

Approval Form

1701 SPR

Proposal Title: Graduate Seminar in Mathematics

Sponsor(s) Dr Weinstein Dept: Mathematics Ext: 3342
Dr Colwell 3311

Check one: Course Specialization Concentration Minor Achievement Certificate
 Certification Program Major Program Minor Change (please name deletion or credit/title/catalog change)

Undergraduate Graduate 3 Credit Hours

<p>Step 1 (Department)</p> <p><input checked="" type="checkbox"/> Approved <u>3/2/95</u> Date</p> <p><input type="checkbox"/> Not Approved</p> <p><u>Larry Howe</u> Dept. CC/Chairperson</p> <p><input checked="" type="checkbox"/> Reviewed <u>1/1/95</u> Date</p> <p><u>[Signature]</u> Dept. Chairperson</p>	<p>Step 2 (Receipt)</p> <p><input type="checkbox"/> SCC# <u>95-96-40</u></p> <p>Proposal Received _____ Date</p> <p><u>307 1 1995</u></p> <p><u>[Signature]</u> SCC Chairperson</p>	<p>Step 3 (School CC)</p> <p>Reviewed <u>11/1/95</u></p> <p><input checked="" type="checkbox"/> Approved <input type="checkbox"/> Not Approved</p> <p>Comments: _____</p> <p><u>[Signature]</u> School Curr Comm Chairperson</p>
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Step 4 (Academic Dean) Comments:

Recommend
 Not Recommend
 Conditionally Recommend (see comments)

Reviewed 11/20/95 Date

[Signature] Signature of Dean of School

Step 5 (SCC)

Open Hearing 1/1/95 Date Approved by Senate Curriculum Committee 1/1/95 Date

Returned to sponsor(s) for the following reasons:

Step 6 (Senate)

Presented to Senate [Signature] Approved Not Approved

Not finalized by Executive Vice President/Provost

[Signature]

Step 7 (Executive V.P./Provost)

Received 4/2/96
Date

Approved Yes No

If no, reasons are as follows:

Student credit hours 3

Faculty load hours 3

Equalized credit hours _____

Official copy and approval sheet filed 4/2/96
Date

[Signature]
Signature, Executive Vice-President/Provost

Registrar

Approved course description received 14 May 96
Date

Hegis Taxonomy and Course Number assigned 1701.533

[Signature]
Signature, Registrar

14 May 96
Date

Notification forwarded:

- Senate Curriculum Committee Chairperson
- Department Chairperson(s)
- Academic Dean(s)
- Registrar
- Sponsor(s)

Rowan College of New Jersey
Department of Mathematics

Course Proposal

Graduate Seminar in Mathematics

I. Details

- a) Course Title: Graduate Seminar in Mathematics
- b) Sponsors: Dr. Evelyn Weinstock and Dr. Janet Caldwell,
Department of Mathematics
- c) Credit Hours: 3
- d) Course Level: Graduate
- e) Curricular Effect: Required course for all students in the
Master of Arts in Mathematics
- f) Prerequisites: One year of graduate level mathematics
courses (18 credit hours) or the
permission of the instructor.
- g) Suggested Time,
Implementation: One section of the course offered each
spring.
- h) Resources: Faculty, equipment, and library resources
are adequate for the first offering.

II. Rationale:

With few exceptions, second year graduate students have had little or no experience with the cutting-edge mathematics found in journals and periodicals. The course proposed here is intended to introduce students to this world and provide them with the necessary guidance that will enable them to benefit from it.

In this course, students will be introduced to mathematics not found in textbooks. They will learn how to read journal articles and analyze them. An emphasis will be placed on communication skills, both oral and written. Students will be required to give both oral and written analysis of their readings.

The mathematics department's graduate courses serve students with different mathematical backgrounds, different interests, and different goals. Whatever career path these students choose, be it education, industry or a Ph.D., a course of this nature is the gateway to the future.

III. Essence of the Course

a) Objectives in Relation to Student Outcomes

Students in this course will become familiar with various mathematical journals and periodicals. They will synthesize and analyze readings for their peers. In particular students will be able to:

Conduct a literature search.

Analyze, interpret, and summarize current mathematics.

Communicate effectively, both orally and in writing.

Generalize, applying inductive reasoning.

Specialize and form analogies, applying deductive reasoning.

Apply current results.

b) Topical Outline:

1. Relationships Between the Different Branches of Mathematics

Algebra

Analysis

Foundations, e.g., set theory and logic

Geometry

Emerging Areas, e.g., discrete mathematics

2. Reading Mathematical Research

Literature searches.

Exposition and communication.

Generalization.

Specialization and analogy.

Application.

3. Researching an Area of Interest in the Current Literature.

Identify the area.

Research the area.

Oral/Written Exposition of the area.

c) Evaluation and Grading:

Students will be evaluated on class participation, written and oral assignments and papers. In particular, students will be required to write a paper and give an oral presentation based on their area of interest.

d) Course Evaluation:

This course will be evaluated through customary student evaluations as well as departmental review on a regular basis.

4. This proposal has been reviewed by The Department of Mathematics' Curriculum Committee and The Mathematics Masters Committee.

5. Additional Information

Instead of a textbook, this course will use readings from the following:

The American Mathematical Monthly
The Mathematics Magazine
Primus
Scientific American
Journal of Recreational Mathematics