4 Proposals
No SCC#

Glassboro State College
Department of Mathematics

The proposed new mathematics department offerings entitled, (1) Freshman Mathematics Seminar, (2) Sophomore Mathematics Seminar, (3) Junior Mathematics Seminar, and (4) Senior Mathematics Seminar, is intended to extend the departments offerings in the area of electives for the talented student of mathematics.

This proposal anticipates that the new course Freshman Mathematics Seminar, will have its first scheduling for the second semester of the 1973-74 academic year.

John Sooy
Chairman, Department of Mathematics

Catalog Descriptions:

1799.199 2 s.h.

FRESHMAN MATHEMATICS SEMINAR (Permission of instructor required)
Selected advanced topics suitable for second semester Freshman who have demonstrated exceptional mathematical interest and capacity.

1799.299 2 s.h.

SOPHOMORE MATHEMATICS SEMINAR (Permission of instructor required)
Selected advanced topics suitable for second semester Sophomores who have demonstrated exceptional mathematical interest and capacity.

1799.399 2 s.h.

JUNIOR MATHEMATICS SEMINAR (Permission of instructor required)
Selected Advanced topics suitable for second semester Juniors who have demonstrated exceptional mathematical interest and capacity. Preparation for National examinations such as, G.R.E., actuarial, etc. is included if students are interested.

1799.499 2 s.h.

SENIOR MATHEMATICS SEMINAR (Permission of instructor required)
Selected advanced topics suitable for first semester Seniors who have demonstrated exceptional mathematical interest and capacity. Preparation for National examinations such as, G.R.E., actuarial, etc. is included if students are interested.

GLASSBORO STATE COLLEGE

Glassboro, New Jersey

Course Proposal

April 1, 1973

I. Identification of the Proposal

		Course numbers:
A. Names -	Freshman Mathematics Seminar	1799.199
	Sophomore Mathematics Seminar	1799.299
	Junior Mathematics Seminar	1799.399
	Senior Mathematics Seminar	1799.499

B. Sponsors - Dr. John Sooy, Mr. Don Stone, Dr. Francis Masat, and Dr. Thomas Osler of the Mathematics Department.

II. Statement from the Sponsors

In this proposal, we recommend the creation of four courses, one for each of the undergraduate years, to supplement the background of superior students. These courses complement the work which the students have already undertaken by increasing the depth of their knowledge in many mathematical areas. Only students who have demonstrated exceptional mathematical ability in previous courses will be admitted. By offering these courses, we hope to stimulate our best students to realize their full mathematical potential.

III. Outline of the Proposal

A. Essence of the Proposal

1. Course titles: Freshman Mathematics Seminar
   Sophomore Mathematics Seminar
   Junior Mathematics Seminar
   Senior Mathematics Seminar

2. Semester hours of credit granted: 2 per course.
3. Course level and prerequisites: undergraduate. Students who have demonstrated exceptional mathematical interest and mastery will be admitted after consultation with the professor.

4. Current curricula pattern into which it falls: elective.
5. Resources: All department members have excellent qualifications to conduct the new courses, and the library and institutional resources are adequate for the offerings.

B. Details of the Proposal

1. Specific objectives of the course:

a. To provide students with superior mathematical skill the opportunity to examine in greater depth the most important topics they have encountered in recent mathematics courses.

b. To provide our superior students with the opportunity to explore areas of mathematics which are not usually given in traditional undergraduate courses, but which are likely to be of future use to the student.

c. To provide our superior students with more advanced training which should assist them in such competitive examinations as the Graduate Record Examination and the Actuarial Examinations.

d. Students at large universities and some other colleges may take graduate mathematics courses or follow an honors program in mathematics as undergraduates. By making these courses available we hope to enrich the mathematics program options and offer our most gifted students greater opportunity to prepare for graduate school and industrial employment.

e. To provide a means for stimulating our superior students by generating interest and enthusiasm. In this way we hope that our students can begin to realize their full mathematical potential.

2. Scope of the course: The topics covered in the course as well as the methods used to teach the course will depend upon the particular interests of the students and the professor in charge. The choice of topics will be determined by:

a. The courses which the students have taken.
b. The material which appears to be of significant use to the student in his future employment, in nationally competitive examinations, and in future graduate education.
c. The material which appears to stimulate the students to gain greater mathematical maturity and to realize their own potential as students of mathematics.

3. Teaching methods: Since gifted students are concentrated in this course, it seems that a variety of teaching methods should be used. These include lectures, classroom discussions, reading assignments, presentations by students, etc. The methods selected will depend upon the particular techniques which the individual instructor handles best, and those which experience shows will stimulate the students to do their best work.

4. Semester when these courses will be offered: The Freshman, Sophomore, and Junior Mathematics Seminars will be offered in the Spring Semester. The reason for this is that the instructor can then begin by building depth into the material which the students learned during the fall. The Senior Mathematics Seminar will be given in the Fall Semester to allow the students to master more material for competitive national examinations.

C. Rationale.

Gifted and exceptionally hard working students of mathematics can profit greatly from deeper than average study of the undergraduate curriculum. At large universities these students sometimes take graduate courses during their undergraduate years. At other institutions these students sometimes are placed in a special "track" and given advanced training throughout their undergraduate years. Neither of these methods is available at Glassboro State College because our resources would not permit them.

The Seminar series outlined above will permit our better students to attempt to realize their full mathematical potential without straining the resources available to our department. A student who completes all four Seminars will be adding eight credits to his total number of college credits, and this should not materially detract from his capacity to take courses in other departments. We feel that this is an important service which must be provided for our gifted students.

D. Consultation.

The proposal has been reviewed and approved by membersof the Mathematics Department Curriculum Committee.