500	0

RECEIVED

EAST CAROLINA UNIVERSITY  
UNC-GA Mission Review  
Academic Program Development Form

SEP 13 1990  
College of Arts & Sciences

COLLEGE/SCHOOL: Arts and Sciences DEPARTMENT: Foreign Languages

API DISCIPLINE SPECIALTY TITLE: Russian Studies Minor

API DISCIPLINE SPECIALTY NUMBER: \_\_\_\_\_

LEVEL: Bachelor  Master \_\_\_\_\_ 1st professional \_\_\_\_\_ Doctoral \_\_\_\_\_

PROPOSED YEAR OF: Establishment <sup>1991</sup>  Deletion \_\_\_\_\_ Redesign \_\_\_\_\_

DESCRIPTION OF PROGRAM AND RELATIONSHIP TO INSTITUTIONAL  
MISSION AND UNIT VISION:

In keeping with the emphasis which the University puts on International Studies in general, this program would be a valuable addition to the existing options for a degree in International Studies.

RATIONALE FOR PROGRAM ADDITION/DELETION/REDESIGN:

Our professor of Russian is not only highly qualified, but also eager to create such a program. This would necessitate the addition of a Russian instructor for the lower levels. It is conceivable to hire a faculty member qualified to teach in more than one discipline. Looking ahead, an excellent combination would be a Russian|German teacher or any other combination which would benefit the Department.

Since, due to normal attrition, we will have to hire a number of new instructors in the next decade, the introduction of a Russian Minor Studies Program would be easy to implement and would add luster to the Department and the University.

ENROLLMENT PROJECTIONS:

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Black										
White	5	7	9	11	13	15	17	19	21	23
Other										
Total	5	7	9	11	13	15	17	19	21	23

Percent non-resident: \_\_\_\_\_

ADDITIONAL FACULTY AND STAFF REQUIREMENTS:

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Faculty	1   2	1   2								
Staff										
Total	1   2	1   2								

BUDGETARY IMPLICATIONS:

YEAR: 1991

Category	Reallocation of Unit Resources	Self-supporting funds (grants and contracts)	Additional Allocations	Total
Personnel			entry-level part-time salary	
Operating				
Library				
Computing				
Other				
Total				

BUDGETARY IMPLICATIONS: (Continued)

YEAR: 1992

Category	Reallocation of Unit Resources	Self-supporting funds (grants and contracts)	Additional Allocations	Total
Personnel			increase to full-time	
Operating				
Library				
Computing				
Other				
Total				

YEAR: \_\_\_\_\_

Category	Reallocation of Unit Resources	Self-supporting funds (grants and contracts)	Additional Allocations	Total
Personnel				
Operating				
Library				
Computing				
Other				
Total				

YEAR: \_\_\_\_\_

Category	Reallocation of Unit Resources	Self-supporting funds (grants and contracts)	Additional Allocations	Total
Personnel				
Operating				
Library				
Computing				
Other				
Total				

RECEIVED

OCT 02 1990

EAST CAROLINA UNIVERSITY  
UNC-GA Mission Review  
Academic Program Development Form

College of Arts & Sciences

COLLEGE/SCHOOL: Arts and Sciences DEPARTMENT: Physics

API DISCIPLINE SPECIALTY TITLE: Biological and Physical Sciences  
Studies (Medical Biophysics)

API DISCIPLINE SPECIALTY NUMBER: 4902

LEVEL: Bachelor \_\_\_ Master \_\_\_ 1st professional \_\_\_ Doctoral X

PROPOSED YEAR OF: Establishment 1993 Deletion \_\_\_ Redesign \_\_\_

**DESCRIPTION OF PROGRAM AND RELATIONSHIP TO INSTITUTIONAL  
MISSION AND UNIT VISION:**

The proposed new degree program is a Ph.D. in Medical Biophysics offered jointly by the Department of Physics and the Departments of Physiology, Radiation Oncology, and Medicine of the School of Medicine. The overall objective of the programs would be to prepare advanced students to become researchers in the general areas of medical physics, biophysics, and physics applied to medicine. East Carolina is a public, doctorate-granting institution committed to rich and distinctive undergraduate and graduate education, exemplary teaching, research and scholarship, public service, and human and intellectual diversity. The educational mission highlights specialized and multidisciplinary education. The research mission calls for traditional and nontraditional creative activity and support for pure and applied research. Medical related service is a substantial part of our service mission. Applicable elements of distinction include: a growing national reputation in medical education with a particular focus on primary care and regional service; educational programs that have responded to regional needs in human service and health programs; individual faculty and faculty groups of national distinction; and particular strengths including medical physics and biophysics. The proposed program is consistent with East Carolina University's basic goals of expanding doctoral programs and strengthening the commitment to research, scholarship and creative activity.

**RATIONALE FOR PROGRAM ADDITION/DELETION/REDESIGN:**

A recent NIH publication recognized the "shortage of personnel who are capable of applying the tools and concepts of the physical sciences to the solution of significant biological problems."<sup>1</sup> A recent General Administration draft report recognized the Physics Department's noteworthy research productivity and encouraged initiatives in biomedical physics.<sup>2</sup> The proposed program would be a natural outgrowth of the Physics Department's programs at the undergraduate and graduate level in applied physics. The School of Medicine doctoral programs in the sciences basic to medicine, a history of cooperation between the Physics Department and the School of Medicine, and Physics Department and Medical School faculty research interest. Graduates would be prepared for a growing number of employment opportunities in university teaching and research, postdoctoral training, government laboratory research, hospitals and other clinical settings, drug company research, and medical instrumentation research. In the area of traditional medical physics alone, projections indicate a growth rate of employment opportunities of 7% per year.<sup>3</sup> (Currently, there are approximately 2000 physicists in the U.S. identified as Medical Physicists.) In the years 1980-85 (the latest period for

which we have figures) the number of Ph.D.s awarded in the combined areas of Medical/Health Physics averaged only 6 per year.<sup>4</sup>

Presently, we have a joint masters degree program with the School of Medicine which should graduate seven clinical medical physicists within the next year.

<sup>1</sup> N.I.H. Guide 16, #36 (1987), p. 5

<sup>2</sup> Physical Science Education in the University of North Carolina (Draft), Jasper D. Memory and Richard W. Linton, UNC-GA, 1988

<sup>3</sup> The Medical Physicist, 1986

<sup>4</sup> Graduate Programs in Physics, Astronomy and Related Field, 1986-87, American Institute of Physics

ENROLLMENT PROJECTIONS:

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Black										
White										
Other										
Total			4	4	4	4	0	0	0	0

Percent non-resident: 50

ADDITIONAL FACULTY AND STAFF REQUIREMENTS:

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Faculty			2		1					
Staff										
Total			2		1					

BUDGETARY IMPLICATIONS:

(A: Annual continuation dollars; B: One-time dollars)

YEAR: 1993

Category	Reallocation of Unit Resources		Self-supporting funds (grants and contracts)		Additional Allocations		Total	
	A	B	A	B	A	B	A	B
Personnel	50				120		170	
Operating	30				30		60	
Library					5		5	
Computing		10				10		20
Other	3				3		6	
Total	83	10			158	10	241	20

BUDGETARY IMPLICATIONS:

YEAR: 1994

Category	Reallocation of Unit Resources		Self-supporting funds (grants and contracts)		Additional Allocations		Total	
	A	B	A	B	A	B	A	B
Personnel					40		40	
Operating	3				3		6	
Library								
Computing								
Other								
Total	3				43		46	

YEAR: 1995

Category	Reallocation of Unit Resources		Self-supporting funds (grants and contracts)		Additional Allocations		Total	
	A	B	A	B	A	B	A	B
Personnel			20		100		120	
Operating	3				3		6	
Library								
Computing		10		10		50		70
Other			10				10	
Total	3	10	30	10	103	50	136	70

YEAR: 1996

Category	Reallocation of Unit Resources		Self-supporting funds (grants and contracts)		Additional Allocations		Total	
	A	B	A	B	A	B	A	B
Personnel			20		40		60	
Operating	3				3		6	
Library					5		5	
Computing			10				10	
Other			10				10	
Total	3		40		48		91	

EAST CAROLINA UNIVERSITY  
UNC-GA Mission Review  
Academic Program Development Form

RECEIVED  
OCT 02 1990  
College of Arts & Sciences

COLLEGE/SCHOOL: Arts & Sciences DEPARTMENT: Physics

API DISCIPLINE SPECIALTY TITLE: Applied Physics - Health Physics Option

API DISCIPLINE SPECIALTY NUMBER: 1998

LEVEL: Bachelor  Master  1st professional  Doctoral

PROPOSED YEAR OF: Establishment 1991 Deletion  Redesign

DESCRIPTION OF PROGRAM AND RELATIONSHIP TO INSTITUTIONAL MISSION AND UNIT VISION:

A Health Physics Option to the B.S. in Applied Physics is being proposed to replace a current Medical Physics Option. This program is consistent with the University's efforts to provide education and training in medical, health, and environmental fields. It is also consistent with the Department's Medical Physics Option in the Master of Physics program and with the Department's efforts to establish a doctoral program in medical biophysics. Because the program will be a replacement for an existing program and because it will be taught by the same faculty already involved in the graduate program in medical physics and medical biophysics, it can be offered with no changes in funding or staff. We expect to propose two additional courses to be taught in physics (one old course in medical physics will be deleted) and one additional course to be taught by Radiation Oncology. All other courses needed for the program are currently being taught by the Departments of Physics, Biology, Chemistry, Mathematics, and Environmental Health.

RATIONALE FOR PROGRAM ADDITION/DELETION/REDESIGN:

The profession of health physics began during World War II when tremendous energies became available from atomic nuclei. The problems due to the accompanying radiation hazards were investigated through the cooperation of physicists, chemists, biologists and physicians. From this endeavor emerged the interdisciplinary specialist known as the "Health Physicist." According to the Health Physics Society the current demand for health physicists exceeds the supply and projections indicate that this situation will continue well into the next century. Careers are available in areas such as medical research institutions, hospitals, universities, industry, waste management operations, and government laboratories and regulatory agencies. In 1989 the starting salaries for people with a B.S. in Health Physics varied widely, but were in the range \$18,000 - \$31,000.

The School of Public Health at UNC Chapel Hill offers a graduate program in Health Physics, but there is not an undergraduate program available in North Carolina. There are only 17 undergraduate programs in the country with the closest ones being at Francis Marion College and the University of Tennessee, Chattanooga. The Physics Department at ECU has been expanding its offerings in the area of medical biophysics and now offers a master's program in medical physics and is proposing a Ph.D. in medical biophysics. A program in health physics is a logical extension of these efforts into the undergraduate curriculum. Since it will replace a current option in medical physics and since

it can be taught with the same faculty and facilities already available for the graduate programs, it can be offered by the university at essentially no additional cost.

Our own experience and that of other universities is that females and blacks are more likely to enroll in health-related areas of physics than in traditional physics. Thus we believe that the program in health physics will help us increase our minority enrollment.

ENROLLMENT PROJECTIONS:

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Black	1	3	3	3	2	0	0	0	0	0
White	4	7	7	7	3	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0	0
Total	5	10	10	10	5	0	0	0	0	0

Percent non-resident: 18

ADDITIONAL FACULTY AND STAFF REQUIREMENTS:

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Faculty	0	0	0	0	0	0	0	0	0	0
Staff	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0

BUDGETARY IMPLICATIONS:

YEAR: 1991

Category	Reallocation of Unit Resources	Self-supporting funds (grants and contracts)	Additional Allocations	Total
Personnel	0	0	0	0
Operating	0	0	0	0
Library	0	0	0	0
Computing	0	0	0	0
Other	0	0	0	0
Total	0	0	0	0

EAST CAROLINA UNIVERSITY  
UNC-GA Mission Review  
Academic Program Development Form

RECEIVED  
OCT 02 1990  
College of Arts & Sciences

COLLEGE/SCHOOL: Arts & Sciences DEPARTMENT: Physics

API DISCIPLINE SPECIALTY TITLE: Applied Physics - Medical Physics Option

API DISCIPLINE SPECIALTY NUMBER: 1998

LEVEL: Bachelor  Master  1st professional  Doctoral

PROPOSED YEAR OF: Establishment  Deletion 1991 Redesign

DESCRIPTION OF PROGRAM AND RELATIONSHIP TO INSTITUTIONAL  
MISSION AND UNIT VISION:

We are requesting the deletion of the Medical Physics Option of the Bachelor of Science in Applied Physics Degree. It will be replaced by a Health Physics Option. (A proposal for establishing the Health Physics Option is included.)

RATIONALE FOR PROGRAM ADDITION/DELETION/REDESIGN:

Medical physics programs are graduate programs at most universities whereas health physics programs are often at the undergraduate level. Since we have recently established a Master of Physics program with a Medical Physics option, we feel it is now appropriate to change the undergraduate program to one in health physics.

ENROLLMENT PROJECTIONS:

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Black	0	0	0	0	0	0	0	0	0	0
White	(3)	(2)	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0	0
Total	(3)	(2)	0	0	0	0	0	0	0	0

Percent non-resident: 0

ADDITIONAL FACULTY AND STAFF REQUIREMENTS:

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Faculty	0	0	0	0	0	0	0	0	0	0
Staff	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0

BUDGETARY IMPLICATIONS:

YEAR: 1991

Category	Reallocation of Unit Resources	Self-supporting funds (grants and contracts)	Additional Allocations	Total
Personnel	0	0	0	0
Operating	0	0	0	0
Library	0	0	0	0
Computing	0	0	0	0
Other	0	0	0	0
Total	0	0	0	0

EAST CAROLINA UNIVERSITY  
UNC-GA Mission Review  
Academic Program Development Form

OCT 01 1990  
College of Arts & Sciences

COLLEGE/SCHOOL: Arts and Sciences DEPARTMENT: Sociology/Anthropology

API DISCIPLINE SPECIALTY TITLE: Anthropology

API DISCIPLINE SPECIALTY NUMBER: 2202

LEVEL: Bachelor x Master      1st professional      Doctoral     

PROPOSED YEAR OF: Establishment 1991 Deletion      Redesign     

DESCRIPTION OF PROGRAM AND RELATIONSHIP TO INSTITUTIONAL  
MISSION AND UNIT VISION:

We proposed to develop two regular field school programs, one in Ethnology and one in Archaeology. Each would involve students devoting one summer session to work as a team in carrying out research on a specific topic in a field setting. The program would be open to students who meet certain prerequisites and would provide them with the opportunity to engage in actual research and apply theories and techniques learned in the classroom as a regular part of their undergraduate education. The proposed Ethnology Field Program is in keeping with ECU's increased emphasis on international programs, and the Archaeology Field Program capitalizes on a strong interest in history and archaeology in Eastern North Carolina.

RATIONALE FOR PROGRAM ADDITION/DELETION/REDESIGN:

Although our students have had field opportunities in the past in association with particular research projects or summer courses, there has been no opportunity for field experience as a regular part of the educational process. Field schools are a key component of anthropology programs. Recent archaeology field schools supported extramurally by Dr. David Phelps have included the excavation and analysis of data from Jordan's Landing, a zone of continuous Indian occupation since 14,000 BC; the King Bazemore house, a colonial residence of historic importance in eastern North Carolina; and Neoheroke Fort near Snow Hill, the site of the last battle of the Tuscarora Indian War in 1713. Similarly, Dr. John Bort and Dr. Holly Mathews extramurally supported ethnology field schools in 1983 and 1984 in Costa Rica and Panama during which students investigated the effects of modernization on health care behavior and economic adaptations. Efforts to obtain such extramural support will continue.

The requested resources would enable the faculty to systematize the field school offerings each summer and make them a regular part of the undergraduate degree. This would strengthen a key component of the undergraduate program, be an important intermediate step in our preparations to plan a master's degree in anthropology, and enable faculty to expand the department's research initiatives both at home and abroad.

ENROLLMENT PROJECTIONS:

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Black	6									
White	18									
Other	6									
Total	30									

Percent non-resident: \_\_\_\_\_

ADDITIONAL FACULTY AND STAFF REQUIREMENTS:

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Faculty										
Staff										
Total										

BUDGETARY IMPLICATIONS:

(A: Annual continuation dollars; B: One-time dollars)

YEAR: 1991

Category	Reallocation of Unit Resources		Self-supporting funds (grants and contracts)		Additional Allocations		Total	
	A	B	A	B	A	B	A	B
Personnel	\$6,000*				\$6,000*		\$12,000*	
Operating			\$1,000		1,000		2,000	
Library								
Computing								
Other	Students will		bear travel costs.					
Total	\$6,000		\$1,000		\$7,000		\$14,000	

\*One summer term faculty position  
Revised 9/20/90

EAST CAROLINA UNIVERSITY  
UNC-GA Mission Review  
Academic Program Development Form

COLLEGE/SCHOOL: Arts and Sciences DEPARTMENT: English

API DISCIPLINE SPECIALTY TITLE: \_\_\_\_\_

API DISCIPLINE SPECIALTY NUMBER: \_\_\_\_\_

LEVEL: Bachelor \_\_\_ Master\_\_\_ 1st professional \_\_\_ Doctoral \_\_\_\_\_  
Non-degree program serving all of the above.

PROPOSED YEAR OF: Establishment 1992  
Deletion \_\_\_\_\_  
Redesign \_\_\_\_\_

DESCRIPTION OF PROGRAM AND RELATIONSHIP TO INSTITUTIONAL  
MISSION AND UNIT VISION:

Instruction in English as a Second Language. The Department of English would create and oversee a program designed to attract to the University foreign students who have a proficiency in English at the intermediate or beginning-advanced level. This program would help to fulfill Goals 1 and 3 of *Strategies for Distinction* at the University, Division, and Unit levels.

RATIONALE FOR PROGRAM ADDITION/DELETION/REDESIGN:

A program of instruction in English as a Second Language would increase the number of foreign students on campus by allowing the University to recruit from the large pool of students whose proficiency in English does not meet our standard on the Test of English as a Foreign Language. The program could be largely self-supporting through student tuition and fees as well as through contracts paid by foreign governments.

## ENROLLMENT PROJECTIONS:

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Black										
White										
Other										
Total	0	25	25	50	50	75	75	75	100	100

Percent non-resident: 100%

## ADDITIONAL FACULTY AND STAFF REQUIREMENTS:

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Faculty		2	2	4	4	6	6	6	8	8
Staff		$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$
Total	0	$2\frac{1}{2}$	$2\frac{1}{2}$	$4\frac{1}{2}$	$4\frac{1}{2}$	$6\frac{1}{2}$	$6\frac{1}{2}$	$6\frac{1}{2}$	$8\frac{1}{2}$	$8\frac{1}{2}$

## BUDGETARY IMPLICATIONS:

(A: Annual continuation dollars; B: One-time dollars)

YEAR: 1992

Category	Reallocation of Unit Resources		Self-supporting funds (grants and contracts)		Additional Allocations		Total	
	A	B	A	B	A	B	A	B
Personnel	19,500				52,000		71,500	
Operating					12,000		12,000	
Library								
Computing						100,000		100,000
Other								
Total	19,500				64,000		83,500	100,000

Revised 9/20/90

YEAR: 1993

Category	Reallocation of Unit Resources		Self-supporting funds (grants and contracts)		Additional Allocations		Total	
	A	B	A	B	A	B	A	B
Personnel	19,500				52,000		71,500	
Operating					12,000		12,000	
Library								
Computing								
Other								
Total	19,500				64,000		83,500	

YEAR: 1994-1995

Category	Reallocation of Unit Resources		Self-supporting funds (grants and contracts)		Additional Allocations		Total	
	A	B	A	B	A	B	A	B
Personnel	19,500				94,000		113,500	
Operating					12,000		12,000	
Library								
Computing								
Other								
Total	19,500				106,000		125,500	

YEAR: 1996-1997-1998

Category	Reallocation of Unit Resources		Self-supporting funds (grants and contracts)		Additional Allocations		Total	
	A	B	A	B	A	B	A	B
Personnel	19,500				136,000		155,500	
Operating					12,000		12,000	
Library								
Computing								
Other								
Total	19,500				148,000		167,500	

YEAR: 1999-2000

Category	Reallocation of Unit Resources		Self-supporting funds (grants and contracts)		Additional Allocations		Total	
	A	B	A	B	A	B	A	B
Personnel	19,500				178,000		197,500	
Operating					12,000		12,000	
Library								
Computing								
Other								
Total	19,500				190,000		209,500	

YEAR: \_\_\_\_\_

Category	Reallocation of Unit Resources		Self-supporting funds (grants and contracts)		Additional Allocations		Total	
	A	B	A	B	A	B	A	B
Personnel								
Operating								
Library								
Computing								
Other								
Total								

YEAR: \_\_\_\_\_

Category	Reallocation of Unit Resources		Self-supporting funds (grants and contracts)		Additional Allocations		Total	
	A	B	A	B	A	B	A	B
Personnel								
Operating								
Library								
Computing								
Other								
Total								

EAST CAROLINA UNIVERSITY  
UNC-GA Mission Review  
Institute/Center Development Form

COLLEGE/SCHOOL: COLLEGE OF ARTS & SCIENCES  
SCHOOL OF EDUCATION DEPARTMENT: SCIENCE/MATH EDUCATION  
CENTER

TITLE OF PROPOSED INSTITUTE/CENTER: CENTER FOR EXCELLENCE IN MATHEMATICS AND  
SCIENCE EDUCATION

PRIMARY PURPOSE: Research \_\_\_ Service X Training \_\_\_

PROPOSED YEAR OF: Establishment \_\_\_ Deletion \_\_\_ Redesign <sup>1991</sup> XXX

DESCRIPTION OF INSTITUTE/CENTER AND RELATIONSHIP TO  
INSTITUTIONAL MISSION AND UNIT VISION (NOTE: If Proposed Institute/Center  
is interdisciplinary, please describe):

SEE ATTACHED SHEET

RATIONALE FOR INSTITUTE/CENTER ADDITION/DELETION/REDESIGN:

SEE ATTACHED SHEET

CENTER FOR EXCELLENCE  
IN MATHEMATICS AND SCIENCE EDUCATION

Description of Center and Relationship to Institutional Mission and Unit Vision (If proposed Center is interdisciplinary, please describe):

The proposed Center for Excellence in Mathematics and Science Education will seek to improve teacher education and stimulate improvement in eastern North Carolina public school mathematics and science programs. It will build on the strengths of academic departments of mathematics, science, science education, and professional education within the College of Arts and Sciences and the School of Education to address needs in mathematics, science, and related technology in kindergarten through high school. The existing Science and Mathematics Education Center and the existing Summer Ventures program will become part of the new Center.

The proposed Center will be organized with the following staff. As external funds are secured to support programs of the Center, additional faculty and staff would be employed.

Director	}	
Assistant Director	}	
Program Director for	}	12 month full-time employees
Public School Students	}	
Administrative Assistant	}	
Secretary	}	
Clerk-Typist	}	
Mathematics Program Director	}	halftime joint appointments
	}	with academic departments
Science Program Director	}	
Faculty to teach courses and	}	as needed; shared with
workshops in mathematics	}	departments or employed
science for teachers	}	in the summer
Faculty and residence life		
staff for Summer Ventures		

The Center will foster cooperation and collaboration between East Carolina University and public school districts. It will assist faculty in academic mathematics and science departments and the School of Education to become involved with public schools in developing and offering mathematics and science programs for teachers and studying the effectiveness of these programs in improving student interest and achievement. The result will be increased student enrollment and achievement in mathematics and science.

The Center will offer workshops, special short courses, and summer institutes in mathematics and science for teachers in kindergarten through twelfth grades to improve their knowledge and skill in teaching mathematics and science, incorporating technology where appropriate.

The Center will develop programs for public school students to help them develop and maintain interest in mathematics and science, enroll in academic mathematics and science courses throughout high school, and be ready to enter the university upon graduation. Two groups will be given special attention. High school students who are academically talented in mathematics and science will be encouraged through the existing Summer Ventures program. Minority and female students who are underrepresented in enrollment in upper level mathematics and science courses will be addressed through programs developed to encourage and assist them in academic courses.

The Center will seek external funding for programs in mathematics and science education to serve teachers, public school students, and other appropriate groups who can assist in meeting the needs described. There are many opportunities for grants from federal and state agencies, foundations, and alliances of businesses and industries to address the purposes which this Center will serve.

Such a Center will address Basic Goal 6 of the East Carolina University Strategies of Distinction, "Improve teacher education and stimulate improvement of public schooling." It will provide leadership and will work with other departments on campus in improving public school education in mathematics, science, and related technology. It will increase the pool of qualified high school students from which the University may recruit, giving special attention to academically talented mathematics and science students as well as minority and female students with interest in the study of mathematics and science. Its programs will increase public awareness of East Carolina University and its positive impact on eastern North Carolina.

The existing Science and Mathematics Education Center was cited by the College of Arts and Sciences as an element of distinction. The College has listed the following among its Priorities for Action:

"to increase admission and retention of minority ... students admitted to the University"

"to encourage College faculty to serve as resources to regional public schools and to participate in teacher training workshops"

"to facilitate collaboration among faculty in academic sciences and mathematics education to secure grants and offer courses specific to the needs of teachers"

"to offer more evening, Saturday, and summer courses specific to the needs of teachers, particularly those working to acquire advanced degrees"

The mission statement of the School of Education includes the preparation and development of professionals in Education through dissemination of knowledge, effective teaching, and service to the educational community. Among its Priorities for Action, the School lists:

"... developing procedures to encourage cooperative research by faculty and students"

"strengthen liaison with superintendents, principals, teachers, and school boards ..."

"initiate a recruitment process beginning with the middle grades level of public schools"

The existing Center addresses these Priorities for Action of the College of Arts and Sciences and the School of Education, especially those related to activities for mathematics and science teachers. Summer Ventures brings outstanding high school students from all over North Carolina to the East Carolina campus to be taught by some of our outstanding faculty members. The University has an opportunity to recruit these students. As our faculty work in these two programs, they obtain knowledge of effective teaching strategies. Then they can employ similar strategies in teaching university students, strengthening our undergraduate programs for preservice teacher preparation and for all undergraduates. As the expanded Center obtains additional external funding and increases its collaborative efforts, it will be able to address other priorities in the University, the College of Arts and Sciences, and the School of Education.

#### Rationale for Center Redesign

National concern has made the quality of mathematics and science education a major issue. Industries located in eastern North Carolina have expressed great difficulty in finding appropriately qualified personnel in mathematics and the sciences. Universities have experienced difficulty in finding students who are well qualified for entrance into mathematics and science related majors.

Studies highlight the fact that few individuals are pursuing either academic or career goals based in science and mathematics. Particularly troublesome is the striking underrepresentation of minorities and females among those who do pursue these goals. Whether this problem is rooted in the lack of appropriate academic preparation, negative societal or personal attitudes, absence of proper information about possibilities, lack of role models to

inspire success in these areas, or other causes, monumental efforts must be exerted in rectifying this situation.

The SAT scores of North Carolina students have received statewide attention because they rank last or next to last in the nation. President Spangler of the University of North Carolina initiated a program involving all campuses of the UNC system, including East Carolina University, in an effort to improve these scores. The State Department of Public Instruction identified sixteen North Carolina School Systems that failed to meet 75% of the student performance standards for state accreditation. Two of these standards require mathematics and science performance at a satisfactory level. Thirteen of these schools are in eastern North Carolina, the region to be served by the proposed Center.

The 1988 Keys to the Future-Elementary Teachers in North Carolina, a survey conducted by the Mathematics and Science Education Network, polled nearly 1,000 elementary teachers representing rural, urban, and suburban schools about teaching science and mathematics. More than one-half of the respondents named science as the subject they felt least qualified to teach. A smaller percentage named mathematics, but many of the teachers indicated that they were not using methods and materials which are appropriate for developing higher order thinking skills and problem solving strategies. The majority of the respondents had not participated in professional degree programs at the university level in more than eight years. Only 4% of the teachers reported an undergraduate concentration in science and 2% reported a mathematics concentration. Elementary teachers need and desire more education in mathematics and science content and methods.

In 1984-85 the East Carolina University Science/Mathematics Education Center conducted a survey of middle and high school teachers in northeastern North Carolina to ascertain their needs for mathematics and science courses. A high percentage of these teachers indicated that they needed courses in mathematics and science content and methods. Similar requests are given on Registration Forms for Center activities and in meetings with school system personnel charged with the responsibility to improve instruction and student performance.

The Science/Mathematics Education Center at East Carolina University was created by the General Assembly of North Carolina in 1984 to meet North Carolina's high tech societal needs for improved mathematics and science instruction. In 1988-89 the Center served 1159 teachers in forty-one workshops, conferences, and courses. Five hundred four graduate credits, 14 undergraduate credits, and 699 renewal credits were awarded to teachers, with an average of 14.2 contact hours per teacher in credit-earning activities. Many teachers have begun graduate programs in activities sponsored by the Center and subsequently completed masters degrees or Certificates of Advanced Study.

Faculty members from the Mathematics Department, all of the science departments, and education have taught courses and workshops for the Center. The Center has been successful in helping faculty members in different disciplines collaborate with one another and with public schools to develop programs that will improve science and mathematics instruction. In most programs, public school master teachers assist the university faculty member in conducting the program. Both University faculty and the public school teachers have benefited from this shared responsibility. University faculty members have become aware of new appropriate instructional techniques for precollege level students and become more sensitive to the needs of public school teachers. Public school teachers have developed self confidence from the mentorship provided by the university faculty member. Free exchange of ideas and support for improved public school teaching has resulted from many of these collaborations.

The existing Center has been successful in forming partnerships and securing external funding for teacher education programs. From July 1, 1988, until June 30, 1989, grants totalling \$193,288 were awarded to the Center. In 1989-90 grants totalling \$162,951 were awarded, and \$3150 was received as donations from industries to support programs for teachers. The Center also assisted science faculty in preparation of proposals for external funding. This record of success with the limited staff available attests to the effectiveness of a Center organization that can bring together different departments and public schools in a common endeavor.

Public school students who are talented in mathematics and science need opportunities to study these subjects in greater depth or breadth than the typical high school in eastern North Carolina can offer. Summer Ventures in Science and Mathematics, an existing program for such students, was funded by the state and established at East Carolina University in 1985. Each summer approximately 100 rising eleventh and twelfth grade students come to campus for five weeks of intensive study in mathematics and science classes and laboratories under the direction of talented and enthusiastic East Carolina faculty. These faculty serve as mentors for Summer Ventures students. Similar programs can be developed to serve other students if funding can be secured.

Studies indicate that the choices which students make in late elementary grades often determine whether or not they will be prepared to enter post high school programs leading to mathematics and science related majors. Minorities and females often choose to avoid courses which would make these majors available to them. Programs which offer promise in motivating these students and improving their achievement in mathematics and science exist and could be implemented if funds could be secured.

The director of the University of North Carolina Mathematics and Science Education Network has encouraged Center directors to seek to have their Centers recognized as a Center in their individual campuses.

Establishment of a Center for Excellence in Mathematics and Science Education on the campus of East Carolina will contribute to the implementation of the Strategic Plan for the University, especially in improving teacher education and public schooling in eastern North Carolina. University, public school, and community resources will be marshalled to address the goals. Center programs will increase the pool of qualified students completing high school prepared for higher education in mathematics and science related fields and bring attention to the positive impact of the University on eastern North Carolina.

ADDITIONAL FACULTY AND STAFF REQUIREMENTS:

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Faculty	0	4.4	0	0	0	1.0	0	0	0	1.0
Staff	0	1.0	0	0	0	1.0	0	0	0	1.0
Total	0	5.4	0	0	0	2.0	0	0	0	2.0

BUDGETARY IMPLICATIONS:

(A: Annual continuation dollars; B: One-time dollars)

YEAR: 1991

Category	Reallocation of Unit Resources		Self-supporting funds (grants and contracts)		Additional Allocations		Total	
	A	B	A	B *	A	B	A	B
Personnel	308000			40000			308000	40000
Operating	112000			85000	10000		122000	85000
Library								
Computing								
Other								
Total	420000			125000	10000		430000	125000

\*THESE ARE ESTIMATES

NOTE: ADDITIONAL SPACE WILL BE NEEDED

BUDGETARY IMPLICATIONS:

YEAR: 1992

Category	Reallocation of Unit Resources		Self-supporting funds (grants and contracts)		Additional Allocations		Total	
	A	B	A	B*	A	B	A	B
Personnel				24000	228000		228000	24000
Operating				22000	8000	6000	8000	28000
Library								
Computing								
Other								
Total				46000	236000	6000	236000	52000

YEAR: 1993

Category	Reallocation of Unit Resources		Self-supporting funds (grants and contracts)		Additional Allocations		Total	
	A	B	A	B*	A	B	A	B
Personnel				49000				49000
Operating				47000	5000		5000	47000
Library								
Computing								
Other								
Total				96000	5000		5000	96000

YEAR: 1994

Category	Reallocation of Unit Resources		Self-supporting funds (grants and contracts)		Additional Allocations		Total	
	A	B	A	B*	A	B	A	B
Personnel				50000				50000
Operating				50000	5000		5000	50000
Library								
Computing								
Other								
Total				100000	5000		5000	100000

\*THESE ARE ESTIMATES

BUDGETARY IMPLICATIONS:

YEAR: 1995

Category	Reallocation of Unit Resources		Self-supporting funds (grants and contracts)		Additional Allocations		Total	
	A	B	A	B*	A	B	A	B
Personnel				50000				50000
Operating				50000	6000	6000	6000	56000
Library								
Computing								
Other								
Total				100000	6000	6000	60000	106000

YEAR: 1996

Category	Reallocation of Unit Resources		Self-supporting funds (grants and contracts)		Additional Allocations		Total	
	A	B	A	B*	A	B	A	B
Personnel				60000	65000		65000	60000
Operating				70000	8000	4000	8000	74000
Library								
Computing								
Other								
Total				130000	73000	4000	73000	134000

YEAR: 1997

Category	Reallocation of Unit Resources		Self-supporting funds (grants and contracts)		Additional Allocations		Total	
	A	B	A	B *	A	B	A	B
Personnel				60000				60000
Operating				70000	7000		7000	70000
Library								
Computing								
Other								
Total				130000	7000		7000	130000

BUDGETARY IMPLICATIONS:

YEAR: 1998

Category	Reallocation of Unit Resources		Self-supporting funds (grants and contracts)		Additional Allocations		Total	
	A	B	A	B*	A	B	A	B
Personnel				65000				65000
Operating				65000	8000		8000	65000
Library								
Computing								
Other								
Total				130000	8000		8000	130000

YEAR: 1999

Category	Reallocation of Unit Resources		Self-supporting funds (grants and contracts)		Additional Allocations		Total	
	A	B	A	B*	A	B	A	B
Personnel				70000				70000
Operating				70000	8000		8000	70000
Library								
Computing								
Other								
Total				140000	8000		8000	140000

YEAR: 2000

Category	Reallocation of Unit Resources		Self-supporting funds (grants and contracts)		Additional Allocations		Total	
	A	B	A	B*	A	B	A	B
Personnel				70000	72000		72000	70000
Operating				70000	9000	5000	9000	75000
Library								
Computing								
Other								
Total				140000	81000	5000	81000	145000