



Bharath

INSTITUTE OF HIGHER EDUCATION AND RESEARCH

(Declared as Deemed - to - be - University under section 3 of UGC Act 1956)



BHARATH INSTITUTE OF SCIENCE AND TECHNOLOGY

No.173, Agharam Road, Selayur, Chennai , T.N - 600 073.

Ref: BIHER/BIST/Civil//Spl/2020

Date: 03/12/2020

CIRCULAR

Many a times, the defined skill sets that are being imparted to students today with Programme Specific Objectives in educational institutions become redundant sooner than later due to rapid technological advancements. It is important for higher education institutions to supplement the curriculum to make students better prepared to meet industry demands as well as develop their own interests and aptitudes.

Hence a Value Added Course is offered by Department of School of Civil and Infrastructure Engineering, Bharath Institute of Higher Education & Research. The course offered is **Application of PSCAD and transient studies** with the duration of 30 hours (Two hour per day) and commences from **05/12/2020 to 23/12/2020(online)**.

Eligibility: Course is open for UG Students for Department School of Civil and Infrastructure Engineering.

Registration:

The registration form which is available in the university website should be duly filled by the participants and to be submitted to the Coordinator at least 5 days before the commencement of course.

Contact:

Mr.S.Rajesh

School of Civil and Infrastructure Engineering.,

Course Coordinator

Bharath Institute of Higher Education & Research.

Email id: anbalagan.civil@bharathuniv.ac.in


HOD

Head of the Dept.
(Civil Engineering)
Bharath Institute of Higher
Education & Research,
Selayur, Chennai - 600 073.

Value Added Course

Application of PSCAD and transient studies

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Value Added Course
Application of PSCAD and transient studies
Content of Syllabus

S.No.	Syllabus Details	No. of Lecture hrs	Time	Date	Lecturer name
1	Introduction of PSCAD and transient studies	2	3.00 – 5.00 pm	05/12/2020	Mr.S.Rajesh
2	Interactive control features of PSCAD (sliders, push buttons, dials and switches)	2	3.00 – 5.00 pm	06/12/2020	Mr.S.Rajesh
3	Studies that require simulation tools such as PSCAD, Advanced features of PSCAD for fast and accurate solutions	2	3.00 – 5.00 pm	07/12/2020	Dr.C.Anbalagan
4	Discussion of prior outage and contingency conditions	2	3.00 – 5.00 pm	08/12/2020	Dr.C.Anbalagan
5	Switching over voltage studies (SOV), Energy dissipation of surge arrestors, arrester rating and the selection of arrestors	2	3.00 – 5.00 pm	11/12/2020	Dr.C.Anbalagan
6	Developing the system and the substation model suitable for TRV investigations	2	3.00 – 5.00 pm	12/12/2020	Dr.C.Anbalagan
7	Transformers	2	3.00 – 5.00 pm	13/12/2020	Dr.C.Anbalagan
8	Automated generation of a large number of fault waveforms in COMTRADE format for real time relay testing	2	3.00 – 5.00 pm	14/12/2020	Dr.C.Anbalagan
9	Protection systems	2	3.00 – 5.00 pm	15/12/2020	Dr.C.Anbalagan
10	Simulating wind generation	2	3.00 – 5.00 pm	18/12/2020	Dr.C.Anbalagan

11	Large induction motors starting issues; including flicker and voltage dip problems	2	3.00 – 5.00 pm	19/13/2020	Mr.S.Rajesh
12	SPower Electronic Basics, HVDC and FACTS	2	3.00 – 5.00 pm	20/12/2020	Mr.S.Rajesh
13	Using power electronic modules and designing simple firing systems	2	3.00 – 5.00 pm	21/12/2020	Mr.S.Rajesh
14	Arc furnace loads	2	3.00 – 5.00 pm	22/12/2020	Mr.S.Rajesh
15	Evaluation of flicker severity	2	3.00 – 5.00 pm	23/12/2020	Dr.C.Anbalagan


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Saidapet, Chennai - 600 073.



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Topic: Application of PSCAD and transient studies

Type of Course: value added course/ UG(**online**).

School of Civil and infrastructure Engineering

Pre-Requisites: AUTO CADD

Course Duration: 30 hours (05/12/2020 to 23/12/2020)

Intended Audience: School of Civil and infrastructure Engineering Students

Industries Applicable To: All companies that deal with the Civil Engineering development

Coordinators: Mr.S.Rajesh

Objective:

- a) Installing the software and getting started
- b) Creating a small simulation case using PSCAD
- c) Fundamental theory of transient simulation
- d) A review of the various models and examples available in PSCAD
- e) Development of an AC system model suitable
- f) AC system transient studies

VALUE ADDED COURSE
Application of PSCAD and transient studies
COURSE OUTLINE:

This course covers the fundamentals of the study of electromagnetic transients in electrical networks. A number of application areas such as AC transients, fault and protection, transformer saturation, wind power, FACTS, power quality, as well as other power systems topics will be discussed with practical examples serving to illustrate the subjects. Several case studies will be applied in detail to highlight practical situations encountered by engineers in the field. Course participants will be able to experiment with the case studies in an interactive hands-on workshop environment using the PSCAD Simulation software. Attendees can request coverage of specific topics or phenomena of interest. Previous experience with the PSCAD software tool is not required. Switching transients are an important factor on the equipment selection, protection and tower air clearances. Lightning and switching are two primary causes of transient overvoltage in power systems. This paper focuses on a comparative study of the modeling and simulation of a switching transient overvoltage study using two widely used simulation tools: PSCAD/EMTDC and EMTP-RV. The overvoltage modeling and statistical analysis method have been carefully described in both simulations. The comparative overvoltage results for switching transient study are also provided.

BHARATH INSTITUTE OF HIGHER EDUCATION AND RESEARCH
CERTIFICATE OF PARTICIPATION

This is to Certify that RAGHU. R, from Bharath Institute of Higher Education and Infrastructure Engineering, Bharath Institute of Science & Technology, BIHER from Coordinator HOD School of Civil & Infrastructure Engineering Research, has participated in value added course on 'Application of PSCAD and transient studies by Mr.S.Rajesh,, Assistant Professor, Organized by School of Civil & 05.12.2020 To 23.12.2020.


Coordinator


HOD

VALUE ADDED COURSE

Feedback Form

Event Name: APPLICATION OF PSCAD & TRANSIENT STUDIES

Event Venue: Date: 5/12/2020

Name of participant: RAGHU.R

1. How useful did you think this event was for you?

(Please circle the appropriate number where 1 = not at all useful and 5 = extremely useful)

1	2	3	4	5
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2. Value added course is useful and well organized.

YES	NO
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3. Did you receive all the information you required at this Venue?

YES	NO
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4. Would you like to attend any further Training Courses VAC

YES	NO
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