PROPOSAL NUMBER: 99-706
CURRICULUM PROPOSAL FORM

DEADLINES:

PROPOSAL TITLE: MINOR CHANGE - Math/Science Specialization of Liberal Studies
SPONSOR/S: K. Magee-Sauer & Math/Science Advisory Board
DEPARTMENT: Chemistry & Physics

CHECK ALL THAT APPLY:
_____ UNDERGRADUATE _____ GRADUATE

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

TYPE OF PROPOSAL (Check ALL that Apply)
_____ General Education
_____ New Course in __________ Bank
_____ Existing course, Add To __________ Bank
_____ Multicultural/Global Designation
_____ Writing Intensive Designation

_____ New Minor/Concentration/Specialization

_____ New Major/Degree Program
_____ Short Term Course Proposal

X ____ Minor Changes to Existing Courses

New Course (NOT Gen. Ed.)
Name Change (Dept., School, Major)
Changes in Degree Requirements
____ Changes Involve Gen. Ed. requirements

Course is NOT General Education
Course IS General Education

DEPARTMENT (SIGNATURE INDICATES APPROVAL)

DEPT. CURRICULUM CHAIR / DATE DEPT. CHAIRPERSON / DATE

COLLEGE CURRICULUM COMMITTEE
DATE OF OPEN HEARING (if necessary)

--- APPROVED
--- NOT APPROVED
COMMENTS: 

SIGNATURE DATE

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

--- APPROVED
--- NOT APPROVED
COMMENTS:

SIGNATURE (Academic Dean) DATE
SIGNATURE (Graduate Dean) DATE
UNIVERSITY CURRICULUM COMMITTEE

DATE OF OPEN HEARING (if necessary) 10/19/98

✓ APPROVED

— NOT APPROVED

COMMENTS:

[Signature] 10/20/98

SIGNATURE

DATE

SENATE

Date announced at Senate 10/20/98

Voted upon at Senate: Approved Not Approved Date:

EXECUTIVE VICE PRESIDENT/PROVOST

✓ APPROVED

— 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

REGISTRAR

DATE APPROVED COURSE DESCRIPTION RECEIVED 11/19/98

HEGIS TAXONOMY & COURSE NUMBER ASSIGNED ______

DATE/SIGNATURE OF REGISTRAR ______

NOTIFICATION FORWARD:

✓ SENATE CURRICULUM COMMITTEE CHAIRPERSON

✓ DEPARTMENT CHAIRPERSONS

✓ ACADEMIC DEAN(S)

✓ REGISTRAR

✓ SPONSOR(S)

Transmittal 11/19/99
SENATE CURRICULUM COMMITTEE
MINOR CURRICULAR CHANGE FORM

PROPOSAL TITLE: Minor Change Math/Science: Specialization of Liberal Studies

☐ UNDERGRADUATE  ☐ GRADUATE  ☐ CREDIT HOURS

SPONSOR(S): K. Mayer-Stover, Math/Sci Advisory Board

DEPARTMENT: Chem & Phys

TELEPHONE: 355-3552

CHECK:
☐ CHANGES IN APPROVED MINORS, SPECIALIZATIONS, CONCENTRATIONS
☐ CATALOG DESCRIPTIONS, TITLES, AND/OR PREREQUISITES
☐ SMALL CHANGES IN COURSE CONTENT OF EXISTING COURSES WHICH DO NOT SUBSTANTIALLY VARY THE CURRICULUM
☐ CHANGES IN HEGIS NUMBER

STEP #1 (DEPARTMENT)
Date Approved: 4/16/98
Date NOT Approved: ______________________

Dept. Curriculum Chairperson signature/date

STEP #2 (COLLEGE)
Recommend To Approve/date: 4/27/98
Recommend NOT To Approve/date: ______________________

Comments:

Dept. Chairperson signature/date

College Curriculum Chairperson Signature/date

STEP #3 (ACADEMIC DEAN)
Recommended: __________

NOT Recommended: ______________________

Dean of College Signature/date

STEP #4 (CURRICULUM COMMITTEE)
Recvd: 4/16/98

SCC# 2798-327

APPROVED: ______________________

NOT APPROVED: ______________________

Curriculum Committee Chairperson Signature/date

STEP #5 EXECUTIVE VP/PROVOST
Approved: ______________________

NOT Approved: ______________________

Signature /Date

REGISTRAR'S SIGNATURE/DATE:
Minor Curricular Change

1. Details:
a. Change Requested:
Course equivalency for major course requirements within the Math/Science Specialization of the Liberal Studies Degree.


2. Rationale:
a. Statement of Need
Many students are transferring into this specialization with significant previous course work which does not exactly match the required specified courses. However, some courses and combination of courses meet or exceed the objectives and goals of the currently required courses. Furthermore, in some instances, students may have future graduate work plans that require a year of chemistry or biology for admission. We propose to allow students to substitute more rigorous course selections when appropriate for their career directions.

The Exploration of the Solar System course satisfies the same objective as the Astronomy course. It is actually a better choice for elementary education coordinate majors since the NJ Science Standards for astronomy are in fact dominated by solar system topics. Astronomy is heavily taxed as a "lab science" course so letting students opt to take the Solar System class reduces the burden on Astronomy as well.

b. Curricular effect:

Essentials of Biology or Biology I AND II

Physics of Everyday Life or Physics I AND II (with or without calc)

Chemistry of Everyday Life or Chemistry I AND II

Astronomy or Exploration of the Solar System

Students opting to take a full year sequence of the discipline rather than the one semester requirement will count the extra hours in their free elective category since this is an optional choice for the student to help prepare for future graduate work, or for course work previously completed before declaring a Math/Sci specialization of the B.A. in Liberal Studies degree. Students taking the Solar System course will reduce the hours required in General Education Math/Science Bank from 15 hours to 14 hours.

This option is relevant to very few of our majors, but we feel we need an accepted policy for the students who do. Currently we have 17 majors of which 15 are elementary education coordinate majors. This is the first year of the program.

3. Results of Consultation: Liberal Studies Math/Science Panel has approved the above policy. P. Bartelt, D. Kapel, G. Itzkowitz, S. Bergmann, E. Moore have been sent this proposal and asked to send comments if they have any directly to the Senate Office.
LIBERAL STUDIES MAJOR: Math/Science Specialization

GENERAL EDUCATION REQUIREMENTS
General Education requirements outlined below are for those students admitted to Rowan University September 1997 or after.

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<tr>
<th>Communications Bank</th>
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<td>Composition I (1501.111)</td>
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<td>Composition II (1501.112)</td>
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<td>Public Speaking (1506.202)</td>
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<th>Math/Science Bank</th>
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<td>Physics of Everyday Life (1902.150)</td>
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<td>Chemistry of Everyday Life (1905.102)</td>
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<td>Statistics I (1702.260)</td>
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<td>Structures of Mathematics (1701.201)</td>
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<th>Humanities, History, and Languages Bank*</th>
<th>12 s.h.</th>
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<td>Philosophy of Science-Writing Intensive (1509.368)</td>
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<td>Logic of Everyday Reasoning (1509.110)</td>
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<th>General Education Electives+</th>
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<td>Computer Literacy</td>
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<td>Gen Ed elective</td>
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+ General Education Electives include those courses designated as "General Education" courses on the General Education Guide sheet, all courses within Liberal Arts and Sciences, and Health & Wellness.

Important: Elementary Education coordinate majors should choose their electives within General Education to meet NJ State Certification Standards.

NOTE: All students must have at least one course designated as Multicultural/Global (M/G), Literature (LIT), Writing Intensive (WI), and a Laboratory Science. The Math/Science Specialization specifies the writing intensive section of Philosophy of Science which must be taken at Rowan University. Students should consult the University's list of General Education courses to select courses which satisfy the M/G and LIT requirements.
Requirements in the Major:  33-34 semester hours
In addition to the General Education (pre-major) requirements, beginning, intermediate, and upper-level courses have been selected or developed so that knowledge and skills are introduced and acquired in a logical order.

1. Lower-Level Major Courses:  16 - 17 s.h.
   (100 and 200 level courses)
   The required lower-level courses are:
   - Principles of Earth Science 3 s.h.
   - Essentials of Biology 4 s.h.
   - Introduction to Programming 3 s.h.
   - Discrete Mathematics 3 s.h.
   - Astronomy or Solar System 4 - 3 s.h.

2. Upper-level Major Courses  17 s.h.
   (300 and 400 level courses)

A total of 17 semester hours, in addition to the General Education and lower-level courses listed above are required for the major. The required upper-level courses are:

   - Chemistry of the Environment 3 s.h.
   - Principles of Ecology 4 s.h.
   - Patterns in Nature I: Visual Geometry 3 s.h.
   - Patterns in Nature II: Projects in Calculus 4 s.h.
   - and Physics
   - Senior Seminar 3 s.h.

Requirements for Graduation:  120 semester hours

General Education: 64 s.h.
Lower Level: 16-17 s.h.
Upper Level: 17 s.h.
Free Electives*: 23-22 s.h.

*Recommended Free Electives or General Education Electives:

   - Pre-Calculus (if needed - prerequisite for Statistics I and Discrete Math) 4 s.h.