

Programme	Semester 1	Course Code	CC-103	Credit Hours	3
Course Title	Calculus and Analytical Geometry				
Course Introduction					
This course aims to provide a broad introduction to the fundamental mathematical techniques, including differentiation and integration, and mathematical objects needed by mathematicians and most applied scientists. The course builds on the foundations laid in secondary school mathematics and in turn aims to lay the foundation for more advanced studies in mathematics undertaken in the following semester and beyond.					
Learning Outcomes					
On the completion of the course, the students will: 1. Equations 2. Solve Questions					
Course Content				Assignments/Readings	
Week 1	Complex Numbers				
Week 2	Cartesian Curves				
Week 3	Functions and Graphs				
Week 4	Limit and Continuity				
Week 5	Differentiation of Functions and applications.				
Week 6	Derivative as Slope of Tangent to a Curve and Application to Tangent				
Week 7	Normal, Linearization				
Week 8	Maxima/Minima				

Week 9	Integration and its application	
Week 10	Point of Inflexion	
Week 11	Reference Frames	
Week 12	Reference Frames 2	
Week 13	Coordinate systems.	
Week 14	Coordinate systems	
Week 15	Coordinate systems	
Week 16	Revision of Course	
Textbooks and Reading Material		
1. Larson, R. (202) Calculus with Analytic Geometry, Seventh Edition. 2. Larson, R., Hostetler, R.P., Edwards, B.H., & Mifflin, H. (2004). Calculus with Analytic Geometry, Seventh Edition. 3. Stein, S.K., & Anthony, A. (2002). Calculus and Analytic Geometry		
Teaching Learning Strategies		
1. Lectures 2. Written Assignments 3. Quizzes		
Assignments: Types and Number with Calendar		
1. Quiz 2. Presentation 3. Assignment		