Sir M Visvesvaraya Institute of Technology
Bengaluru-562157

Department of Electronics & Communication Engineering
PG & Research Center

From ,

Dr Supriya V G
Professor , Department of ECE

Date : 28-DEC-2019

4105
30|12|19

To
The Principal
Sir MVIT

Through
The HOD , Dept of ECE
Sir MVIT

Respected Sir,

Sub : Permission to conduct one-week National Level Student
Development Program on 3-D Printing & Raspberry-Pi-Reg.,

With reference to the above subject, it is to bring to your kind notice that the Department of ECE, has planned to conduct a one Week National Level student development program on 3-D Printing & Raspberry –Pi in association with IEEE and ISTE Student Branch. It is expected that the students from various colleges from different states are expected to participate in the workshop. This will help the students enhance their practical exposure on the niche areas and making them industry ready no sooner they graduate.

In this regard, I request you to kindly permit us to conduct the program from March 2nd – 7th 2020. A sum of 1000/- is decided to be collected towards registration fee from each non-IEEE Member participant coming from other institutes and Rs.800/- IEEE Members from in house participants. The number of participants will be restricted to 50. 4 sets of kits with all the accessories would be purchased during the conduction and hands on will be delivered on these kits. Post workshop these kits would be deposited in the incubation center and will be made available for the students and faculty to carry out various projects of their interest.

A total expenditure of Rs.1, 50,000/-(One lakh fifty thousand only) is expected to incur for the conduction of this program. Rs.90, 000/- (Ninety Thousand is expected to be raised via registrations and funding from ISTE and VTU. I request you to kindly support us by giving the financial assistance for the remaining amount.

Thanking you,

Yours faithfully,

Dr Supriya V G.
Tentative Budgetary Proposal

Forwarded to Principal

Tentative budgetary proposal under various heads:

SL NO	PARTICULARS OF THE EXPENDITURE	AMOUNT in Rs.
1.	Printing of brochures 200 Nos	4000.00
2.	Postage n Delivery	2000.00
3.	Inauguration (bouquets, breakfast for dignitaries, post function snacks)	10000.00
4.	Design & Printing of certificates and banners	8000.00
5.	Lunch and refreshments for all the participants for 5 days (120X 75X5)	45000.00
6.	Remuneration for the resource Persons	60,000.00
7.	Purchase of Raspberry Pi Kits with accessories	21000.00
Total Expenditure		**1,50,000.00**
Amount expected to be collected via registrations, funding from ISTE, VTU		-90,000.00

SRI KRISHNADEVARAYA EDUCATIONAL TRUST

No. 16, Ballari Road, Sadashivanagar, Bengaluru – 560 080

Ref.No.KET/ 59 /1260 /2019 – 2020   Date: 21/01/2020

N O T E:

Sub: Financial assistance for organizing One-Week National Level Student Development Programme (SDP) on "3-D Printing & Raspherry-Pi – Reg.

Ref: Letter from HOD, Dept. of Electronics & Communication Engg., dated 28/12/2019, recommended by the Coordinator, RAC, duly forwarded by the Principal.

<div align="center">***</div>

With reference to the above, this is to convey approval for organizing One-Week National Level Student Development Programme (SDP) on "3-D Printing & Raspherry-Pi for the students of Electronics & Communicaton Engg., in association with IEEE and ISTE Student Branch between 2nd and 7th March, 2020.

Rs.50,000/- (Rupees FiftyThousand only) is sanctioned to meet the expenditure. The amount may be drawn from Principal's SB account and reimbursement claimed later with duly audited bills and vouchers.

(K.SYAMA RAJU)
SECRETARY

To
The Principal,
Sir MVIT,
Bengaluru.

Copy to :
1. The HOD, Dept. of Electronics & Communication Engg., Sir MVIT, Bengaluru.
2. The Accounts Officer, Sri KET, Bengaluru.

By BJL

SRI KRISHNADEVARAYA EDUCATIONAL TRUST

No. 16, Ballari Road, Sadashivanagar, Bengaluru – 560 080

Ref.No.KET/ 59 /1260 /2019 – 2020   Date: 21/01/2020

N O T E:

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Printing & Raspherry-Pi – Reg.

Ref: Letter from HOD, Dept. of Electronics & Communication
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National Level   Student Development Programme (SDP)   on "3-D Printing &
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2. The Accounts Officer, Sri KET, Bengaluru.

by BJL

SIR M VISVESVARAYA INSTITUTE OF TECHNOLOGY

Krishnadevaraya Nagar, Hunasamaranahalli, Bangalore -562157
Department of Electronics & Communication Engineering

Student Development Program
"3D printing and Raspberry-Pi"
2nd – 6th March 2020

Date: 2|3|2020

Sl. No.	USN	Name of Participant	Signature Morning	Signature Afternoon
1	—	Santhosh		
2	—	Kavya M.R		
3	IMV17ECO46	Jayanth. M.B		
4	IMV17EC036	Dhananjaya B.R.		
5	IMV17EC063	MONISH B·V	Monish	monish
6	IMV17E6044	Hariram J		
7	IMV17EC051	KAUSHIK KUMAR	Kaushik	Kaushik
8	IMV17EC061	MEHUL JAIN		Mehul
9	IMV17ME076	SUBODH RAKSHIT	Subodh·	Subodh·
10	IDB18ECO59	Komala. S.Hiremath	K.a	K.a
11	IDB18EC063	Likitha Arjun.le.	Likir	likitha
12	IMV18EC085	Sakshi. H.S		
13	IMV18EC055	I.Monisha shakthi	monisha	
14	IMV18EC.083	Sahana.V	Sahana.V	Sahan V
15	IMV18EC107	Spandana H.V	Sp H.V	Sp H.V
16	IMV18EC126	Swathi. P	Swathi. P.	Swathi
17	IMV18EC101	SHRAVYA	Shravya	Shravya
18	IMV18EC087	SANA ISMAIL	Sanaismail	Sanaismail
19	IMV18EC076	RANJITHA.P	Ranjitha.	Ranjitha
20	1MV18EC031	Dollina Shreya	Shrey	
21	IMV18EC047	Litha K		
22	IMV18EC124	A. Gowri Pooja		
23	1MV18EC043	KHUSHI. N. RAJ	Khushi N Raj	Khushi. N. Raj
24	1MV18TE030	RAJESHWARI GUPTA	Rup H.	Raj
25	IMV18EC014	ANJALI	Anjali	Ani
26	IMV18EC115	Vaishnavi Verma	Vaishnavi	Vaishnavi
27	IMV18EC113	Tejeshwini.B. Dudbhatte	B	
28	IMV18ME063	Prateek. S.	Prate.S	Prate.S.
29	IMV18ME037	Hitesh Kumar	Hkumar	
30	IMV18ME036	Harsh Garg		
31	IMV18ME058	PARIKSHIT BR		
32	IMV17ECO10	Umair		

SIR M VISVESVARAYA INSTITUTE OF TECHNOLOGY

Krishnadevaraya Nagar, Hunasamaranahalli, Bangalore -562157
Department of Electronics & Communication Engineering

Student Development Program
"3D printing and Raspberry-Pi"
2nd – 6th March 2020

Date: 3/3/2020

Sl. No.	USN	Name of Participant	Signature	
			Morning	Afternoon
1	IMV17EC057	LIKHITA L GOVEAS		
2	IMV17EC053	KRATHI TODALBAGI		
3	IMV17EC055	KRITHIKA. J		
4	IMV17EC009	Ankitha . C		
5	IMV17EC023	Bavitra Sruthi		
6	IMV17EC058	Nishanth		
7	IMV17EC059	Maaz Ahmed		
8	IMV17EC013	Ashik Jacob		
9	IMV17EC010	Umair Ansari		
10	IMV17EC034	Deepak M		
11	IDT19MEd17	NAGANANDANA.U		
12	IDT19MEH01	ADARSHA.S		
13	—	Santhosh		
14	—	Kavya		
15	IDB18EC063	Likitha Arjun le.		
16	IDB18EC059	Komala. S.Hiremath		
17	IMV18EC085	Sakshi. H.S		
18	IMV18EC055	I.momshashakthi		
19	IMV18EC083	Sahana.V		
20	IMV18EC107	Spandana H.V		
21	IMV18EC031	Shreya D		
22	IMV18EC076	RANJITHA.P.		
23	IMV18EC103	Sirisha J.C		
24	IMV18EC054	MEGHANA.M		
25	IMV18EC053	Meghana.K		
26	IMV18EC099	Shivani.N.S		
27	IMV18EC101	SHRAVYA		
28	IMV18EC113	Tejashwini B Dudhabhate		
29	IMV18EC087	SANA ISMAIL		
30	IMV18EC126	SWATHI. P		
31	IMV18EC115	VAISHNAVI VERMA		
32	IMV18EC113	KHUSHI N.RAJ		

SIR M VISVESVARAYA INSTITUTE OF TECHNOLOGY

Krishnadevaraya Nagar, Hunasamaranahalli, Bangalore -562157
Department of Electronics & Communication Engineering

Student Development Program
"3D printing and Raspberry-Pi"
2nd – 6th March 2020

Date: 4/3/2020

Sl. No.	USN	Name of Participant	Signature Morning	Signature Afternoon
1	IMV17EC034	DEEPAK M	bPajz	Deverpal
2	IMV17EC013	ASHIK JACOB	Ashik	Ashok
3	IMV17EC010	AMA UMMAIY	Um	Umaiy
4	IMV17EC058	Nishanth		Nishanth
5	IMV17EC059	Maaz	Maaz tabs	Maaz Ahmm
6	IDT19ME427	SYED AAKHIO MUZAMMIL		
7	IDT19ME428	SYED SHUAIB	Syed Shuay	Syed Shuai
8	IDT19ME417	NAGANANDANA.U	Nag	NSy
9	IDT19MH01	ADARSHA.S	AdaygS	Adarshs
10	—	Santrosh	Spee	Spee
11	IDB18EC059	komala.S.Hiremath	kd	kd
12	IDB18EC063	likitha.Arjun.k	link	link
13	IMV18EC103	Sirisha.J.C	Sirisha	Sirisha
14	IMV18EC099	Shivani.N.S	Shivani	Shivani
15	IMV18EC076	RANJITHA.P	Rj	RJ
16	IMV18EC053	Meghana K	Meghak	Meghak
17	IMV18EC054	Meghana M	neeM	Meghum
18	IMV18EC126	Swathi-P	Swathi-P.	Swathi.P
19	IMV18EC113	Tejeshwini.B.Dudhabhal	D	D
20	IMV18EC101	SHRAVYA	Shravya	Shravya
21	IMV18EC115	Vaishnavi Visua	Vaishnavi	Vaishnavi
22	IMV18EC087	Sana Ismail	Sanaismail	Sanaismail
23	IMV18EC043	KHUSHI.N.RAJ	Khushi.N.Raj	Khushi.N.Raj
24	IMV18EC014	ANJALI	Anjali	Anjali
25	INV18EC047	LEKHA.C	Rdel	Rdel
26	IMV17EC046	fes Jayanth.M.B	Jyth	Jyth
27	IMV17EC061	mehul-Jain	Qlw	Qlw
28	IMV17EC036	Dhananjaya B.R.		
29	IMV17ME076	Subodh Rakshit	Subodh	Subodh
30	IMV17EC063	MONISH B.V	Monish	Monish
31	IMV17EC044	Hariram J	Hri	Hri
32	IMV17EC051	Kaushik kumar	Kaushik	Kaushik

SIR M VISVESVARAYA INSTITUTE OF TECHNOLOGY

Krishnadevaraya Nagar, Hunasamaranahalli, Bangalore -562157
Department of Electronics & Communication Engineering

Student Development Program
"3D printing and Raspberry-Pi"
2nd – 6th March 2020

Date: 5/3/2020

Sl. No.	USN	Name of Participant	Signature Morning	Signature Afternoon
1	IMV17EC061	Mehul-Jain		
2	1MV17EC051	KAUSHIK KUMAR		
3	IMV17EC063	MONISH B·V		
4	IMV17EC044	Hariram J		
5	IDB18EC059	Komala.S.Hiremath		
6	IDB18EC063	Likitha.Arjun.K		
7	—	Kavya. M·R		
8	IMV17EC023	Banitha Sruthi·S		
9	IMV17EC055	Krithika·J		
10	IMV17EC057	hikhita·G		
11	IMV17EC053	Krathi·T		
12	IMV17EC009	Ankitha·C		
13	IMV18EC054	MEGHANA·M		
14	IMV18EC053	MEGHANA K		
15	IMV18EC103	Sirisha J·c		
16	IMV18EC099	Shivani·N·S		
17	IMV18EC087	SANA ISMAIL		
18	IMV18EC101	SHRAVYA		
19	IMV18EC113	Tejaswini		
20	IMV18EC115	Vaishnavi Verma	Vaishnavi	Vaishnavi
21	IMV18EC126	Swathi	Swathi-P	Swathi,P.
22	IDT19ME428	SYED SHUAIB		
23	IDT19ME416	Md. Shoaiakh		
24	IDT19ME417	NAGANANDANA·U	Nag	Nag
25	IDT19ME427	SYED AAKHIB		
26	IDT19ME401	ADARSHA·S		
27	IMV18EC124	A. Jeswi Pooja		
28	IMV18EC014	ANJALI	Anjali	Anjali
29	IMV18TE030	RAJESHWARI GUPTA		
30	1MV18EC043	KHUSHI·N·RAJ	Khushi·N·Raj	Khushi·N·Raj
31	IMV18EC047	LEKHA·F		
32	IMV17EC058	Nishanth		

SIR M VISVESVARAYA INSTITUTE OF TECHNOLOGY

Krishnadevaraya Nagar, Hunasamaranahalli, Bangalore -562157
Department of Electronics & Communication Engineering

Student Development Program
"3D printing and Raspberry-Pi"
2nd – 6th March 2020

Date: 6/3/2020

Sl. No.	USN	Name of Participant	Signature Morning	Signature Afternoon
1	—	Santhosh	Spoce	
2	—	Kanya	B	B
3	1DB18EC063	Likitha . Arjun. K	LiK	LiK
4	1DB18EC059	Komala.S. Hiremath	H. Sa.	K.S
5	1MV18EC101	Shravya	Shravya	Shravya
6	1MU18EC115	Vaishnavi Verma	Vaishnavi	Vaishnavi
7	1MV18EC126	Swathi	Swathi P.	Swathi
8	1MV18EC113	Tejeshwini . B	B	B
9	1MV18EC087	Sana Ismail	Sanajmail	Sanajmail
10	IMV18ECO 53	Meghana . K	Meghana.K	Meghana
11	IMV18ECO54	Meghana . M	Meghana.M	Meghana . m
12	IMV18ECO99	SHIVANI . N . S	Shivani N.S.	Shivani
13	IMV18EC103	SIRISHA . J . C	Sirisha.J.C.	Sirisha . J . C
14	IMV17ECO09	Anvitha . C	Anvitha	
15	IMV17EC023	Bavitra Sruthi	Bavitra	
16	IMV17EC053	Krathi . R . Todalagi	krathi	
17	IMV17EC055	Krithika Jayakeerthi	Krithika	
18	IMV17EC057	Likhita Govdas	Likhita	
19	IMV17ECO10	Ansari Md Abdul Umair	Umair	Amu
20	IMV17EC058	Nishanth	Nishanth	
21	INV17EC034	Deepak . M	Deepak M	deep
22	IMV17EC059	Maaz Ahmed	Maaz	Maaz labs
23	IMV18EC107	Spandana H.V	S	S
24	IMV18EC085	Sakshi H.S	Saks	Sakshi
25	IMV18EC083	Sahana V.	Sahana V	Sahana V.
26	IMV18EC055	Monisha	M	M
27	IMV18EC076	Ranjitha P	R	R
28	IMV18EC031	Shreya	Srei	Srei
29	IMV18ECO47	LEKHA . K	lekha	lekha
30	IMV18EC124	AGONRI POOJA	Pooja	Pooja
31	IMV18ME063	Pratteek . S.	Pratty . S.	Pratty . S
32	IMV18ME058	Parikshit BR	Pari . B. R.	Parikshit BR

IEEE BANGALORE SECTION

Five day National level SDP on
"3D Printing and Raspberry-Pi"
2nd to 6th March 2020

Jointly organized by Dept. of ECE,
Sir MVIT IEEE Student Branch &
SMVIT- ISTE Student Chapter

In Association With
Xtrans Solutions Pvt. Ltd.,
Advanced Electronic Systems.
Invihub Techno-solutions Pvt. Ltd.,

XTRANS
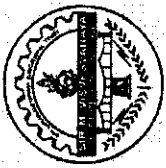
Venue: *Marconi Seminar Hall, SMVIT*

SPONSORED BY

Sri Krishnadevaraya Educational Trust & ISTE

SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY
(An ISO 9001:2008 Certified Institution)
International Airport Road, Krishnadevaraya Nagar,
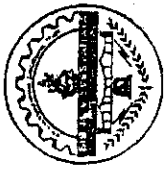Hunasamaranahalli, Bengaluru-562 157
Website: www.sirmvit.edu

CHIEF PATRONS

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Sri K.V Sekhar Raju	Vice President, Sri KET
Sri K Syama Raju	Secretary, Sri KET
Sri M.Venkataramana Raju	Treasurer, Sri KET
Sri G Prabhakar Raju	Academic Chairman

ORGANISING CHAIR

Dr. V.R Manjunath	Principal

CONVENER

Dr. R. Sundaraguru	Professor & HOD ECE

CHIEF CO-ORDINATOR

Dr. Supriya V.G	Professor , ECE

CO-ORDINATORS

Dr. Kavitha G.R	Associate Professor
Mr.Naveen I G	Assistant Professor
Mr.Phanindar Ravi P	Assistant Professor

ORGANIZING COMMITTEE

Dr. Sasmita Mohopatra	Associate Professor
Mrs. Krishna Priya Sharma	Associate Professor
Mr. Satish Kumar	Associate Professor
Mrs. Shalini P	Associate Professor
Mrs. Vijaya Lakshmi S	Associate Professor
Mrs. Seema S	Assistant Professor
Mrs. Soumya Nadgir	Assistant Professor
Mrs. Praveena N	Assistant Professor
Mrs. Bhuvaneswari	Assistant Professor
Mrs. Swetha L	Assistant Professor
Mrs. Rajeshwari K N	Assistant Professor
Mrs. Poongothai C	Assistant Professor
Mrs. Vijayashri B	Assistant Professor
Mrs. Sheetal Bagali	Assistant Professor

REGISTRATION FORM

Five day National level SDP on
"3D Printing and Raspberry-Pi"
2nd to 6th March 2020

Name : ....

USN: ....

Department: ....

Institution : ....

Mobile: ....

IEEE membership ID no. (if member): ....

E-mail: ....

Signature of the   **Signature of HOD**
Applicant   **with seal**

_____   _____

Students are informed to scan the duly filled form
and send to the below mail id.

workshop.mvit2020@gmail.com

Sir M. Visvesvaraya Institute of Technology, Bengaluru-562157
Department of Electronics and Communication Engineering

FIVE DAY NATIONAL LEVEL SDP ON "3D PRINTING AND RASPBERRY-PI"

2ND TO 6TH MARCH 2020

DAY	SESSION 1 9:30-10:45AM	10:45-11:00 AM	SESSION 2 11:00-1:00 PM	1:00-1:30 PM	SESSION 3 1:30-3:00PM	3:00-3:15 PM	SESSION 4 3:15-4:15 PM
DAY1	INAUGURATION	TEA BREAK	Introduction to IoT, Hardware and Sensors. Demo on Arduino Board and Arduino IDE and Sensors	LUNCH BREAK	ESP8266 and Arduino UNO	TEA BREAK	Sending & Receiving Data to & from Cloud
DAY2	Introduction to Protocols like MQTT, HTTP, CoAP, LoRa, Bluetooth	TEA BREAK	Introduction to Raspberry Pi 3 Installation and basic setup	LUNCH BREAK	Hands on session on Raspberry Pi 3 with different sensors	TEA BREAK	Sending & Receiving Data to & from Cloud
DAY3	Introduction to IoT Applications	TEA BREAK	Demo on Bluetooth Controlling from mobile App Using Arduino and Raspberry Pi 3	LUNCH BREAK	Demo on TCP/IP Communication Using Arduino and Raspberry Pi 3	TEA BREAK	Quiz
DAY4	Introduction to 3D Printing. Types of 3D Printing Technology and how it works.	TEA BREAK	Basic Introduction on Building a 3D Printer.	LUNCH BREAK	Complete explanation on Electronics and Mechanical Concept needed to build a 3D Printer	TEA BREAK	Explanation on the Software Concept needed to buid a 3D Printer
DAY5	Building a 3D Printer by assembling a DIY Kit from INVI-HUB.	TEA BREAK	SESSION 1 continued	LUNCH BREAK	Brief explanation on the Software to be used in 3D Printing Technology and 3D Modelling.	TEA BREAK	VALEDICTORY

Sir M. Visvesvaraya Institute of Technology, Bengaluru-562157

Department of Electronics and Communication Engineering

FIVE DAY NATIONAL LEVEL SDP ON "3D PRINTING AND RASPBERRY-PI"

2ND TO 6TH MARCH 2020

DAY	SESSION 1 9:30-10:45AM	10:45-11:00 AM	SESSION 2 11:00-1:00 PM	1:00-1:30 PM	SESSION 3 1:30-3:00PM	3:00-3:15 PM	SESSION 4 3:15-4:15 PM
DAY1	INAUGURATION	TEA BREAK	Introduction to IoT, Hardware and Sensors. Demo on Arduino Board and Arduino IDE and Sensors	LUNCH BREAK	ESP8266 and Arduino UNO	TEA BREAK	Sending & Receiving Data to & from Cloud
DAY2	Introduction to Protocols like MQTT, HTTP, CoAP, LoRa, Bluetooth		Introduction to Raspberry Pi 3 Installation and basic setup		Hands on session on Raspberry Pi 3 with different sensors		Sending & Receiving Data to & from Cloud
DAY3	Introduction to IoT Applications		Demo on Bluetooth Controlling from mobile App Using Arduino and Raspberry Pi 3		Demo on TCP/IP Communication Using Arduino and Raspberry Pi 3		Quiz
DAY4	Introduction to 3D Printing. Types of 3D Printing Technology and how it works.		Basic Introduction on Building a 3D Printer.		Complete explanation on Electronics and Mechanical Concept needed to build a 3D Printer		Explanation on the Software Concept needed to build a 3D Printer
DAY5	Building a 3D Printer by assembling a DIY Kit from INVI-HUB.		SESSION 1 continued		Brief explanation on the Software to be used in 3D Printing Technology and 3D Modelling.		VALEDICTORY

Sir M. Visvesvaraya Educational Trust's

SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY

Accredited by NAAC, New Delhi

ISO 9001:2008 Certified Institution

IEEE
BANGALORE SECTION

Certificate

XTRANS

This is to certify that Mr/ Ms _____ of _____

has participated in the 5 day National level student Development Program on **"3D PRINTING AND RASPBERRY PI"**, from 2ⁿᵈ to 6ᵗʰ March 2020, organized by Dept. of ECE, in association with Xtrans Solutions Pvt. Ltd. , Advanced Electronics Systems Pvt. Ltd. , Invihub Techno Solutions Pvt. Ltd.

Sponsored by KET and ISTE.

Dr R Sundaraguru
HOD, Dept of ECE

Mr.Sunil T. Shambhatnavar
General Manager, ALS Pvt. Ltd.

Dr. Suresh B
Chairman ISTE-Karnataka

SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY

Krishnadevaraya Nagar, Hunasamaranahalli, Bangalore -562157

IEEE
BANGALORE SECTION

Department of ELECTRONICS & COMMUNICATION ENGINEERING

National Workshop on
"3D printing and Raspberry-Pi"
2nd – 6th March 2020

(Please tick the appropriate box)

	Excellent	Good	Satisfactory
1. Presentation	[✓]	[ ]	[ ]
2. Practical to My Needs and Interests	[✓]	[ ]	[ ]
3. Well Organized	[✓]	[ ]	[ ]
4. Hands- on Sessions	[✓]	[ ]	[ ]
5. Instructor's Knowledge	[✓]	[ ]	[ ]
6. Topic relevance	[✓]	[ ]	[ ]
7. Topic Coverage	[✓]	[ ]	[ ]
8. Hospitality	[✓]	[ ]	[ ]
9. Interaction	[✓]	[ ]	[ ]

Any other comments or suggestions

Conduction of these types of workshop will be beneficial for us. This workshop helps me to gather new information about real world, invention and ideas

Overall, how would you evaluate this Student Development Program?

Excellent [✓]   Good [ ]   Satisfactory [ ]

Signature

Name: KAUSHIK KUMAR

College: SMVIT

Department of ELECTRONICS & COMMUNICATION ENGINEERING

National Workshop on
"3D printing and Raspberry-Pi"
2nd – 6th March 2020

(Please tick the appropriate box)

	Excellent	Good	Satisfactory
1. Presentation	[✓]	[ ]	[ ]
2. Practical to My Needs and Interests	[✓]	[ ]	[ ]
3. Well Organized	[✓]	[ ]	[ ]
4. Hands- on Sessions	[✓]	[ ]	[ ]
5. Instructor's Knowledge	[✓]	[ ]	[ ]
6. Topic relevance	[✓]	[ ]	[ ]
7. Topic Coverage	[✓]	[ ]	[ ]
8. Hospitality	[✓]	[ ]	[ ]
9. Interaction	[✓]	[ ]	[ ]

Any other comments or suggestions

....
....

Overall, how would you evaluate this Student Development Program?

Excellent [✓]   Good [ ]   Satisfactory [ ]

Name: Jayanth. M.B

College: SIR. MVIT

Signature

Third Intensive Workshop on Downstream Processing of Phytopharmaceuticals - Research & Industrial Applications
Duration – 10 Saturdays (25th August to 3rd November, 2018)
(A collaborative effort of Himalaya Drug Company and Sir MVIT)

Himalaya
SINCE 1930

Venue: Dept. of Biotechnology, Sir MVIT

Organized By
Department of Biotechnology
Sir M Visvesvaraya Institute of Technology
Krishnadeveraya Nagar, New International Airport Road
Hunasamaranahalli, Bangalore - 562157
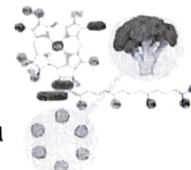
Coordinator

Dr RAJENDRA SINGH C

Third Integrative Workshop on
Downstream Processing of Phytopharmaceuticals - Research & Industrial Applications Duration – 10 Days (Only on Saturdays)
25th August -3rd November, 2018
Venue : Department of Biotechnology, Sir MVIT College, Bangalore-562157

Himalaya
SINCE 1930

INTRODUCTION

The recent years there is a tremendous growth in herbal medicaments and a progressive popularity in accepting traditional medicines and Ayurveda as a system, even in western / European countries. With the present potential of approximate 70-80 billion dollars of global market, the herbal industry it is expected to touch around 5 trillion dollars by 150. India has a strong indigenous knowledge of additional therapies and huge untapped resources to be a front runner in the arena of herbal drug discovery. Our industry has to gear up to become a leader in herbal products, and develop associated critical talent pool in prime areas like pharmacognosy, phytochemistry, bioprocess engineering, biotechnology, tissue culture, medicinal chemistry, bioassays and clinical trials, etc.

In the MNTT scenario, Pharma industry has diverted a lot of attention and funds towards developing new molecules which can be patented. The untapped knowledge of potential therapeutic substances from the herbs can be a treasure for drug research in India.

The skill set available to work in this developing sector is minimising, as interests of the graduates is skewed towards affluent professions like IT and other allied services. The courses offered in biological sciences and biotechnology are not aligned with the requirement of industries, and thereby the qualified graduates often find difficulty in getting suitable jobs. This workshop will not only help the students to get acquainted to the technological advancements in the pharma industry but also expose them various opportunities available in the phytopharmaceuticals sector.

THE HIMALAYA DRUG COMPANY

Himalaya is household brand today. Every second 16 Himalaya products are sold globally. With a range of over 40 products spanning pharmaceutical, personal care, baby care, animal health and wellness space, Himalaya touch the lives of millions of customers worldwide giving them products that help them lead healthier, enriched lives. Himalaya is focused on converting Ayurveda's herbal wisdom into a range of proprietary formulations dedicated to healthy living and longevity. Himalaya scientists have been closely researching herbs for over 80 years. During this time, it has launched several breakthrough formulations. Himalaya's seed to shelf philosophy ensure that it is fully engaged in the entire process of product development from raw material to finished product. Himalaya monitors that herbs are collected in a sustainable way cultivated in a natural bio-friendly environment. Today, worldwide, the Himalaya brand is synonymous with safe and efficacious herbal healthcare and personal care products. It has a network of offices in over 90 countries to help us stay connected to our customers.

SIR MVIT

Started in 1986, Sir M VIT has been a institute of technical repute in the state of Karnataka, offering nine undergraduate programmes and five post-graduate programmes. The institute is affiliated to Visvesvaraya Technological University (VTU) and approved by the All India Council for Technical Education (AICTE). The institute is also certified by DSIR- SIRO and ISO-9001 2008. Most of its courses are accredited by the National Board of Accreditation (NBA), New Delhi. Seven of its departments are declared as R & D centers by VTU. The faculty of the institute are carrying out projects sponsored by various funding agencies like AICTE, UGC, AR&DB, DST, DBT, VTU, Ministry of power etc.

DEPT. OF BIOTECHNOLOGY

Sir MVIT was the first college under VTU to realize the need for an Engineering Course in Biotechnology wherein a student's mathematical abilities, computational talent and analytical skills, could be trained to appreciate the complexities of the biological world. The long-term objective of developing such an interface is directed towards sustainable growth & development, while generating products relevant to society.

After its inception in 2002, the Department of Biotechnology at Sir MVIT has relentlessly worked towards targets and milestones. Equipped with quality lab facilities for graduate, post-graduate and research programs, the department is aiming to achieve excellence in select to domains related bioscience, bioengineering and biotechnology.

FACILITATORS

Module - 1
(25th Aug & 1 Sept)
Dr Ganesh
Dr R. Kannan
Dr.Prasanna
Mr Zakir Hussain
Mr.Sumanth
Mr Sandeep

Module - 2
with 8th Sept
Dr Gururaj
Dr Dhananjaya
Mr Raghavendra

Module - 3
(22nd & 29th Sep & 6th Oct)
Dr U V Babu
Dr Vijayakumar
Dr Priyank Mangal
Mr Sharath Kumar L M

Module - 4 (13th & 27th Oct)
Dr Vishwanathan, Dr U.V. Babu

Module - 5 (3rd Nov)
Inspire by Leaders

MODULES & DURATION

Total Duration	:	10 Saturdays
Every Saturday	:	10 am -4 pm
Theory Classes	:	2 h on Saturdays
Hands on Sessions	:	3 h on Saturdays
Total Credits	:	50 Credits
Total Seats	:	Limited to 30

MODULE 1 (10 CREDITS)

Introduction to the indigenous systems of medicines
1. Ayurveda
2. Siddha
3. Unani
4. Drug substances - Herbs, Animals, Minerals, Metals
5. Proprietary Medicines
6. Doctrine of Signatures

Ethnic knowledge
1. Ethnobotany
2. Bioprospecting
3. Biopiracy
4. TKDL

Biodiversity
1. Agroclimatic zones
2. Biodiversity Hotspots
3. BSI

National & International trade on endangered species
1. International Regulation- CITES
2. National Regulation - Negative listed

Pharmacognosy & GACP
1. Herbs - authenticity, quality, purity, safety
2. Pharmacognosy
3. Authentication of herbs - Microscopic, Macroscopic, powder characters
4. DNA fingerprinting / Barcode
5. Herbs cultivation
6. Good Agricultural and Collection Practices

MODULE 2 (10 CREDITS)

Plant Biotechnology
1. Introduction
2. Scope of biotechnology
3. Green revolution
4. Impact of plant Biotechnology on human kind
5. Basics for laboratory setup

Plant Tissue Culture (plants cloning)
1. Recombinant DNA technology (gene cloning)
2. Hormone Functions in Plants
3. Various kinds of media
4. Composition of media and its significance
5. Enhancement of secondary metabolites

Endangered species and Biotechnology approaches
1. Introduction of Endangered sp.
2. Role of Tissue culture in endangered species with respect to CITES, NBA NMPB
3. Application of biotechnology in Conservation of species

Bioprocessing engineering and its Industrial applications Hairy root culture in medicinal plants
1. What is hairy root culture?
2. How it is beneficial in Plant system
3. Advantages of HR culture
4. Methods involved in HR culture
5. Role of A. tumefaciens to Genetically Engineer Plants

What is a GMO and issues of Non-GMO herb material?
1. Introduction of GMO plants in India
2. What is the difference between a traditional breed and GMO?
3. Current Status of GM Crops in India
4. Guidelines for the Safety Assessment of Foods Derived from GMO Plants
5. Regulatory framework for GMO's in India

Hydroponics: An Alternative Plant Growing Method
1. Introduction
2. Types of Hydroponics
3. Methods involved in Hydroponics
4. Advantage of the process

MODULE 3 (15 CREDITS)

Natural Product Chemistry
1. Basics of Natural Product Chemistry
2. Classification of Natural Products
3. Drug Discovery from Natural Products
4. Downstream processing of herbs/plant materials
5. Analytical and Bioactive markers

Extraction & Isolation of Bioactive compounds
1. Types of Extraction
2. Concentration and Drying
3. Advanced extraction techniques
4. Chromatography
5. Characterization of Natural Products

Spectroscopy
1. Basics of Spectroscopy
2. UV & IR Spectroscopy
3. Nuclear Magnetic Resonance (NMR)
4. Mass Spectroscopy
5. Advanced spectroscopic techniques for identification of bioactive markers
6. Assignments / Group Activities / Quiz / Presentations

MODULE 4 (10 CREDITS)

Basics of Process Engineering
1. Introduction
2. Application of process engineering in industries

Industrial set up of Phytopharmaceuticals
1. Comparison of lab and commercial process

Lab Scale to Pilot Scale
1. Process design and screening
2. Concept of scale up

Process Validation
1. Process Design
2. Process Qualification
3. Process Verification

Extraction Process
1. Introduction to commercial scale extraction process
2. Various types of extraction processes
3. Advance extraction techniques

Concentration Process
1. Introduction to concentration process
2. Selection of process parameters

Drying Process
1. Introduction to drying, different industrial drying methods Selection of drying techniques

Recent advances in automation
1. Introduction to process automation
2. Need for process automation
3. Advances in process automation

MODULE 5 (5 CREDITS)

☐ Inspiring Talks by Leaders, Entrepreneurs and Experts
☐ Assignments / Group Activities / Quiz / Presentations / Discussions

Credits and Assessments

% Marks	Grade Point	Letter Grade
85-100	10	A
75-84.99	9	A
65-74.99	8	B
55-64.99	7	B
45-54.99	6	C
26-39.99	5	D
0-24.99	2	E

Assessments in the form of Group Activities / Quizzes / MCQs, Idea Presentations / Discussions shall be conducted by industry experts and Facilitators to grade the candidates

Who Can Attend

Eligibility: Graduate/Post Graduate students from Basic sciences, Life Sciences and Engineering sciences like Pharmacy, Chemistry, Botany, Zoology, Microbiology, Biochemistry, Biotechnology, Genetics, Genetic Engineering, Biotech Engineering and Chemical Engineering can register

Course Fees & Registration Details

Please Contact the Faculty/Course Coordinator and register for the program by paying the defined fees on or before 21st August 2018 at the following

ADDRESS

Dr C Rajendra Singh
Associate Professor, Department of Biotechnology,
Sir M Visvesvaraya Institute of Technology,
Krishnadevarayanagar, Hunasamaranahalli
International Airport Road, Bangalore 562157
Contacts: 91-80-28477026, +91-9341809544
Email: rajendrabiochem@gmail.com
Course Fees: Rs. 2,000/-

(Rupees Two Thousand Only)

❖ Certificate of Participation will be only given to those registered candidates who possess a minimum of 50% attendance at the workshop and secure a Credit Point Average of >5.0
❖ Certificate of Merits with Course Grades and Awards will be distributed on the last day of the event to the Top 5 performers of the workshop
✓ Participants can avail the college bus facility for these 10 Saturdays to reach the college campus

SRI KRISHNADEVARAYA EDUCATIONAL TRUST
No. 16, Ballari Road, Sadashivanagar, Bengaluru – 560 080

Ref.No.KET/ 157 /2018- 2019/546   Date: 17/07/2018
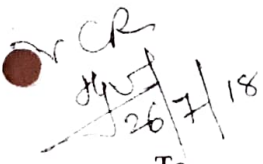
N O T E:

Sub: Financial assistance for organizing Third Intenstive Worshop on "Downstream Processing of Phytopharmaceuticals – Research and Industrial Applications" - Reg.

Ref: Letter from HOD, Dept. of Bio-Technology No. VIT/BT/104/2017-2018, dated 03/07/2018, signed by HOD and recommended by Convenor, Researc Advisory Committee, with Principal's endorsement No. 1648, dated 04/07/2018.

***

With reference to the above, this is to convey approval for organizing Third Intenstive Worshop on "Downstream Processing of Phytopharmaceuticals – Research and Industrial Applications" as per the requirement of NBA and NAAC to hone the skills of students to suit to the job market requirements, on Saturdays for a duration of 10 weeks starting from 18th August to 3rd November, 2018, by industry experts from Himalaya Drug Company, Bengaluru.

Rs.30,000/- (Rupees Thirty Thousand only) is granted which may be drawn from Principal s SB account and reimbursement claimed later with duly audited bills and vouchers

(K. SYAMA RAJU)
SECRETARY

26/7/18

To
The Principal,
Sir MVIT, Bengaluru – 562 157.

Copy to:
1. The HOD, Dept. of Bio-Technology, Sir MVIT, Bengaluru.
2. Accounts Officer, Sri KET, Bengaluru
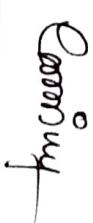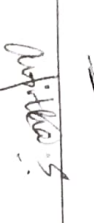
By BJL

Department of Biotechnology
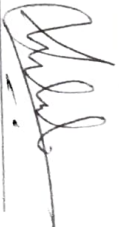## Sir MVIT- 5621571.
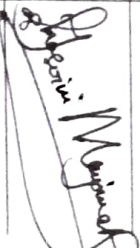
Intensive Workshop on Downstream Processing of Phytopharmaceuticals – Research & Industrial Applications

Duration – 10 Saturdays (25th August to 3rd November, 2018)
(A collaborative effort of Himalaya Drug Company and Sir MVIT)

Registration (25.08.2018)

Sl. No.	Name	Institute/College	Mobile No.	Email ID	Signature
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3	SOORYASANKAR R.	''	9444782982	sooryasankar98@gmail.com	
4	KEERTHANA·S	''	8148193189	keerthanasivakumar33@gmail.com	
5	BRUNDHA·R	NEW HORIZON COLLEGE OF ENGINEERING	9066389405	brundharaju@gmail.com	
6	ARPITHA SRINIVAS	''	9620908878	arpithasrinivasta@gmail.com	

Sl. No.	Name	Institute/College	Mobile No.	Email ID	Signature
7	CAROL ASHMITHA	New Horizon college of Engineering.	9916557798	carolashmitha@yahoo.co.in	*signature*
8	ANJANA MENON	New horizon college of engineering	7866858414	anjanamenon38@gmail.com	Anjana
9	Akshaya. R	New horizon college of Engineering	9886088456	rakshaya4@gmail.com	Akshaya
10	Hemashree.M.R	New horizon college of Engineering	9480069228	hemashreemappa@gmail.com	*signature*
11	Pooja. H.V.	SMVIT	9008928996	Poojahv412@gmail.com	Pooja.H.V
12	Shubhanshu Yadav	SMVIT	7259924561	juddu423@gmail.com	Shubhansh
13	Anuj Shetty	SMVIT	9380747670	anujshetty18@gmail.com	*signature*
14	Rakshini Suilekha	SMVIT	9481632458	sreelekha.mailme@gmail.com	*signature*
15	Sreelatha.B.J.	SMVIT	9741135778	Sreelathbj@gmail.com	*signature*

Sl. No.	Name	Institute, College	Mobile No.	Email ID	Signature
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18	Astha A Yadav	Sir MVIT	9972264304	astha.ayadav@gmail.com	Astha.
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21	VARSHINI.M	Sir MVIT	9686732818	varshinimohand9@gmail.com	Varshini M
22	TANUJA.B.R.	SIR MVIT	8971397888	polyjebiba149+@gmail.com	
23	Sukesh Narayan Keshyap	SIRMVIT	8050120689	sukeshkulupl803@gmail.com	
24	ALFIYA HELAI.S	SIR MVIT.	9980433423	alfiya0423@gmail.com.	Alfiya
25	SUPRAJA.S	SIR MVIT	9482837635	suprajaprakash97@gmail.com	Supraj

Name	Institute/College	Mobile No.	Email ID	Signature
26 Kevin Akash. R	Sir. MVIT	7338018194	kbla236@gmail.com	
27 Sonali S Sagar	Sir MVIT	8951372488	sonalibangalore @gmail.com	
28 Priyanka Vhemmore	Sir MVIT	9766617761	priyankashremee 2019@gmail.com	
29 Sonali S Naik	Sir MVIT	7022539120	sonalin1947@gmail.com	
30				
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Third Integrative Workshop on Downstream Processing of Phytopharmaceuticals-
Research & Industrial Applications
(25ᵗʰ August to 3ʳᵈ November, 2018 – 10 Saturdays)

Jointly organized by

The Himalaya Drug Company, Bangalore

&

Department of Biotechnology
SIR M. Visvesvaraya Institute of Technology, Bangalore -562 157

Certificate of Participation

This is to certify that

Mr./Ms. .... has participated in
of ....
the Integrative Workshop on "DOWNSTREAM PROCESSING OF
PHYTOPHARMACEUTICALS - RESEARCH & INDUSTRIAL APPLICATIONS" and
secured .... Grade .

Dr. Manjunath V R
Principal
Sir MVIT

Dr. H.G. Nagendra
Prof. & Head
Department of Biotechnology

Dr. U. V. Babu
Head-Phytochemistry-R&D
The Himalaya Drug Company

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