

Protima Dash

Senior Lecturer in Mathematics

Course Outcomes:

By the end of this course, students should be able to:

Understand and use of mathematical expressions, relationships in a variety of contexts, calculus and transformation in engineering perspective.

apply the knowledge in mathematical modelling in solving technical problems know how ODE is used to develop video games involving jumping motion and to model the velocity of a character after the command is given to return them to the ground.

Use in MP3 coding to simplify the MP3 formats file, also used to compress mp3 or. wmv and simplify it easily to get a fast and more simplified sound.

Use in transmission and processing of digital signals, transform time domain into frequency domain

Course Lesson plan:

Class No	Week	Chapter	Topics
01 - 02	01	Introductory discussion	Prerequisite, Application of Mathematics in CSE
03 - 04	02	Formation of ODE	ODE, PDE, Order, Degree & Solution
05 - 08	03 - 04	Solution of first order and first-degree ODE	Variable Separable form, Homogeneous Equation, Reducible to homogeneous,
09 - 10	05		Linear equation, Bernoulli's equations
11 - 12	06	Solutions of second and higher order ODE	Constant coefficients & homogeneous equations
		Mid Term Examination	
13 - 18	07 - 09	Laplace Transformation	Definition and Properties of Laplace Transformations & Inverse Laplace transformation and Their Applications
19 - 24	10 - 12	Fourier Transformation	Real and complex form of Fourier series, Finite transform, Fourier Integral, Fourier Transform in solving BVP of wave equations and Heat Equation, properties of Fourier Transform, DFT
		Final Examination	

Grading Policy:

Marks out of 100	Letter Grade	Grade Point
80 - 100	A+	4.00
75 - 79	A	3.75
70 - 74	A-	3.50
65 - 69	B+	3.25
60 - 64	B	3.00
55 - 59	B-	2.75
50 - 54	C+	2.50
45 - 49	C	2.25
40 - 44	D	2.00
00 - 39	F	0.00

Marks Distribution:

Attendance	07
Class Test	15
Assignment	05
Presentation	08
Mid Term Exam	25
Final Exam	40
Total	100

Course Repositories:

Moodle (BLC)	Course Title: Engineering Mathematics (Spring 21) Link: https://elearn.daffodilvarsity.edu.bd/course/view.php?id=9698

Teacher Information:

Course Tutor:	Office:	Counselling Time
Protima Dash Sr. Lecturer in Mathematics Department of GED, DIU	Teachers Room, 2 nd Floor, Main Building, DIU, Shukrabad. Cell: 01716788108 Mail: halim.ged@diu.edu.bd	Saturday: 11:30 AM – 02:30 PM Sunday: 11:30 AM – 02:30 PM