GLASSBORO STATE COLLEGE
GLASSBORO, NEW JERSEY

INSTRUCTIONAL COMPUTING TASK FORCE
DIVISION OF PROFESSIONAL STUDIES

New Program Proposal - April 1983

Post Baccalaureate Achievement Certificate in Computers in Education

1. DETAILS

a. Title of the proposal: Post Baccalaureate Achievement Certificate in Computers in Education

b. Sponsors: Dean Janice Weaver and members of the Professional Studies Division Task Force on Computer Education. Members of the Task Force are:

Dr. Blough, Curriculum & Instruction/ Elementary
Dr. DiObilda, Reading
Dr. Falzetta, Curriculum & Instruction/ Secondary
Dr. Gallia, Curriculum & Instruction/ Secondary
Dr. Gardiner, Curriculum & Instruction/ Secondary
Dr. Guerard, Industrial Education/Technology
Dr. Martin, Reading
Dr. Masat, Mathematics/Computer Science
Dr. O'Day, Graduate Studies
Dr. Rilling, Curriculum & Instruction/ Elementary
Dr. Sakiey, Reading
Mr. Stone, Mathematics/Computer Science
Dr. Tannenbaum, Foundations of Education
Dr. Tomei, Educational Administration
Mr. VonHoltz, Industrial Education/Technology
Dr. Winn, Administrative Studies

Administrative Responsibility for Program: Curriculum & Instruction/Secondary

c. Scope or size of the program: This is a post baccalaureate program with courses totaling 18 semester hours. The program is designed to deliver instruction to educators in two major areas: instructional applications and administrative applications.

d. Relationship to curriculum: Although this pro-

posal is developed as a program design, individual courses may be taken by graduate students enrolled in the M.A. or Certification programs. Such students would apply these courses in their elective or core areas, depending upon the type of program in which they are enrolled. Pre-matriculated graduate students will be admitted to courses on a space available basis.

e. Prerequisites of Eligibility: These are the same as those indicated in Resolution No. 11, approved by the G.S.C. Board of Trustees on 6/13/79. The following statement describes the eligibility of students.

> "Applicants seeking admission...must meet normal graduate admission requirements except that G.R.E. scores will not be required. No more than 3 semester hour credits from other institutions may be transferred to meet requirements of this program. The.... programs may be designed for advanced level skills development or advanced study in a particular disciplinary area(s), but in any case they will consist of a coherent pattern of 15 - 24 semester hours of graduate courses. Coursework...while in every way appropriately designated graduate coursework, may not necessarily fulfill programmatic requirements in individual graduate programs or conceivably in any graduate program except as electives. This certificate program is not designed for those who intend to matriculate in master's degree program....
>
> 1. Candidates for the Certificate must hold an undergraduate degree and be admissable to graduate work in accordance with existing college standards (exception: the G.R.E.'s are not required.).
>
> 2. Candidates for certificates in teaching fields must hold an initial teaching certificate as issued by the State Board of Examiners.
>
> 3. Satisfactory academic progress is maintained with a 3.0 (B) cumulative average. The candidate must complete the requirements within four years (exception: an additional year may be

granted by authority of the appropriate Dean and recommendation by the program advisor in unusual circumstances). No more than two courses may be taken on a pass/no credit basis...."

f. Suggested Time and Scale of Implementation: It is proposed that this program be implemented Fall 1983. The scale of implementation is projected as follows:

Admission of students

1983 - 1984, 25 - 30
1984 - 1985, 25 - 30
1985 and beyond. It is anticipated that the number of enrolled students will remain between 40 -60 students.

Course offerings

Fall 1983-84

Computer Science I 20 - 25
Instructional Application of Computers 20 - 25
Computer Technology in Educational Administration 20 - 25

Spring 1983-84

Advanced BASIC 20 - 25
Computer Assisted Instruction 20 - 25

Summer 1984

Computer Science I 20 - 25
Advanced BASIC 20 - 25
Instructional Application of Computers 20 - 25

Fall 1984-85

Computer Science I 20 - 25
Instructional Application of Computers 20 - 25
Computer Technology in Educational Administration 20 - 25
Computers and the Curriculum 15 - 20
Instructional Applications of Word Processing and Data Management 15 - 20

Spring 1984-85

Advanced BASIC 20 - 25
Computer Assisted Instruction 20 - 25
Instructional Computer Languages:
PASCAL & LOGO 20 - 25
Use of Data Base Systems 15 - 20
Seminar in Educational Computing
10 - 15

The entire program will be evaluated according to the guidelines described in Resolution No. 11 of the Post-Baccalaureate Achievement Certicate Program approved by the Board of Trustees of Glassboro State College on June 13, 1979.

g. Resource requirements (equipment, library, staff, space, etc.)

Equipment - Computer time available and projected

Fall 1983-84	1,800-2,250 man hours
Spring 1983-84	1,200-1,500 man hours
Summer 1984	1,800-2,250 man hours
Fall 1984-85	2,700-3,450 man hours
Spring 1984-85	2,400-3,150 man hours

Equipment - All types of input terminals available and required for faculty and students in the Program

Fall 1983-84	10 - 12
Spring 1983-84	10 - 12
Summer 1984	10 - 15
Fall 1984-85	15 - 17
Spring 1984-85	15 - 17

3 to 5 additional terminals may be needed by 1984-85

Library holdings are adequate especially for existing courses. Additional periodicals need to be purchased as well as new books currently scheduled for publication. It is estimated that the following expenditures need to be made for software.

Fall 1983-84	$ 500
Spring 1983-84	500

Fall 1984-85	1,000
Spring 1984-85	500

Existing staff are available who are already qualified and approved to teach graduate-level courses. All hold doctorates in their respective fields or are qualified or in the process of adding an additional computer education endorsement or specialty to their respective disciplines. Such staff who will teach in the Computer Education program shall be selected by the program administrator with the concurrence of a Department Chairperson and Dean through the normal course staffing process. Staff presently identified by the Task Force are as follows:

Dr. Masat	Mathematics/Computer Science
Dr. Martin	Reading
Dr. Blough	Curriculum and Instruction/ Elementary
Dr. Gallia	Curriculum and Instruction/ Secondary
Dr. Guerard	Industrial Education/ Technology
Mr. Von Holtz	Industrial Education/ Technology
Dr. Tomei	Educational Administration

A computer laboratory already exists in the Robinson Building equipped with microcomputers and will serve as the primary support for this program. Also used extensively will be the new Burroughs Computer recently acquired by the College.

2. RATIONALE

This program has been developed because of the tremendous growth of the microcomputers in both the school and home. Teachers and administrators are sensing a professional obsolescence as more students and parents (and Board members) become involved with computers. Enrollments in existing computer courses are large and the demand by educators appears to be increasing. Therefore, this program was developed in accord with the goals of the College as established in the master plan and the Board of Trustees' action approving the concept of the Post-Baccalaureate Achievement Certificate. It is clearly appropriate for the Professional Studies Division to sponsor such a proposal which will serve the professional staff development needs of teachers and administrators. Such leadership by the Professional Studies

Division means that its M.A. Graduates will also have the opportunity to be competent with the latest state-of-the-art teaching and administrative applications.

3. ESSENCE of the Post-Baccalaureate Achievement Certificate

a. Major Goals

(1.) Educators will have a comprehensive picture of the present and prospective role of computers in both instruction and system management at all levels of education.

(2.) Educators will be able to select, use, and evaluate hardware, software, and the most effective authoring and teaching languages for the instructional applications of computers.

(3.) Educators will be able to initiate, implement, manage, and evaluate instructional and system management programs using computers.

(4.) Educators will have an understanding of the philosophical, social, legal and educational implications of computers in education and society.

b. Specific Objectives: The Program provides educators with:

(1.) Information concerning the state of the art and issues in computers in education, particularly at K-12 levels.

(2.) A philosophical and psychological foundation for selection, development, implementation, and evaluation of software in relationship to the curriculum.

(3.) Competencies for selecting and using hardware appropriate to the curriculum.

(4.) Competencies to use computers in drill and practice, tutorial lessons, diagnostic and achievement testing, and academic record-keeping with traditional, non-traditional, and handicapped students.

(5.) A knowledge of structured programming languages appropriate for teaching traditional, non-traditional, and handicapped students at the K-12 levels.

(6.) Competencies for developing and evaluating computer modeling and simulation systems.

(7.) Models for training teachers, staff, and administrators in computer use with traditional, non-traditional, and handicapped students.

(8.) Competencies to identify, evaluate, select, develop, and use data-based management systems.

(9.) An understanding of the social and legal issues (such as right to privacy and computer security) created by computer use.

c. Structure or Organization: Total of 18 semester hours

Required Core Courses (12)

- Computer Science I
- Instructional Applications of Computers
- Computers and the Curriculum
- Seminar in Educational Computing

12

TRACKS (6)

Instructional Applications

- Computer-Assisted Instruction 3

and one of: 3

- Instructional Applications of Word Processing and Data Management
- Advanced BASIC
- Instructional Computer Languages: PASCAL and

LOGO 6

Administrative Applications (6)

Computer Technology in Educational Administration 3

and one of: 3

Computer-Assisted Instruction
Instructional Applications of Word Processing and Data Management
Advanced BASIC
Instructional Computer Languages: PASCAL and LOGO
Use of Data Base Systems 6

Total hours 18

REQUIRED CORE COURSES Semester Hours

Computer Science I 3
Prerequisites: none
Algorithms, flow diagrams, fundamentals of computer structure and operation, BASIC programming, numerical applications, educational applications and social consequences of computers are considered.

Instructional Application of Computers I and II 3
(1.5 S.H. per quarter course or module)
Prerequisites: none
The first half of the course surveys current topics and issues in computer science education, particularly as it applies to the K-12 levels. This includes educational, societal, and administrative implications and the history of computers and computing. Second half of the course includes using computers and software in the

classroom, hands-on training, and elements of programming in BASIC.

Computers and the Curriculum 3
Prerequisites: Instructional Applications of Computers
This course consists of four major components: The philosophical and psychological foundation for software selection and design; procedures for the selection and development of educational software in the content areas; implementation and adaptation of educational software; and evaluation of instructional software.

Seminar in Educational Computing 3
Prerequisites: Completion of all other course requirements for the Post Baccalaureate Certificate in Computers in Education or permission of the program advisor
Students shall review the issues, research, and the state of the art in educational computing. They will develop and carry out an in-depth research project and prepare a written report on it. Projects are to be selected from the areas of curriculum evaluation and development, computer assisted instruction, or administrative applications.

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12 hours

TRACKS

*Instructional Applications

Computer-Assisted Instruction 3
Prerequisites: Instructional Applications of Computers I and II or equivalent experience
Following a brief review of instructional applications of computers, this course will permit practicing teachers to experience ways in which the computer can be used in an instructional setting.

Students will use microcomputers to develop their own computer assisted instruction (CAI) units for classroom use. Included will be skills for additional applications, such as testing, scoring, and class record keeping.

AND ONE OF

Instructional Applications of Word Processing and Data Management 3
Prerequisites: Instructional Applications of Computers or equivalent experience
Word processing, data base management, and spreadsheet operations are combined into an integrated system suitable for educational applications. Students prepare sample student or personnel information and enter it into a microcomputer system for subsequent handling. Applications include text preparation, maintenance of information files, and data manipulation including projection simulations. Current application software will be used, discussed, and evaluated.

Advanced BASIC 3
Prerequisites: Computer Science I, Introduction to Computer Science, or equivalent experience
Beginning with a brief review of elementary BASIC, the course covers functions, structured programming and subroutines, files, graphics, matrix operations, system and library functions, disk operating systems, machine-language extensions, and applications.

Instructional Computer Languages: PASCAL and LOGO 3
Prerequisites: Computer Science I, Introduction to Computer Science, or equivalent experience.
The course covers structured programming languages appropriate for teaching students at the pre-college level. It also prepares teachers to

teach those languages to students in elementary and secondary schools.

*Administrative Applications

Computer Technology in Educational Administration 3
This course covers the many aspects of computer science and data processing as they relate to educational administration. The application of computer technology to master schedule construction, registration, student scheduling, grade reporting, transcript generation, instructional utilization, accounting testing and evaluation are some of the areas explored.

AND ONE OF

Computer-Assisted Instruction 3
(see above)

Instructional Applications of Word Processing and Data Management 3
(see above)

Advanced BASIC 3
(see above)

Instructional Computer Languages 3
(see above)

Use of Data Base Systems in Education 3
Prerequisites: Instructional Applications of Computers I and II
Students study Data Base Management Systems applied to education and learn to apply a typical system and to solve typical educational business management information problems.

Students learn how to produce reports, provide efficient input data to computer programs and provide responses to educational needs.

18 hours

d. Administration: Curriculum and Instruction/ Secondary will be responsible for scheduling and staffing courses and advising students.

4. RESULTS OF CONSULTATION

a. List the names of all parties consulted:

Dr. Blough, Curriculum & Instruction/Elementary
Dr. DiObilda, Reading
Dr. Falzetta, Curriculum & Instruction/Secondary
Dr. Gallia, Curriculum & Instruction/Secondary
Dr. Gardiner, Curriculum & Instruction/Secondary
Dr. Guerard, Industrial Education/Technology
Dr. Martin, Reading
Dr. Masat, Mathematics/Computer Science
Dr. O'Day, Graduate Studies
Dr. Rilling, Curriculum & Instruction/Elementary
Dr. Sakiey, Reading
Mr. Stone, Mathematics/Computer Science
Dr. Tannenbaum, Foundations of Education
Dr. Tomei, Educational Administration
Mr. Von Holtz, Industrial Education/Technology
Dr. Winn, Administrative Studies

b. Consultations from the following people are included in Appendix A:

Dr. Jack Eisenstein, Superintendent, Atlantic City Public Schools
Dr. William D. Horton, Superintendent, Pitman Public Schools
Mr. Carl Simmons, Superintendent, Vineland Public Schools
Mr. Peter B. Contini, Superintendent, Gloucester County Department of Education
Ms. Jacquie Cochrane, Director, Educational Management by Computer Center, Gloucester County Educational Services Commission

5. NEW COURSES: See Appendix B for course proposals for the following new courses:

Instructional Application of Computers I and II
Computers and the Curriculum
Advanced BASIC
Instructional Computer Languages: PASCAL and LOGO
Computer-Assisted Instruction
Instructional Applications of Word Processing and Data Management
Use of Data Base Systems in Education
Seminar in Computer Education

ATLANTIC CITY PUBLIC SCHOOLS
ADMINISTRATION BUILDING
1809 PACIFIC AVENUE
ATLANTIC CITY, NEW JERSEY 08401

OFFICE OF THE SUPERINTENDENT
AREA CODE (609) 344-2837

March 23, 1983

Dr. Mario J. Tomei, Chairperson
Task Force on Educational Computing
Glassboro State College
Glassboro, New Jersey 08028

Dear Mario:

Please be advised that I have reviewed the material under consideration by the Task Force on Educational Conputing to be presented to the College Curriculum Committee for adoption and find the program leading to the Post-Baccalaureate Achievement Certificate to have been very carefully developed.

The need for more technological skills in our schools' educational programs is a fact of life. Our teachers must be prepared to meet this challenge. The programs as presented will help local school systems qualify teachers and administrators to have the training necessary for advancing technology into our curriculum and course offerings.

I wholeheartedly support your efforts. I will encourage our staff to enroll in these proposed course offerings. This program is very much needed in our area particularly at the graduate level.

Good luck in your endeavors.

Sincerely yours,

Jack Eisenstein, Ed. D.
Superintendent of Schools

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Vineland Public Schools

106 LANDIS AVENUE VINELAND, N.J. 08360 (609) 692-3798

April 14, 1983

Dr. Mario J. Tomei, Chairperson
TASK FORCE ON EDUCATIONAL COMPUTING
Glassboro State College
Glassboro, New Jersey 08028

Dear Mario,

Thank you for the opportunity to review the computer education program being developed by Glassboro State College. This has been shared with members of our administrative and supervisory staff.

We are pleased to endorse the concepts and programs planned.

Sincerely,

Carl Simmons
Superintendent

CS:jb

GLOUCESTER COUNTY EDUCATIONAL SERVICES COMMISSION

HERBERT BUILDING • P.O. BOX 8 • SEWELL, NEW JERSEY 08080
(609) 468-2015 or 7522

AS M. McLENIGAN
.xecutive Director

ROBERT A. SULZMAN
Assistant Executive Director

ROBERT A. PEDDLE
Business Administrator

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April 11, 1983

Mario J. Tomei, Ed.D., Chairperson
Task Force on Educational Computing
Educational Administration Department
Glassboro State College
Glassboro, New Jersey 08028

Dear Dr. Tomei:

It was my pleasure to review the draft copy of your committee's proposal for a graduate program in computer education.

In my opinion, the proposed program is greatly needed by teachers, supervisors, and administrators.

I strongly endorse the graduate program in computer education as it appears in your proposal, and I would like to be kept informed of its progress within your institution.

Thank you for including me in your endeavor.

Sincerely,

Jacquie Cochrane

JACQUIE VALERI COCHRANE, Director
Educational Management by Computer Center
(609) 468-8570

JVC/lcw

State of New Jersey
GLASSBORO STATE COLLEGE
GLASSBORO, NEW JERSEY 08028

OFFICE OF THE VICE PRESIDENT
FOR ACADEMIC AFFAIRS

October 28, 1983

Dr. Mark M. Chamberlain
President
Glassboro State College

Dear Mark:

I believe you received a copy of the curriculum proposal that accompanied the approval forms for the Post-Baccalaureate Achievement Certificate in Computers in Education. I am writing this letter to you as a summary of the proposal. It can also serve the purpose of being an executive summary for the Board of Trustees. The summary will try to follow the guidelines for Certificates of Advanced Study Program adopted by the Board in June of 1979.

Rationale

There has been and continues to be a tremendous growth in the use of microcomputers in both the school and home. However, little attention has been paid to the need for developing knowledge and skills in computing among the existing professional teachers and school administrators. The proposed certificate program addresses that need.

It is believed that this need can be best met through a certificate program, which requires and provides a coherent structure but would not warrant a master's degree.

Development and Approval of the Program

The proposal was developed by a group of faculty members from the Departments of Mathematics/Computer Science, Elementary Education, Secondary Education, Industrial Education/Technology and Educational Administration. The proposal was sponsored by the Division of Professional Studies. It was reviewed and approved by all of the offices, units and governing bodies involved in the college's policy and procedures for curriculum approval.

The program is designed to serve professional teachers and school administrators. There are two tracks and a common core. The two tracks are instructional applications and administrative applications.

The teachers in the schools are frequently expressing to our faculty the need for such a program. Therefore, we have reason to believe

that the potential enrollment is very large. However, for a variety of reasons, e.g., capacity and quality assurances, the number of students enrolled during the first three years of the program will be held to less than fifty per year

The copy of the proposal has a descriptive outline of the courses as well as discussion of the resource needs of the program. It should be noted that all of the courses are at the graduate level. The college currently has the resources in personnel, equipment, non-salary funds and space to adequately provide the program at the level that is proposed.

Operation of the Program

The requirements for admission to the program are consistent with the guidelines adopted by the Board of Trustees. The administrative responsibility for the program will reside with the Department of Secondary Education.

If the program is approved by the Board of Trustees, the projected date for starting the program will be Fall, 1984.

Evaluation and Reapproval

In accordance with the guidelines adopted by the Board of Trustees, the entire program will be evaluated at the completion of three years of operation, i.e., Summer, 1987. At that time, determination will be made whether reapproval will be sought.

Conclusion

It is the belief of several faculty members that the proposed certificate program is an excellent response to a very strongly felt need in the communities we serve. The Dean and I share that belief.

The proposed certificate program will certainly enhance our offerings at the post-baccalaureate level. It also, to some degree, points to one direction that the college should seriously consider in the post-baccalaureate and graduate area.

It I can be of any further assistance to you in this matter, please let me know.

Sincerely yours,

Herman D. James
Vice President
for Academic Affairs

HDJ/bos

cc: Dean Weaver
Dr. O'Day