



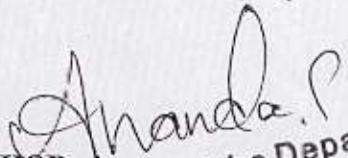
Sapthagiri College of Engineering

(Affiliated to Visvesvaraya Technological University, Belagavi & Approved by AICTE, New Delhi)
#14/5, Chikkasandra, Hesaraghatta Main Road, Bengaluru - 560057


Date: 02/01/2015


Meeting Circular

A meeting is scheduled on 03/01/2015 at 10:30 PM in Department of Biotechnology. This meeting will be regarding the conduction of FDP and to identify the coordinators for this event.


HOD
Head of the Department
Dept. of Bio-Technology
Sapthagiri College of Engineering
No. 57/1, Chikkasandra
Hesaraghatta Main Road
Bangalore -57

Copy To,

1. HOD of Physics 

2. HOD of Chemistry 


Principal
Sapthagiri College of Engineering
Chikkasandra, Hesaraghatta Road,
Bangalore- 560 057



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FDP Report

"Innovative methods for Structural Analysis of Molecules"

19-1-2015 to 23-1-2015

Monday to Friday

DEPARTMENT OF BIOTECHNOLOGY

AND

DEPARTMENT OF BASIC SCIENCE

FIVE DAYS FACULTY DEVELOPMENT PROGRAMME

ON

"Innovative methods for Structural Analysis of Molecules"

19-1-2015 to 23-1-2015

Monday to Friday

Time Date/Day	9:30AM TO 10:30AM	10:30AM TO 12:30PM	1:45PM TO 2:30PM	2:30PM TO 3:30PM	3:45PM TO 4:30PM
19-1-2015 Monday	FDP Inaugural Function	TEM Dr Krishan BS	LAB SESSION Quantification Chemically Synthesized molecules using UV spectrometer Roopa K		
20-1-2015 Tuesday	Chromatographic techniques for Bimolecular analysis Dr Venkaieshappa, SIMS		LAB SESSION Preparation of reagents and Sample for HPLC Dr Venkateshappa, SIMS		
21-1-2015 Wednesday	LAB SESSION Running of sample and analysis of chromatogram Centre research laboratory, SIMS Medical College				
22-1-2015 Thursday	Structural Analysis through FTIR Dr Mahesh CEO, Azymes Pvt Ltd		LAB SESSION Data analysis of GC-MS and FTIR graphs Dr Mahesh CEO, Azymes Pvt Ltd		
23-1-2015 Friday	Structural analysis X-Ray crystallography Jagadessh Gowda Prof and HOD Department of Physics, SCE				Valedictory Function

10:30AM-10:45AM- Tea Break, 12:30PM-1:30PM-Lunch Break, 3:30PM-3:45PM- Tea Break


Circular


All the faculty of Department of Biotechnology and Department of Basic Science are hereby informed to attend five days faculty development programme titled as **Innovative methods for Structural Analysis of Molecules** from 19-1-2015 to 23-01-2015. All the Faculty register their names with Faculty Coordinator **Mrs Soumya C, Dept of Biotechnology.**

Ananda S

HOD of Biotechnology
Head of the Department
Dept. of Bio - Technology
Sapthagiri College of Engineering
No. 57/1, Chikkasandra
Hesaraghatta Main Road
Bangalore - 57

Copy To

1. HOD of Chemistry 

2. HOD of Physics 


Principal

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14/5, Chikkasandra, Hesaraghatta Main Road
Bengaluru - 560 057

PATRONS

Sri G Dayanand
Chairman, SCE

Sri G D Manoj
Executive Director, SCE

Dr. Ashwath Kumar M
Principal, SCE

Organisers

Dr. Ananda S
HOD, BT

Dr. Krishna B S
HOD, Chemistry

Dr. Jagadeesh Gowda
HOD, Phycis

Co-ordinator

Prof. Soumya C
AP, Dept of BT

Registration Form

*Five Day Faculty
Development
Programme
On*

*Innovative Methods For
Structural analysis of
Molecules*

19th January to 23rd January 2015

Monday to Friday

Participant Details

Name : _____

Dept : _____

College: _____

Mobile : _____

Email ID : _____

Signature of the Participant



**SAPTHAGIRI COLLEGE OF
ENGINEERING**
Affiliated to VTU, Belagavi

*Five Day Faculty
Development
Programme
ON*

*Innovative
Methods For
Structural analysis
of Molecules*

*Department of Bio-Technology
And
Department of Basic Sciences*

About Sapthagiri College of Engineering

Sapthagiri College of Engineering was established in the year 2001 by the Srinivasa Educational and Charitable Trust(R) to implement path breaking student centric education methods. To augment talent, nurture teamwork to transform to develop individual as responsible citizen. To educate the students and faculties about entrepreneurship to meet vibrant requirements of the society. Strengthen Industry Institute Interaction for knowledge sharing. SCE has the most advanced laboratories for practical training, state of the art computing facilities and spacious classrooms with good infrastructure. The Institution has collaborative & extension activities by way of MOUs with various organizations for fostering Academic/ Research/ Innovation. SCE has contributed significantly to the field of education. The organization provides an ideal ambience to stimulate the teaching-learning process, leadership skills, helping in bringing out skillset to conduct research and development.

About Department of Bio-Technology

Biotechnology(BT) is the third wave in bio-science and represents an interface of basic and applied sciences, where transformation of science into technology is witnessed. The Department of Biotechnology was established in 2004, The courses offered are: B.E., M.Sc. (Engg.) and Ph.D in Biotechnology.

The Department imparts quality education to equip students with advanced skills compatible to the needs of Biotech industry and academia. The department has been recognised as a Research Center by Visvesvaraya Technological University (VTU), Belagavi. The department has state of the art laboratories and with more than TWO hundred publications in various National and International peer reviewed journals.

The students are encouraged to do in house research projects which helps them to handle independent projects to gain hands on practical exposure. Department has received research funds from VGST, KSCST & AGASTHYA FOUNDATION in the thirst areas. Also, department has industry interaction with Genie pvt ltd, Chlorobios, Clintrac pvt ltd, Stelixir, Genelon and so on.

Department of Basic sciences

Basic sciences department consists of Physics, chemistry and Mathematics . All these departments was established in 2001 and are imparting quality education for first years in Engineering. All the Faculty members are encouraged to participate in the conference/workshops and also to publish/present research papers in journals and conferences. Excellence in research and teaching has been the hallmark of Basic science departments ever since its inception. Our exceptional research profile directly feeds into our teaching experience.

About FDP

The Department of Biotechnology and Department of Basics Science is jointly organizing the FDP programme on Innovative Methods for structural analysis of molecules for 5 days from 19-1-2015 to 23-1-2015 (Monday-Thursday).

Elucidation of molecular structure is necessary to identify or confirm the compound during research or product development. Chemical structural elucidation of impurities is necessary to support compound regulatory submissions for a number of industrial sectors such as agrichemicals, pharmaceutical and new chemical entity registrations. Different techniques are available to determine molecular weight, structure and purity of compound such as spectrometry, chromatographic techniques.

Major Topics Covered

1. Scanning Electron microscopy
2. X-Ray Diffraction
3. Transmission Electron Microscopy
4. Atomic Force Microscopy
5. Characterization Techniques



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FDP Report

“Innovative methods for Structural Analysis of Molecules”

19-1-2015 to 23-1-2015

Monday to Friday

Five days Faculty Development Programme on “**Innovative methods for Structural Analysis of Molecules**” was jointly organized by the Department of Biotechnology and Department of Basic science at Sapthagiri college of Engineering, Bangalore from 19-1-2015 to 23-1-2015.

Elucidation of molecular structure is necessary to identify or confirm the compound during research or product development. Chemical structural elucidation of impurities is necessary to support compound regulatory submissions for a number of industrial sectors such as agrichemicals, pharmaceutical and new chemical entity registrations. Different techniques are available to determine molecular weight, structure and purity of compound such as spectrometry, chromatographic techniques. The FDP programme was arranged to know the advance techniques used for the analysis of micro and molecule.

Program Objective:

1. Gain in-depth knowledge of techniques involved in analysis of molecule
 - ❖ Scanning Electron Microscopy (SEM) Introduction, Instrumental details, image formation, Sample preparation and applications.
 - ❖ X-Ray Diffraction (XRD) Introduction, Instrumentation details, Phase Identification, Crystal Size, Crystal Quality, Texture (to some extent), Crystal Structure
 - ❖ Transmission Electron Microscopy (TEM) introduction Instrumentation details, TEM imaging and Diffraction, Precession Electron Diffraction, Electron Energy Loss Spectroscopy, Energy Dispersive Spectroscopy, Orientation imaging microscopy, Image processing and Analysis.
 - ❖ Atomic Force Microscopy (AFM) introduction, instrumentation, applications advantages and disadvantages.
 - ❖ Surface and material Characterization Techniques- introduction, instrumentation, adsorption and absorption techniques.
2. Hands on Training



FDP Report

"Innovative methods for Structural Analysis of Molecules"

19-1-2015 to 23-1-2015

Monday to Friday

Summary of Event

Day 1:

Dr Krishna B S, Professor & Head Dept. of Chemistry, Sapthagiri college of Engineering

He delivered talk on Transmission Electron Microscopy (TEM) introduction, Instrumentation details, TEM imaging and Diffraction, Proportion Electron Diffraction. Electron Energy Loss Spectroscopy, Energy Dispersive Spectroscopy, Orientation imaging microscopy, Image processing and Analysis "

Afternoon a lab session was conducted by Roopa KP Department of Chemistry, SCE.

Day 2 and Day 3:

Dr Venkateshappa, Dept. of Biochemistry, SIMS

He delivered talk on Chromatographic techniques for bimolecular analysis and Analysis of molecules by HPLC. He gave a talk on how the samples can be separated and used for identification of diseases. Hands on experience were carried out in in SIMS research laboratory were the sample preparation and output of the results were analyzed.

session the preparation of reagents require for running the HPLC was done.

Day 4:

Dr Mahesh CEO, Azymes Pvt Ltd

Delivered the lecture on Structural Analysis through FTIR and interpretation of results. The role of biomolecules in different field was explained.

Day 5:

Dr Jagadeesh Gowda G V, HOD Physics Sapthagiri college of Engineering

Delivered lecture on " X-Ray Diffraction (XRD) Introduction, Instrumentation details, Phase Identification, Crystal Size, Crystal Quality, Texture (to some extent), Crystal Structure". He discussed in details about XRD and Plotting of PXRD graph with the help of Origin software and Explained the of crystal size, stress and strain of the particles.

FDP Report

“Innovative methods for Structural Analysis of Molecules”

19-1-2015 to 23-1-2015
Monday to Friday



Dr Krishna B S - Delivering lecture on Transmission Electron Microscopy



Dr Jagadeesh Gowda GV- Delivering lecture on X-Ray Diffraction



Signature of the FDP Co-Ordinator



Signature of the HOD
Head of the Department
Dept. of Bio - Technology
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ATTENDANCE LIST

Event Name: Innovative methods for Structural Analysis of Molecules
 Date: 19-1-2015 to 23-01-2015

Sl. No	Faculty Name	DAY-1		DAY-2		DAY-3		DAY-4		DAY-5	
		MS	AS	MS	AS	MS	AS	MS	AS	MS	AS
1	Prashanth Kumar HP	HP	HP	HP	HP	HP	HP	HP	HP	HP	HP
2	Vinutha Mores	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA
3	Rohit K.C.	R	R	R	R	R	R	R	R	R	R
4	Shobha G.	AS	AS	AS	AS	AS	AS	AS	AS	AS	AS
5	Dr. Krishnamurthy NB	NB	NB	NB	NB	NB	NB	NB	NB	NB	NB
6	Krishna murthy TP	K	K	K	K	K	K	K	K	K	K
7	Soumya.c	PC	PC	PC	PC	PC	PC	PC	PC	PC	PC
8	Dr. Shankar K.S	KS	KS	KS	KS	KS	KS	KS	KS	KS	KS
9	Bhenu Baby Mathew	B	B	B	B	B	B	B	B	B	B
10	Sasanya D	D	D	D	D	D	D	D	D	D	D
11	Vijay Kiran	WIK	WIK	WIK	WIK	WIK	WIK	WIK	WIK	WIK	WIK

Principal
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 Date: 19-1-2015 to 23-01-2015

Sl. No	Faculty Name	DAY-1		DAY-2		DAY-3		DAY-4		DAY-5		
		MS	AS	MS	AS	MS	AS	MS	AS	MS	AS	
1	Dr. Chaitanya Lakshmin	P	P	P	P	P	P	P	P	P	P	✓
2	Thamija KV	H	H	H	H	-	H	H	H	H	H	✓
3	Meena S	MA	MA	MA	MA	MA	MA	MA	MA	MA	MA	✓
4	Roopa. K.P.	P	P	P	P	P	P	P	P	P	P	✓
5	Anusree A.M	P	P	P	P	P	P	P	P	P	P	✓
6	Dr. B.S. Krishna	BSK	BSK	BSK	BSK	BSK	BSK	BSK	BSK	BSK	BSK	✓

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Ananda
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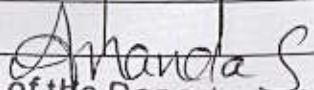
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Event Name: Innovative methods for Structural Analysis of Molecules
Date: 19-1-2015 to 23-01-2015

Sl. No	Faculty Name	DAY-1		DAY-2		DAY-3		DAY-4		DAY-5		
		MS	AS	MS	AS	MS	AS	MS	AS	MS	AS	
1	Mrs. Shashikala Bis											✓
2	Mr. Gnanendras D.S											✓


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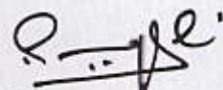
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Department of Biotechnology and Department of Basic Sciences


CERTIFICATE OF PARTICIPATION

This is to certify that [✓] Dr/Mr/Ms/Mrs Shashidhara K.S of Sapthagiri College of Engg has successfully participated in the Faculty Development Program on **INNOVATIVE METHODS FOR STRUCTURAL ANALYSIS OF MOLECULES** from 19-1-2015 to 23-01-2015 at Sapthagiri College of Engineering, Bengaluru - 560057.


Coordinator


Convener


Principal


Principal
Sapthagiri College of Engineering
Chikkasandra, Hesaraghatta Road,
Bangalore- 560057