Code	CBM101	Prerequisites	None
Name	Algebra y Geometría analítica	Co-requisites	None

Credits	Contact Hours
05	
Categorization of credits	
Math and basic science	X
Engineering topic	
Other	

Coordinator's name	Edward Segura

Text book
Stewart J., Redlin L., Watson S. (2007). Precalculus. (3rd Edition). Publisher Cengage Learning.
Other supplemental materials
Sullivan M. (1997). Precalculus (4th Edition). Swokowski. Cole. (2011) Algebra and Trigonometry with Analytic Geometry (13th Edition). Douglas Faires, J.; Defranza, J. (2001). Precalculus. (2nd Edition). International Thomson Editores, S. A

Description
The algebra and analytical geometry course includes the study of all the preliminary aspects necessary for a first pre-calculus course, applying learning-teaching strategies that focus on the use of this knowledge in the learning of other subjects and in its daily application. The subject develops the conceptual contents of functions and graphs, algebraic, logarithmic and trigonometric functions, conic sections, polar coordinates and parametric equations that serve as mediators for the development of the proposed skills.

Type of course	☒ Required ☐ Elective

Specific goals for the course	
Outcomes of instruction	EG1. Become aware of the different problems of life (speed with which an object moves, change in temperature of a body, sales volume of a company, etc.) that are modeled with the functions, as preparation for the study of higher mathematics. EG2. Appreciate the knowledge of how the needs of the human being (to express debts, faults, subtractions where the minuend is less than the subtrahend, etc.) have been expanding the number of numerical sets. EG3. Share with your classmates the excitement of solving problems using mathematics, through collaborative work. EG4. Allows the help of their peers, through integration into work groups, for a better understanding of any mathematical topic.
Student outcomes	CG1. Understands and develops theories, abilities and skills in the management and resolution of individual and collective problems through a logical-mathematical thinking capacity, in order to correctly use the strategies to be developed in the environment in which they find themselves.

Topics
Unit I: Functions and Graphs Unit II: Algebraic Functions Unit III: Exponential and logarithmic functions Unit IV: Trigonometric functions Unit V: Conics, polar coordinates and parametric equations