Report

on

Online Internship

In association with

IEEE TEMS BMSCE Student Branch

on

Analog Signal Processing Concepts using Python

from

15th to 30th September, 2021

by

The Department of

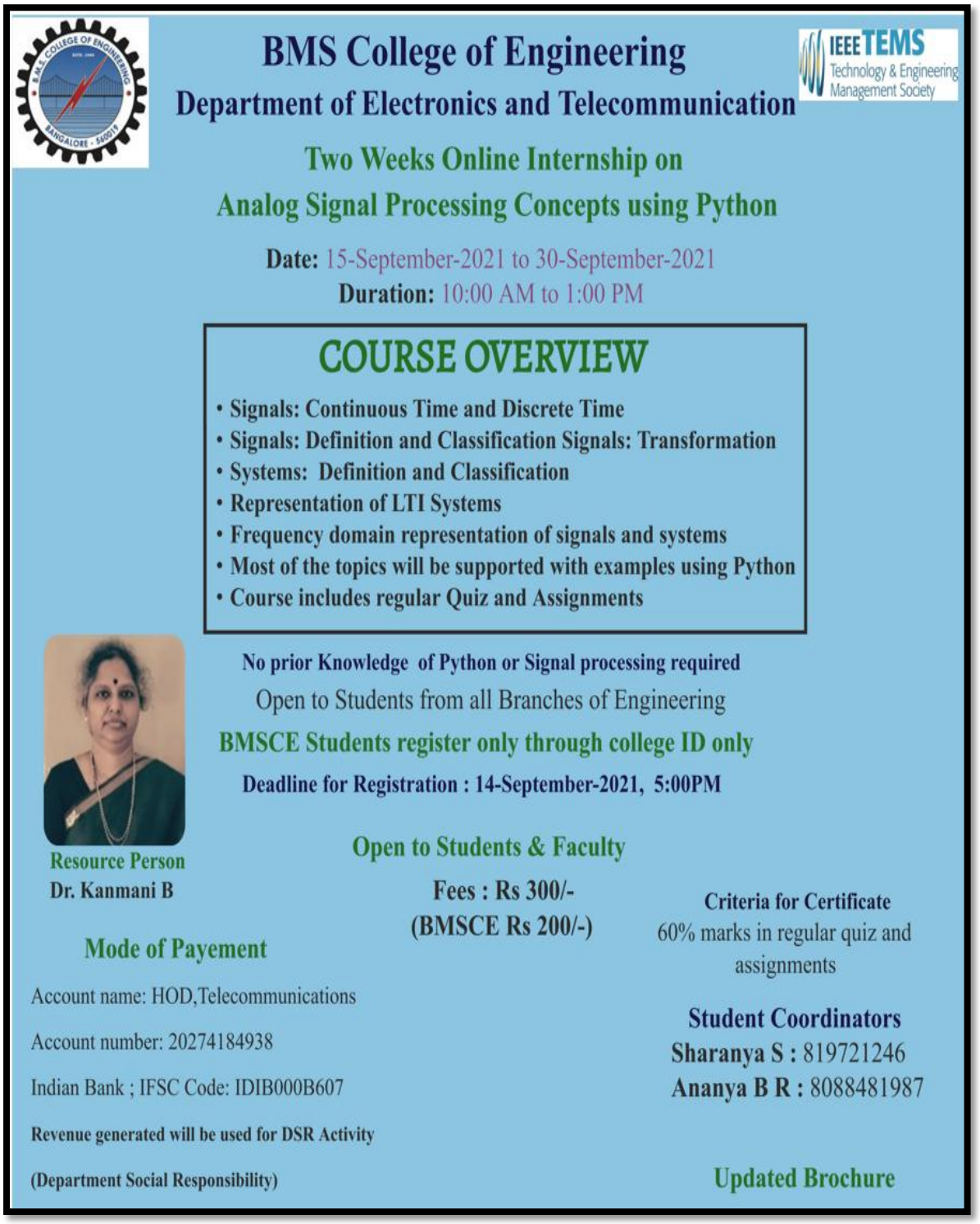
Electronics and Telecommunication Engineering

BMS College of Engineering, Bengaluru – 560019

A DSR Activity

DSR - Department Social Responsibility

Event Brochure



NOTE: Since the revenue generated from the event shall be used towards a social cause, the event is recognized as an activity of the IEEE TEMS BMSCE Student Branch

Event Brochure- Version 2

NOTE: The brochure was revised, as it was decided to utilize the revenue generated towards a social cause, and the activity was identified as that of the Department Social Responsibility (DSR).

Event Brochure – Version 1

BMS College of Engineering

Department of Electronics and Telecommunication

Two Weeks Online Internship on

Analog Signal Processing Concepts using Python

Date: 15-September-2021 to 30-September-2021

Duration: 10:00 AM to 1:00 PM

COURSE OVERVIEW

- Signals: Continuous Time and Discrete Time
- Signals: Definition and Classification Signals: Transformation
- Systems: Definition and Classification
- Representation of LTI Systems
- Frequency domain representation of signals and systems
- Most of the topics will be supported with examples using Python
- Course includes regular Quiz and Assignments

Resource Person
Dr. Kanmani B

No prior Knowledge of Python or Signal processing required

Open to Students from all Branches of Engineering

BMSCE Students register only through college ID only

Deadline for Registration : 13-September-2021

Fees : Rs 300/-
(BMSCE Rs 200/-)

Criteria for Certificate

- 80% Attendance
- 60% marks in regular quiz and assignments

Mode of Payement

Account name: HOD,Telecommunications

Account number: 20274184938

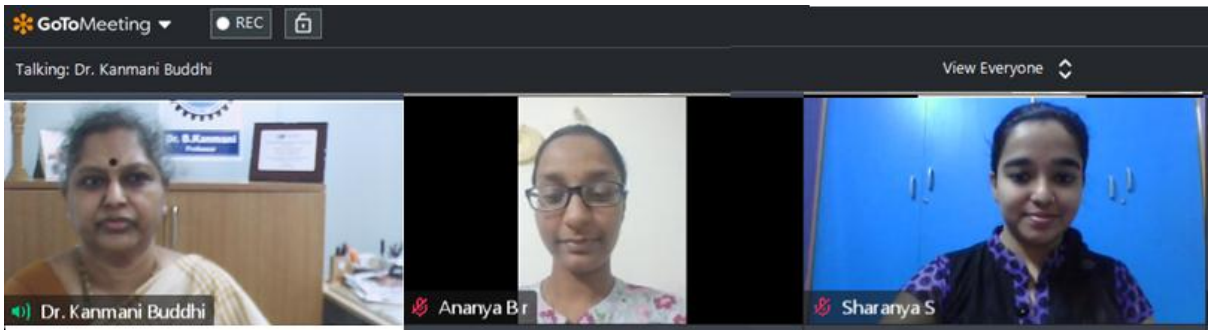
Indian Bank ; IFSC Code: IDIB00B67

Student Coordinators

Sharanya S : 819721246

Ananya B R : 8088481987

Inaugural Event



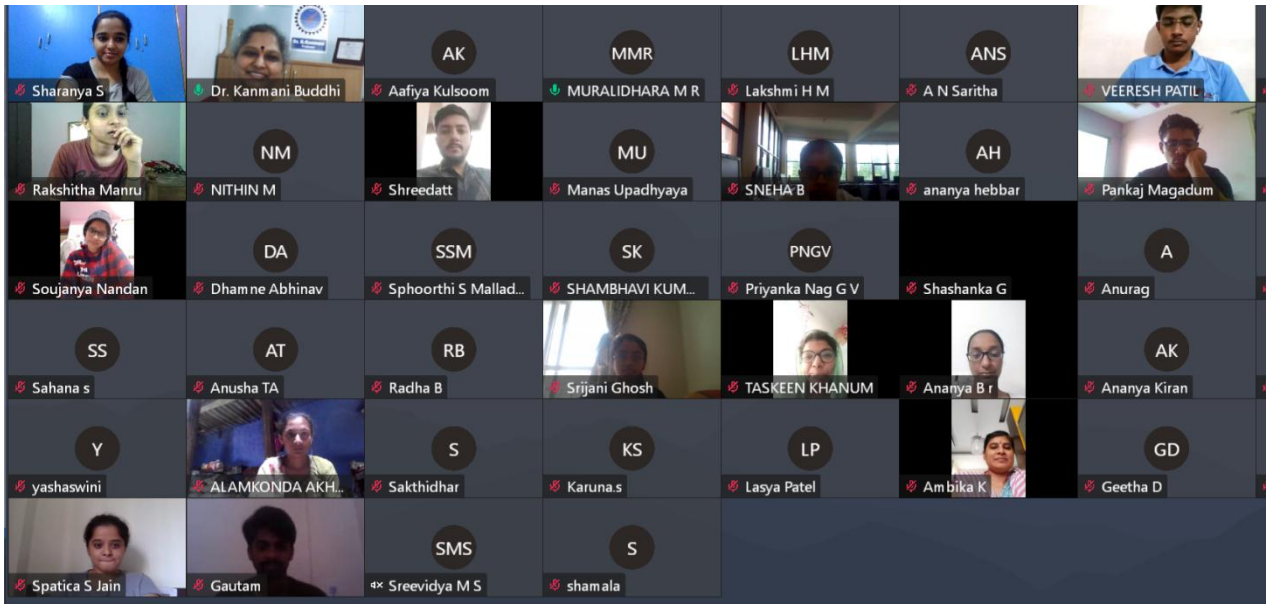
The Internship commenced with the Welcome of all participants by Student coordinator **Sharanya S.**

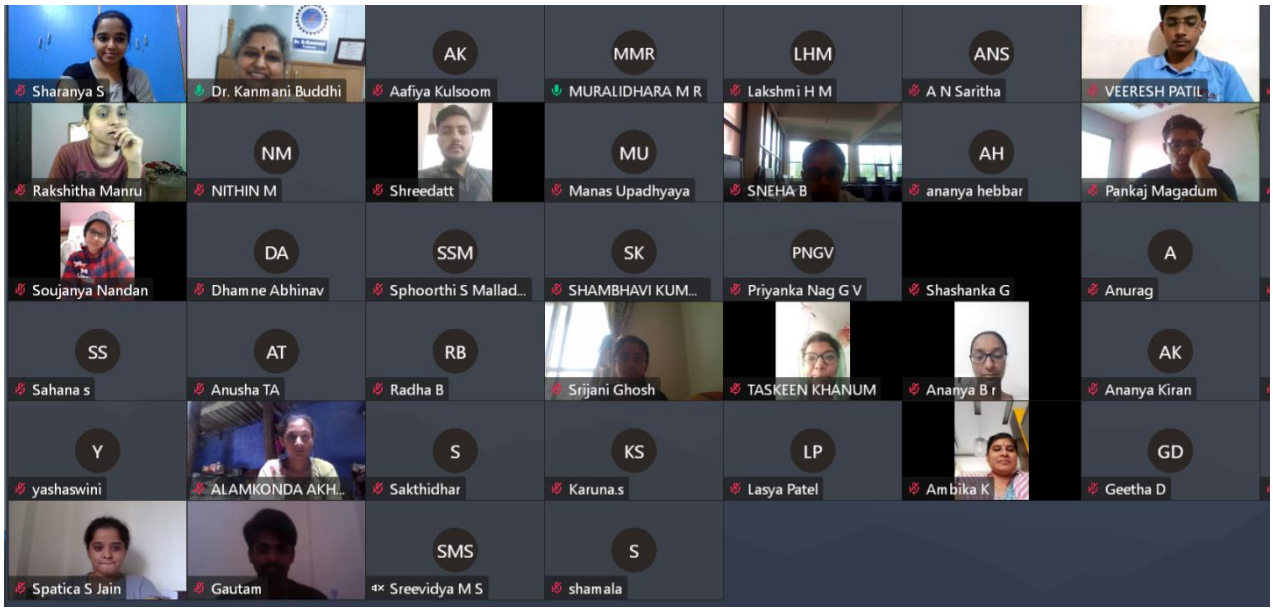
This was followed by the Address by **Dr Kanmani**, who addressed students with overview of the course contents and the internship. Salient features of her address are:

- Welcomed the participants from the colleges of:
  - AMC Engineering College
  - Bangalore Institute of Technology
  - Basaveshwar Engineering College Vidyagiri Bagalkot
  - BMS College of Engineering
  - BMS Institute of Technology
  - Dayananda Sagar College of Engineering
  - G.Pullaiah College of Engineering and Technology
  - Gopalan College of Engineering and Management
  - Jain College of Engineering Belagavi
  - K S School of Engineering and Management
  - Malnad College of Engineering Hassan
  - New Horizon College of Engineering
  - Rajeev Gandhi Memorial College of Engineering and Technology Nandyal
  - SJCIT (Sri Jagatguru Chandrasekhar Institute of Technology)
  - Solleti Bhavani shankar
  - Vidyavardhaka College of Engineering Mysore

- Expressed satisfaction over the diverse spectrum of 63 participants for the Internship from 16 colleges, from the departments of ECE, CSE, EEE, TCE, ETE and EIE, pursuing their first/second/third year of Engineering program.
- Publicity of the event was through the college portal, and through social media
- The entire registration was through the online link: https://forms.gle/nnHZ6afjZUY3pCWm8
- Acknowledged the support extended from GotoMeeting, the special COVID package to the college, and has made the online teaching professional and convenient. All sessions shall be handled through the GotoMeeting platform https://global.gotomeeting.com/join/682294205
- She informed everyone about the magnanimous management of the college which has provided complete salary to all employees, even during the pandemic, a gesture not followed by many other institutions.
- Every day the course shall have Theory and Hands-on lab sessions
- The platform for the lab sessions shall be through the Google Colab for Python; and the Multisim Live Online, electronic circuit simulation tool by National Instruments. Both these programming environments are Open source
- Mentioned that there shall be Quiz/Assignments and successful completion is essential towards receiving the Certificate
- The class notes, relevant content and the Python code shall be shared
- Acknowledged the support from the Principal and Vice-Principal towards the conduction of the program
- Acknowledged the support and continuous active engagement of the two student volunteers: Ananya and Sharanya, both students of the IV semester

The inaugural session concluded with the Vote of Thanks by the Student coordinator **Ananya B R**





List of Participants

S.No.	Name	Deisgnation	USN	College
1	TALHA MOHAMMED	Student - ECE	1AM19EC113	AMC Engineering College
2	SHIVAKUMAR HEGDE	Student - TCE	1BI17TE408	Bangalore Institute of Technology
3	Nivedita S Kalamangi	Student- CSE	2BA19CS046	Basaveshwar Engineering College Vidyagiri Bagalkot
4	Geetha N	Technical Staff - EIE	Technical Staff	BMS College of Engineering
5	Manas Upadhyaya	Student - TCE	1BM20ET022	
6	Radha B	Technical Staff - ECE	Technical Staff	
7	Srijani Ghosh	Student - ECE	1BM19EC205	
8	Sahana S	Student - ECE	1BM19EC206	
9	Mukund Vahinipathi	Student - TCE	1BM20ET024	
10	Anurag Soni	Student - TCE	1BM20ET011	
11	Shashanka G	Student- CSE	1BM20CS147	
12	Shamala N Bhat	Technical Staff - ETE	Technical Staff	
13	A N Saritha		Technical Staff	
14	Shivaraj Kumar k m		Technical Staff	
15	Abhinav Dhamne	Student - TCE	1BM19ET015	
16	Ananya Kiran	Student - TCE	1BM20ET008	
17	Sreevidya M S	Student - TCE	1BM20ET049	
18	Ambika K	Faculty - ETE	Faculty	
19	Archana.K	Faculty - ETE	Faculty	
20	Ananya Hebbar	Student - TCE	1BM20ET007	
21	Yashaswini	Technical Staff - ECE	Technical Staff	
22	Geetha D		Technical Staff	
23	Renuka S Rampur		Technical Staff	
24	Lasya G Patel	Student - TCE	1BM20ET021	
25	MURALIDHARA M R	Technical Staff - ECE	Technical Staff	
26	Yamunaa R	Technical Staff - EIE	Technical Staff	
27	Goutam Hegde	Student - TCE	1BY19TE401	BMS Institute of Technology
28	Rakshitha K Manru	Student - TCE	1BY18TE046	
29	Manoj Vishweshwar Bhat	Student - TCE	1BY18TE030	
30	Nagaveni R	Student - TCE	1BY19TE403	

S.No.	Name	Deisgnation	USN	College
31	Syed Aman Sha Hussain	Student - TCE	1DS19ET093	Dayananda Sagar College of Engineering
32	SPATICA S JAIN	Student - TCE	1DS19ET086	
33	SHAMBHAVI KUMARI	Student - TCE	1DS19ET076	
34	Matam Raghunandana Soujanya	Student - TCE	1DS19ET045	
35	Siri Ranganath	Student - EIE	1DS19EI040	
36	Anusha TA	Student - EIE	1DS19EI006	
37	Umme Salma Ahmed	Student - EEE	1DS18EE115	
38	vivek m	Student - TCE	1DS19ET099	
39	Sphoorthi Malladad	Student - TCE	1DS19ET087	
40	Pankaj Ashok Magadum	Student - ECE	1DS19EC726	
41	Anjala Saikia	Student - TCE	1DS19ET008	
42	D.Venu Gopal	Student - ECE	18AT1A04G0	G.Pullaiah College of Engineering and Technology
43	SHREEDATTA.G	Student - ECE	18AT1A04E0	
44	Priyanka L	Student - ECE	1GD19EC036	Gopalan College of Engineering and Management
45	Anjumabegum bapannavar	Student - ECE	2JI19EC022	Jain College of Engineering Belagavi
46	Priyanka Nag G V	Student - ECE	1KG18EC043	K S School of Engineering and Management
47	Kavyashree K	Student - ECE	1KG18EC028	
48	Karuna.S	Student - ECE	1KG19EC048	
49	Aafiya Kulsoom	Student - ECE	1KG19EC001	
50	Prajwal S.K	Student - ECE	1KG19EC073	
51	Pramod.R	Student - ECE	1kg19ec074	
52	YADUNANDAN KR	Student - ECE	4MC19EC095	Malnad College of Engineering Hassan
53	Koustubha Bhat	Student - EEE	4MC19EE048	
54	Lakshmi H M	Student - ECE	4MC19EC035	
55	M Jayanthi	Faculty - ECE	Faculty	New Horizon College of Engineering
56	Lingala Sakthidhar Reddy	Student - ECE	1NH19EC723	
57	Akhila Alamkonda	Student - ECE	18091A0407	Rajeev Gandhi Memorial College of Engineering and Technology Nandyal
58	Sneha.B.	Student - ECE	1SJ19EC158	SJCIT (Sri Jagatguru Chandrasekhar Institute of Technology)
59	TASKEEN KHANUM	Student - ECE	1SJ19EC170	
60	Solleti Bhavani Shankar	Student - ECE	1SJ19EC161	Solleti Bhavani shankar
61	Prithvi BR	Student - EEE	4VV19EE039	Vidyavardhaka College of Engineering Mysore
62	NITHIN M	Student - EEE	4VV19EE034	
63	Veeresh patil	Student - EEE	4VV19EE054	

Contents Covered during the Internship

Session (Date)	Topics Covered
Session -1 (15/09/2021)	**1. Introductions to Signals** **2. Types of Signals** **3. Examples for Signals** **4. Classifications of Signals** **5. Basics of Python** **6. Python using Numpy**
Session -2 (16/09/2021)	**1. Types of Basic Signals** a. Unit Impulse b. Unit Step c. Unit Ramp d. Exponential e. Sin(Wt) and Cos(Wt) f. Signum (t) g. Sync(t) h. Sin(h x) i. Sigmoid g. Gaussian h. Cos(A+B) **2.Plotting of Basic Signals Using Python**
Session -3 (17/09/2021)	**1. Transformation of Signals x(t)** a. Time Shift Property b. Energy Signals c. Power Signals d. Addition of Signals e. Subtraction of Signals f. Derivative of Signals g. Integral of Signals h. Orthogonal Property of Signals i. Gaussian Waveform j. Exponential Function **2. Python Code on:** a. Sum of two signals b. Sum of sinusoidal signals c. Exponential decaying sinusoidal d. Converting rad to degree and vice versa e. Computing factorial f. Function to create Gaussian distribution g. Function to create Uniform distribution h. Function to create Exponential distribution i. Plot of sine and its square j. Plotting subplots k. Plotting of derivative function l. Plotting of integral function m. Creating Audio n. Integrating Gaussian function
18/09/2021	**QUIZ-1**

Session -4 (20/09/2021)	**1. Linear and Non-Linear Systems** **2. Gaussian Limits for integrations** **3. Multisim Live circuit constructions on:** 1. RC Circuit 2. Linear circuits 3. Non-Linear Circuits 4. RL circuit 5. RLC circuit 6. Circuit with diode and above all of the circuits were supported with graphs.
Session -5 (22/09/2021)	**1. Linearity Test** **2. Sine Test** **3. Conversion of one signal to another using LTI** **4. Integration and Differentiation of given input signal to obtain an output signal** **5. Convolution** **6. LTI for RLC circuit** **7. Different methods of representing LTI** 1. Pole-Zero 2. Frequency response 3. Impulse representation
23/09/2021	**QUIZ -2**
Session -6 (24/09/2021)	**1. LINEAR INVARIANT SYSTEM** a. Impulse Response h(t) b. Differential Equation c. Pole Zero plot d. Transfer Function H(s) e. Frequency Response H(W) f. Block Diagram **2. Stability** a. Impulse Response h(t) area function b. Pole- Zero plot c. Poles present in left half of s-plane 3. **LP/HP/BP** using Frequency Response Examples of LTI System **4.Python Code Of LTI System** a. Differential Equation b. Transfer Response c. Frequency Response d. Magnitude Response e. Phase Response
Session -7 (25/09/2021)	**1. Design of differential equation - H(s)** **2. Stability using pole zero plot** **3. Partial fractions and complex conjugate** **4. Frequency response** **5. Linearity check on op-amp circuit** **6. Python code on:** 1.Function for the pole zero plot 2.Function to compute the frequency response

	3. H(s) = (s-1)/(s^2 +4s+5) 4. H(s) = 1/(s+1) 5. H(s) = 1/(s^3 +2s^2 + 2s + 1) 6. Example for 4th order Butterworth filter 7. H(s) = (2s^2+3s-4)/(s^5 + 3s^4 +2s^3 -2s +6)
Session -8 (27/09/2021)	**1. 2nd Order low pass Butterworth filter.** **2. 4th Order low pass Butterworth filter** **3. 2nd Order High pass Butterworth filter** **4. 4th Order High pass Butterworth filter** **5. Examples on 4th and 2nd order High and low pass filter** **6. Finding gain and designing of RC for the circuit in butter-worth filter.** **7. Multisim Live circuit on Butterworth high and low pass filter.**
Session -9 (28/09/2021)	**1.Analysis of Differential Equation, H(s) and Pole Zero Plot to predict:** a. Causality b. Stability c. Low Pass Filter / High Pass Filter d. Frequency Response H(W) **2.Design to Obtain the H(s), Differential Equation and pole zero plot when Frequency Response H(W) is given** **3.Fourier Series Representation** **4.Sine Harmonics of Sinusoidal Signals** **5.Fourier Series Representation of Periodic Signals** **6.Fourier Series Co-efficient** **7.Python Code Using Google Colab** a. Addition of Sine Waves To Obtain Square Waves b. Obtain Square Wave Using For Loop c. Impulse Train **d. Weighted Summation of Sinusoids** Fourier Series of Triangular Waveform Fourier Series of Half Wave Rectified Waveform Fourier Series of Full Wave Rectified Waveform
Session -10 (29/09/2021)	**1. Fourier series on continuous time signal** **2. Frequency spectrum** **3. Fourier transforms** **4. Examples for Fourier series and transform** **5. Filters** **6. DFT and DSP** **7. Application to Fourier series** **8. Python code on:** 1. Fourier Series of rectangular wave for different time period 2. Moving from Fourier series to Fourier Transform 3. Fourier Transform of rectangular pulse, cosine wave, exponential wave
30 -09-2021	Quiz -3; Feedback and Valedictory

ATTENDANCE (September - 2021)

SL.No	Name	15th	16th	17th	20th	22nd	24th	25th	27th	28th	29th	Quiz-1	Quiz-2	Quiz-3
1	A N Saritha	p	p	p	p	p	p	p						
2	ALAMKONDA AKHILA	p	p	p		p				p		p	p	
3	AMAN	p	p	p	p	p	p		p	p	p	p	p	p
4	Aafiya Kulsoom	p	p	p		p				p	p			
5	Abhinav		p					p						
6	Admin	p				p								
7	Admin- pc1					p								
8	Ambika K	p	p	p	p	p	p	p	p	p	p	p		
9	Ananya B r	p	p	p	p	p	p	p	p	p	p			
10	Ananya Kiran	p	P	p	p	p	p		p	p	p	p	p	p
11	Anurag	p	P									p		
12	Anusha TA	p	P	p	p	p	p		p	p	p	p	p	p
13	Dhamne Abhinav	p	P	p	p		p	p	p	p	p	p	p	
14	Gautam	p			p	p	p	p						
15	Geetha D	p	P	p	p	p	p	p	p	p	p			p
16	Goutam Hegde	p	p	p	p	p	p		p	p	p	p	p	p
17	KAVYASHREE K	p	p	p	p	p	p	p	p	p	p	p	p	p
18	Karuna.s	p	p	p	p		p	p	p	p	p	p		p
19	Lakshmi H M	p	p	p	p	p	p	p	p	p	p	p		p
20	Lasya Patel	p	p	p	p	p	p			p	p	p	p	
21	M Jayanthi	p	p	p	p	p		p				p		p
22	MURALIDHARA M R	p	p	p	p	p	p	p	p	p	p	p		
23	Manas Upadhyaya	p	p	p	p		p	p	p	p		p	p	
24	Manoj Bhat	p	p	p	p	p	p	p	p	p	p	p	p	p
25	Mukund Vahinipathi	p	p		p							p		
26	NITHIN M	p	p	p	p	p	p		p			p		
27	PRITHVI BR	p	p	p								p	p	
28	Pankaj Magadum	p	p	p	p	p	p	p	p	p	p	p	p	p
29	Priyanka Nag G V	p	p	p	p	p	p	p	p	p	p	p	p	p
30	Radha B	p	p	p	p	p	p	p	p	p	p			
31	Rakshitha K Manru	p	p	p	p	p	p	p	p	p	p	p	p	p
32	Renuka S Rampur	p	p	p	p	p	p	p	p	p	p	p		
33	SHAMBHAVI KUMARI	p	p	p	p	p						p	p	p
34	SNEHA B	p	p	p	p	p	p	p	p	p	p	p	p	
35	Sahana s	p	p	p	p	p	p	p	p	p	p	p	p	p
36	Sakthidhar lingala	p	p	p	p	p		p		p		p	p	
37	Shashanka G	p	p	p	p		p	p	p	p	p	p	p	p
38	Shreedatt	p			p							p		
39	Siri Ranganath	p	p	p	p	p		p		p	p	p	p	p
40	Soujanya Nandan	p	p	p	p	p		p	p	p	p	p		

41	Spatica S Jain	p	p	p	p	p	p	p	p			p	p	p
42	Sphoorthi S Malladad	p	p	p	p	p	p	p	p	p	p	p	p	p
43	Sreevidya M S	p	p	p	p	p	p	p				p	p	
44	Srijani Ghosh	p	p	p	p	p	p	p	p	p	p	p	p	
45	TASKEEN KHANUM	p	p	p	p	p						p	p	
46	Umme Salma Ahmed	p	p	p	p	p	p		p	p	p	p	p	
47	VEERESH PATIL	p	p	p	p	p								
48	VLSI4	p												
49	Veeresh Patil	p										p		
50	Venu Gopal D	p			p			p				p		
51	YADUNANDAN KR	p	p	p	p	p	p	p	p	p	p	p	p	
52	Ananya Hebbar	p	p	p	p	p	p	p	p	p		p	p	
53	Shamala	p	p	p	p	p	p		p					
54	Yashaswini	p	p	p	p	p	p	p	p	p	p	p		
55	Sharanya S	p			p		p	p	p					
56	Geetha N		p	p	p	p	p	p	p	p	p			p
57	Nagaveni R		p	p	p	p	p	p	p	p	p	p		
58	Prajwal S K		p									p		
59	Pramod R		p	p								p	p	
60	Shivkumar Hegde		p	p		p	p	p	p	p	p	p		p
61	Shivarajkumar K M		p			p						p		
62	Vivek		p	p	p	p	p	p		p	p	p	p	p
63	Yamuna R		p	p	p	p	p					p		p
64	Anjala Sakia			p								p	p	p
65	Archana K				p		p	p	p	p				
66	BMSCE				p	p	p		p		p			
67	HDL Lab					p								
68	Sakthidhar Reddy					p								

Assessments

Three online Quiz was conducted, and the solution discussed

Quiz-1: https://forms.gle/x8cmr2V5nJFR7jcL6

Quiz-2: https://forms.gle/bJ28eSP4wKTA5T1AA

Quiz-3: https://forms.gle/oKGRK6yV7HiQzcRQ7

The DSR Activity

A school shall be identified.

The revenue generated shall be used to donate books, uniform and other essential items to the identified school.

In addition, students shall explore developing and contributing concept videos, conduction of short online courses, and support in preparing for competitive examinations.

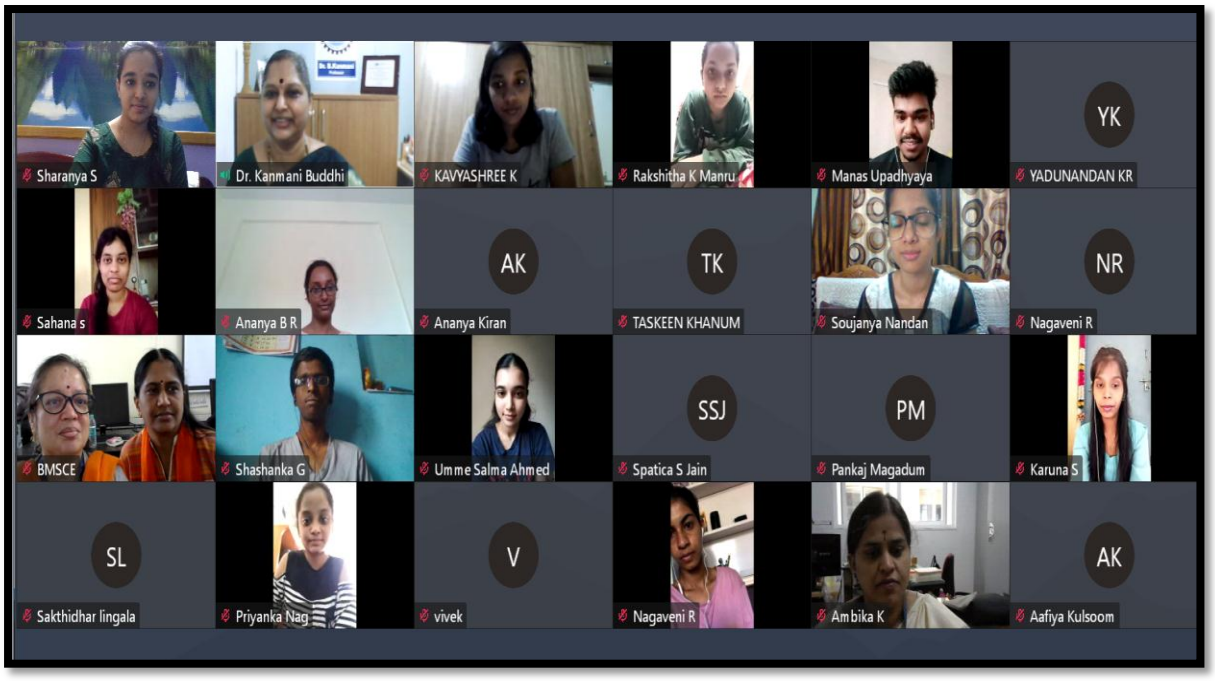
All recipients shall be made aware of IEEE TEMS

Statement of Accounts

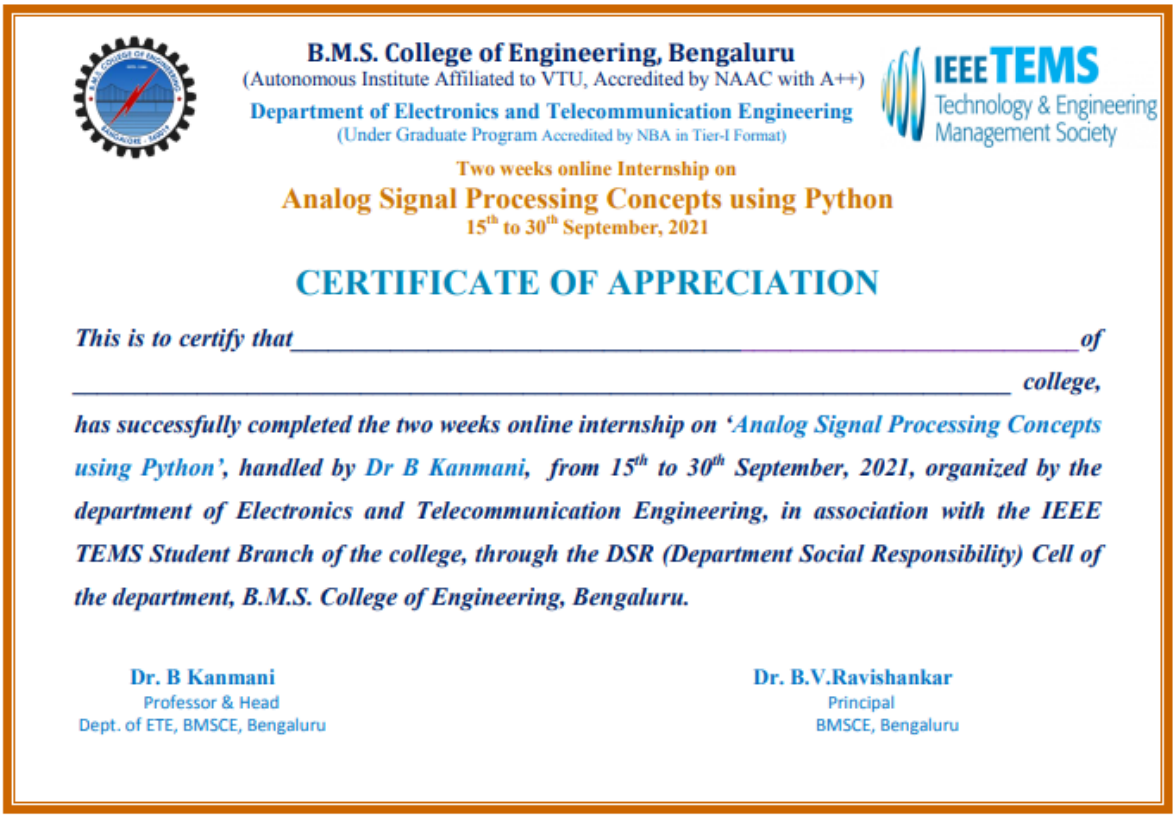
Sl. No.	Participants	Number	Amount
1	Participants from 15 colleges (Rs 300/- each)	31	Rs 9,300/-
2	Participants from BMSCE (Rs 200/- each)	18	Rs 3,600/-
3	Faculty and Staff from our TCE department were allowed to attend free	5	--
4	Participants who did not pay the fee	9	--
	Total revenue generated		**Rs 12,900/-**

Hence, the total revenue generated is **Rs 12,900/-** through this initiative.

Valedictory Event



Sample Certificate



B.M.S. College of Engineering, Bengaluru
(Autonomous Institute Affiliated to VTU, Accredited by NAAC with A++)
Department of Electronics and Telecommunication Engineering
(Under Graduate Program Accredited by NBA in Tier-I Format)

IEEE TEMS Technology & Engineering Management Society

Two weeks online Internship on

Analog Signal Processing Concepts using Python

15th to 30th September, 2021

CERTIFICATE OF APPRECIATION

This is to certify that_____of _____ college, has successfully completed the two weeks online internship on 'Analog Signal Processing Concepts using Python', handled by Dr B Kanmani, from 15th to 30th September, 2021, organized by the department of Electronics and Telecommunication Engineering, in association with the IEEE TEMS Student Branch of the college, through the DSR (Department Social Responsibility) Cell of the department, B.M.S. College of Engineering, Bengaluru.

Dr. B Kanmani
Professor & Head
Dept. of ETE, BMSCE, Bengaluru

Dr. B.V.Ravishankar
Principal
BMSCE, Bengaluru

Summary of Feedback Survey

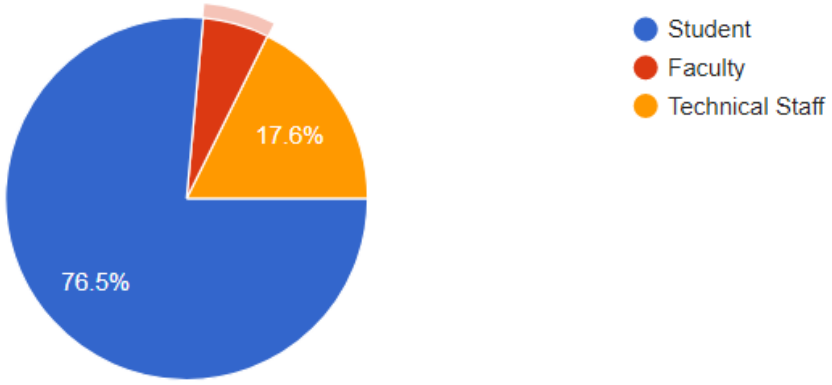
Feedback survey link: https://forms.gle/qdoXmCzyVk9HZzKKA

Feedback Survey: Analog Signal Processing Concepts using Python

Form description

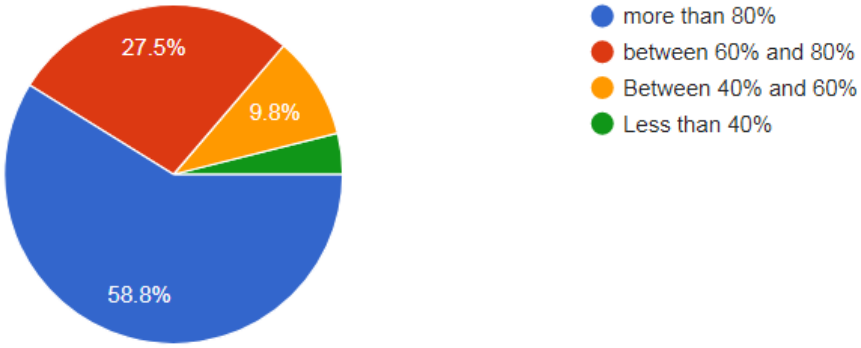
Role

51 responses



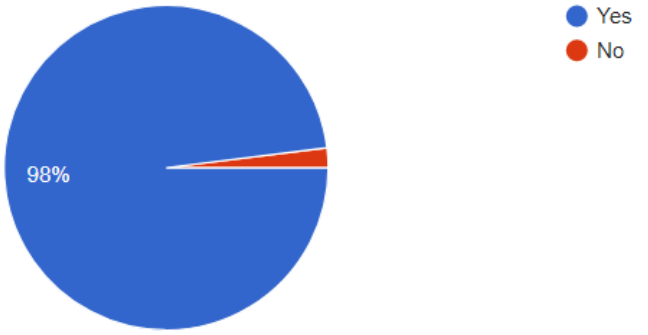
Kindly describe your attendance percentage

51 responses



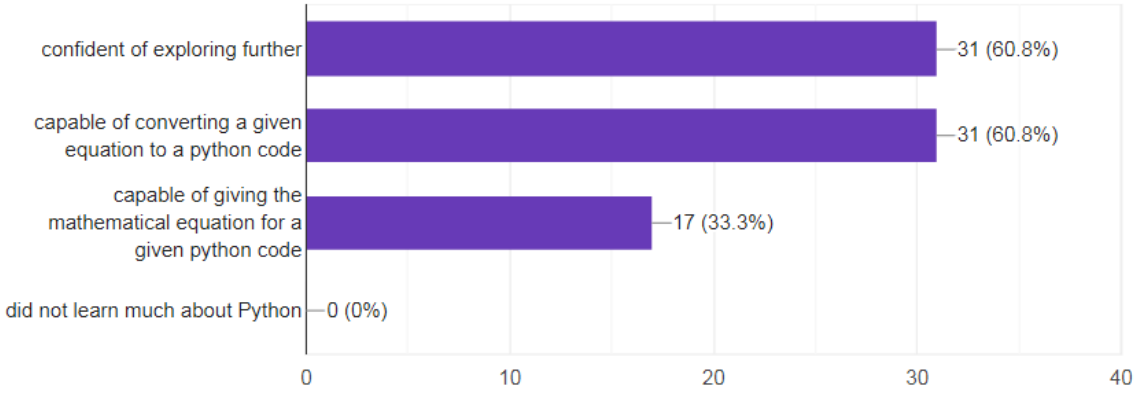
I am aware that the revenue generated through this Activity will go for a Social Cause

51 responses



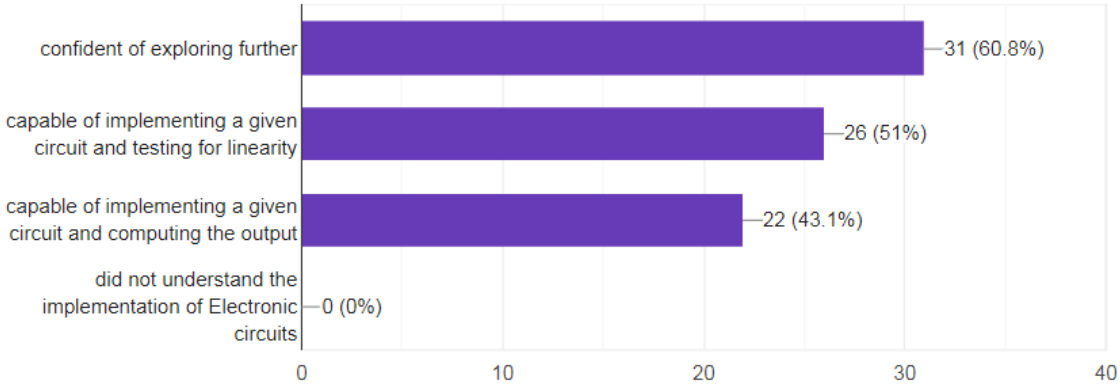
Kindly describe your learning experience in Python

51 responses



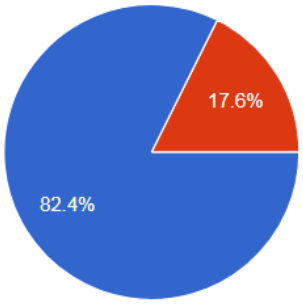
Kindly describe your learning experience of using Multisim Live

51 responses



Kindly describe your overall learning experience

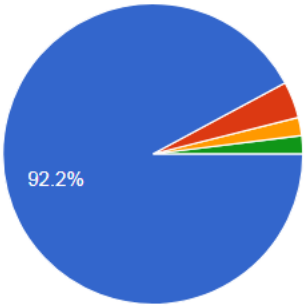
51 responses



- Extremely satisfied with the learning experience of the Internship
- Moderately satisfied with the learning experience of the Internship
- Not satisfied with the learning experience of the Internship

Kindly give your opinion on the Course content

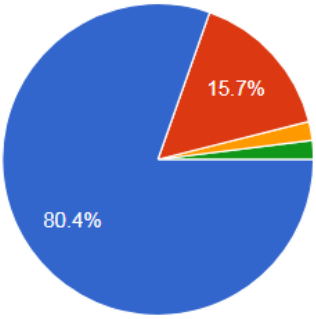
51 responses



- Content is well planned and covered for the available duration
- More content can be included
- Content needs to be reduced
- As the time is comparatively limited. Content needs to be reduced and the classes can be conducted a bit slower so that everyone can cope up!

Your opinion on the duration of the internship

51 responses



- Two weeks is fine
- Should have been planned for One month
- One week would have been fine
- THREEE WEEKS

List TWO concepts you liked most, and confident of applying in future

40 responses

Python code, multisim

1- I have learnt to use phython code for singal processing. 2- Further more information about multi sim live

Lpf,hpf

Data science using Python, AI

Python Code, Multisim Live

I never knew that we could plot graphs using Python. This is definitely a fascinating concept which I would like to explore further and try it out with my theory subjects. The other concept I liked was the LTI system.

Python coding and multisim

miltisim live circuit demonstrtion

Teaching and course

Solving the signals and systems concepts in python

Integration and creating circuits using multisim online

Frequency domain representation of signals and systems
Representation of LTI systems

MULTISIM AND PYTHON

Fourier Transforms, Adding trigonometric waves

coding concept
solving skill

LTI system, signal transformation

Multisim and Analog signal processing

Learning of Python and to design the circuits in Multisim Live

Linearity and LTI systems

I DIDN'T KNOW TO WRITE MATHEMATICAL EQUATION USING PYTHON.

Python and multism code for fourier series
And butterworth filters

Frequency response and integration/differentiation using python

LTI representation and design

Signal transformation and Fourier series, transform

Design of filters by using mutisim

python and multisim

LTI system and basics

Filters and numpy techniques

Butterworth filters and systems

Convolution, Fourier series

Designing a circuit in multisim and pole zero plots problems

Pandas and LTI

Python and multism live

Signals : Continuous time and discrete time and representation of LTI system

The one where we can create audio

I can introduce python for signals and systems.

1. Python code
2. Mathematical equation for python code

Many....

I liked using numpy in python. I also loved matlab library through which we could make graphs in python

List any positive aspects of the Course

40 responses

Very Smoothly Explained By the respective incharge

learning new thing,deep knowledge about course

Spent my occasion precisely enjoying in learning

The course was extremely well planned and was conducted according to the schedule. Though the course was short and sweet, we were able to learn so much (in such a short span of time). I would like to take this opportunity and thank Kanmani ma'am for making us glide through the course effortlessly. Every concept was made crystal clear to us. I would definitely be willing to attend more such courses.. Thank you!

It's a good experience about analog concepts ... We like to participate in further courses conducted ... I liked the way mam teached .. overall nice experience

Excellent

Teaching

Course was very good. Its structure and preparation was very good. It aims at providing knowledge to the students as well as helping society like two birds with one stone.

Thank you for a great course. Great presentation style with lots of opportunities to ask questions and talk about real life examples which all made for a really enjoyable and informative course.

THE COURSE DELIVERY AND CONTENT WAS GOOD. IT IS WELL PLANNED WORKSHOP.

Implementation of previous learnt concepts on Python

Towords positivity on analog signal

Well planned and implemented the same

Interesting

It's good experience in attend course

Timing
Portions covered

I liked the way Kanmani ma'am patiently taught each and every concept so that we could learn it very well. I also liked the idea of keeping theory session and lab session separately. It helped us grasp the knowledge we learned in the theory classes to apply in the lab sessions

good learning experience.

overall satisfied

Very friendly teaching and well planed schedule

Ma'am was very supportive and the class was interactive which helped us to concentrate more

Awesome course
Application oriented.
Mam you are awesome teacher.

THEORY ALSO HAS BEEN TAUGHT IT WAS VERY VERY GOOD FOR STUDENTS AS WELL AS TECHNICAL STAFF.

It was very helpful and informative.
Content is well planned and covered
And know we are capable of implementing a circuit and testing it for linearity and many more things
The session was student friendly

Well structured and comprehensive

It is very useful for electronic student

Good content and was able to understand the concepts clearly, thanks to the instructor. Practical sessions were fun, especially the Fourier topic

Excellent teaching by mam

Basics were taught well.

Lecturer is very kind and is capable of teaching very clearly

The teacher was the best thing about this course. Always started the day with a smile, which created a positive environment, highly suitable for learning. Loved the whole learning experience. Very enriching.

the usage of numpy and mulltisim live

The faculty was sweet enough explain every concept in an extremely understanding way

It is a very good course for introducing python and pandas numpy and other libraries.

Excellently organized and had amazing learning experience.

good theory and practical implementation thought together for better understanding

Everything on the website was most useful especially to run code using python and multisim

The classes which I attended were absolutely informative and interesting

Course taught us to learn and think beyond the course plan.

The class was very interactive, Mam explanation was to the point, I really felt good learning python code.

List any negative aspects of the course, and give suggestions for our improvement in future

34 responses

we didn't get recordings of the sessions

difficult to understand, theory is more 1

No negative suggestions in the course

No negative feedback.

Nothing...

No negative aspects

No, Negative aspects

Nothing negative

LITTLE BIT FASTER

nothing

no

It would have been better if we had recordings to refer the concepts for future

Nothing

Nill

There are no such negative aspects.

Nil

In Starting the class was bit fast but later on it went so well
No negative aspects

Please record the section

No comments

Non

I felt it was a bit fast-paced.

Could have gone through some basics

Two weeks and so many concepts Was a little fast

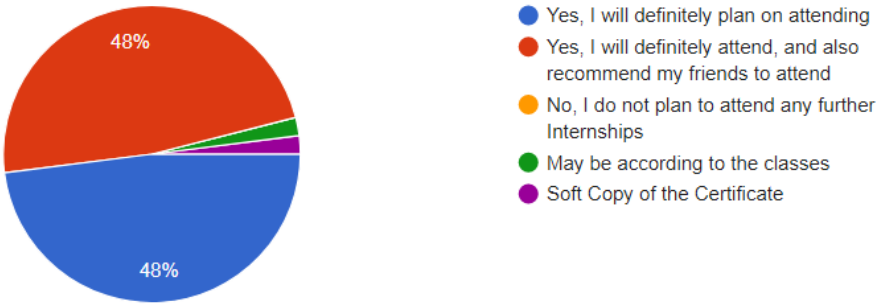
The speed of teaching could have been reduced especially the python part and other slightly difficult concepts

Coding part should be explained in detail

Only negative thing for me was i didn't know the signals and systems concepts as previous sem was promoted
It would have been great if we had got the recordings of the sessions.
nil
Nothing to say
NIL
Lab sessions could have been more, I could not match up with the lab session speed.
–
Nothing as such. In the starting the speed of teaching was little fast but then after few session it became fine.

We plan to organize: Digital Signal processing concepts using Python; Probability and Statistics using Python; Data Science using Python in future

50 responses



Regarding Certificate

47 responses

Any other comments

30 responses

Overall I am happy with course

It was very helpful

Looking forward for more internships on interesting concepts

Nothing, good experience by attend internship

I enjoyed the class and the environment which was there was very much comfortable.

COURSE WAS EXTREMELY GOOD. IF WE ATTEND ANOTHER TWO COURSE WE WILL BE WELL AQUAINTED WITH PYTHON CODING AS WELL AS SUBJECT.

Please conduct more intership

Very usefull course

Please let me know about any such internships in the future, too.

Better than I thought

Good experience

Thank you KANMANI Ma'am for conducting such a wonderful program.
It is a very humble initiative from your side i am happy that i was a part of it.

Stay healthy stay safe.
Hope you continue this for as long as possible with no disturbances.

None

nil

It's my fate that I couldn't learn much because of my health issues I would love love to attend further programs if possible

Very informative class am very happy that I attended this internship and thankful for Dr. Kanmani Mam.

Wonderful session

Thank you for your valuable Feedback

Message from Coordinators

The satisfaction that accompanies the successful completion of this Analog Signal Processing Concept using Python Internship would be in-complete without mention of the people who made it possible, without constant guidance and encouragement would have a made efforts go in vain. We consider ourselves privileged to express gratitude and respect towards all from the completion of this internship.

We convey thanks to **our Respected Dr. Kanmani B** mam, of Electronics and Telecommunication department for providing encouragement, constant support and guidance which was of a great help for completion of this Internship successfully.

SHARANYA S - 1BM19ET051

ANANYA B R – 1BM19ET007

Approval from Principal (to organize the program)

8/25/2021 Two Week Online Internship Program - te_office@bmsce.ac.in - BMS College of Engineering Mail

Hod Tce 9:53 AM (15 m
to Principal, Viceprincipal, me

Dear Principal and Viceprincipal Sir

I would like to offer a Two Week online Internship program for interested students fi including our college. The event brochure is yet to be prepared.

Title: Signal Processing Concepts using Python
Duration: TWO weeks online Internship
Dates: 15th to 29th September, 2021
Fees: Rs 450/- (Rs 300/- for BMSCE students)

We would like to share 30 % of the amount collected with college, and use the 70% department IRG (to be used for procurement of academic accessories for online te other academic expenditure for the faculty)

The faculty would not like to claim any honorarium for this activity.

I will come in person today to get your permission in person.

Thanking you
with regards
B Kanmani BKan
25/8/21

Permitted) Dr Jayshri
25/08/2021

Approval from Principal (after organization of the program)

10/6/2021 permission to utilize the revenue for social cause - hi_office@bmsce.ac.in - BMS College of Engineering Mail

Kanmani B
to Principal, Viceprincipal, Faculties TCE, To_office 1:10 PM (2 h

Dear Principal Sir,

Thank you for the support extended in conducting the Two week online Internship on, 'Analog Signal Processing concepts using Python', from 15th to 30th September 2021.

Since, we plan to utilize the revenue generated for a social cause, this activity is recognized as an initiative of the DSR Cell (Department Social Responsibility) and also an activity conducted in association with IEEE TEMS BMSCE Student Branch

Pleased to inform that the program was conducted successfully, and we have received positive feedback from the 54 participants, from 16 colleges. We charged a nominal Rs 300/- (for participants) and Rs 200/- (for participants from BMSCE). The total revenue generated is **Rs 12,900/-**(twelve thousand nine hundred only).

We would like to identify a government school, and donate useful academic items like books, bags, geometry box etc. In addition, we would also like to explore creating useful technical content for the school children

In view of the above purpose, we seek your permission to utilize the entire revenue generated for the DSR activity.

Thanking you
with regards
B Kanmani BKan
08/10/2021

Approved for the course as recommended
08/10/2021