Adichunchanagiri Institute of Technology,

Chikkmaglur
DEPARTMENT OF MATHEMATICS

COs (18mat11)

CO1: Apply the knowledge of calculus to solve problems related to polar curves and its applications in determining the bentness of a curve

CO2: Learn the notion of partial differentiation to calculate rates of change of multivariate functions and solve problems related to composite functions and Jacobians

CO3: Apply the concept of change of order of integration and variables to evaluate multiple integrals and their usage in computing the area and volumes

CO4: Solve first order linear/nonlinear differential equation analytically using standard methods

CO5: Make use of matrix theory for solving system of linear equations and compute eigenvalues and eigenvectors required for matrix diagonalization process

COs (18mar21)

CO1: Solve first order linear/nonlinear differential equations analytically using standard methods

CO2 : Explain various physical models through higher order differential equations and solve such linear ordinary differential equations.

CO3: Understand a variety of partial differential equations and solution by exact methods/method of separation of variables.

CO4: Describe the applications of infinite series and obtain series solution of ordinary differential equations

CO5: Apply the knowledge of numerical methods in the models of various physical and engineering phenomena.

COs (21mat11)

CO1: Apply the knowledge of calculus to solve problems related to polar curves and its applications in determining the bentness of a curve.

CO2: Learn the notion of partial differentiation to calculate rate of change of multivariate functions and solve problems related to composite functions and Jacobian.

CO3: Solve first-order linear/nonlinear ordinary differential equations analytically using standard methods.

CO4: Demonstrate various models through higher order differential equations and solve such linear ordinary differential equations.

CO5: Test the consistency of a system of linear equations and to solve them by direct and iterative methods.

COs (21mat21)

CO1: Apply the concept of change of order of integration and change of variables to evaluate multiple integrals and their usage in computing the area and volume.

CO2: Illustrate the applications of multivariate calculus to understand the solenoidal and irrotational vectors and also exhibit the inter dependence of line, surface and volume integrals.

CO3: Formulate physical problems to partial differential equations and to obtain solution for standard practical PDE's

CO4: Apply the knowledge of numerical methods in modelling of various physical and engineering phenomena

CO5: Solve first order ordinary differential equations arising in engineering problems.

COs (18mat31)

CO1: Use Laplace transform and inverse Laplace transform in solving differential/ integral equation arising in network analysis, control systems and other fields of engineering.

CO2: Demonstrate Fourier series to study the behaviour of periodic functions and their applications in system communications, digital signal processing and field theory.

CO3: Make use of Fourier transform and Z-transform to illustrate discrete/continuous function arising in wave and heat propagation, signals and systems.

CO4: Solve first and second order ordinary differential equations arising in engineering problems using single step and multistep numerical methods.

CO5: Determine theexternals of functionals using calculus of variations and solve problems arising in dynamics of rigid bodies and vibrational analysis.

COs (18mat41)

CO1: Use the concepts of analytic function and complex potentials to solve the problems arising in electromagnetic field theory.

CO2: Utilize conformal transformation and complex integral arising in aerofoil theory, fluid flow visualization and image processing.

CO3: Apply discrete and continuous probability distributions in analyzing the probability models arising inengineering field.

CO4: Make use of the correlation and regression analysis to fit a suitable mathematical model for the statistical data.

CO5: Construct joint probability distributions and demonstrate the validity of testing the hypothesis.

DEPARTMENT OF MATHEMATICS

PSO FOR CVE

PSO1: The graduates will be able to plan, analyse, design and execute cost effective civil engineering structures without over exploitation of natural resources.

PSO2: The graduates will have the ability to take up employment, entrepreneurship, research and development for sustainable civil society.

PSO3: The graduates will be able to pursue opportunities for personal and professional growth, higher studies and engage in lifelong learning in civil engineering profession.

PSO4: The graduates will be able to demonstrate professional integrity and an appreciation of ethical environmental, regulatory and issues related to civil engineering projects.

PSO FOR CSE

PSO1: Professional Skills: The ability to understand & implement the computer programs in the areas of Computer Architecture, System Software, Database Management Systems, Web Design, Multimedia and Computer Networking.

PSO2: Problem-Solving Skills: The ability to solve real-world problems by suitable mathematical model with strong technological concepts in rapidly growing arena of computer technology.

PSO3: Successful Career and Entrepreneurship: Knowledge in diverse areas of Software Engineering and Management & Entrepreneurship for IT Industry, conducive in cultivating skills for successful career development.

PSO FOR ISE

PSO1: Graduates will be able to understand, analyze information technology problems and provide solutions through their problem solving skills

PSO2: Graduates will be able to apply the skills of programming in software development

PSO3: Graduates will be able to work in industries in the areas of web designing, software testing, development and maintenance

PSO4: Should have the capability to comprehend the technological advancements in the usage of modern design tools to analyze and design subsystems/processes for a variety of applications.

PSO FOR ECE

PSO1: Professional Skills: Graduates are able to analyze and design systems in the fields related to Digital signal processing, communication and networking, VLSI and embedded systems.

PSO2: Problem-Solving Skills: Graduates are able to identify problems in the areas of Signal processing, communication and embedded systems and provide efficient solutions using computational tools and algorithms individually or working in a team.

PSO FOR EEE

PSO1: To design, operate & maintain a smart distributed generation system at the least economical and ecological cost

PSO2: To acquire the technical skills for generation, transmission & auditing of energy with financial constraints and enhance proficiency in solving problems of power industry.

PSO FOR ME

PSO1:
Employability: Students acquire technical and managerial skill that make them an employable graduate

PSO2: Research: Students acquire theoretical and practical background of each course that they are capable of applying it for solving real-time (Physical) problems.

HEAD OF DEPARTMENT
Department of Mathematics
Adichunchanagiri institute of Technology
CHIKKAMAGALURU-577 102

Dr. C.T. JAYADEVA
Principal   B.E.,M.Tech.,Ph.D
Adichunchanagiri Institute of Technology
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Adichunchanagiri Institute of Technology

Chikkmaglur

DEPARTMENT OF MATHEMATICS

POS

1) Engineering knowledge

2) Problem analysis

3) Design/development of solutions

4) Conduct investigations of complex problems

5) Modern tool usage

6) The engineer and society

7) Environment and sustainability

8) Ethics

9) Individual and team work

10) Communication

11) Project management and finance

12) Life-long learning

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CO –PO MAPPING

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	H	M	S	S	S	S	NM	NM	NM	NM	NM	S
CO2	H	M	S	S	S	S	NM	NM	NM	NM	NM	S
CO3	H	M	S	S	S	S	NM	NM	NM	NM	NM	S
CO4	H	M	S	S	S	S	NM	NM	NM	NM	NM	S
CO5	H	M	S	S	S	S	NM	NM	NM	NM	NM	S

UE

| Attainment(out of 100) | Direct Attainment | | Fee |
	Attainment(out of 3)	Attainment(out of 100)	Attainment(out of 3)
30.86	2.17	72.35	3
30.86	2.17	72.35	3
30.86	2.17	72.35	3
30.86	2.17	72.35	3
30.86	2.16	71.89	3

UE

| Attainment(out of 100) | Direct Attainment | | Fee |
	Attainment(out of 3)	Attainment(out of 100)	Attainment(out of 3)
0	0	0	0
0	1.8	60	0
0	0	0	0
0	0	0	0
0	1.33	44.22	0

sity Exam

| Attainment(out of 100) | Direct Attainment | | Fee |
	Attainment(out of 3)	Attainment(out of 100)	Attainment(out of 3)
0	0	0	0
0	1.8	60	0
0	0	0	0
0	0	0	0
0	1.8	60	0

sity Exam

| Attainment(out of 100) | Direct Attainment | | Fee |
	Attainment(out of 3)	Attainment(out of 100)	Attainment(out of 3)
0	1.8	60	0
0	1.8	60	0
0	0	0	0
0	1.8	60	0
0	0	0	0

sity Exam

| Attainment(out of 100) | Direct Attainment | | Fee |
	Attainment(out of 3)	Attainment(out of 100)	Attainment(out of 3)
0	0	0	0

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