



## SCHEME AND SYLLABUS - B.E. COMPUTER ENGINEERING

B.E. COMPUTER ENGINEERING-SEMESTER II													
Course Code	Type	Subject	L	T	P	Credits	Evaluation Scheme (Percentage weights)					Pre-requisites	
							Theory			Practical			
							CA	MS	ES	CA	ES		
FC006	FC	Mathematics-II	3	1	0	4	25	25	50	-	-	None	
COURSE OUTCOMES													
1. By the end of this course, the student will be able to solve system of equations and know the concepts of eigenvalue and eigenvector. 2. Know the concepts of Ordinary Differential Equations and its applications. 3. Know the concepts of Special Functions. 4. Know the concepts of Laplace Transforms and its application to solve Differential Equations													
COURSE CONTENT													
<b>Matrices:</b> Rank, inverse and normal form of a matrix using elementary transformations, consistency of linear system of equations; linear dependence/independence, linear transformations, eigenvalues and eigenvectors of a matrix, Cayley-Hamilton theorem, diagonalization.													
<b>Ordinary Differential Equations:</b> Second & higher order linear differential equation with constant coefficients, general solution of homogenous and non-homogenous equations, Euler-Cauchy equation, Application to mass-spring system and electrical circuits. Power series method.													
<b>Special Functions:</b> Beta and Gamma functions, Dirichlet's Integral. Legendre equation, Legendre polynomials and its properties, Bessel equation, and Bessel function of first kind and its properties, ber and bei functions.													
<b>Laplace Transforms:</b> Basic properties, Laplace transform of derivatives and integrals. Laplace of periodic functions. Laplace transforms solution of IVP and simultaneous linear differential equations, unit step function, Dirac-Delta function.													



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Inverse Laplace transform, Convolution theorem

### SUGGESTED READINGS

1. G. B. Thomas and R. L. Finney, "Calculus and Analytic Geometry", Pearson Education.
2. R. K. Jain and S. R. K. Iyenger, "Advanced engineering mathematics", Narosa.
3. Erwin Kreyszig, "Advanced engineering mathematics," Wiley.
4. Michael Greenberg, "Advanced engineering mathematics", Pearson Education.

Course Code	Type	Subject	L	T	P	Credits	CA	MS	ES	CA	ES	Pre-requisites
FC007	FC	English-II	2	0	0	2	25	25	50	-	-	None

### COURSE OUTCOMES

1. The course will focus on the four integral skills of language, improving the proficiency levels in all of them and to learn to use language as a tool for effective communication.
2. This course will widen the understanding of the learners in all genres of literature (short stories, poetry, autobiographies..) with the help of expository pieces .
3. The course will strive to equip the learner with the ability to express oneself and be understood by others with clarity and precision, in both written and spoken forms.
4. This course will encourage creative use of language through translation, paraphrasing and paragraph writing.
5. Along with the above, the course will also build confidence and encourage the students to use a standard spoken form of English in order to prepare them to face job interviews, workplace and in higher studies.

### COURSE CONTENT

#### **Literature**

1. Anton Chekov: The Bet
2. Guy de Maupassant: The Necklace
3. D H Lawrence: Odour of Chrysanthemums
4. R K Narayan: Malgudi Days
5. Sarojini Naidu: Bangle Sellers