



[|Jai Sri Gurudev|]

Sri Adichunchanagiri Shikshana Trust®



ADICHUNCHANAGIRI INSTITUTE OF TECHNOLOGY, CHIKKAMAGALURU-577102,

DEPARTMENT OF ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING



COURSE LEARNING OUTCOMES

Semester	Subject	Subject code	CLO
3	TRANSFORM CALCULUS, FOURIER SERIES AND NUMERICAL TECHNIQUES	21MAT31	<p>CLO 1. To have an insight into solving ordinary differential equations by using Laplace transform techniques</p> <p>CLO 2. Learn to use the Fourier series to represent periodical physical phenomena in engineering analysis.</p> <p>CLO 3. To enable the students to study Fourier Transforms and concepts of infinite Fourier Sine and Cosine transforms and to learn the method of solving difference equations by the z-transform method.</p> <p>CLO 4. To develop the proficiency in solving ordinary and partial differential equations arising in engineering applications, using numerical methods.</p>
	DATA STRUCTURES AND APPLICATIONS	21CS32	<p>CLO1. Explain the fundamentals of data structures and their applications essential for implementing solutions to problems.</p> <p>CLO2. Illustrate representation of data structures: Stack, Queues, Linked Lists, Trees and Graphs.</p> <p>CLO3. Design and Develop Solutions to problems using Arrays, Structures, Stack, Queues, Linked Lists.</p> <p>CLO4. Explore usage of Trees and Graph for application development.</p> <p>CLO5. Apply the Hashing techniques in mapping key value pairs.</p>
	ANALOG AND DIGITAL ELECTRONICS	21CS33	<p>CLO1. Explain the use of photo electronics devices, 555 timer IC, Regulator ICs and uA741</p> <p>CLO2. Make use of simplifying techniques in the design of combinational circuits.</p> <p>CLO3. Illustrate combinational and sequential digital circuits</p> <p>CLO4. Demonstrate the use of flipflops and apply for registers</p> <p>CLO5. Design and test counters, Analog-to-Digital and Digital-to-Analog conversion techniques.</p>

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COMPUTER ORGANIZATION AND ARCHITECTURE	21CS34	<p>CLO1. Understand the organization and architecture of computer systems, their structure and operation</p> <p>CLO2. Illustrate the concept of machine instructions and programs</p> <p>CLO3. Demonstrate different ways of communicating with I/O devices</p> <p>CLO4. Describe different types memory devices and their functions</p> <p>CLO5. Explain arithmetic and logical operations with different data types</p> <p>CLO6. Demonstrate processing unit with parallel processing and pipeline architecture</p>
OBJECT ORIENTED PROGRAMMING WITH JAVA LABORATORY	21CSL35	<p>CLO1. Demonstrate the use of Eclipse/Netbeans IDE to create Java Applications.</p> <p>CLO2. Using java programming to develop programs for solving real-world problems.</p> <p>CLO3. Reinforce the understanding of basic object-oriented programming concepts.</p>
SOCIAL CONNECT & RESPONSIBILITIES	21SCR36	<p>CLO1. Enable the student to do a deep dive into societal challenges being addressed by NGO(s), social enterprises & The government and build solutions to alleviate these complex social problems through immersion, design & technology.</p> <p>CLO2. Provide a formal platform for students to communicate and connect with their surroundings.</p> <p>CLO3. Enable to create of a responsible connection with society.</p>
SAMSKRUTIKA KANNADA	21KSK37	<p>CLO1. Introducing Kannada Language, Literature and Culture to the professional degree Students</p> <p>CLO2. To create awareness and interest among students about the modern and pre-Modern Kannada literature.</p> <p>CLO3. Introduce pioneers in technological field and their achievements to the students</p> <p>CLO3. To introduce Vocabulary, Communication and Writing Skills in Kannada.</p>
MASTERING OFFICE (Practical based)	21CSL381	<p>CLO1. Understand the basics of computers and prepare documents and small presentations.</p> <p>CLO2. Attain the knowledge about spreadsheet/worksheet with various options.</p> <p>CLO3. Create simple presentations using templates various options available.</p> <p>CLO4. Demonstrate the ability to apply application software in an office environment.</p> <p>CLO5. Use MS Office to create projects, applications.</p>

PROGRAM OUTCOMES

1. **Engineering knowledge:**

Graduates can apply the knowledge of mathematics, science, engineering fundamentals and an engineering specialization to Civil Engineering related problems.

2. **Problem analysis:**

An ability to identify, formulate, review research literature, and analyze Civil engineering problems reaching substantiated conclusions using principles of mathematics and engineering sciences.

3. **Design/development of solutions:**

An ability to plan, analyze, design and implement engineering problems and design system components or processes to meet the specified needs.

4. **Conduct investigations of complex problems:**

An ability to use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

5. **Modern tool usage:**

An ability to apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.

6. **The engineer and society:**

An ability to apply contextual knowledge to assess societal, legal issues and the consequent responsibilities relevant to the professional engineering practice.

7. **Environment and sustainability:**

An ability to understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

8. **Ethics:**

An ability to apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

9. **Individual and team work:**

An ability to function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings to accomplish a common goal.

10. **Communication:**

An ability to communicate effectively on engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, and make effective presentations

11. **Project management and finance:**

Ability to demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.

12. **Life-long learning:**

An ability to engage in independent and life-long learning in the broadest context of technological change.