

Centre for Continuing Education of NIT Warangal:

The Centre for Continuing Education of NIT Warangal organizes Continuing Education Programs and Workshops in the frontier areas of Science, Engineering, Technology, Management, Humanities, Social Science and socially relevant themes on self-financing basis in three different modes: (i) At NIT Warangal by NIT Warangal (ii) At NIT Warangal in collaboration with other Organizations (iii) By NIT Warangal Faculty at the Host Organization/Institute.

About NIT Warangal:

National Institute of Technology Warangal, formerly known as Regional Engineering College was established in 1959. Over the years it has developed into a premier institute of higher learning and is ranked among the top technical education institutions in India. There are 13 Departments offering eight undergraduate and 32 post-graduate programs besides doctoral program. About 5000 students across the country and about 500 international students study in the campus. It is a fully residential campus sprawling over 250 acres with excellent infrastructure, state of the art library, seminar halls, guest houses and laboratories.



Brief Profile of the Department of CS & E:

The Department of Computer Science & Engineering was established in the year 1991. The department offers high quality undergraduate, postgraduate and doctoral programs. The Department has a team of well experienced faculty, graduated from IIT's, NIT's, Central Universities and other premier Institutes of higher learning. The department provides state-of-art research facilities to generate knowledge and develop technologies in the thrust areas of Computer Science and Engineering.

For any query regarding this program, please contact the Coordinators.

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Center for Continuing Education

Online Short-Term Course on “Software Testing Tools”

**19th July
to
23rd July, 2021**

Call for Registration and Participation

Coordinator

Dr. Sangharatna Godbole

**Organized by
Department of CSE**

**In association with the
Center for Continuing Education**



Overview of the Domain:

Software Testing is essential because we all commit mistakes. Some of those mistakes are extremely critical. We need to check everything and anything we produce because things can always go wrong – humans make mistakes all the time. As we can observe the mistakes, hence we all need to verify our own work. However, some mistakes come from bad assumptions and blind spots, so we might make the same mistakes when we verify our own work as we made when we did it. Hence, we may not notice the flaws in what we have done. Ideally, we do a manual testing, but as time evolved and new techniques have been discovered, so we have different software testing techniques with their automated tools. This course is to train the participants with such advanced topics.

Objectives:

- The objective of the STC is to introduce fundamentals of Software Testing.
- The program would help the participants to understand the key concepts behind Software Testing.
- The program will be more practical than theory.
- The objective of the STC is to demonstrate open source software testing tools and make all participants to use them.
- Several applications and research topics also will be discussed. So that interested participants can use them in their work.

Topics to be covered:

- ✦ Introduction to Software Testing
- ✦ Black-box and White-box Testing
- ✦ Static and Dynamic analyses
- ✦ Fuzzing
- ✦ Bounded Model Checking
- ✦ Introduction to Assembly Code (LLVM)
- ✦ Dynamic Symbolic Execution
- ✦ Dynamic Symbolic Execution with Pruning
- ✦ Mutation Testing

Open Source Software Testing Tools:

1. TCASE, 2. Clang, 3. Framma-C, 4. AFL,
5. CBMC, 6. KLEE, 7. TracerX, 8. KLEEMA

Note: Participants will be provided an ISO image of Oracle Virtual Box 6.1 with all the installed tools. So that during the training session participants can simultaneously perform.

Resource Persons:

Faculty from NIT Warangal, will deliver lectures and conduct hands on sessions of software testing tools.

Registration is open to: Faculty members, Industrial practitioner, Post-Doctoral Fellows, Research Scholars, PG students, UG students in Computer Science & Engineering, and Information Technology, who have an aptitude to work in the areas of Software Engineering broadly.

How to Apply: Eligible candidates may apply by filling the following google form with payment proof on or before 15th July, 2021.

<https://forms.gle/9m9TQ3usFfeaswc88>

Registration fee:

Category	Amount
Faculty, Post-doctoral fellows, Research Scholars, PG students, UG students	Rs. 500 /-
Industry participants	Rs. 1000/-

Registration fee may be remitted Online through NEFT to the Bank account given below. Proof of remittance of the requisite registration fee (with transaction number if online transaction) shall be uploaded in the google form.

Important Note: Please enter course code STT in remarks while doing transaction. This is mandatory.

Account Number	62403680215 (Savings Account)
Account Name	Center for Continuing Education NITW
Bank Name:	State Bank of India (SBI)
Branch:	NIT Warangal
IFSC Code:	SBIN0020149
Remarks	STT

Confirmation of Participation:

On receipt of the google form and fee remittance receipt, participants will be sent confirmation of their participation through email by 15th July, 2021. As the program is conducted online, the number of participants in the workshop is limited to 100. *Candidates are advised to register early to avoid disappointment.*