

- 
- 
- 

*\*Indicates a required field*

Proposer*	Alfred Dahma	Proposer Email*	alfy@iup.edu
Contact Person*	Francisco Alarcón	Contact Email*	falarcon@iup.edu
Proposing Department/Unit*	Mathematics	Contact Phone*	7-2608

Course Level\* undergraduate-level

**Course Revisions**

(Check all that apply; fill out categories below as specified; i.e. if only changing a course title, only complete Category A)

Category A:

Category B:

liberal-studies

**\* Teacher Education: Please complete the Teacher Education section of this form (below)**

**\* Liberal Studies: Please complete the Liberal Studies section of this form (below)**

**\* Distance Education: Please complete the Distance Education section of this form (below)**

**Rationale for Proposed Changes (All Categories)**







2. Number patterns
3. Solving mathematical puzzles

**B. Sets**

1. Basic concepts
2. Sets of numbers
3. Venn diagrams
4. Operations on sets
5. Infinity

**C. Logic**

1. Statements and quantifiers
2. Truth tables
3. Analyzing arguments

**D. Geometry**

1. Basic terms and concepts
2. Angles
3. Polygons
4. Perimeter, area
5. Polyhedrons, volume, surface area
6. Transformations
7. Non-Euclidean geometry
8. Topology

**E. Numeration**

1. Roman numerals
2. Binary numbers
3. Other number systems

**F. Number Theory**

1. Divisibility rules
2. Factors
3. Prime numbers
4. Prime factorization
5. Goldbach's Conjecture
6. Fermat's Last Theorem
7. Diophantine equations

**(N) Brief Course Outline**

*(Give sufficient detail to communicate the content to faculty across campus.*

*It is not necessary to include specific*

***As outlined by the federal definition of a "credit hour", the following should be a consideration***

***regarding student work - For every one hour of classroom or direct faculty instruction,***

***there should be a minimum of two hours of out of class student work.***

***readings, calendar or assignments)***

A. Problem Solving Strategies

1. Inductive/Deductive reasoning
2. Number patterns
3. Solving mathematical puzzles

B. Sets

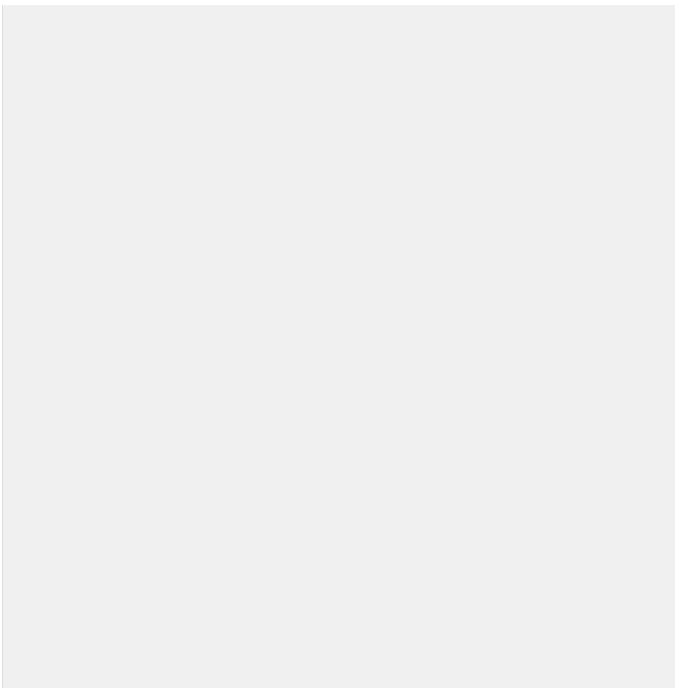
1. Basic concepts
2. Sets of numbers
3. Venn diagrams
4. Operations on sets

<p>If Completing this Section, Check the Box to the Right:</p>	<p><b>NOTE: you must check this box if the Course has previously been approved for Distance Education</b></p>
<p>Course Prefix/Number</p>	
<p>Course Title</p>	
<p>Type of Proposal</p>	<p><b>See CBA, Art. 42.D.1 for Definition</b></p>
<p>Brief Course Outline</p>	<p><b>Give an outline of sufficient detail to communicate the course content to faculty across campus. It is not necessary to include specific readings, calendar or assignments</b></p> <p><b>As outlined by the federal definition of a "credit hour", the following should be a consideration regarding student work - For every one hour of classroom or direct faculty instruction, there should be a minimum of two hours of out of class student work.</b></p>
<p><b>Rationale for Proposal m 47.63 -2.85   47.63 -3.6 3 341.02   8.38   48 ",</b></p>	









<ul style="list-style-type: none"><li>• civic engagement</li></ul>	
<ul style="list-style-type: none"><li>• an understanding of the ethical and behavioral consequences of decisions and actions on themselves, on society, and on the physical world</li></ul>	
<ul style="list-style-type: none"><li>• an understanding of themselves and a respect for the identities, histories and cultures of others</li></ul>	

**How will each outcome be measured**

