About us

About Institute

F.C.R.I.T. was established in 1994 and is a part of the Agnel Technical Education Complex at Vashi, which itself was established in 1984. The institute is named after late Rev. Fr. Conceicao Rodrigues. F.C.R.I.T. has, within a short span of time, established itself as a leading engineering college in Mumbai University. Though its reputation rests mainly on the high quality, value-based technical education that it imparts, it has to its credit a verdant, well maintained campus and extensive facilities. Its location in the vicinity of the holy places of various religious denominations underscores its secular credentials and its philosophy of "Vasudhaiva Kuttumbakam". The College has been granted Religious minority status. The college prides on being one of few that has accreditation for all five branches. It was ranked by NIRF in the Rank band 201-250 in the year 2023, whereas it was ranked earlier also in 2017.

Department of Mechanical Engineering

Departmental Vision

To provide a vibrant academic, research and industrial environment for creating self-sustainable professionals and responsible citizens.

About Mechanical Department

The department of Mechanical Engineering was started in the year 1994 with an intake of 60 students for Under Graduate course. The intake was subsequently increased to 120 students from AY 2019-20. The department also offers PG program in Machine Design with a sanctioned intake of 18 students. The research centre under the department also offers Ph.D. in Mechanical Engineering having intake of 25. The UG Program is accredited up to 2028, by NBA. The department has modern infrastructure with well- equipped laboratories and computational facilities with up-to-date hardware and software resources. The well qualified and experienced faculty of the department imparts knowledge to the students in the fundamental and applied aspects of Mechanical Engineering courses by adopting conventional as well as the latest teaching and assessment tools. The department is well-packed with highly motivated and dedicated faculties to impart quality education in parallel with research. The research culture in the department has produced significant numbers of research publications and patents.

Contact Us

Program Coordinators

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Agnel Charities

Fr. C. Rodrigues Institute of Technology, Vashi

An Autonomous Institute permanently affiliated to University of Mumbai
(AICTE Approved, NBA and NAAC Accredited)

Department of Mechanical Engineering

Short Term Training Program

Introduction to Advanced Optimization Techniques for Engineering Applications

DATE : 1ST JUNE - 6TH JUNE 2026

Our Patrons

Rev. Fr. Peter D'souza
Managing Director
ATEC, Vashi

Rev. Fr. Seby
Assistant Managing Director
ATEC, Vashi

Dr. S. M. Khot
Principal
FCRIT, Vashi

Conveners

Dr. Aqleem Siddiqui
HoD, Mech
FCRIT, Vashi

Dr. Nilaj Deshmukh
Dean (Admin & Faculty)
FCRIT, Vashi

FCRIT, Vashi | 9620620475 | https://fcrit.ac.in/

Departmental Mission

- To provide state-of-the-art infrastructure and quality education.
- To generate opportunities for students to provide industrial exposure.
- To imbibe team spirit and entrepreneurial skills.

Departmental Program Educational Objectives (PEO's)

Graduates will...

- Be able to use effectively Engineering Knowledge and modern tools in the field of Core Mechanical Engineering.
- Have interdisciplinary competence in areas like Mechatronics and CAD/CAM/CAE.
- Be able to demonstrate adequate competency and creativity to take up corporate challenges.
- Be able to pursue higher studies and entrepreneurship.

Departmental Program Specific Outcomes (PSO's)

Graduates will be able to...

- Apply knowledge in the domain of Design, Thermal and Manufacturing sciences to solve Engineering Problems.
- Use appropriate tools and techniques to solve problems in the field of Mechanical Vibration and CAD/CAM/CAE.

Short Term Training Program Overview

This Short Term Training Program is designed to provide participants with practical and conceptual understanding of modern optimization and decision-making techniques used in engineering and research. The program focuses on analytical, numerical, and intelligent optimization methods that support effective problem-solving in complex engineering systems.

Participants will gain exposure to classical optimization approaches, stochastic techniques, multi-criteria decision-making methods, and advanced metaheuristic algorithms. Emphasis is placed on real-world applications, hands-on problem formulation, and interpretation of results relevant to design optimization, process improvement, and system performance evaluation.

The program also introduces experimental design techniques such as Design of Experiments, Taguchi's methods, and Response Surface Methodology to support data-driven optimization. By the end of the training, participants will be equipped with practical tools and methodological insights applicable to academic research, industrial problems, and interdisciplinary engineering applications.

Registration Details

Online Registration Link

https://forms.office.com/r/L7SJueMXZJ

Who can attend

Students, Faculty and Industrial professionals

Registration Fee

Rs. 600/- for Students
Kindly contact us for any query

Scan for Payment

Last Date of Registration

22nd May 2026

Course Content

This course introduces modern optimization and decision-making techniques widely used in engineering and research. It focuses on practical problem formulation, systematic solution methods, and real-world applications, enabling participants to handle complex design, analysis, and optimization challenges with confidence.

- Fundamentals of optimization including linear and non-linear programming, constrained and unconstrained problems, and single and multi-variable optimization.
- Monte Carlo techniques for stochastic analysis. Multi-criteria decision-making methods such as AHP, TOPSIS, PROMETHEE, MOORA, ELECTRE, and BWM, along with weight determination methods including PSI, CRITIC, and Entropy.
- Fuzzy concepts in optimization and decision-making. Neural network–based optimization techniques.
- Metaheuristic algorithms including TLBO, Jaya, BHARAT, GA, PSO, ABC, and hybrid methods. Group decision-making approaches.
- Introduction to optimization software. Design of Experiments, Taguchi's methods, and Response Surface Methodology.