APPENDIX [A]: COURSE SYLLABI

Basic and Applied Science Courses (BA)

Basic and Applied Science Courses Group

BA 123 – Mathematics 1

C O U R S E I N F O R M A T I O N

Course Title: Mathematics 1

Code: BA 123

Hours: Lecture – 2 Hrs. Tutorial – 2 Hrs. Credit –3.

Prerequisite: None

G R A D I N G

Class Performance/Attendance:	10%
Midterm # 1/Assignments – (7^{th} Week):	30%
Midterm # 2/Assignments – (12^{th} Week):	20%
Final Exam:	40%

C O U R S E D E S C R I P T I O N

Basic rules of differentiation. Trigonometric function and their derivatives .Inverse of trigonometric and their derivatives .Logarithmic function and their derivatives. Exponential function and their derivatives.Derivatives of hyperbolic functions and their inverse. Parametric differentiation.

Implicit differentiation. The n^{th} derivatives. L'Hospital rule .Partial Differentiation .Taylor and Maclaurin's expansions, and 12^{th} week exam Complex numbers. Conic sections.

T E X T B O O K &R E F E R E N C E S

Calculus & Analytic Geometry by Sherman & Anthony Publisher: Mc Graw-Hill

C O U R S E A I M

Introduce students to differentiation, trigonometric, inverse trigonometric, algorithmic, exponential and hyperbolic functions, as well as to complex numbers and conic sections.

SPECIFIC OUTCOMES OF INSTRUCTION

- The students will be familiar with basic transcendental functions and their properties.
- The students will develop skills in the techniques of differentiation, and enables them to grasp its intuitive meaning.
- The students will be provided with essential knowledge and skills in analytic geometry.

COURSE OUTLINE

Week Number 1:	Basic rules of differentiation.
Week Number 2:	Trigonometric function and their derivatives
Week Number 3:	Inverse of trigonometric and their derivatives
Week Number 4-5:	Logarithmic function and their derivatives
Week Number 6:	Exponential function and their derivatives
Week Number 7:	Derivatives of hyperbolic functions and their inverse
Week Number 8:	Parametric differentiation and 7 th week exam.
Week Number 9:	Implicit differentiation.
Week Number 10:	The n^{th} derivatives.
Week Number 11:	L'Hospital rule
Week Number 12:	Partial Differentiation.
Week Number 13:	Taylor and Maclaurin's expansions and 12 th week exam
Week Number 14:	Complex numbers.
Week Number 15:	Conic sections
Week Number 16:	Final Exam.

COURSE COORDINATOR AND DEMAND

Course Coordinator:	Dr.Ahmed Elbakly.
Course Demand:	*Required*