



All India Council for Technical Education



Sponsored
Online Short Term Training
Programme

on

**“Hands on Training on MATLAB and
Advanced Optimization Techniques”**

From 21th to 26th December 2020

(Phase-I)



Organized by

**Department of Mechanical
Engineering**

Government College of Engineering

Bargur, Krishnagiri Dist- 635104,

Tamil Nadu.

<http://www.gcebargur.ac.in>

COURSE CONTENTS

- Fundamentals of optimization
- Optimization principles using MATLAB
- Simulink in MATLAB
- Metaheuristic Optimization approaches
- Script Programming
- Basic commands in MATLAB and hands on practice
- Design for optimization
- Fuzzy optimization
- Decision making and optimization
- Application and case studies

ABOUT THE PROGRAMME

Nowadays, engineering researchers, post graduates, academicians, and field engineers are very often use optimization techniques in order to achieve desirable outcomes, ideation, modeling, analysis, decision making and optimization certainly play important roles in process synthesis and analysis, transportation, logistics, production scheduling, telecommunications network, complex reactor networks, separation sequence synthesis, finding of an optimal trajectory for a robot arm, the optimal thickness of steel in pressure vessels, the optimal set of parameters for controllers, or optimal relations or fuzzy sets in fuzzy models, optimal network in energy integration, automated design of heat exchangers, mass exchanger networks, etc. The rapid advancement and growth in

computing performances enable optimization techniques to become increasingly important and popular in almost all engineering applications for system identification, modelling, controls and data mining etc. This STTP is planned to provide a common platform to all faculty members of technical institutions to gain theoretical fundamentals coupled with practical knowledge of analytical and numerical methods to solve various engineering of real life applications.

ORGANIZING COMMITTEE

Chairperson: Dr. Nishanth Kanvel, ME, PhD
Principal/GCE-Bargur.

Convener: Dr. P.Thirumal, ME, PhD
Associate Professor & Head
Dept.of.Mech. Engg, GCE.-bargur.

Program Coordinator:

Dr.D.Thirumalaikumarasamy, ME, PhD
Assistant Professor (Senior Grade)
Dept.of.Mech.Engg, GCE.-bargur.

RESOURCE PERSONS

Eminent speakers from NITTR and other reputed universities along with the industries will conduct and deliver the lectures in different sessions of this programme.

Address your queries and clarification to:

Dr.D.Thirumalaikumarasamy ME, PhD
Assistant Professor (Senior Grade)

Department of Mechanical Engineering
Govt. College of Engineering, Bargur.

Contact No: 9894319865, 8508593544

Email:sttpmechgce@gmail.com

ABOUT THE INSTITUTION

Government College of Engineering, Bargur (GCEB) is one of the educational institutions developed by Government of Tamil Nadu, which was started in the year 1994 to cater to the needs of the nation in the development of technocrats and to provide facilities for educating and training men and women to meet the entrepreneurial and management needs. The Tamil Nadu Government has created adequate infrastructural facilities and sufficient funds and is keen on developing the institute for higher education. GCEB is permanently affiliated to Anna University, Chennai, received accreditation from National Board of Accreditation (NBA), New Delhi for all of its eligible UG programmes and also declared fit by University Grant Commission (UGC), New Delhi to receive central assistance (UGC grant), by awarding 2(f) and 12 (b) status.

ABOUT THE DEPARTMENT

The Mechanical Engineering department was started in the year 2009. Though this department is youngest departments in this college, it is continuously striving to achieve excellence in education, academic and industry oriented research as well as consultancy work aiming service to the society. This department has excellent experimental and computational facilities. The department has 9 faculty members with expertise on the academic and

major research areas include Surface engineering, Material processing, IC engine testing and design, alternative fuels, processing and characterization of materials. The department has received research grants worth of one core from various funding agencies like DST- SERB, DRDO and AICTE, New Delhi.

REGISTRATION DETAILS & ELIGIBILITY

- NO registration fees
- This Short term training programme is open to faculty members and research scholars of AICTE approved Engineering and Polytechnic colleges.

IMPORTANT DATES:

Due date for online Registration: **19.12.2020**

Acceptance and Intimation: **20.12.2020**

IMPORTANT INSTRUCTIONS FOR THE PARTICIPANTS

- STTP session timing has been categorized in two segments

1st session: 10:00 AM - 12:00PM

2nd session: 02:00 PM - 04:00PM

(However this timing is subjected to the availability of the speakers and any changes in the schedule will be meticulously informed to the participants)

➤ The participants are instructed to register compulsorily with the mobile number (in the Google form during online registration) linked to 'Whats App' account for smooth communication.

➤ Certificates will be awarded to those participants who successfully will attend all the session of the STTP with 75% overall attendance.

Submission of the feedback form is mandatory through sttpmechgce@gmail.com to receiving certificate.

➤ The certificate will be issued on successful completion of evaluation (quiz) at the end of the STTP with 50% scoring marks.

➤ Participants should have good internet bandwidth for live streaming of STTP session.

➤ There is only 'online' mode of registration via 'Google form'. Other mode will not be accepted.

LINK FOR ONLINE REGISTRATION

<https://forms.gle/bP4c9Ao7BAs5g9dN6>