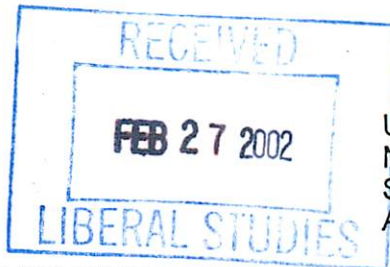LSC Use Only
Number: _236_
Submission Date: _____
Action-Date: _____

UWUCC USE Only
Number: _01-62C_
Submission Date: _____
Action-Date: _UWUCC App 4/9/02_
Senate App 5/7/02

CURRICULUM PROPOSAL COVER SHEET
University-Wide Undergraduate Curriculum Committee

I.   CONTACT

Contact Person _Gerald Buriok_   Phone _7 2608_

Department _Mathematics_

II.   PROPOSAL TYPE (Check All Appropriate Lines)

_X_   COURSE   _MATH 121 Calculus I / Nat Sci, Soc Sci_
                              Suggested 20 character title

____   New Course*   _____
                              Course Number and Full Title

_X_   Course Revision   _MATH 121 Calculus I for Business, Natural and Social Science_
                              Course Number and Full Title

____   Liberal Studies Approval+   _____
         for new or existing course   Course Number and Full Title

____   Course Deletion   _____
                              Course Number and Full Title

____   Number and/or Title Change _____
                              Old Number and/or Full Old Title

                              _____
                              New Number and/or Full New Title

_X_   Course or Catalog Description Change _MATH 121 Calculus I for Business, Natural and Social Sciences_
                              Course Number and Full Title

_____   PROGRAM: ____ Major   ____ Minor   ____ Track

____   New Program*   _____
                              Program Name

____   Program Revision*   _____
                              Program Name

____   Program Deletion*   _____
                              Program Name

____   Title Change   _____
                              Old Program Name

                              _____
                              New Program Name

III.   Approvals (signatures and date)

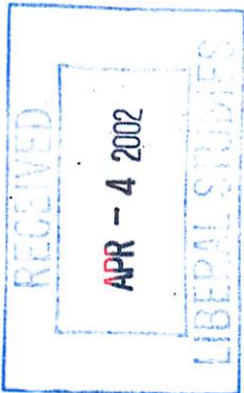_Gary Stewart_   10/1/01
Department Curriculum Committee

Gerald Buriok   10/1/01
Department Chair

_____   02/26/02
College Curriculum Committee

_John D. ____   2/27/02
College Dean

Mary Sadler   4-18-02
+Director of Liberal Studies (where applicable)

*Provost (where applicable)

85

I. Catalog Description

MATH 121 Calculus I for Natural and Social Sciences

4 credits
4 lecture hours
0 lab hours
(4c-0l-4sh)

Prerequisites: MATH 105 or MATH 110 or appropriate Placement Test Score or permission of the Mathematics Department Chairperson.

Note: Student may not take MATH 121 after successfully completing a calculus course without the written approval of the mathematics department chairperson.

This course offers a review of elementary functions, including logarithmic and exponential functions. Natural and Social Science majors are introduced to the central ideas of calculus, including limit, derivative and integral. Applications to natural and social sciences are emphasized.

II. Course Objectives

1. Students will understand and take advantage of pattern recognition in the study of mathematics.
2. Students will make a careful study of functions and their application to the natural and social sciences.
3. Students will understand how to interpret functions expressed analytically and graphically.
4. Students will understand the limit process and how it pertains to functions in the natural and social sciences.
5. Students will be able to calculate the derivative of a function and interpret its meaning.
6. Students will be able to calculate the integral of a function and interpret its meaning.
7. Students will leave the course with a solid set of skills and a conceptual framework to equip the students for future study.

III. Course Outline

A. Functions (4 hours)
  1. Real Numbers, Inequalities, and Lines
  2. Exponents
  3. Functions
  4. Functions, Continued

This is intended as a short review of precalculus. All of this material is covered extensively in MATH 105.

B. Derivatives and Their Uses (11 hours)
   1. Limits and Continuity
   2. Slopes, Rates of Change, and Derivatives
   3. Some Differentiation Formulas
   4. Product and Quotient Rules
   5. Higher-Order Derivatives
   6. Chain Rule and Generalized Power Rule
   7. Nondifferentiable Functions

C. Further Applications of Derivatives (11 hours)
   1. Graphing Using the First Derivative
   2. Graphing Using the First and Second Derivatives
   3. Optimization
   4. Further Applications of Optimization
   5. Optimizing Harvest Size
   6. Implicit Differentiation and Related Rates

D. Exponential and Logarithmic Functions (6 hours)
   1. Exponential Functions
   2. Logarithmic Functions
   3. Differentiation of Logarithmic and Exponential Functions

Reminder: Items 1 and 2 are a review from MATH 105.

E. Integration and Its Applications   (11 hours)
   1. Antiderivatives and Indefinite Integrals
   2. Integration Using Logarithmic and Exponential Functions
   3. Definite Integrals and Area
   4. Further Applications of Definite Integrals
   5. Integration by Substitution

F. Additional Topics in Integration (9 hours)
   1. Integration by Parts
   2. Integration Using Tables
   3. Improper Integrals
   4. Numerical Integration

The remaining four hours are for review classes and/or tests.

IV.   **Method of Instruction**

This course is taught in a traditional classroom setting involving lecture, student participation in class, homework assignments, and written in class evaluations. Instructors are free to assign optional projects that may or may not involve graphing technology.

V.   Evaluation Methods

The final grade for the course will be determined as follows:

50%   Tests. Tests will include problems on basic competency and critical thinking.
20%   Final Examination. The final examination will be comprehensive and cover both basic competency and critical thinking.
30%   Homework, Quizzes, and Projects. These will cover textbook assignments and applications.

Grades will be assigned as follows:

A: 90%-100%
B: 80%-89%
C: 70%-79%
D: 60-69%
F: 0%-59%

VI.   Required Textbook

Berresford, Geoffrey C. and Andrew M. Rockett. Applied Calculus (2nd edition). Boston: Houghton Mifflin Publishing Company, 2000.

VII.   Special Resource Requirements

Some instructors may require students to purchase a graphing calculator.

VIII.   Bibliography

Committee on the Mathematical Sciences in the Year 2000. Everybody Counts: A Report to the Nation on the Future of Mathematics Education. Washington, DC : National Academy Press, 1989.

Hughes-Hallet, Deborah, et al. Applied Calculus. New York: John Wiley & Sons, Inc., 1999.

Ostebee, Arnold, and Paul Zorn. Calculus from Graphical, Numerical, and Symbolic Points of View. Stamford, CT: Harcourt, 1997.

Part II. Description of Curriculum Change

1. New syllabus of record. (Attached.)

2. Summary of proposed revisions:

The proposed changes are in the prerequisite, replacing "or equivalent high school preparation" with "or appropriate Placement Test Score or permission of the Mathematics Department Chairperson", and the title, where the word "Business" is deleted. The note and catalog description are reworded for better sentence structure, and to emphasize the course is for non-mathematics majors.

a. Proposed new catalog description:

MATH 121 Calculus I for Natural and Social Sciences   **4c-0l-4sh**

Prerequisite: MATH 105 or MATH 110 or appropriate Placement Test Score or permission of the Mathematics Department Chairperson.

Note: Students may not take MATH 121 after successfully completing another calculus course without the written permission of the Mathematics Department Chairperson.

This course offers a review of elementary functions, including logarithmic and exponential functions. Natural and Social Science majors are introduced to the central ideas of calculus, including limit, derivative and integral. Applications to natural and social sciences are emphasized.

b. Old Catalog Description.

MATH 121 Calculus I for Business, Natural, and Social Sciences   **4c-0l-4sh**

Note: May not take MATH 121 after successfully completing another calculus course without the written permission of the mathematics department chairperson.
Prerequisite: MATH 105 or 110 or equivalent high school preparation

Introduces non-Math major to analytic geometry, elementary functions (including logarithmic and exponential functions), central ideas of the calculus (limit, derivative, and integral), applications of derivatives to business, social, and natural sciences.

3. Justification/rationale for the Change.

The prerequisite "equivalent high school preparation" is difficult to check and enforce. High school mathematics classes vary in depth and quality and a list of course doesn't provide reliable information. With the implementation of Banner, it is possible for the computer to check to see if a student's Placement Test Score in mathematics is appropriate for enrollment in MATH 121. The Placement Test Score provides a way of measuring high school preparation, and Banner will enforce this prerequisite.

The catalog description has been reworded to remove unnecessary parentheses and make it more readable. The note has been reworded to make a complete sentence. The Mathematics Department developed a new course for students in the College of Business, namely MATH 115 Applied Mathematics for Business. This new course will be required instead of MATH 121 for business students. Thus "Business" is being removed from the title of both courses in the MATH 121/122 sequence, and business applications will be de-emphasized in the course.

4. Old syllabus of record. (Attached.)

5. Liberal Studies course approval form and checklist. (Attached.)

Part III. Letters of Support. (Attached.)

Mathematics Department
Indiana University of Pennsylvania
Indiana, PA 15705

Course Number: MA 121

Course Title: Calculus I for Business, Natural, and Social Sciences

Credits: 4 semester hours

Prerequisites: MA 110 or equivalent high school preparation

Textbook: *Applied Calculus*, 3rd ed.
by Dennis Berkey
Saunders College Publishing

Revised: 4/96

Catalog Description:
Introduces non-Math major to analytic geometry, elementary functions (including logarithmic and exponential functions), central ideas of the calculus (limit, derivative, and integral), applications of derivatives to business, social, and natural sciences.

Course Outline/Sample Time Schedule:

1. Numbers, Functions, and Graphs   (4 hours)
    Please note: Treat this as a **review** of precalculus/college algebra material. Don't encourage skipping precalculus by covering this material in detail.
    1.1 Working with Real Numbers
    1.2 Graphs of Equations
    1.3 Distance in the Plane; Equations for Circles
    1.4 Functions and Their Graphs
    1.5 Some Special Types of Functions
    1.6 Finding Zeroes of Functions
    1.7 Combinations of Functions

2. Differentiation
    2.1 The Slope of a Curve   (2 hours)
    2.2 Limits   of Functions   (1 hour)
    2.3 One-Sided Limits and Continuity   (1 hour)
    2.4 The Derivative   (2 hours)
    2.5 Applicationbs of the Derivative:
         Position and Velocity   (1 hour)
    2.6 Business Appliications of the Derivative (1 hour)
    2.7 The Product and Quotient Rules   (1 hour)
    2.8 The Chain Rule   (1 hour)

2.9   Limits at Infinity   (1 hour)

3.   Applications of The Derivative
       3.1   Increasing and Decreasing Functions   (1 hour)
       3.2   Relative Maxima and Minima   (1 hour)
       3.3   Concavity and the Second Derivative   (2 hours)
       3.4   Curve Sketching I: Asymptotes   (2 hours)
       3.5   Curve Sketching II   (2 hours)
       3.6   Finding Absolute Extrema   (1 hour)
       3.7   Applied Maximum-Minimum Problems   (1 hour)
       3.8   Applications to Economics and Business   (1 hour)
       3.9   Related rates and Implicit Differentiation   (2 hours)
       3.10 Linear Approximations and Differentials   (1 hour)
       3.11 The Mean Value Theorem   (1 hour)

4.   Exponential and Logarithmic Functions
       4.1   Exponential Functions   (1 hour)
       4.2   Logarithmic Functions   (1 hour)
       Remember, these two sections should be a **review** of
precalculus/college algebra material.
       4.3   Differentiating the Natural Logarithm Function(2 hours)

       This is 2 hours because this section contains logarithmic
differentiation.
       4.4   Differentiating the Exponential Function (1 hour)
       4.5   Exponential Growth and Decay   (2 hours)
       4.6   Mathematical Modelling   (2 hours)

5.   Antiderivatives and the Definite Integral
       5.1   Antiderivatives   (1 hour)
       5.2   More on Antiderivatives   (1 hour)
       5.3   Finding Antiderivatives by Substitution   (1 hour)
       5.4   The Area Problems and the Definite Integral   (2 hours)
       5.5   The Fundamental Theorem of Calculus   (1 hour)
       5.6   Finding Areas by Integration   (2 hours)
       5.7   Applications of the Definite Integral
             to Economics and Business   (2 hours)
       5.8   Other Applications of the Definite Integral   (1 hour)

This syllabus covers 50 hours of class time. This leaves 6 hours
for tests and to do optional computer topics, do explorations, or
to devote extra time to topics that may give your students
difficulty.

Note : If you wish to use a graphing calculator in this course,
you must notify the chairperson of the Service Courses Committee
one semester in advance so that a note to this effect can be
included on the Course Schedule for students.

LIBERAL STUDIES COURSE APPROVAL, PARTS 1-3: GENERAL INFORMATION CHECK-LIST

I. **Please indicate the LS category(ies) for which you are applying:**

LEARNING SKILLS:
_____ First Composition Course   _____ Second Composition Course
__✓__ Mathematics

KNOWLEDGE AREAS:
_____ Humanities: History   _____ Fine Arts
_____ Humanities: Philos/Rel Studies   _____ Social Sciences
_____ Humanities: Literature   _____ Non-Western Cultures
_____ Natural Sci: Laboratory   _____ Health & Wellness
_____ Natural Sci: Non-laboratory   _____ Liberal Studies Elective

II. **Please use check marks to indicate which LS goals are _primary, secondary, incidental,_ or _not applicable_. When you meet with the LSC to discuss the course, you may be asked to explain how these will be achieved.**

Prim Sec Incid N/A

A. Intellectual Skills and Modes of Thinking:
1. Inquiry, abstract logical thinking, critical analysis, synthesis, decision making, and other aspects of the critical process. — ✓(Prim)
2. Literacy--writing, reading, speaking, listening. — ✓(Sec)
3. Understanding numerical data. — ✓(Prim)
4. Historical consciousness. — ✓(Sec)
5. Scientific Inquiry. — ✓(Sec)
6. Values (Ethical mode of thinking or application of ethical perception). — ✓(N/A)
7. Aesthetic mode of thinking. — ✓(Sec)

B. Acquiring a Body of Knowledge or Understanding Essential to an Educated Person — ✓(Prim)

C. Understanding the Physical Nature of Human Beings — ✓(N/A)

D. Collateral Skills:
1. Use of the library. — ✓(N/A)
2. Use of computing technology. — ✓(N/A)

III. **The LS criteria indicate six ways that courses _should_ contribute to students' abilities. Please check all that apply. When you meet with the LSC, you may be asked to explain your check marks.**

_____ 1. Confront the major ethical issues which pertain to the subject matter; realize that although "suspended judgment" is a necessity of intellectual inquiry, one cannot live forever in suspension; and make ethical choices and take responsibility for them.

✓ 2. Define and analyze problems, frame questions, evaluate available solutions and make choices.

✓ 3. Communicate knowledge and exchange ideas by various forms of expression, in most cases writing and speaking.

✓ 4. Recognize creativity and engage in creative thinking.

✓ 5. Continue learning even after the completion of their formal education.

✓ 6. Recognize relationships between what is being studied and current issues, thoughts, institutions, and/or events.

LIBERAL STUDIES COURSE APPROVAL, PARTS IV.

A. There is a common syllabus of topics that are covered by each of the instructors teaching this course. This syllabus includes, but is not limited to, topics which introduce students to deductive reasoning, develop problem solving skills, and enable students to understand the underlying principles of formulae, and use and interpret numerical data. The Mathematics Department has a Service Courses Committee, which oversees the content and methodology in a collection of non-majors courses, including MATH 121.

B. Whenever appropriate, information will be introduced which will reflect the contributions made to mathematics by women and racial minorities.

C. The Mathematics Department wishes to exercise the exception and claim that the primary purpose of this course is the development of higher level quantitative skills. The syllabus for MATH 121 was developed to provide students with basic knowledge of calculus in order that they may apply it in upper division courses in their majors. Success in these courses requires an understanding of descriptive and analytical approaches to problem solving.

D. MATH121 is an introductory course. Students who score sufficiently high on the Placement Test may take this course in their first semester. Basic concepts of calculus are introduced in this course for the purpose of developing analytical and quantitative skills which can be applied in upper level courses, particularly those related to safety and natural sciences. The first calculus course in the mathematics major sequence is MATH 123, which is more rigorous than MATH 121 and has a different emphasis. Besides mathematics majors, MATH 123 is required of students in certain programs in the College of Natural Sciences and Mathematics. It is deeper than MATH 121 since a thorough understanding of underlying concepts of calculus is emphasized.

CHECK LIST -- MATHEMATICS
(Learning Skills Area)

Mathematics Criteria which the Course must meet:

__✓__ Introduce students to deductive reasoning

__✓__ Develop in the student problem solving techniques appropriate for the course

__✓__ Enable the student to understand the underlying principle of formulas

__✓__ Enable the student to use and interpret numerical information

Courses appropriate to the Mathematics Learning Skills Area must be either:

__✓__ A. Mathematics courses that develop significant mathematical skills required by a major discipline

_____ B. Mathematics courses designed for Liberal Studies

Additional criteria which courses in Category B must meet:

_____ Develop the student's confidence in handling numerical problems and data.

_____ Be sensitive to the diverse background characteristics of the student

_____ Include elements on the history or appreciation of mathematics

_____ Introduce the hand-held calculator or the computer as a tool

Mathematics Department Curriculum Changes

Response Form

✓ The Mathematics Department has informed me of the proposed changes listed
below, and I support these changes.

___ The Mathematics Department has informed me of the proposed changes listed
below, and I do not support these changes.

Comments:

MANAGEMENT   Prarlents B·w   5/31/2001
_____   _____
Department   Chairperson   /   Date

1. MATH 105 College Algebra: Change in prerequisite.

2. MATH 121 Calculus I for Business, Natural and Social Sciences: Change in prerequisite,
catalog description, and title.

3. MATH 122 Calculus II for Business Natural and Social Sciences: Change in prerequisite and
title.

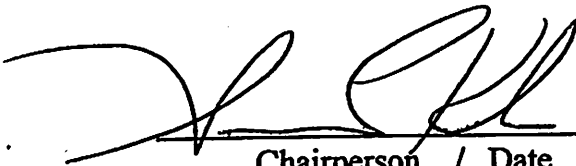# Mathematics Department Curriculum Changes

Response Form

✓ The Mathematics Department has informed me of the proposed changes listed below, and I support these changes.

___ The Mathematics Department has informed me of the proposed changes listed below, and I do not support these changes.

Comments:

Accounting
Department / _____ _____ . 6/1/01
                          Chairperson   /   Date

1. MATH 105 College Algebra: Change in prerequisite.

2. MATH 121 Calculus I for Business, Natural and Social Sciences: Change in prerequisite, catalog description, and title.

3. MATH 122 Calculus II for Business Natural and Social Sciences: Change in prerequisite and title.

12

Mathematics Department Curriculum Changes

Response Form

✓ The Mathematics Department has informed me of the proposed changes listed below, and I support these changes.

___ The Mathematics Department has informed me of the proposed changes listed below, and I do not support these changes.

Comments:

Finance & Legal Studies
_____
Department

Ibrahim Affaneh   6/1/01
_____
Chairperson   /   Date

1. MATH 105 College Algebra: Change in prerequisite.

2. MATH 121 Calculus I for Business, Natural and Social Sciences: Change in prerequisite, catalog description, and title.

3. MATH 122 Calculus II for Business, Natural and Social Sciences: Change in prerequisite and title.
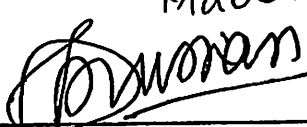
13

Mathematics Department Curriculum Changes

Response Form

_✓_ The Mathematics Department has informed me of the proposed changes listed below, and I support these changes.

___ The Mathematics Department has informed me of the proposed changes listed below, and I do not support these changes.

Comments:

Matrons

_____
Matons Department

_____ June 13, 2001
Chairperson / Date

1. MATH 105 College Algebra: Change in prerequisite.

2. MATH 121 Calculus I for Business, Natural and Social Sciences: Change in prerequisite, catalog description, and title.

3. MATH 122 Calculus II for Business Natural and Social Sciences: Change in prerequisite and title.

Mathematics Department Curriculum Changes

Response Form

X The Mathematics Department has informed me of the proposed changes listed below, and I support these changes.

___ The Mathematics Department has informed me of the proposed changes listed below, and I do not support these changes.

Comments:

Safety Sciences
_____
Department

Lo H. Ferguson 5/31/01
_____
Chairperson / Date

1. MATH 105 College Algebra: Change in prerequisite.

2. MATH 121 Calculus I for Business, Natural and Social Sciences: Change in prerequisite, catalog description, and title.

3. MATH 122 Calculus II for Business Natural and Social Sciences: Change in prerequisite and title.

15

Mathematics Department Curriculum Changes

Response Form

⟋ The Mathematics Department has informed me of the proposed changes listed below, and I support these changes.

___ The Mathematics Department has informed me of the proposed changes listed below, and I do not support these changes.

Comments:

Spanish + Classical Lang .   _R. Roger Smith_ 6-4-01
      Department   **Chairperson / Date**

1. MATH 105 College Algebra: Change in prerequisite.

2. MATH 121 Calculus I for Business, Natural and Social Sciences: Change in prerequisite, catalog description, and title.

3. MATH 122 Calculus II for Business Natural and Social Sciences: Change in prerequisite and title.
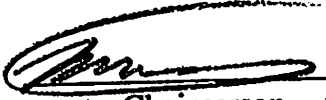
Mathematics Department Curriculum Changes

Response Form

✓ The Mathematics Department has informed me of the proposed changes listed below, and I support these changes.

___ The Mathematics Department has informed me of the proposed changes listed below, and I do not support these changes.

Comments:

GEOGRAPHY
Department

Chairperson   /   Date   8/1/c1

1. MATH 105 College Algebra: Change in prerequisite.

2. MATH 121 Calculus I for Business, Natural and Social Sciences: Change in prerequisite, catalog description, and title.

3. MATH 122 Calculus II for Business Natural and Social Sciences: Change in prerequisite and title.

Mathematics Department Curriculum Changes

Response Form

✓ The Mathematics Department has informed me of the proposed changes listed below, and I support these changes.

___ The Mathematics Department has informed me of the proposed changes listed below, and I do not support these changes.

Comments:

Nursing and Allied Health
Professions.
Department

~~~~~~ 6-4-01.
Chairperson / Date

1. MATH 105 College Algebra: Change in prerequisite.

2. MATH 121 Calculus I for Business, Natural and Social Sciences: Change in prerequisite, catalog description, and title.

3. MATH 122 Calculus II for Business Natural and Social Sciences: Change in prerequisite and title.

Mathematics Department Curriculum Changes

Response Form

___/ The Mathematics Department has informed me of the proposed changes listed
below, and I support these changes.

___ The Mathematics Department has informed me of the proposed changes listed
below, and I do not support these changes.

Comments:

_____Biology_____   _____W. Bar Bar_____ 8/7/61
        Department   Chairperson   /   Date

1. MATH 105 College Algebra: Change in prerequisite.

2. MATH 121 Calculus I for Business, Natural and Social Sciences: Change in prerequisite,
catalog description, and title.

3. MATH 122 Calculus II for Business Natural and Social Sciences: Change in prerequisite and
title.

Mathematics Department Curriculum Changes

Response Form

___ The Mathematics Department has informed me of the proposed changes listed
below, and I support these changes.

___ The Mathematics Department has informed me of the proposed changes listed
below, and I do not support these changes.

Comments:

Computer Science
Department

Gary L Breitenbach   _Jun 18, 2001_
Chairperson   **Date**

1. MATH 105 College Algebra: Change in prerequisite.

2. MATH 121 Calculus I for Business, Natural and Social Sciences: Change in prerequisite,
catalog description, and title.

3. MATH 122 Calculus II for Business Natural and Social Sciences: Change in prerequisite and
title.

Mathematics Department Curriculum Changes

Response Form

✓ The Mathematics Department has informed me of the proposed changes listed
below, and I support these changes.

___ The Mathematics Department has informed me of the proposed changes listed
below, and I do not support these changes.

Comments:

Geoscience .   _Darlene Richards_ 6/13/01
Department   Chairperson   /   Date

1. MATH 105 College Algebra: Change in prerequisite.

2. MATH 121 Calculus I for Business, Natural and Social Sciences: Change in prerequisite,
catalog description, and title.

3. MATH 122 Calculus II for Business Natural and Social Sciences: Change in prerequisite and
title.

Mathematics Department Curriculum Changes

Response Form

✓ The Mathematics Department has informed me of the proposed changes listed below, and I support these changes.

___ The Mathematics Department has informed me of the proposed changes listed below, and I do not support these changes.

Comments:

Physics
Department

Richard O. Roberts 6/8/01
Chairperson / Date

1. MATH 105 College Algebra: Change in prerequisite.

2. MATH 121 Calculus I for Business, Natural and Social Sciences: Change in prerequisite, catalog description, and title.

3. MATH 122 Calculus II for Business Natural and Social Sciences: Change in prerequisite and title.

Mathematics Department Curriculum Changes

Response Form

✓ The Mathematics Department has informed me of the proposed changes listed
below, and I support these changes.

___ The Mathematics Department has informed me of the proposed changes listed
below, and I do not support these changes.

Comments:

Chemistry
Department

Russes Van Jossen Ramsey
Chairperson   /   Date

August 29, 2001

1. MATH 105 College Algebra: Change in prerequisite.

2. MATH 121 Calculus I for Business, Natural and Social Sciences: Change in prerequisite,
catalog description, and title.

3. MATH 122 Calculus II for Business Natural and Social Sciences: Change in prerequisite and
title.

Mathematics Department Curriculum Changes

Response Form

✓ The Mathematics Department has informed me of the proposed changes listed below, and I support these changes.

___ The Mathematics Department has informed me of the proposed changes listed below, and I do not support these changes.

Comments:

___*m/s/ps*___
Department

Lucretia B. Berkey 9/25/01
Chairperson   Date

1. MATH 105 College Algebra: Change in prerequisite.

2. MATH 121 Calculus I for Business, Natural and Social Sciences: Change in prerequisite, catalog description, and title.

3. MATH 122 Calculus II for Business Natural and Social Sciences: Change in prerequisite and title.

To: Dr. Charles McCreary, Chairperson
    French/German Department

From: Gerald Buriok, Chairperson
      Mathematics Department

Date: September 13, 2001

Subject: Proposed Mathematics Curricula Revisions

Attached to this memo is a copy of proposed mathematics curricula revisions that may affect your department. This is the same material that was originally sent to your department on June 1, 2001. Professor Op De Beeck returned the original with a note saying I should send them to Dr. Liscinsky later in the summer. Considering the unfortunate events that occurred, I have held off until now.

Please consider these proposed revisions and return the response form to me at your earliest convenience.

Jerry Buriok

From: Jerry Buriok <jburiok@grove.iup.edu>
To: <karatjas@iup.edu>
Cc: Jerry Buriok <jburiok@grove.iup.edu>
Sent: Friday, July 06, 2001 8:37 AM
Subject: Math Curriculum Proposals

Hi Nick,

I haven't heard back from you about the curriculum proposals for MATH 105, 110, 121, 122, 123, 124 that I sent out around the first of June. Any chance you could dig those out and fill out the response form I provided? If you can't find them, let me know and I will send another copy.

Jerry Buriok