ICT course on
Scilab Programming
May 14-18, 2018

Registration Form

Please complete the details below

Name(Mr./Ms.) _____

1. Category: Academic

3. Organization: _____

4. Address:

_____

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_____

5. Tel. No. (Mob): _____

6. E-mail ID: _____

7. Highest Acad. Qualification: _____

Signature of the Candidate

Signature of the Head of the Department/Institution
(If required)

Course content:

- SCILAB Introduction and Vector Operations, Variables and Matrix Operations
- Conditional Branching, Iterations and Loops Scripts Functions
- Toolboxes and Scilab Applications using Garuda Cloud
- 2D, 3D Graphs and Advanced Plotting Commands
- Image Processing Toolbox and Implementation of Face and Eye Detection Techniques
- Introduction to OpenCV
- Curve Fitting, Polynomials and Differential Equations
- Simulation using XCOS
- Numerical Optimization Techniques and Artificial Intelligence

Patron

Dr. Akhilesh Kumar Mishra,
Director, REC Ambedkar Nagar

Chairman (EE)	Chairman (IT)
Dr. S. P. Singh	**Dr. S. Tripathi**
Head, EED	Head, IT Dept,
Convener (EE)	**Convener (IT)**
Dr. Puneet Joshi	**Mr. Shivendu Mishra**
Dr. Sanjay Agrawal	**Mr. Ashish Kumar Mishra**
Assist. Prof. EED	**Assist. Prof. IT Dept**

Co-ordinators

Mr. Vikas Patel (EE)
Miss. Shikha Choudhary (EE)
Mr. Prince Rajpoot (IT)

Organizing Committee:

Dr. Mohd. Aslam Husain, Assistant Professor
Dr. Arif Iqbal, Assistant Professor
Mr. Sonu Kumar, Assistant Professor
Mr. Lokesh Yadav, Assistant Professor
Mr. Yudhisthir Pandey, Assistant Professor
Miss. Shashi Pandey, Assistant Professor
Mr. Ravindra Kumar, Assistant Professor
Mr. Shivendra Pandey, Assistant Professor
Mr. Ramesh Chandra Pandey, Assistant Professor
Mr. Amit Kumar, Assistant Professor
Mr. Sharad Verma, Assistant Professor

NITTTRCHD@ RECABN

ICT course on
Scilab Programming

May 14-18, 2018
Organized by

Department of Electrical Engineering
&
Department of Information Technology

Rajkiya Engineering College Ambedkar Nagar

In collaboration with

NITTTR Chandigarh

An Initiative of

Ministry of Human Resorce Development (MHRD), Govt. Of India

Preamble: Scilab is free and open source software for numerical computation providing a powerful computing environment for engineering and scientific aplications.

Scilab is released as open source under the CeCILL license (GPL compatible), and is available for download free of charge. Scilab is available under GNU/Linux, Mac OS X and Windows XP/Vista/7/8

What does Scilab do ?

Scilab includes hundreds of mathematical functions. It has a high-level programming language allowing access to advanced data structures, 2-D and 3-D graphical functions.

A large number of functionalities is included in Scilab:

- **Maths & Simulation**
  For usual engineering and science applications including mathematical operations and data analysis.
- **2-D & 3-D Visualization**
  Graphics functions to visualize, annotate and export data and many ways to create and customize various types of plots and charts.
- **Optimization**
  Algorithms to solve constrained and unconstrained continuous and discrete optimization problems.
- **Statistics**
  Tools to perform data analysis and modeling
- **Control System Design & Analysis**
  Standard algorithms and tools for control system study
- **Signal Processing**
  Visualize, analyze and filter signals in time and frequency domains.
- **Application Development**
  Increase Scilab native functionalities and manage data exchanges with external tools.
- **Xcos - Hybrid dynamic systems modeler and simulator**
  Modeling mechanical systems, hydraulic circuits, control systems...

Scilab as a platform

Thanks to its ability to interconnect with third-party technologies and applications, Scilab can also act as a unique platform to bring together codes written in different programming languages in a single, unified language, thus facilitating their distribution, their back-up and use.

About National Institute of Technical Teachers Training & Research (NITTR): In realization of the need for training better quality technicians to meet the large-scale industrialization of the country, the ministry of Human Resource Development (the then Ministry of Education), Government of India established four Regional Technical Teachers' Training Institutes (now National Institute of Technical Teachers Training & Research, NITTTR at Bhopal, Chandigarh, Chennai and Kolkata in 1967. The Institute at Chandigarh is one of these four NITTTRs, started in collaboration with Royal Netherlands Government (upto 1974). It was designed to meet the requirements of developing polytechnic education in the northern region covering the states of Jammu and Kashmir, Himachal Pradesh, Punjab, Haryana, Rajasthan, Uttar Pradesh, Uttrakhand, Delhi and Union Territory of Chandigarh. The Institute is registered under the Societies Registration Act, 1860 and is managed by a Board of Governors.

The institute also set up the department of Rural Development and the department of Entrepreneurship Development to assist polytechnics in directing their efforts towards training manpower and disseminating information in these areas. The Educational Television and Computer Science departments were established in the year 1981and 1982 respectively. Since 1983, the institute has been guiding and assisting the states in the areas of Educational Planning and Management. Since 1992, the institute started offering Regular Master of Engineering Programmes in (i) Engineering Education and (ii) Manufacturing Technology. In the year 1994, two more courses namely Master of Engineering in Construction Technology and Management and Computer Science and Engineering were added. In the year 1998, two more Master of Engineering Programmes in Instrumentation and Control and Electronics and Communication Engineering were added, and, since 2005, the institute started offering Modular Master of Engineering Programmes in all the above disciplines. All these programmes, being offered for teachers of technical institutions and their administrators, professionals from industry and general candidates, are duly approved by AICTE and affiliated to Panjab University, Chandigarh.

About the Institute: Rajkiya Engineering College (R.E.C.) Ambedkar Nagar was established by Government of Uttar. The college has started offering B.Tech Programme in three disciplines – Information Technology (IT), Electrical Engineering (EE) and Civil Engineering (CE) with intake of 60 seats in each branches from the session 2010-11.

The students are extensively exposed to cross-cultural environment as candidates from various other State such as Jammu & Kashmir, Madhya Pradesh, Rajsthan etc. join REC for various undergraduate programs. REC Ambedkar Nagar is fully residential institution with three hostels for boys and one for girls.

About the Departments: he department of Electrical Engineering at Rajkiya Engineering College Ambedkar Nagar offers a vibrant environment for undergraduate education in Electrical Engineering Established in 2010. the Department of Electrical Engineering is actively engaged in teaching and research. With modern laboratories and excellent members of faculty.

The under graduate programme provides the students with a strong background in the broad areas of Electrical Engineering, namely, communication technology, control technology, electronics, and power & energy. A strong exposure to state-of-the-art technologies is further provided through elective courses that are carefully designed for the interested students.

The Department of Information Technology was established in 2010 with an intake of 60 student. The department has highly qualified, committed and well experienced faculty members with varied specializations. The faculties are involved in organizing and participating in several seminars, conferences and workshops. They have also published research papers in various national and international journals, presented papers in conferences in India. Over the years, the department has become a center of excellence, providing in-depth technical knowledge and opportunities for innovation and research, with well-equipped computer facilities.

Information Technology Department is the first point of contact for the campus community by supporting telephone, computing, networking, and applications. IT Department is dedicated to facilitate and enhance teaching, learning, and administrative services and to increase the productivity and efficiency using information technology resources.

TIME TABLE FOR SCILAB PROGRAMMING THROUGH ICT

Dates	**Session 1** **10:00 am -11.30 am**	**Session 2:** **11:30 am to 1:00 pm**	**Session 3** **2:00 pm to 4:00 pm**
14/5/2018	Inauguration and Introduction to Scilab Programming (MD)	Matrix Commands, sci Files and Functions (MD)	Plotting of 2D and 3D graphs and practice (MD)
15/5/2018	Polynomial with Practice (MD)	Differential equations with practice (MD)	Signal Processing Toolbox of Scilab (MD)
16/5/2018	Image Processing Toolbox of Scilab (AD)	Scilab Apps using Garuda Cloud (AD)	Optimization techniques (JS)
17/5/2018	OpenCV (Expert)	OpenCV (Expert)	Simulation in Scilab with XCOS (MD)
18/5/2018	Neural Network Introduction (Expert)	Neural Network Toolbox in Scilab (Expert)	Valediction

Coordinator: Dr. Maitreyee Dutta

MD: Dr. Maitreyee Dutta
AD: Amit Doegar
JS: Jagriti Saini
Expert: Dr. Gaurav Kumar, Director, Magma Research and Consultancy Services (From list of the experts given by Computer Science and engineering Department)