

PROPOSAL NUMBER: 99- 751
P

CURRICULUM PROPOSAL FORM

DEADLINES:

REGULAR COURSE PROPOSALS: OCTOBER 23, 1998 FOR FALL, 1999 AND FEBRUARY 19, 1999 FOR SPRING, 2000
 SHORT-TERM COURSE PROPOSALS: DECEMBER 11, 1998 FOR FALL, 1999 AND MARCH 26, 1998 FOR SPRING 2000

PROPOSAL TITLE: MINOR IN MATHEMATICS : Addition of a second track
SPONSOR/S: CURRICULUM COMMITTEE, DR. A. ABAY, CHAIR
DEPARTMENT: MATHEMATICS

CHECK ALL THAT APPLY:
 UNDERGRADUATE GRADUATE

COLLEGE: LAS
 If LAS: History/Humanities
 Math/Sciences
 Social/Behavioral Sciences

* * * * *

TYPE OF PROPOSAL (Check ALL that Apply)

<input type="checkbox"/> General Education	<input type="checkbox"/> New Course (NOT Gen. Ed.)
<input type="checkbox"/> <u>New Course in</u> _____ <u>Bank</u>	<input type="checkbox"/> Name Change (Dept., School, Major)
<input type="checkbox"/> Existing course, Add To _____ Bank	<input type="checkbox"/> Changes in Degree Requirements
<input type="checkbox"/> Multicultural/Global Designation	<input type="checkbox"/> <u>Changes Involve Gen. Ed. requirements</u>
<input type="checkbox"/> Writing Intensive Designation	<input type="checkbox"/> Minor Changes to Existing Courses
<input type="checkbox"/> New Minor/Concentration/Specialization	<input type="checkbox"/> <u>Course is NOT General Education</u>
<input type="checkbox"/> New Major/Degree Program	<input type="checkbox"/> <u>Course IS General Education</u>
<input type="checkbox"/> Short Term Course Proposal	<input checked="" type="checkbox"/> MINOR CHANGE TO MINOR IN MATHEMATICS

DEPARTMENT
 (SIGNATURE INDICATES APPROVAL)

Abera Abay 3/4/99 Ronald J. Godon 3/1/99
 DEPT. CURRICULUM CHAIR / DATE DEPT. CHAIRPERSON / DATE

COLLEGE CURRICULUM COMMITTEE
 DATE OF OPEN HEARING (if necessary) 4-27-99

APPROVED
 NOT APPROVED

COMMENTS:

Nancy Ann Tullham 4-27-99
 SIGNATURE DATE

ACADEMIC DEAN (& GRADUATE DEAN, for New Graduate Programs Only)

APPROVED
 NOT APPROVED

COMMENTS:

[Signature] [Signature]
 SIGNATURE (Academic Dean) SIGNATURE (Graduate Dean)

DATE DATE

UNIVERSITY CURRICULUM COMMITTEE

DATE OF OPEN HEARING (if necessary) 5/7/99

APPROVED

NOT APPROVED
COMMENTS:

Janetta Renee 5/25/99
SIGNATURE DATE

SENATE

Date announced at Senate 5/11/99

Voted upon at Senate: **Approved** **Not Approved** **Date:**

EXECUTIVE VICE PRESIDENT/PROVOST

APPROVED

JUN 8 1999

NOT APPROVED If no, reasons are as follows:

STUDENT CREDIT HOURS _____ FACULTY LOAD HOURS _____ EQUALIZED CREDIT HOURS _____

OFFICIAL COPY & APPROVAL SHEET FILED (DATE): _____

DATE/SIGNATURE EXECUTIVE VICE PRESIDENT/PROVOST

[Signature] 6/28/99

REGISTRAR

DATE APPROVED COURSE DESCRIPTION RECEIVED _____

HEGIS TAXONOMY & COURSE NUMBER ASSIGNED _____

DATE/SIGNATURE OF REGISTRAR Robert A. Hubert 7/7/99

NOTIFICATION FORWARD:

_____ SENATE CURRICULUM COMMITTEE CHAIRPERSON

_____ DEPARTMENT CHAIRPERSONS

_____ ACADEMIC DEAN(S)

_____ REGISTRAR

_____ SPONSOR(S)

**Rowan University
Department of Mathematics**

Minor Curricular Change

Changing the Minor in Mathematics to have two tracks

1. Details

a. Change requested:

We need to change the program of Minor in Mathematics such that it will have two tracks. Track I is the current format.

Minor in mathematics: Track I

A. The required core of 15 semester hours is:

1701.130	Calculus I	4
1701.131	Calculus II	4
1701.230	Calculus III	4
1701.210	Linear Algebra	3

B. Choose two courses from either the applied Mathematics option or two courses from the theoretical mathematics option.

Applied Mathematics Option:

1702.360	Intro to Probability and Statistics I
1702.361	Intro to Probability and Statistics II
1701.320	Ordinary Differential Equations
1701.332	Intro to Numerical Analysis
1703.400	Applications of Mathematics
1701.386	Intro to Partial Differential Equations

OR

Theoretical Mathematics Option:

1701.330	Intro to Real Analysis I
1701.331	Intro to Real Analysis II
1701.340	Modern Algebra I
1701.341	Modern Algebra II
1701.350	Geometry I
1701.351	Geometry II
1701.352	Theory of Numbers
1701.430	Intro to Complex Analysis

Track II is a new track designed for students from the School of Engineering.

Minor in mathematics: Track II (Engineering)

A. The required core of 19 semester hours is:

1701.130	Calculus I	4
1701.131	Calculus II	4
1701.241	Math for Engineering Analysis I	4
1701.242	Math for Engineering Analysis II	4
1701.210	Linear Algebra	3

B. Choose one course from the following list of courses in applied mathematics.

1702.360	Intro to Probability and Statistics I
1702.361	Intro to Probability and Statistics II
1701.332	Intro to Numerical Analysis
1703.400	Applications of Mathematics
1701.386	Intro to Partial Differential Equations

b. **Sponsor:** Curriculum Committee, Mathematics Department, Dr. Abera Abay, Chair of Committee.

2. **Rationale**

a. **Statement of “need” for such a change:**

Currently, the Department of Mathematics offers a minor in mathematics (Track I in section 1a). Students wishing to minor in mathematics must take 21 semester hours including 15 semester hours in required core courses and 6 semester hours in either applied mathematics or theoretical mathematics. The choice of applied or theoretical coursework depends on the student’s goals and should be decided in consultation with the department chairperson or advisement coordinator. A 2.0 GPA is required in the minor courses and at least 6 credits must be taken at Rowan University.

Since the opening of the Engineering School, the Mathematics Department has received requests for a minor in mathematics from students in the Engineering School. At present, Engineering students are required to take 4 courses in mathematics. These are Calculus I and II (freshman year) and Mathematics for Engineering Analysis I and II (sophomore year). The calculus courses are taken with other students from different disciplines. However, Mathematics for Engineering Analysis I and II are courses designed mainly for engineering students. These courses cover mainly topics from multi-variable calculus (Calculus III) and Differential Equations. Thus, the Mathematics Department feels that students who took Mathematics for Engineering Analysis I and II need not take Calculus III and Ordinary Differential Equations for the minor. Thus, we are proposing Track II for engineering students who want to minor in mathematics. Students wishing to

minor in mathematics must take 22 semester hours including 19 semester hours in required core courses and 3 semester hours in applied mathematics. A 2.0 GPA is required in the minor courses and at least 6 credits must be taken at Rowan University.

b. Statement of curricular effect:

The second track in Minor in Mathematics is designed for students from the School of Engineering. Any student from the School of Engineering who wishes to minor in mathematics is eligible for this program. This program implementation will not affect other department and school offerings.

c. Suggested time of implementation: This program is to be implemented starting fall 1999.

d. Resource requirements: There are no additional resources required for this program.

3. Results of Consultation

The above has been approved by members of the Mathematics Department. A consultation letter has been requested from the Dean of the School of Engineering.



*Office of the Associate Dean of Engineering
Henry M. Rowan Hall, Rm. 113*

April 8, 1999

Dr. Ronald Czocho
Chair, Mathematics
Robinson Hall

The College of Engineering has reviewed your proposal for a Minor Curricular Change - Changing the Minor in Mathematics to have two tracks.

We support the change that is proposed in the attached document. It will provide an opportunity for our engineering students to minor in mathematics in an efficient manner, while satisfying their major requirements. We are satisfied that the proposed track (Track II) will provide our students with a good foundation in mathematics, as is the intent of pursuing a minor.

Please let me know if we can be of further assistance in support of this proposal.

Sincerely yours,

Dr. Steven Chin
Associate Dean

Cc: Dr. James Tracey, Dean
Dr. T.R. Chandrupatla, Chair - Mechanical Engineering
Dr. R. Dusseau, Chair - Civil & Environmental Engineering
Dr. J. Schmalzel, Chair - Electrical & Computer Engineering
Dr. S. Slater, Chair - Chemical Engineering

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