



# The Islamia University of Bahawalpur

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## Tentative Course Plan

Department of Computer Science & IT

Class: BS-CS ( E)

Semester 1st

Instructor	Shabana Kousar	Email: <a href="mailto:kousar9800@gmail.com">kousar9800@gmail.com</a>	
Course Title	Calculus and Analytical Geometry	Program	BSCS
Course Number	CSIT-01104	Credit Hours	3
Lecture Schedule	MONDAY & TUESDAY: 4:00-5:30 PM		
<b><u>METHODS OF TEACHING</u></b> <ul style="list-style-type: none"><li>• Lectures</li><li>• Presentations</li><li>• Assignments</li><li>• Quizzes</li></ul>			
Resource Material	Reference Book		
	1)Calculus and Analytical Geometry		
	2	Thomas Finny,Calculus And Analytical Geometry,10 <sup>th</sup> Addition,John Wiley and Sons	
Advice Helping Hours	MONDAY & TUESDAY 4:00 PM to 7:00 PM		
Reading	Mid-Term (30%) Final Exam (50%) Problem Session/Assignments (20%)		

COURSE CONTENTS

Session	Topics
1-2	Cartesian Product, Binary Relation,Function and its Types.
3-4	Complex Numbers,Operation on Complex Numbers,Cartesian and polar Form of Complex Numbers.
5-6	DeMoivre’s Theorem and its Applications.
7-8	Functions and its Graph, Symmetrical Properties and Curve Tracing.
9-10	Limit and Continuity.
11-12	Differentiation of Functions(Power and chain rule).
13-14	Differentiation of Functions(Trigonometric,Inverse trigonometric,Logrithmic and Exponential).
15-16	Taylor and Maclaurin Series of Different Functions.
MID TERM	
17-18	Maxima,Minima and Point Of Inflection.
19-20	Indefinite Integration Of Simple Functions.
21-22	Integration By Suitable Substitutions and Trigonometric Substitutions.
23-24	Integration By Parts and By Partial Fractions.
25-26	Definite Integral.
27-28	Differential Equation and its Solution.
29-30	Application to area Bounded By The Curve.
31-32	Application to Tangent and Normal Line.
FINAL TERM	

Student Evaluation Criteria:

Attendance	5%
Workshop/Assignments/Case study	5%
Surprise Test/Sudden Test, Quizzes	5%
Class Participation	5%
Mid-Term Paper	30%
Final-Term Paper	50%
	100%

Student Responsibilities:

Students must attend class. Failure to attend class may result in failure in the course. Students must also arrive before and remain in class for the entire period. Cellular phones and Beeper must be Turned Off, class room decorum (behavior) adopts, Course outlines and calendar explain requirements and assignments, and students are responsible for knowing what they say. Students are also responsible for doing all assigned work before. Excessive absences (more than 03) will result in “F Grade”. Students may prepare sketchbook for class notes and for references.