



Philadelphia University
Department of Basic Science and Mathematics
Program Goals & Student learning Outcomes

Student learning Outcomes	Program Goals						
	G1	G2	G3	G4	G5	G6	G7
K1	√		√	√			
K2	√			√	√		
K3							√
K4				√			√
K5				√			√
K6							√
I1				√			
I2	√				√		√
P1					√		√
P2	√						
P3			√			√	
P4				√			
P5							
P6							√
T1	√						
T2			√			√	√

Program Goals

- G1 Learning to calculate, manipulate and solve problems
- G2 Learning to read with critical thinking
- G3 Learning to write with clear logic and to prove, defend, and explain what they write
- G4 Learning to think abstractly and creatively
- G5 Learning to formulate and test hypotheses
- G6 Learning to construct mathematical proofs and arguments
- G7 Learning to appreciate the beauty, power, and preciseness of mathematics

Program SLO

Knowledge and Understanding Skills

- K1. Students develop flexibility, perseverance, and strategies in attacking problems.
- K2. Students are able to organize and interpret information forms abstractions and generalizations
- K3. Students have positive attitude toward mathematics.
- K4. Students recognize the connections of mathematics in real life situations.
- K5. Students gain confidence in mathematical thinking.
- K6. Students are prepared to allow progress to higher levels of mathematics.

Thinking skills (Intellectual Skills)

- I1. The ability to find ways to solve problems when no routine path is apparent .
- I2. The ability to gather data, make conjectures, assemble evidence, and build arguments to support or refute conjectures.

Subject-Based Practical skills (Professional and Practical Skills)

- P1. The ability to translate information from real world into mathematical language
- P2. Using signs, symbols, and graphs.
- P3. The ability to present mathematical ideas in written, visual, and oral formats.
- P4. The ability to make links among mathematical ideas and to other disciplines.
- P5. The ability to use appropriate technology to solve meaningful mathematical problems.
- P6. To understand and appreciate the power and limitations of technology.

Skills for life and work (General and Transferable Skills)

- T1. The ability to use mathematics writing software to write mathematical text.
- T2. The ability to write a computer program.