



# Moodlakatte Institute of Technology

(A Unit of Moodlakatte Nagarathna Bhujanga Shetty Trust (R.))

(Approved by AICTE, New Delhi & Affiliated to VTU, Belagavi)

Moodlakatte - 576 217, Kundapura Taluk, Udupi District, Karnataka

## SYLLABUS

**Engineering Mathematics: No of Hours : 7Hours**

Linear Algebra  
Calculus  
Probability and Statistics  
Differential Equations  
Complex Variables  
Numerical Methods  
Subject-Specific Sections:

**Computer Science and Information Technology: No of Hours : 23 hours**

Digital Logic  
Computer Organization and Architecture  
Programming and Data Structures  
Algorithms  
Theory of Computation  
Compiler Design  
Operating System  
Databases  
Computer Networks

**Core ECE Subjects: No of Hours : 23 hours**

1. Networks, Signals, and Systems:
  - o Network solution methods
  - o Network theorems
  - o Signal analysis
  - o Continuous-time signals
  - o Discrete-time signals
  - o Fourier series and transforms
2. Electronic Devices:
  - o Energy bands
  - o Diodes
  - o Transistors
  - o MOSFETs
3. Analog Circuits:

- o Small-signal equivalent circuits
- o Frequency response
- o Operational amplifiers
- o Oscillators

4. Digital Circuits:

- o Boolean algebra
- o Combinational and sequential circuits
- o Microprocessors

5. Control Systems:

- o Mathematical modeling
- o Feedback principles
- o Stability analysis

6. Communications:

- o Analog and digital communication systems
- o Information theory
- o Error detection and correction

7. Electromagnetics:

- o Maxwell's equations
- o Wave propagation
- o Transmission lines
- o Antennas

**Core ME Subjects: No of Hours : 23 hours**

1. Applied Mechanics and Design:
  - o Engineering Mechanics
  - o Mechanics of Materials
  - o Theory of Machines
  - o Vibrations
  - o Machine Design
2. Fluid Mechanics and Thermal Sciences:
  - o Fluid Mechanics
  - o Heat Transfer
  - o Thermodynamics
  - o Applications

3. Manufacturing and Industrial Engineering:
  - Engineering Materials
  - Metal Casting
  - Forming
  - Joining
  - Machining and Machine Tool Operations
  - Metrology and Inspection
  - Production Planning and Control
  - Inventory Control
  - Operations Research

**Core CE Subjects: No of Hours : 23 hours**

1. Structural Engineering:
  - Mechanics
  - Structural Analysis
  - Concrete Structures
  - Steel Structures
2. Geotechnical Engineering:
  - Soil Mechanics
  - Foundation Engineering
3. Water Resources Engineering:
  - Fluid Mechanics and Hydraulics
  - Hydrology
  - Irrigation
4. Environmental Engineering:
  - Water and Waste Water
  - Air Pollution
  - Municipal Solid Wastes
  - Noise Pollution
5. Transportation Engineering:
  - Transportation Infrastructure
  - Highway Engineering
6. Geomatics Engineering:
  - Principles of Surveying
  - GIS

**Core EEE Subjects: No of Hours : 23 hours**

1. Electric Circuits:
  - Network graph

- KCL, KVL
  - Network theorems
  - Steady-state analysis
  - Transient analysis
2. Electromagnetic Fields:
    - Coulomb's law
    - Gauss's law
    - Ampere's law
    - Maxwell's equations
  3. Signals and Systems:
    - Representation of continuous and discrete-time signals
    - LTI systems
  4. Electrical Machines:
    - Transformers
    - DC machines
    - Induction machines
    - Synchronous machines
  5. Power Systems:
    - Power generation concepts
    - Transmission line parameters
    - Power factor correction
  6. Control Systems:
    - Transfer function
    - Feedback principles
    - Stability analysis
  7. Electrical and Electronic Measurements:
    - Measurement of voltage, current, power, energy
    - Instrument transformers
    - Digital voltmeters and multimeters
  8. Analog and Digital Electronics:
    - Operational amplifiers
    - Combinational and sequential circuits
    - A/D and D/A converters
  9. Power Electronics:
    - Semiconductor power devices
    - Rectifiers
    - Inverters
    - DC-DC converters



**Principal**

Merrillakatte Institute of Technology  
 Merrillakatte, Kundapur - 576117  
 Udupi Dist, Karnataka



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## CIRCULAR

**Date : 09/03/2022**

Dear Students,

We would like to announce the commencement of preparatory classes for GATE, GRE, and TOEFL for the academic year 2021-2022 for the benefit of our final year students. These classes aim to provide structured and comprehensive coaching to help you excel in these competitive exams, which are essential for higher education and career advancement.

We encourage all final year students to take advantage of these classes to enhance your skills and prepare effectively for these exams. For further details or queries, please contact the Placement Department.

Principal

Moodlakatte Institute of Technology,  
Moodlakatte, Kundapura - 576217  
Udupi Dist, Karnataka



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Report on GATE, GRE, and TOEFL Preparatory Classes for the Academic Year 2021-2022

No of students participated 61

Name of the Faculty:

Prof. Raghunath D

Prof. Prashanth Hegde

Prof. Akshatha

Prof. Pramila

Prof. Thimmappa

No of Hours : 30

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## **Preamble:**

In alignment with our commitment to fostering academic excellence and professional readiness, the Placement Department of Moodlakatte Institute of Technology, Kundapura, organized comprehensive preparatory classes for GATE, GRE, and TOEFL for the academic year 2022. These classes were tailored to meet the growing aspirations of our final year students aiming for higher studies and global career opportunities.

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## **Objectives:**

### **GATE Classes:**

To equip students with in-depth knowledge and problem-solving skills in their respective engineering disciplines.

To enhance the students' ability to perform well in the GATE examination, thereby increasing their chances for admission into prestigious postgraduate programs and securing lucrative job opportunities in public sector undertakings.

### **GRE Classes:**

To develop a strong foundation in verbal reasoning, quantitative reasoning, and analytical writing.

To prepare students to achieve competitive scores in GRE, facilitating their admission into renowned graduate programs globally.

### **TOEFL Classes:**

To improve the students' proficiency in English, focusing on reading, listening, speaking, and writing skills.

To prepare students to excel in the TOEFL examination, which is a critical requirement for admission into English-speaking universities around the world.

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## **Outcome:**

### **Enhanced Knowledge and Skills:**

Students gained a thorough understanding of the core concepts and advanced topics relevant to their engineering disciplines for GATE.

GRE classes helped students develop robust analytical and critical thinking skills, essential for problem-solving and data interpretation.

TOEFL sessions significantly improved students' English language proficiency, particularly in academic contexts.

**Increased Confidence:**

Regular assessments and mock tests boosted students' confidence and exam readiness.

Interactive sessions and doubt-clearing classes ensured a clear understanding of complex topics, enhancing self-assurance.

**Higher Exam Success Rates:**

A notable percentage of students achieved commendable scores in GATE, GRE, and TOEFL, reflecting the effectiveness of the preparatory classes.

Many students received admission offers from prestigious institutions and secured interviews with leading public sector undertakings.

**Holistic Development:**

Students developed better time management and strategic planning skills through rigorous training and practice.

The preparatory classes also fostered a competitive spirit and a collaborative learning environment among students.

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**Conclusion:**

The GATE, GRE, and TOEFL preparatory classes organized by the Placement Department for the academic year were a resounding success. The positive outcomes and feedback highlight the program's effectiveness in enhancing students' academic and professional competencies. We remain committed to providing such enriching opportunities to our students, helping them achieve their educational and career goals.



Principal

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