



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, Selaiyur, Chennai , T.N - 600 073.

Ref: BIHER/BIST/Civil//Spl/2017

Date: 10/08/2017

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 Civil Engineering, Bharath Institute of Higher Education & Research. The course offered is **Earthquake Resistance Design of Buildings Using SAP** with the duration of 36 hours (Two hour per day) and commences from **28/08/2017**.

Eligibility: Course is open for UG Students of School of Civil and Infrastructures 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 10 days before the commencement of course.

Contact:

Mrs.R.Chitra,

Assistant Professor /School of Civil and Infrastructures Engineering,

Course Coordinator

Bharath Institute of Higher Education & Research.

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

HOD/CIVIL
Head of the Department
Department of Civil Engineering
Bharath Institute of Higher Education & Research
(Declared as Deemed to be University U/S 3 of UGC Act 1956)
Selaiyur, Chennai-600 073, INDIA

SCHOOL OF CIVIL AND INFRASTRUCTURE ENGINEERING
VALUE ADDED COURSE - EARTHQUAKE RESISTANCE DESIGN OF
BUILDINGS USING SAP

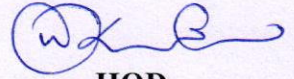
Date: 28.10.2018-20.09.2017

Year/Sem: II /III

List of students

SL.NO	REG NO	NAME OF THE CANDIDATE	STUDENTS CONTACTS NUMBER	E MAIL ID
1	U16CE001	ATHNAN BAYAJ K	7904684263	bayaj1998@gmail.com
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31	U16CE039	KECHANGULIE KEDITSU	9940230346	Kechakeditsu44@gmail.com

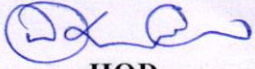
32	U16CE040	BISHWANATH SINGH	9366887653	bishwa155@gmail.com
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34	U16CE042	RENISH R	9010579593	renishjo.re@gmail.com
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HOD
Head of the Department
Department of Civil Engineering
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Saidyur, Chennai-600 073. 2016

Value Added Course
Earthquake Resistance Design of Buildings Using SAP
Content of Syllabus

S.No.	Syllabus Details	No. of Lecture Hours	Time	Date	Lecture name
1	Introduction to Dynamic Loads	2 Hours	10.00am to 12.00pm	28.08.2017	Dr.S.J.Mohan, Professor
2	Static Load v/s Dynamic Load, Types of Dynamic forces, Force Control and Displacement Control	2 Hours	10.00am to 12.00pm	29.08.2017	Dr.S.J.Mohan, Professor
3	Basics of Seismology	2 Hours	10.00am to 12.00pm	30.08.2017	Dr.S.J.Mohan, Professor
4	Behavior of Structures During Earthquake and Earthquake Resistant Features of Structure	2 Hours	10.00am to 12.00pm	31.08.2017	Dr.S.J.Mohan, Professor
5	Inertia forces in structures	2 Hours	10.00am to 12.00pm	01.09.2017	Dr.S.J.Mohan, Professor
6	Behavior of Brick Masonry Structures	2 Hours	10.00am to 12.00pm	04.09.2017	Dr.S.J.Mohan, Professor
7	Behavior of Stone Masonry Structures	2 Hours	10.00am to 12.00pm	05.09.2017	Dr.S.J.Mohan, Professor
8	Behavior of RC Structures	2 Hours	10.00am to 12.00pm	06.09.2017	Dr.S.J.Mohan, Professor
9	Earthquake Design Philosophy & Guide lines	2 Hours	10.00am to 12.00pm	07.09.2017	Mrs.R.Chitra,AP
10	Fundamentals of Earthquake Vibrations of Structures	2 Hours	10.00am to 12.00pm	08.09.2017	Mrs.R.Chitra,AP
11	Equation of Motion (By Newton's Law and By D'Alembert's Principle), Degrees of Freedom	2 Hours	10.00am to 12.00pm	11.09.2017	Mrs.R.Chitra,AP
12	Equation of Motion for Forced Vibration for Damped and Un damped System	2 Hours	10.00am to 12.00pm	12.09.2017	Mrs.R.Chitra,AP
13	Earthquake Load Analysis on Structures	2 Hours	10.00am to 12.00pm	13.09.2017	Mrs.R.Chitra,AP
14	Introduction to methods of Earthquake Load Analysis	2 Hours	10.00am to 12.00pm	14.09.2017	Mrs.R.Chitra,AP
15	Analysis of Structure by Linear Static Method (Seismic Coefficient Method)	2 Hour	10.00am to 12.00pm	15.09.2017	Mrs.R.Chitra,AP
16	Analysis of Structure by Linear Dynamic Method (Random Response Method)	2 Hours	10.00am to 12.00pm	18.09.2017	Mrs.R.Chitra,AP
17	Ductile Detailing, Concepts of Detailing of various structural components as per IS: 13920 provisions.	2 Hours	10.00am to 12.00pm	19.09.2017	Mrs.R.Chitra,AP
18	Design of seismic resistant buildings using SAP & concept of lateral load distribution on buildings	2 Hours	10.00am to 12.00pm	20.09.2017	Mrs.R.Chitra,AP


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Topic: Earthquake Resistance Design of Buildings Using SAP

Type of Course: value added course / UG

School of Civil and infrastructure Engineering

Pre-Requisites: Design of Reinforced Concrete Structure.

Course Duration: 36 hours (28/08/2017 to 20/09/2017)


Intended Audience: Civil Engineering Students

Industries Applicable To: All companies that deal with the civil Design software.

Coordinators: Dr.S.J.Mohan, Professor and Mrs.R.Chitra, Assistant Professor

Objective:

- 1) To familiarize students to study the behavior of buildings and structures subjected to seismic loading.
- 2) Design of different type of member of building to resist the earthquake.
- 3) To deal with different aspect of earthquake forces
- 4) Computation of earthquake forces on building frame using seismic coefficient method as per IS 1893-2002.
- 5) Design of seismic resistant buildings using SAP & concept of lateral load distribution on buildings



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COURSE OUTLINE:

Earthquake Resistance Design of Buildings Using SAP, also known as Earthquake engineering, is the branch of civil engineering concerned with the engineering behavior of buildings resist the earthquake. The course on Introduction to Earthquake Resistance Design of Buildings Using SAP provides the fundamental concepts, principles and application of earthquake engineering in seismic analysis and design of structures. The course begins with the Seismology explaining the causes of occurrence of earthquake and its characterization. The seismic analysis of the structures under earthquake excitation is developed. The structural system modeled as discrete and continuous system. The concept of response spectrum analysis procedure to determine structure response and design earthquake forces is explained. The codal provisions for earthquake resistant design of structures as per Indian Standards are explained. Finally, the course also covers the soil structure interaction and inelastic response spectra.

The advanced course material on Earthquake Engineering will be very useful to undergraduate students, post-graduate students, teachers and practitioners. A number of chosen problems will be solved to illustrate the design and analysis concepts clearly.

Earthquake Resistance Design of Buildings Using SAP deals with different aspect of earthquake forces, the course provide a coherent development to the students for the courses in sector of earthquake engineering and to study the present the foundations of many basic engineering concepts related earthquake Engineering and also experience in the implementation of engineering concepts which are applied in field of earthquake engineering.


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GRADE **A**
NATIONAL ASSESSMENT AND
ACCREDITATION COUNCIL



BHARATH INSTITUTE OF SCIENCE AND TECHNOLOGY

CERTIFICATE OF PARTICIPATION

This is to Certify that Kamal Doss.K.y, Bharath Institute of Higher Education and Research, has participated in value added course on “**Earthquake Resistance Design of Buildings Using SAP**”, presented by **Mrs.R.Chitra, Assistant Professor, School of Civil & Infrastructre Engineering, BIHER**, Organized by School of Civil & Infrastructure Engineering, Bharath Institute of Science & Technology, BIHER from 28.08.2017 to 20.09.2017.

Coordinator

Co-Coordinator

HOD, Civil Engineering
Head of the Department

Department of Civil Engineering
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VALUE ADDED COURSE - EARTHQUAKE RESISTANCE DESIGN OF BUILDINGS

USING SAP

Date: 28.10.2018-20.09.2017

Year/Sem: II /III




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VALUE ADDED COURSE

Feedback Form

Event Name: **SKILL DEVELOPMENT COURSE ON HAND BLOCK PRINTING.**

Event Venue: Date: **BIHER - 07/07/2017**

Name of participant: **S. PRASANNA - U17CE022**

CONTENT

Was the content interesting?	Yes ✓	No
Was the content understandable?	Yes ✓	No
Was there clarity in the content?	Yes ✓	No

STRUCTURE

(Rate from 1-5 where 1 being the least)

How was the focus of the talk good?	1	2	3	4	5
How far you found the lecture useful?	1	2	3	4	5
How far did the lecturer meet your expectations?	1	2	3	4	5
What struck you about this topic?					

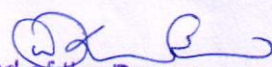
PRESENTATION

(Rate from 1-5 where 1 being the least)

How far the lecturer managed to capture your attention?	1	2	3	4	5
How did you find the lecturer vocabulary?	1	2	3	4	5
How far audience participation & interaction encouraged?	1	2	3	4	5
How far the lecturer appeared enthusiastic about the subject?	1	2	3	4	5

OVERALL

Were you satisfied with the lecture?	Yes ✓	No	
Was the lecturer able to answer your questions?	Yes ✓	No	
What is your overall impression about the lecture?	Good ✓	Average	Ok
What suggestions do you have to improve the lecturers approach?	<u>-NIL-</u>		


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