NEW COURSE PROPOSAL

PROGRAM AREAS _____MATH

1. Catalog Description of the Course. *[Include the course prefix, number, full title, and units. Provide a course narrative including prerequisites and corequisites. If any of the following apply, include in the description: Repeatability (May be repeated to a maximum of ___ units); time distribution (Lecture ___ hours, laboratory ___ hours); non-traditional grading system (Graded CR/NC, ABC/NC). Follow accepted catalog format.]*

MATH 230 LOGIC AND MATHEMATICAL REASONING (3)
 Three hours of lecture per week.
 Introduction to modern deductive logic. Critical thinking and abstract approaches to common language. Includes abstract sets and number sets, relations, prepositional logic, common language cases, and theory of quantification.

GenEd:A3

2. Mode of Instruction.

	Units	Hours per Unit	Benchmark Enrollment
Lecture	3	1	24
Seminar	_____	_____	_____
Laboratory	_____	_____	_____
Activity	_____	_____	_____

3. Justification and Learning Objectives for the Course. (Indicate whether required or elective, and whether it meets University Writing, and/or Language requirements) *[Use as much space as necessary]*

The course is a required course for Mathematics majors.

Through this course, students will be able to
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- Analyze statements of common language in a critical and abstact manner
- Use deductive logic in a variety of everyday and scientific situations.
- Work with sets, numbers, relations, propositional structures (both with and without quantification).
- Assess the logical soundness of statements and proofs.
- Present concepts and techniques of logic in oral and written form.

This course is not designed to satisfy the University Writing or Language requirements.

4. Is this a General Education Course   YES
  If Yes, indicate GE category:

A (English Language, Communication, Critical Thinking)	A3
B (Mathematics & Sciences)	
C (Fine Arts, Literature, Languages & Cultures)	
D (Social Perspectives)	
E (Human Psychological and Physiological Perspectives)	

5. **Course Content in Outline Form.** *[Be as brief as possible, but use as much space as necessary]*

    Introduction to modern deductive logic.
    Critical thinking and abstract approach to common language.
    Abstract sets and number sets
    Relations, prepositional logic and theory of quantification.

6. **References.** *[Provide 3 - 5 references on which this course is based and/or support it.*

Logic. A very short introduction, by Graham Priest Oxford University Press (2000)
Symbolic Logic, G. Hardegree, McGrawHill, (1999).

7. **List Faculty Qualified to Teach This Course.**

    All Mathematics and Computer Science Faculty

8. **Frequency.**
    a. Projected semesters to be offered: Fall ___X__   Spring _X____   Summer __X___

9. **New Resources Required.**

    a. Computer (data processing), audio visual, broadcasting needs, other equipment

        None

    b. Library needs

        None

    c. Facility/space needs

        None

10. **Consultation.**
    Attach consultation sheet from all program areas, Library, and others (if necessary)

11. If this new course will alter any degree, credential, certificate, or minor in your program, attach a program modification.

_____ **Ivona Grzegorczyk**____1/8/03_____
Proposer of Course   Date