



**VIMAL JYOTHI**  
ENGINEERING COLLEGE



**Professional Development Program on**

# **OBE & NBA**

On January 16, 2023

*For all Teaching staff of VJEC*

*Resource Person*

**Dr Umakant Kulkarni**

Professor

Shri Dharmasthala Manjunatheshwara College of  
Engineering and Technology, Dharwad, Karnataka

## PDP on OBE and NBA - on 16.01.2023

Dr Benny Joseph <bennyjoseph@vjec.ac.in>

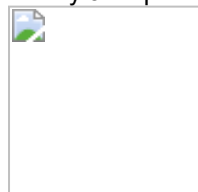
Tue, Jan 3, 2023 at 1:56 PM

To: Anisha Joseph CS <anisha@vjec.ac.in>, Soumya John <soumyakulakkottu@vjec.ac.in>, Hridya CE <hridyap94@vjec.ac.in>, Beena Joseph Library <beenjoseph@vjec.ac.in>, Subhalakshmi ASH <subhalakshmi@vjec.ac.in>, Jerrin Yomas <jerrinyomas@vjec.ac.in>, Josy James ME <josyjames@vjec.ac.in>, Raju Kk <rajukk@vjec.ac.in>, "Vasudevan. M" <vasu@vjec.ac.in>, Midhun Mukundan <midhunmukundan@vjec.ac.in>, Abhiram P CS <abhiramp@vjec.ac.in>, Anuragi CE <anuragi@vjec.ac.in>, Dhanoj M <dhanoj24@vjec.ac.in>, "Dr. P. 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Regards

Benny Joseph





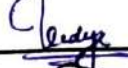

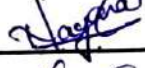















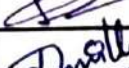
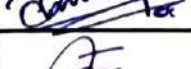

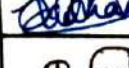

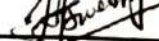
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PDP on NBA and OBE.jpg  
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VIMAL JYOTHI ENGINEERING COLLEGE, CHEMPERI

PDP on OBE & NBA on 16/1/2023

Sl. No	Name	Department	Signature
1.	Laly James	EEE	
2.	Athira M. Thomas	EEE	
3	Vidhya S S	CSE	
4.	Sureaji Narayanan	CSE	
5	Nayana Suresh	CSE	
6	Najira Salim	CSE	
7.	Rajitha K.V	CSE	
8	Suhada C	CSE	
9	Athirani P	CSE	
10	Sreelakshmi M	CSE	 16/1/23
11	Shreedaya M	CSE	
12	Sisra P	CSE	
13	Timba Devasia	CSE	
14	Dina R.	CSE	
15	Anu Trusa George	ADS	
16.	Ujwala Vijayan	CSE	
17	Ambili M.A	CSE	
18.	Manju M.	CSE	
19.	Anit Thomas M	ADS	
20.	Do Reema Mathew A	ADS	
21.	Diya Rameshan	CSE	
22	Dinsha P. K	CSE	
23	Arju Sunny	ASH	
24	SITHARA TOM	ASH	
25	Riya Pstadeep	CE	
25	Aswathi K	CE	

VIMAL JYOTHI ENGINEERING COLLEGE, CEMPERI

PDP on OBE & NBA on 16/1/2023





Sl. No	Name	Department	Signature
26	Tina Francis	EEE	
27	Shelma George	eee	
28	Ankita Sebastian	EEE	
29	DIVYA THOMAS	ASH	
30	SUBHALAKSHMI	ASH	
31	LEENA P.V	ASH	
32	Jijina.MT.	<del>EEE</del> ADS	
33	MIDHUN MUKUNDAN MK	ME	
34	Rajith.k	EE	
35	Nivin C Viju	ASTT	
36	Dr. G. Justin Sunil	Prof-EEE	
37	Justine M Augustin	TPC	
38	Prabin James	EEF-	
39	Shinu.M.M	AEI	
40	RIJIN.I.K	CSE	
41	Abdul Latheef	CSE	
42	Meja M Francis	ME	
43	Dr. P. Seidharan	ME	
44	Arunlal M.P	ME	
45	Ramprasad A	ME	
46	Anoop K R	ME	
47	George.K.V	ASH	
48	Jijo Joseph	EEE	
49	Vasudevan. M	ASH	

50 Dr. Jeethu V. Devaria CSE

51. (comp/d) Sajin K Kurialaore ME

52. Dr. Manoj V. Thomas eee

53 .K.J. Sebastian (Pro)

Sl No	Name	Department	Signature
54	R. Geminon V Joseph	VJIM	
55	Niyas KM	ME	
56	Ancy K. Sunny	ADS	
57	Dr. Rashmi - TV	ECE	

# IQAC VJEC Professional Development Program

## PDP on OBE and NBA

A professional development program on OBE and NBA was conducted by IQAC VJEC for the faculty Members on 16 January to 21 January 2023. The resource Persons was Dr Umakant Kulkarni, Professor, Sri Dharmasthala Manjunatheswara college of Engineering and Technology, Dharward, Karnataka. . Dr Benny Joseph welcomed the guest. 57 Staff members from different department were participated in this workshop.

### Photos





**Report Prepared by**  
 Dr Jayesh George M  
 IQAC Associate Coordinator

**Report Approved by**  
 Dr Benny Joseph  
 Principal.





# VIMAL JYOTHI ENGINEERING COLLEGE

JYOTHI NAGAR, CHEMPERI – 670632, KANNUR, KERALA

Affiliated to APJ Abdul Kalam Technological University  
Approved by AICTE • ISO 9001:2015 Certified  
Accredited by Institution of Engineers (India), NBA, NAAC



NBA: B.Tech CE, CSE, EEE & ME



NAAC ACCREDITED

Date:16/01/2023

**Dr. Umakant Kulkarni**  
Professor  
Shri Dharmasthala Manjunatheshwara College of  
Engineering and Technology, Dharwad, Karnataka

Dear Sir,

Thank you very much for sparing your valuable time for conducting a "Professional Development Program on OBE and NBA" at Vimal Jyoti Engineering College on 16.01.2023. Your ideas, input and enthusiasm were really helpful in making improvements to our system. We look forward to your continued support for our accreditation related activities in the future.

  
Sincerely,

Dr. Benny Joseph  
Principal  
Vimal Jyothi Engineering College



**VIMAL JYOTHI**  
**ENGINEERING COLLEGE**  
CHEMPERI - KANNUR



# **NAAC READINESS EVALUATION WORKSHOP**

**20<sup>th</sup> and 21<sup>st</sup> January 2023**

Resource Person:

**Dr. V Rajendran**

Principal, Dr. N.G.P Arts and Science College  
Coimbatore.

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## **Schedule**

**20 January 2023 - 9.00 AM - 11.00 AM :**

**NAAC General Review (For all Faculty)**

**11.15 AM onwards:**

**Criteria level review**

**(All HoDs, All NAAC Coordinators and Interested faculty)**

**21 January 2023: All day -**

**Criteria level review**

**(All HoDs, All NAAC Coordinators and Interested faculty)**

## NAAC Readiness Evaluation Workshop \_ January 20 & 21, 2023.

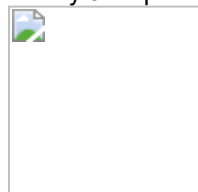
Dr Benny Joseph <bennyjoseph@vjec.ac.in>

Tue, Dec 20, 2022 at 4:04 PM

To: Anisha Joseph CS <anisha@vjec.ac.in>, Soumya John <soumyakulakkottu@vjec.ac.in>, Hridya CE <hridyap94@vjec.ac.in>, Beena Joseph Library <beenajoseph@vjec.ac.in>, Subhalakshmi ASH <subhalakshmi@vjec.ac.in>, Jerrin Yomas <jerrinyomas@vjec.ac.in>, Josy James ME <josyjames@vjec.ac.in>, Raju Kk <rajukk@vjec.ac.in>, "Vasudevan. M" <vasu@vjec.ac.in>, Midhun Mukundan <midhunmukundan@vjec.ac.in>, Abhiram P CS <abhiramp@vjec.ac.in>, Anuragi CE <anuragi@vjec.ac.in>, Dhanoj M <dhanoj24@vjec.ac.in>, "Dr. P. 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S" <adarshks@vjec.ac.in>, Keerthijith CS <keerthijithp@vjec.ac.in>, Lekshmy Hari <lekshmyhari@vjec.ac.in>, Rehna CM CS <rahnacm@vjec.ac.in>, Department ASH <dash@vjec.ac.in>, Shamy A <shamyasanthosh@vjec.ac.in>, Ankita Sebastian EE <ankitasebastian@vjec.ac.in>, Ancy K Sunny <ancyksunny@vjec.ac.in>, Shaji George <shajigc@vjec.ac.in>, Sisna P CS <sisnap@vjec.ac.in>, Training & Placement <tpc@vjec.ac.in>, Jinsa Mathew <jinsamathew@vjec.ac.in>, Sreekanth ME <sreekanth@vjec.ac.in>, Neena V V <neenaphalgun@vjec.ac.in>, Ance Maria Thomas <ancemariathomas@vjec.ac.in>, Reema Mathew <reemamathew@vjec.ac.in>, Thipthi Balakrishnan CS <thipthibalakrishnan@vjec.ac.in>, Anusha Chacko <anushachacko@vjec.ac.in>, Sudharsana Vijayan EI <sudharsanavijayan@vjec.ac.in>, V Aji Augustine ME <ajiaugustine@vjec.ac.in>, Abdul Latheef <abdullatheef@vjec.ac.in>, Akhil KK CS <akhilkk@vjec.ac.in>, Athira CE <athirarajendran@vjec.ac.in>, George Kv <george@vjec.ac.in>, "Manoj K. C" <kcmanojk@vjec.ac.in>, Jerin Saji <jerinsaji@vjec.ac.in>, Anju Sunny <anjusunny@vjec.ac.in>, Vinod J Thomas <vinodkurisinkal@vjec.ac.in>, Deepu VS CE <deepuvs@vjec.ac.in>, Ujwala Vijayan CS <ujwalavijayan@vjec.ac.in>, Nandana S CS <nandanas@vjec.ac.in>, Leena PV ASH <leenapv@vjec.ac.in>, Divya K <divyavinod@vjec.ac.in>, Dain Philipose ME <dainphilipose@vjec.ac.in>, Rojin CE <rojinp@vjec.ac.in>, Stanly Kurian <stanlykurian@vjec.ac.in>, Athira Thomas EE <athiramthomas@vjec.ac.in>, Arunlal ME <arunlalmp@vjec.ac.in>, Thomas John <thomas.john@vjec.ac.in>, "Roshini T.V" <roshini.tv@vjec.ac.in>, "Dr. Anto EC" <dr.anto@vjec.ac.in>, Warden - Alphonsa hostel <alphonsa@vjec.ac.in>, "Dean( Exams)VJEC" <deanexam@vjec.ac.in>, Teena George <teenag@vjec.ac.in>, "Appu C. Kurian" <appu.kurian@vjec.ac.in>, "Renji P. Cherian" <renji@vjec.ac.in>, Anitha Babu <anithababu@vjec.ac.in>, Anu CS <anuvellackallil@vjec.ac.in>, Tinu Francis <tinufancis@vjec.ac.in>, Dominic <dominic@vjec.ac.in>, Diya Rameshan CS <diyarameshan@vjec.ac.in>, Tintu Devasia <tintudevasia@vjec.ac.in>, Sreelakshmi CS <sreelakshmi@vjec.ac.in>, Sreedaya CS <sreedayam@vjec.ac.in>, Shelma George <shelmageorge@vjec.ac.in>, Jeethu CS <jeethuthomas@vjec.ac.in>, "Shimna P.K" <shimna@vjec.ac.in>, Shijith Thomas <shijiththomas@vjec.ac.in>, JIjina MT CS <jijinamt@vjec.ac.in>, Shamin Kk <shaminmuthu@vjec.ac.in>, Bindu Sebastian <bindujohn@vjec.ac.in>, Niyas KM ME <niyaskm@vjec.ac.in>, "Shinu M. M" <shinum@vjec.ac.in>, Laxmi M Ramdas CE <laxmimramdas@vjec.ac.in>, Peter CE <peterjobe@vjec.ac.in>, Rajitha KV CS <rajithakv@vjec.ac.in>, Sreeraji CS <sreerajinarayanan@vjec.ac.in>, Namitha PR CS Nov 2021 <namithapr@vjec.ac.in>

Cc: Office VJEC <office@vjec.ac.in>, Josteen J Puthumana <josteen@vjec.ac.in>, "Fr. Lipin" <libinezupara777@gmail.com>, Santhome Hostel <santhome@vjec.ac.in>, Bursar <bursar@vjec.ac.in>, "K.J. Sebastian Puthenpura" <sebastianputhenpura@vjec.ac.in>, Manager <manager@vjec.ac.in>, Fr Jinu <jinuachan@vjec.ac.in>, Chairman VJEC <chairman@vjec.ac.in>, Assistant manager <asstmanager@vjec.ac.in>, Wardens <warden@vjec.ac.in>

Regards  
Benny Joseph



----- Forwarded message -----

From: **Dr. Jayesh George** <jayeshg1988@vjec.ac.in>

Date: Tue, 20 Dec 2022 at 15:44

Subject: NAAC Readiness Evaluation Workshop \_ January 20 & 21, 2023.

To: Dr Benny Joseph <bennyjoseph@vjec.ac.in>

Dear Sir  
PFA

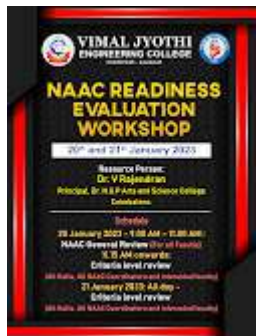
----- Forwarded message -----

From: **A K H I L** <akhil@vjec.ac.in>

Date: Tue, 20 Dec, 2022, 3:37 pm

Subject: NAAC READINESS Workshop IQAC

To: Jayesh George M <jayeshg1988@vjec.ac.in>



NAAC READINESS Workshop IQAC copy.jpg  
2772K



# NAAC Readiness Evaluation Workshop



## Attendance Sheet

Date: 20 January 2023

Time: 9.00 AM - 11.00 AM

Venue: Varikkattu Hall

Sl. No	Name	Department	Signature
1	Dr. Jayesh George	ECE	
2	Dr. P. Sridharan	ME	
3	PROF. DR. VEA. SATHAPPAN	CIVIL	
4	Mr. Sabin Joseph	MBA	
5	Ms. Malavika Prasad	MBA	
6	JUSTINE M. AUGUSTINE	TPO	
7	Dr. R. SENTHILKUMAR	EEE	
8	Dr. G. Justin Sunil Dhan	EEE	
9	Abhisam. P	CS	
10	RIJIN. I. K	CSE	
11	RIJOY. G. N	EEE	
12	Anitha Prabha	CE	
14	Leena - P. V	ASH	
15	Tintu Devasia	CSE	
16	Namitha P.	CSE	
17	Omaya. K	CSE	
18	Signa. P	CSR	
19.	Dr. Reema Mathew. A	CSE	
20	Jijina. M.T	CSE	
21	Diya Rameshan	CSR	
22	Rajitha - B. V.	CSR	
23	Sreedhaya. M	CSE	
24	Shelavahmi M	CSR	
25	Swathi Chandra M.T	CSE	



# IQAC VJEC Professional Development Program

## NAAC Readiness Evaluation Workshop

A Workshop on **NAAC Readiness Evaluation** was conducted by IQAC VJEC for the faculty Members on 20 January to 21 January 2023. The resource Persons was Dr Rajendran V from Dr NGP Arts and Science College, Coimbatore . Dr Benny Joseph welcomed the guest.. 42 Staff members from different department were participated in this workshop.

### Photos





**Report Prepared by**  
Dr Jayesh George M  
IQAC Associate Coordinator

**Report Approved by**  
Dr Benny Joseph  
Principal.





## Event Proposal Form

1	Event type and name	<b>IQAC VJEC Workshop for Faculty Development</b> PDP on OBE and Accreditations
2	Date	March 2, 2023 at 9.30 AM
3	Participants/ audience	ASH dept. and newly joined faculty
4	Venue	Board Room, VJEC
5	Objectives	<ul style="list-style-type: none"><li>To impart the knowledge on<ol style="list-style-type: none"><li>OBE</li><li>Different accreditations</li></ol></li></ul>
6.	Expected outcomes	All faculty members are aware about OBE and different accreditations
7	Connected PEOs/POs/COs	-
8	Resource requirements	Dr Benny Joseph, Principal VJEC Mr. Shinu M M, AP, AEI dept
9	Responsible persons	Prepared by <b>Dr Jayesh George M</b>  Recommended by <b>Dr. Benny Joseph, Principal</b>



# **Professional Development Program on OBE & Accreditations**

**On March 02, 2023**

**For ASH department and newly joined faculty**

*Time: 9.30 AM onwards*

*Venue: Board room*

*Program Organized by IQAC VJEC*

## PDP on OBE and Accreditations by IQAC VJEC \_ Poster

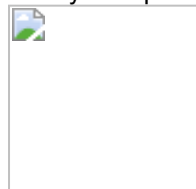
Dr Benny Joseph <bennyjoseph@vjec.ac.in>

Tue, Feb 28, 2023 at 1:36 PM

To: Anisha Joseph CS <anisha@vjec.ac.in>, Soumya John <soomyakulakkottu@vjec.ac.in>, Hridya CE <hridyap94@vjec.ac.in>, Beena Joseph Library <beenajoseph@vjec.ac.in>, Subhalakshmi ASH <subhalakshmi@vjec.ac.in>, Dinsha PK CS <dinshapk@vjec.ac.in>, Jerrin Yomas <jerrinyomas@vjec.ac.in>, Aswathi K CE <aswathik@vjec.ac.in>, Josy James ME <josyames@vjec.ac.in>, Raju Kk <rajukk@vjec.ac.in>, "Vasudevan. M" <vasu@vjec.ac.in>, Midhun Mukundan <midhunmukundan@vjec.ac.in>, Abhiram P CS <abhiramp@vjec.ac.in>, Anuragi CE <anuragi@vjec.ac.in>, Dhanoj M <dhanoj24@vjec.ac.in>, "Dr. P. Sridharan ME" <sridharanp@vjec.ac.in>, "Shaji M.A" <shajimamundackal@vjec.ac.in>, Divya B <divyab@vjec.ac.in>, Grace John <gracejohn@vjec.ac.in>, Anit Thomas CS Nov 2021 <anitthomasm@vjec.ac.in>, Indulekha EE <kmindulekha@vjec.ac.in>, Biju Mathew <bijupmathews@vjec.ac.in>, "Reshma K.V" <reshmakv@vjec.ac.in>, "Ryne P.M" <ryne@vjec.ac.in>, "ashwinjoy@vjec.ac.in CE" <ashwinjoy@vjec.ac.in>, margaret CE <margaret@vjec.ac.in>, "Dr. Saathappan CE" <drsaath@vjec.ac.in>, Jyothi Joseph <jyothijoseph@vjec.ac.in>, Logi N Bobby CE <logibobbyabraham@vjec.ac.in>, Abhijath IP CE <abhijathip@vjec.ac.in>, Rijin K CS <rjini@vjec.ac.in>, "Dr. Febin IP CS Nov 2021" <febinip@vjec.ac.in>, Tintu George <tintugeorge@vjec.ac.in>, Shimna P CE <shimnap@vjec.ac.in>, "rinnet@vjec.ac.in CE" <rinnet@vjec.ac.in>, Laly James <lalyjames@vjec.ac.in>, Jayesh George Vj <jayeshg1988@vjec.ac.in>, "gokulnath@vjec.ac.in ME" <gokulnath@vjec.ac.in>, Tom Sithara ASH <tomsithara@vjec.ac.in>, Dilin Vjec Me <iamdilin@vjec.ac.in>, Jitto John <jitto@vjec.ac.in>, Shyni K CS <shynik@vjec.ac.in>, Sr Jessy <jessykunnum@gmail.com>, Christopher Vj <christopher0420@vjec.ac.in>, Anitta Jose CE <anittajose@vjec.ac.in>, Nayana Suresh CS <nayanasuresh@vjec.ac.in>, Siji ASH <sijibaskar@vjec.ac.in>, Thomas Jacob <thomaspullattu@vjec.ac.in>, Binil Kumar K <binil@vjec.ac.in>, ambilimacse@vjec.ac.in, Theertha CE <theerthadeljit@vjec.ac.in>, Riya Pradeep CE <riyapradeep@vjec.ac.in>, Sigi Thomas <sigithomasj@vjec.ac.in>, Ram Prasad ME <ramprasad@vjec.ac.in>, R Senthilkumar <rsenthilkumar@vjec.ac.in>, "Dr. Justin EE" <agjustin@vjec.ac.in>, Manju M CS <manjum@vjec.ac.in>, Sinai Michel CE <sinaimichel@vjec.ac.in>, Resmitha rami antony CE <resmitharantony@vjec.ac.in>, Suhada CS <suhadac@vjec.ac.in>, Justine M Augustine <justine@vjec.ac.in>, Jijo Joseph EEE <jijo4joseph@vjec.ac.in>, Rojith EE <rojithk@vjec.ac.in>, Jomy Jose <jomyjose@vjec.ac.in>, Saneesh K CE <saneeshkrish46@vjec.ac.in>, "Dr. Vibhoosha CE" <vibhoosha@vjec.ac.in>, Mejo M Francis <mejofrancis@vjec.ac.in>, Prabin James <prabinjesus@vjec.ac.in>, "Manoj. V. Thomas" <manojkurissinkal@vjec.ac.in>, G Glan Devadhas <glandeva@vjec.ac.in>, Jyothsna Mohan CS <jyothsnasmohan@vjec.ac.in>, Vineethamol Abraham <vineetha@vjec.ac.in>, Ann Mathew <annmathew@vjec.ac.in>, Dean Academic VJEC <deanacademic@vjec.ac.in>, Jancy <jancy@vjec.ac.in>, "Vidhya S. S CSE" <vidhyasud@vjec.ac.in>, Najira Salam CSE <najirasalam@vjec.ac.in>, Divya Thomas ASH <divyathomas@vjec.ac.in>, Swathi Chandra EE <swathichandramt@vjec.ac.in>, "Adarsh K. S" <adarshks@vjec.ac.in>, Keerthijith CS <keerthijithp@vjec.ac.in>, Lekshmy Hari <lekshmyhari@vjec.ac.in>, Rehna CM CS <rahnacm@vjec.ac.in>, Department ASH <dash@vjec.ac.in>, Shamy A <shamyasanthosh@vjec.ac.in>, Ankita Sebastian EE <ankitasebastian@vjec.ac.in>, Ancy K Sunny <ancyksunny@vjec.ac.in>, Shaji George <shajigc@vjec.ac.in>, Sisna P CS <sisnap@vjec.ac.in>, Training & Placement <tpc@vjec.ac.in>, Jinsa Mathew <jinsamathew@vjec.ac.in>, Sreekanth ME <sreekanth@vjec.ac.in>, Neena V V <neenaphalgun@vjec.ac.in>, Ance Maria Thomas <ancemariathomas@vjec.ac.in>, Reema Mathew <reemamathew@vjec.ac.in>, Thipthi Balakrishnan CS <thipthibalakrishnan@vjec.ac.in>, Anusha Chacko <anushachacko@vjec.ac.in>, Sudharsana Vijayan EI <sudharsanavijayan@vjec.ac.in>, V Aji Augustine ME <ajiagustine@vjec.ac.in>, Abdul Latheef <abdullatheef@vjec.ac.in>, Akhil KK CS <akhilkk@vjec.ac.in>, Athira CE <athirarajendran@vjec.ac.in>, George Kv <george@vjec.ac.in>, "Manoj K. 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Cherian" <renji@vjec.ac.in>, Anitha Babu <anithababu@vjec.ac.in>, Anu CS <anuvellackallil@vjec.ac.in>, Tinu Francis <tinufrancis@vjec.ac.in>, Liji Merlin Kurian CS <lijikurian@vjec.ac.in>, Dominic <dominic@vjec.ac.in>, Diya Rameshan CS <diyarameshan@vjec.ac.in>, Tintu Devasia <tintudevasia@vjec.ac.in>, Sreelakshmi CS <sreelakshmi@vjec.ac.in>, Sreedaya CS <sreedayam@vjec.ac.in>, Shelma George <shelma@vjec.ac.in>, Jeethu CS <jeethuthomas@vjec.ac.in>, "Shimna P.K" <shimna@vjec.ac.in>, Shijith Thomas <shijiththomas@vjec.ac.in>, Jljina MT CS <jljina@vjec.ac.in>, Shamin Kk <shaminmuthu@vjec.ac.in>, Bindu Sebastian <bindujohn@vjec.ac.in>, Niyas KM ME <niyaskm@vjec.ac.in>, "Shinu M. M" <shinum@vjec.ac.in>, Peter CE <peterjobe@vjec.ac.in>, Rajitha KV CS <rajithakv@vjec.ac.in>, Sreeraji CS <sreerajinarayanan@vjec.ac.in>, Namitha PR CS Nov 2021 <namithapr@vjec.ac.in>

Cc: Office VJEC <office@vjec.ac.in>, Josteen J Puthumana <josteen@vjec.ac.in>, "Fr. Lipin" <libinezhpura777@gmail.com>, Santhome Hostel <santhome@vjec.ac.in>, Bursar <bursar@vjec.ac.in>, "K.J. Sebastian Puthenpura" <sebastianputhenpura@vjec.ac.in>, Manager <manager@vjec.ac.in>, Fr Jinu <jinuachan@vjec.ac.in>, Chairman VJEC <chairman@vjec.ac.in>, Assistant manager <asstmanager@vjec.ac.in>, Wardens <warden@vjec.ac.in>

Regards  
Benny Joseph



----- Forwarded message -----

From: **Dr. Jayesh George** <jayeshg1988@vjec.ac.in>

Date: Tue, 28 Feb 2023 at 13:32

Subject: PDP on OBE and Accreditations by IQAC VJEC \_ Poster

To: Dr Benny Joseph <bennyjoseph@vjec.ac.in>

Dear Sir

IQAC VJEC proposed to conduct a one-day workshop on OBE and accreditations for the ASH dept. and newly joined faculty on 02.03.2023. Poster is attached herewith.

Time: 9.30 AM onwards

Venue: Board room



Best regards,

Dr Jayesh George M

Associate Professor

Department of Electronics & Communication Engineering

Vimal Jyothi Engineering College, Kannur, Kerala, India.

Ph: +91 9746135446



PDP on OBE and Accreditations.jpg  
269K



## PDP on OBE and Accreditations

### Attendance Sheet

Date: 2 March 2023

Time: 9.30 AM – 12.10 PM

Venue: Board Room

Sl. No	Name	Department	Signature
1	AKHIL KK	ADS	
2	DIVYA THOMAS	ASH	
3	Vineethamol Abraham	ASH	
4	SITHARA Tom	ASH	
5	Agni Sunny	ASH	
6	Subhalakshmi.V	ASH	
7	Rajitha. K.V.	CSR	
8	Dr. Roohini .T V	ECE	
9	Anil Thomas M	ADS	
10	Namitha. P	ADS	
11	Thripthi P Balakrishnan	ADS	
12	Lakshmi	CSE	
13	Sreesaji Alasayanan	CSE	
14	Sisra P	CSR	
15	Sreelakshmi M	CSE	
16	Sreedhara . M	CSG	
17	Liji Merlin Kurian	CSE	
18	Ramprasad.A	ME	
19	Shijith Thomas	ASH	
20	Rajitha K	EEE	
21	Jomy Jose	ASH	
22	Leena. PV	"	
23	Dominic.N. Thomas	"	
24	George. K.V.	ASH	



# IQAC VJEC Professional Development Program

## OBE and Accreditations

A PDP on OBE and accreditations was conducted by IQAC VJEC for the faculty Members of ASH Department and Newly Joined Staff on 2 March 2023, 9.30 AM at Board Room. The resource Persons were Dr Benny Joseph and Mr. Shinu M M. Dr Benny Joseph explained about COs, CO gap and content beyond syllabus. Mr Shinu explained about attainment calculation. 39 Staff members from different department were participated in this workshop.

### Photos





**Report Prepared by**  
Dr Jayesh George M  
IQAC Associate Coordinator

**Report Approved by**  
Dr Benny Joseph  
Principal.



Timestamp	Username	Faculty Name ( This name will be seen as such in the certificate)	Designation	Department	Workshop objectives where clearly stated and met	The workshop was well organized	Workshop helped me to understand OBE and Accreditations	Workshop helped me to understand OBE and Accreditations	The information presented were relevant and useful	The presenters provided adequate time for questions and answered them satisfactorily	The workshop increased my knowledge in OBE and Accreditations
2023/03/14 12:15:55 P	jayeshg1988@vjec.ac.in	Jay	Aso	ECE	2	3	4	5	4	4	5
2023/03/14 12:25:18 P	anitthomasm@vjec.ac.in	Anit Thomas M	Assistant Professor	ADS	5	5	5	5	5	5	5
2023/03/14 12:56:30 P	sreerajinarayanan@vjec.ac.in	SREERAJI NARAYANAN	Assistant Professor	CSE	1	1	1	1	1	1	1
2023/03/14 1:39:53 P	namithap@vjec.ac.in	NAMITHA P	ASSISTANT PROFESSOR	ADS	4	4	5	5	5	4	5
2023/03/14 1:40:53 P	rahnaem@vjec.ac.in	Rahna C M	Assistant professor	CSE	5	5	5	5	5	5	5
2023/03/14 1:41:36 P	divyathomas@vjec.ac.in	Divya Thomas	Assistant professor	ASH	4	4	5	5	5	5	5
2023/03/14 1:53:06 P	tomsithara@vjec.ac.in	Sithara Tom	A.P	ASH	5	5	4	4	5	5	5
2023/03/14 2:01:02 P	sreedayam@vjec.ac.in	Sreedaya M	Assistant Professor	CSE	4	4	5	5	5	4	5
2023/03/14 3:06:22 P	vineetha@vjec.ac.in	Vineethamol Abraham	Assistant Professor	ASH	5	5	4	4	5	5	4
2023/03/14 3:23:02 P	dominic@vjec.ac.in	DOMINIC N THOMAS	AP	ASH	4	4	4	4	5	5	4
2023/03/14 7:05:11 P	anjusunny@vjec.ac.in	ANJU SUNNY	AP	ASH	5	5	5	5	5	5	5
2023/03/14 8:17:40 P	anuvellackallil@vjec.ac.in	Anu Treesa George	Asst.Professor	ADS	5	5	4	4	5	5	4
2023/03/14 9:00:50 P	lijikurian@vjec.ac.in	Liji Merlin Kurian	Assistant Professor	CSE	5	5	5	5	5	5	5
2023/03/15 8:52:41 A	ancemariathomas@vjec.ac.in	ANCE MARIA THOMAS	Assistant professor	ASH	4	4	5	5	5	5	5
2023/03/15 8:55:03 A	akhilkk@vjec.ac.in	Akhil KK	Assistant Professor	ADS	4	4	4	4	4	4	4
2023/03/16 7:39:52 A	thripthibalakrishnan@vjec.ac	Thripthi P Balakrishnan	Assistant Professor	ADS	5	5	5	5	5	5	5
2023/03/16 7:44:23 A	arunlalmp@vjec.ac.in	Arunlal M P	Assistant Professor	ME	5	5	5	5	5	5	5
2023/03/16 8:22:40 A	rajithakv@vjec.ac.in	RAJITHA K V	Asst. Professor	CSE	5	5	5	5	5	5	5



**VIMAL JYOTHI ENGINEERING COLLEGE**  
**CHEMPERI, KANNUR**



**INTERNAL QUALITY ASSURANCE CELL**  
**CERTIFICATE OF PARTICIPATION**

**Thripathi P Balakrishnan**

**Assistant Professor**

has participated in the **Professional Development Program on OBE and Accreditations** on March 2, 2023, organized by Internal Quality Assurance Cell, Vimal Jyothi Engineering College, Kannur, Kerala.

**Dr. Jayesh George M**  
**IQAC Co-coordinator**

**Dr. Roshini T V**  
**IQAC Coordinator**

**Dr. Benny Joseph**



**VIMAL JYOTHI ENGINEERING COLLEGE**  
**CHEMPERI, KANNUR**



**INTERNAL QUALITY ASSURANCE CELL**  
**CERTIFICATE OF PARTICIPATION**

**Arunlal M P**

**Assistant Professor**

has participated in the **Professional Development Program on OBE and Accreditations** on March 2, 2023, organized by Internal Quality Assurance Cell, Vimal Jyothi Engineering College, Kannur, Kerala.

**Dr. Jayesh George M**  
**IQAC Co-coordinator**

**Dr. Roshini T V**  
**IQAC Coordinator**

**Dr. Benny Joseph**  
**Pri**

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## Feedback Analysis of PDP on OBE and Accreditations.

---

IQAC VJEC <iqac@vjec.ac.in>

Mon, Mar 20, 2023 at 11:21 AM

To: Sreeraji CS <sreerajinarayanan@vjec.ac.in>

Cc: bennyjoseph@vjec.ac.in, "Shinu M. M" <shinum@vjec.ac.in>, Dean Academic VJEC <deanacademic@vjec.ac.in>

Dear SREERAJI NARAYANAN

We sincerely apologize for any inconvenience you have experienced in PDP on OBE and accreditations. At IQAC, participant satisfaction is something we take very seriously and anything less than ensuring you are completely happy is unacceptable. I appreciate your patience with us as we further investigate this issue. I'm confident your next experience with IQAC Workshops will be up to your expectations. We are happy if you share what made you unhappy during the PDP, however, it is not mandatory.

Encl: PDP on OBE and accreditations feedback.

Regards  
Dr Jayesh George M  
IQAC

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 **OBE Feedback.pdf**  
196K



**Event proposal form**

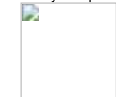
1	Event type and name	FDP 5 Days FDP on OBE philosophy and Practice
2	Date and time	5 <sup>th</sup> , 6 <sup>th</sup> , 7 <sup>th</sup> , 8 <sup>th</sup> and 9 <sup>th</sup> May 2023 Time : 9.00am to 4.10pm
3	Participants/ audience	VJEC Faculty
4	Venue	Varikkattu Hall
5	Objectives	<ul style="list-style-type: none"> <li>To provide faculty members with the necessary knowledge and skills to design, implement, and assess curricula based on measurable learning outcomes.</li> <li>To understand the key concepts of OBE, such as backward design, learning outcomes, and assessment strategies.</li> <li>To provides faculty members with an opportunity to learn about the latest trends and best practices in OBE, as well as to collaborate and share ideas with their colleagues</li> </ul>
6	Expected outcomes	<ul style="list-style-type: none"> <li>Enhance understanding of the principles and practices of OBE</li> <li>Able to define CO, do CO-PO mapping and frame assessment tool</li> <li>Development of student-centered teaching strategies</li> <li>Calculate CO and PO attainment</li> </ul>
7	Resource requirements	Laptop
8	Any other relevant information	Resource person: <ol style="list-style-type: none"> <li>Dr. Benny Joseph, Principal, VJEC</li> <li>Ms. Laly James, Professor and HoD, EEE Department</li> <li>Ms. Divya B, Associate Professor and HoD , CSE Department</li> <li>Mr. Shinu M M, Assistant Professor, AEI</li> <li>Dr. Nageswara Gupta, Principal, Sri Venkateshwara College of Engineering, Bangalore</li> <li>Dr. Venkatesh Babu D L, Consultant on OBE</li> </ol>
9	Responsible persons	<u>Staff coordinators:</u> <ol style="list-style-type: none"> <li>Dr Roshini T V, Dean Academic</li> <li>Dr Jayesh George, IQAC coordinator</li> </ol>

**Brochure\_ FDP on OBE Philosophy and Practice****Dr Benny Joseph** <bennyjoseph@vjec.ac.in>

Fri, Apr 28, 2023 at 2:31 PM

To: Anisha Joseph CS <anisha@vjec.ac.in>, Soumya John <soumyakulakkottu@vjec.ac.in>, Hridya CE <hridyap94@vjec.ac.in>, Beena Joseph Library <beenajoseph@vjec.ac.in>, Subhalaakshmi ASH <subhalaakshmi@vjec.ac.in>, Dinsha PK CS <dinshapk@vjec.ac.in>, Jerrin Yomas <jerrinyomas@vjec.ac.in>, Aswathi K CE <aswathik@vjec.ac.in>, Josy James ME <josyames@vjec.ac.in>, Raju Kk <rajukk@vjec.ac.in>, Vasudevan, M' <vasu@vjec.ac.in>, Midhun Mukundan <midhunmukundan@vjec.ac.in>, Abhiram P CS <abhiramp@vjec.ac.in>, Anuragi CE <anuragi@vjec.ac.in>, Dhanqj M <dhanqj24@vjec.ac.in>, "Dr. P. 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V. Thomas" <manojkurissinkal@vjec.ac.in>, G Glan Devadhas <glandeva@vjec.ac.in>, Jyothsna Mohan CS <jyothsnasmohan@vjec.ac.in>, Vineethamod Abraham <vineetha@vjec.ac.in>, Ann Mathew <annmathew@vjec.ac.in>, Dean Academic VJEC <deanacademic@vjec.ac.in>, Jancy <jancy@vjec.ac.in>, "Vidhya S. S CSE" <vidhyasad@vjec.ac.in>, Najira Salam CSE <najirasalam@vjec.ac.in>, Divya Thomas ASH <divyathomas@vjec.ac.in>, Lijisha T CS <lijishat@vjec.ac.in>, Swathi Chandra EE <swathichandramt@vjec.ac.in>, "Adarsh K. 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Cherian" <renji@vjec.ac.in>, Anitha Babu <anithababu@vjec.ac.in>, Anu CS <anuvellackallil@vjec.ac.in>, Tinu Francis <tinufrancis@vjec.ac.in>, Liji Medin Kurian CS <lijikurian@vjec.ac.in>, Dominic <dominic@vjec.ac.in>, Diya Rameshan CS <diyarameshan@vjec.ac.in>, Tintu Devasia <tintudevasia@vjec.ac.in>, Sreelakshmi CS <sreelakshmin@vjec.ac.in>, Sreedaya CS <sreedayam@vjec.ac.in>, Shelma George <shelmageorge@vjec.ac.in>, Jeethu CS <jeethuthomas@vjec.ac.in>, "Shimna P.K" <shimnapk@vjec.ac.in>, Shijith Thomas <shijiththomas@vjec.ac.in>, Jljina MT CS <jljinamt@vjec.ac.in>, Shamin Kk <shaminmuthu@vjec.ac.in>, Bindu Sebastian <bindujohn@vjec.ac.in>, Niyas KM ME <niyaskm@vjec.ac.in>, "Shinu M. M" <shinum@vjec.ac.in>, Peter CE <peterjobe@vjec.ac.in>, Rajitha KV CS <rajithakv@vjec.ac.in>, Sreeraj CS <sreerajinarayanan@vjec.ac.in>, Namitha PR CS Nov 2021 <namithapr@vjec.ac.in>

CC: Office VJEC <office@vjec.ac.in>, Josteen J Puthumana <josteen@vjec.ac.in>, "Fr. Lipin" <libinezhpura777@gmail.com>, Santhome Hostel <santhome@vjec.ac.in>, Bursar <bursar@vjec.ac.in>, "K.J.Sebastian Puthenpura" <sebastianputhenpura@vjec.ac.in>, Manager <manager@vjec.ac.in>, Fr Jinu <jinuachan@vjec.ac.in>, Chairman VJEC <chairman@vjec.ac.in>, Assistant manager <asstmanager@vjec.ac.in>, Wardens <warden@vjec.ac.in>

Regards  
Benny Joseph

----- Forwarded message -----

From: Dr. Jayesh George <jayeshg1988@vjec.ac.in>  
Date: Fri, 28 Apr 2023 at 14:29  
Subject: Brochure\_ FDP on OBE Philosophy and Practice  
To: Dr Benny Joseph <bennyjoseph@vjec.ac.in>

Dear Sir  
PFA

Best regards,  
Dr Jayesh George M  
Associate Professor  
Department of Electronics & Communication Engineering  
Vimal Jyothi Engineering College, Kannur, Kerala, India.  
Ph: +91 9746135446

**2 attachments** **Event proposal form - 5days FDP.pdf**  
72K **FDP on OBE.pdf**  
491K

## INTERNAL QUALITY ASSURANCE CELL

### 5 Days FDP on OBE philosophy and Practice

DATE -5th, 6th, 7th, 8th and 9th May  
2023

TIME - 9.00am to 4.10pm



Vimal Jyothi Engineering College,  
Jyothi Nagar, Kannur District, Chempuri, Kerala  
670632



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Venue: Varikkattu Hall, VJEC vR

## ADVISORY COMMITTEE

Dr. Sridharan P , Professor/ME  
Dr. Senthilkumar R, Professor/ME  
Ms. Neena V V, AP/CSE  
Ms. Anit Thomas, AP/ADS  
Dr. Vibhoosha M P , AP/CE  
Ms. Shamy A, AP/AEI  
Ms. Shimna P K , AP/ECE  
Ms. Mejo M Francis, AP/ME  
Mr Prabhin James, IEEE VT Society  
South Asia Representative

## Resource Persons

1. Dr. Benny Joseph, Principal, VJEC
2. Ms. Laly James,  
Associate Professor and HoD,  
EEE Department
3. Ms. Divya B,  
Associate Professor and HoD ,  
CSE Department
4. Mr. Shinu M M,  
Assistant Professor, AEI
5. Dr. Nageswara Gupta, Principal,  
Sri Venkateshwara College  
of Engineering, Bangalore
6. Dr. Venkatesh Babu D L,  
Consultant on OBE

## ORGANIZING COMMITTEE

### Chief Patron

Archbishop Mar Joseph Pamplany, Arch Bishop  
Archdiocese of Tellicherry

### Patron

Rev. Fr ANTONY MUTHUKUNNEL,  
PROTO SYNCELLUS, Chairman VJEC

### Co Patrons

Rev. Fr. James Chellamkottu, Manager, VJEC  
Rev. Fr. Lazar Varambath, Bursar, VJEC

### Convenor

Dr. Benny Joseph, Principal, VJEC

## COORDINATOR

1. Dr Roshini T V, Dean Academic  
Ph: 9496402767
2. Dr Jayesh George, IQAC coordinator  
Ph: 9746135446

## Major Course Contents:

- Introduction to OBE
- Defining / Refining Course Outcomes
- Activity - Redefining Cos
- Blooms Taxonomy
- Hands-on Blooms Taxonomy
- CO-PO Mapping
- Assessment tools
- Activity on Assessment tools
- Curricular gaps, Course level gaps
- Programme level gaps
- Hands-on in preparing curricular gaps
- CO Attainment
- PO Attainment
- Hands on session on attainment calculation
- Gap filling activity

## About the FDP:

This Faculty Development Programme (FDP) addresses the need to enhance the knowledge about the latest Outcome-Based Education(OBE) and its implications in teaching, assessment and evaluation. The aim of this FDP is to nurture the philosophy of Outcome Based Education (OBE) and to build the capacity of the young Faculty Members and Heads of department so as to facilitate its institutionalization in the Teaching-Learning System and other Academic Processes of the Institution. Moreover, the objectives of FDP are as follows: Provide faculty members with the necessary knowledge and skills to design, implement, and assess curricula based on measurable learning outcomes. Understand the key concepts of OBE, such as backward design, learning outcomes, and assessment strategies. Provides faculty members with an opportunity to learn about the latest trends and best practices in OBE, as well as to collaborate and share ideas with their colleagues

## CERTIFICATION

All participants will get certificate from the IQAC, VJEC.

## Who should Attend

All Faculty members from all the departments of VJEC

## Registration Fees

This workshop is fully sponsored by VJEC Management for IQAC VJEC. Hence this workshop is free for all participants.

## About the College

Vimal Jyothi Engineering College (VJEC) is an educational project of the Archdiocese of Thalassery established in the year 2002 and is managed by Meshar Diocesan Educational Trust. The college is approved by AICTE and affiliated to APJ Abdul Kalam Technological University (KTU). VJEC is a self-financing catholic minority institution aiming at generating a fervour for Engineering and Technology in students. Here we inspire, nurture and foster them to realize their career potential in the field of Engineering and Technology. With profound insight into the resource requirements of the higher education system, VJEC has proudly set up world-class infrastructure complemented with intellectual capital in the form of competent faculty. Many of the facilities are way beyond the regulatory requirements aiming for learning beyond the syllabus to address the requirements of the industry. These material facilities along with value addition programs and student support systems are the integral facets of empowerment at VJEC. Digital library, industry supported project labs, language lab, and student chapters of professional bodies such as IEEE, ISOI, IETE, SAE, CSI offer an extensive range of resources, opportunities and services to the outcome-based teaching learning process. Effective implementation of quality control processes ensures Engineering graduates with the expected level of knowledge, skill and attitude. Vimal Jyothi Engineering College is a NAAC and IEI accredited institution and six U.G. programs are accredited with NBA.

## VISION OF THE COLLEGE

To bloom into a Center of Excellence for Technical Education and a pace-setter in rural India with its quality processes and procedures, interwoven with freedom of flexibility, moulding professionals of superior quality, dedicated to the progress and development of Humanity.

## MISSION OF THE COLLEGE

To prepare the students to see beyond geographical limit and belong to a new age of acquisition and application of the challenges of the changing world. inspired and guided by gospel values, we contribute to the socioeconomic welfare of the country with due concern to the marginalized.



## FDP on OBE Philosophy and Practice



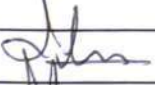
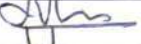








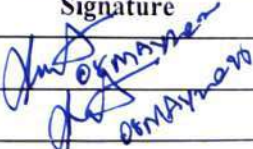

May 5 -9, 2023

### FDP Schedule

<b>Day 1</b>	<b>5th May 2023</b>	
Time	Session	Resource Person
9:00-10:00	Inauguration and Introduction to the FDP	Dr Benny Joseph
10:00-11:00	Diagnostic test	Dr Benny Joseph
11:00-11:15	Break	
11:15-1:15	OBE philosophy in Teaching learning process	Prof. Laly James
	Curriculum Gap identification	Prof. Laly James
	Gapfilling activity, etc	Prof. Laly James
1:15-2:00		
2:00 - 4.10	Defining / Refining Course Outcomes	Prof. Divya B
	CO-PO Mapping	Prof. Divya B
	Assessment tools	Prof. Divya B
	Break	
	Attainment Calculation	Prof. Divya B
<b>Day 2</b>	<b>6th May 2023</b>	
Time	Session	Resource Person
9:00-10:00	Assessment Test	Dr Benny Joseph
10.00 - 4.10	Attainment Calculation presentation by the faculty	Prof. Shinu M M
<b>Day 3</b>	<b>7th May 2023</b>	
Time	Session	Resource Person
9.00 - 4.10	Hands on session on attainment calculation	Prof. Shinu M M
<b>Day 4</b>	<b>8th May 2023</b>	
Time	Session	Resource Person
9:00-9:30	Introduction to OBE	Dr. Nageswara Gupta
9:30-10:30	Defining / Refining Course Outcomes	Dr. Nageswara Gupta
10:30-10:45	Break	
10:45-11:15	Activity - Redefining COs	Dr. Nageswara Gupta
11:15-11:45	Blooms Taxonomy	Dr. Venkatesh Babu
11:45-1:15	Hands-on Blooms Taxonomy	Dr. Venkatesh Babu
1:15-1:45	Lunch	
1:45 - 2:30	CO-PO Mapping	Dr. Venkatesh Babu
3:00-3:15	Break	
3:15-4.10	Assessment tools	Dr. Venkatesh Babu

<b>Day 5</b>	<b>9th May 2023</b>	
<b>Time</b>	<b>Session</b>	<b>Resource Person</b>
9:00-9:30	Activity on Assessment tools	Dr. Venkatesh Babu
9:30-10:30	Curricular gaps, Course level gaps	Dr. Venkatesh Babu
10:30-10:45	Break	
10:45-11:45	Programme level gaps	Dr. Venkatesh Babu
11:45-1:15	Hands-on in preparing curricular gaps	Dr. Nageswara Gupta
1:15-1:45	Lunch	
1:45 - 2:30	CO Attainment	Dr. Nageswara Gupta
3:00-3:15	Break	
3:15-4.10	PO Attainment	Dr. Nageswara Gupta

**Vimal Jyothi Engineering College, Chemperi**  
**FDP on OBE Philosophy and Practice May 5 -9, 2023**  
**FDP Schedule**

<b>Day 1</b>		<b>5th May 2023</b>	
<b>Time</b>	<b>Session</b>	<b>Resource Person</b>	<b>Signature</b>
9:00-10:00	Inauguration and Introduction to the FDP	Dr Benny Joseph	
10:00-11:00	Diagnostic test	Dr Benny Joseph	
11:00-11:15	Break		
11:15-1:15	OBE philosophy in Teaching learning process	Prof. Laly James	
	Curriculum Gap identification	Prof. Laly James	
	Gapfilling activity, etc	Prof. Laly James	
1:15-2:00			
2:00 - 4.10	Defining / Refining Course Outcomes	Prof. Divya B	
	CO-PO Mapping	Prof. Divya B	
	Assessment tools	Prof. Divya B	
	Break		
	Attainment Calculation	Prof. Divya B	
<b>Day 2</b>		<b>6th May 2023</b>	
<b>Time</b>	<b>Session</b>	<b>Resource Person</b>	<b>Signature</b>
9:00-10:00	Assessment Test	Dr Benny Joseph	
10.00 - 4.10	Attainment Calculation presentation by the faculty	Prof. Shinu M M	
<b>Day 3</b>		<b>7th May 2023</b>	
<b>Time</b>	<b>Session</b>	<b>Resource Person</b>	<b>Signature</b>
9.00 - 4.10	Hands on session on attainment calculation	Prof. Shinu M M	
<b>Day 4</b>		<b>8th May 2023</b>	
<b>Time</b>	<b>Session</b>	<b>Resource Person</b>	<b>Signature</b>
9:00-9:30	Introduction to OBE	Dr. Nageswara Gupta M	
9:30-10:30	Defining / Refining Course Outcomes	Dr. Nageswara Gupta M	
10:30-10:45	Break		

10:45-11:15	Activity - Redefining COs	Dr. Nageswara Gupta M	<i>[Signature]</i> 9/5/23
11:15-11:45	Blooms Taxonomy	Dr. Venkatesh Babu D L	<i>[Signature]</i> 9/5
11:45-1:15	Hands-on Blooms Taxonomy	Dr. Venkatesh Babu D L	<i>[Signature]</i> 9/5
1:15-1:45	Lunch		
1:45 - 2:30	CO-PO Mapping	Dr. Venkatesh Babu D L	<i>[Signature]</i> 9/5
3:00-3:15	Break		
3:15-4.10	Assessment tools	Dr. Venkatesh Babu D L	<i>[Signature]</i> 9/5
<b>Day 5</b>	<b>9th May 2023</b>		
<b>Time</b>	<b>Session</b>	<b>Resource Person</b>	<b>Signature</b>
9:00-9:30	Activity on Assessment tools	Dr. Venkatesh Babu D L	<i>[Signature]</i> 9/5
9:30-10:30	Curricular gaps, Course level gaps	Dr. Venkatesh Babu D L	<i>[Signature]</i> 9/5
10:30-10:45	Break		
10:45-11:45	Programme level gaps	Dr. Venkatesh Babu D L	<i>[Signature]</i> 9/5
11:45-1:15	Hands-on in preparing curricular gaps	Dr. Nageswara Gupta M	<i>[Signature]</i> 9/5/23
1:15-1:45	Lunch		
1:45 - 2:30	CO Attainment	Dr. Nageswara Gupta M	<i>[Signature]</i> 9/5/23
3:00-3:15	Break		
3:15-4.00	PO Attainment	Dr. Nageswara Gupta M	<i>[Signature]</i> 9/5/23
4.00-4.10	Valedictory Function	Dr Benny Joseph	<i>[Signature]</i>

# Vimal Jyothi Engineering College, Chemperi

## Internal Quality Assurance Cell


FDP on OBE Philosophy and Practice

### Attendance Sheet

#### Department ADS


Sl. No	Employee ID	NAME	5/5/23 FN	5/5/23 AN	6/5/23 FN	6/5/23 AN	7/5 FN	7/5 AN	8/5 FN	8/5 AN	9/5 FN	1/5 AN
1	FCS001	Dr Manoj V.Thomas	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present
2	FAE18	Ms Reema A Mathew	Present	Absent	Present	Present	Present	Present	Present	Present	Present	Present
3	FCS037	Ms Ancy K Sunny	Present	Absent	Present	Present	Present	Present	Present	Present	Present	Present
4	FEE061	Ms SwathiChandra M T	Present	Absent	Present	Present	Present	Present	Present	Present	Present	Present
5	FCS060	Ms Anit ThomasM	Present	Absent	Present	Present	Present	Present	Present	Present	Present	Present
6	FCS066	Ms Thripathi P Balakrishnan	Absent	Absent	Present	Present	Present	Present	Present	Present	Present	Present
7	FCS065	Mr Akhil K K	Present	Absent	Present	Present	Present	Present	Present	Present	Present	Present
8	FCS070	Ms Anu TreesaGeorge	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present
9	FCS071	Ms Jijina M T	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present
10	FCS082	Ms Namitha P	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present

ADS

  
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 Dr. Jayashree George

Department E&I												
Sl. No	Employee ID	NAME	5/5/23 FN	5/5/23 AN	6/5/23 FN	6/5/23 AN	7/5 FN	7/5 AN	8/5 FN	8/5 AN	9/5 FN	9/5 AN
1	FAE048	Dr G. Glan Devadhas	ABSENT	<i>Kant</i>	<i>SB</i>	<i>SB</i>	<i>SB</i>	<i>SB</i>	<i>SB</i>	<i>SB</i>	<i>SB</i>	<i>SB</i>
2	FEC10	Ms Shamy A	<i>SB</i>	<i>SB</i>	<i>SB</i>	<i>SB</i>	<i>SB</i>	<i>SB</i>	<i>SB</i>	<i>SB</i>	<i>SB</i>	<i>SB</i>
3	FAE03	Ms Reshma K V	<i>SB</i>	<i>SB</i>	<i>SB</i>	<i>SB</i>	<i>SB</i>	<i>SB</i>	<i>SB</i>	<i>SB</i>	<i>SB</i>	<i>SB</i>
4	FAE23	Mr Dhanoj Mohan	ABSENT	<i>SB</i>	<i>SB</i>	<i>SB</i>	<i>SB</i>	<i>SB</i>	<i>SB</i>	<i>SB</i>	<i>SB</i>	<i>SB</i>
5	FAE034	Mr Shinu M. M	<i>SB</i>	<i>SB</i>	<i>SB</i>	<i>SB</i>	<i>SB</i>	<i>SB</i>	<i>SB</i>	<i>SB</i>	<i>SB</i>	<i>SB</i>
6	FAE043	Ms Jinsa Mathew	<i>Jinsa</i>	<i>Jinsa</i>	<i>Jinsa</i>	<i>Jinsa</i>	<i>Jinsa</i>	<i>Jinsa</i>	<i>Jinsa</i>	<i>Jinsa</i>	<i>Jinsa</i>	<i>Jinsa</i>


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 Dr. Jayesh

Department ASH

Sl. No	Employee ID	NAME	5/5/23 FN	5/5/23 AN	6/5/23 FN	6/5/23 AN	7/5 FN	7/5 AN	8/5 FN	8/5 AN	9/5 FN	9/5 AN
1	ASH047	Mr George K V	<del>JK</del>	<del>JK</del>	<del>JK</del>	<del>JK</del>	<del>JK</del>	<del>JK</del>	<del>JK</del>	<del>JK</del>	<del>JK</del>	<del>JK</del>
2	ASH02	Mr VasudevanM	<del>V</del>	<del>V</del>	<del>AB</del>	<del>AB</del>	<del>AB</del>	<del>AB</del>	<del>AB</del>	<del>AB</del>	<del>AB</del>	<del>AB</del>
3	ASH08	Mr Jomy Jose	<del>J</del>	<del>J</del>	<del>J</del>	<del>J</del>	<del>J</del>	<del>J</del>	<del>J</del>	<del>J</del>	<del>J</del>	<del>J</del>
4	ASH12	Mr Dominic NThomas	<del>D</del>	<del>D</del>	<del>D</del>	<del>D</del>	<del>D</del>	<del>D</del>	<del>D</del>	<del>D</del>	<del>D</del>	<del>D</del>
5	ASH19	Mr ShijithThomas	<del>S</del>	<del>S</del>	<del>S</del>	<del>S</del>	<del>S</del>	<del>S</del>	<del>S</del>	<del>S</del>	<del>S</del>	<del>S</del>
6	ASH036	Ms VineethamolAbraham	<del>V</del>	<del>V</del>	<del>V</del>	<del>V</del>	<del>V</del>	<del>V</del>	<del>V</del>	<del>V</del>	<del>V</del>	<del>V</del>
7	ASH045	Ms Sithara Tom	<del>S</del>	<del>S</del>	<del>S</del>	<del>S</del>	<del>S</del>	<del>S</del>	<del>S</del>	<del>S</del>	<del>S</del>	<del>S</del>
8	ASH048	Ms Anju Sunny	<del>A</del>	<del>A</del>	<del>A</del>	<del>A</del>	<del>A</del>	<del>A</del>	<del>A</del>	<del>A</del>	<del>A</del>	<del>A</del>
9	ASH049	Ms Ance MariaThomas	<del>A</del>	<del>A</del>	<del>A</del>	<del>A</del>	<del>A</del>	<del>A</del>	<del>A</del>	<del>A</del>	<del>A</del>	<del>A</del>
10	ASH050	Ms DivyaThomas	<del>D</del>	<del>D</del>	<del>D</del>	<del>D</del>	<del>D</del>	<del>D</del>	<del>D</del>	<del>D</del>	<del>D</del>	<del>D</del>
11	ASH051	Ms Leena P V	<del>L</del>	<del>L</del>	<del>L</del>	<del>L</del>	<del>L</del>	<del>L</del>	<del>L</del>	<del>L</del>	<del>L</del>	<del>L</del>
12	ASH052	MsSubhalakshmi V	<del>S</del>	<del>S</del>	<del>S</del>	<del>S</del>	<del>S</del>	<del>S</del>	<del>S</del>	<del>S</del>	<del>S</del>	<del>S</del>
13	ASH053	Mr Jobin K V	<del>J</del>	<del>J</del>	<del>J</del>	<del>J</del>	<del>J</del>	<del>J</del>	<del>J</del>	<del>J</del>	<del>J</del>	<del>J</del>

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 Dr. Jayashree

Department CE												
Sl. No	Employee ID	NAME	5/5/23 FN	5/5/23 AN	6/5/23 FN	6/5/23 AN	7/5 FN	7/5 AN	8/5 FN	8/5 AN	9/5 FN	9/5 AN
1	FCE06	Dr Biju Mathew	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
2	FCE01	Ms Sigi Thomas	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
3	ADM08	Dr BennyJoseph	ABSENT	ABSENT	ABSENT	ABSENT	AB	ABSENT	ABSENT	AB	AB	AB
4	FCE033	Ms Anitha Babu	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
5	FCE051	Mr Saneesh K	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
6	FCE054	Mr Logi N Boby	ABSENT	ABSENT	ABSENT	ABSENT	AB	AB	AB	AB	AB	AB
7	FCE057	Mr Abhijath I P	ABSENT	ABSENT	AB	AB	AB	AB	AB	AB	AB	AB
8	FCE060	Ms Anuragi P	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
9	FCE065	Dr SaathappanVRA	ABSENT	ABSENT	AB	AB	AB	AB	AB	AB	AB	AB
10	FCE068	Ms MargaretAbraham	ABSENT	ABSENT	AB	AB	AB	AB	AB	AB	AB	AB
11	FCE069	Mr Ashwin Joy	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB
12	FCE070	Ms RinnetFrancis	ABSENT	ABSENT	AB	AB	AB	AB	AB	AB	AB	AB
13	FCE075	Mr Rojin P	ABSENT	ABSENT	AB	AB	AB	AB	AB	AB	AB	AB
14	FCE073	Ms Hridya P	ABSENT	ABSENT	AB	AB	AB	AB	AB	AB	AB	AB
15	FCE082	Ms Anitta Jose	ABSENT	ABSENT	AB	AB	AB	AB	AB	AB	AB	AB
16	FCE091	Ms AthiraRajendran	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB
17	FCE095	Dr Vibhoosha MP	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB
18	FCE096	Ms ResmithaRani Antony	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB
19	FCE099	Ms Sinai Michel	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB
20	FCE102	Ms Aswathi K	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB
21	FCE103	Ms Shimna P	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB
22	FCE104	Ms ParvanenduK	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB

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10/05/2023  
 Co-ordinator  
 Dr. Jayashree A



Department CSE

Sl. No	Employee ID	NAME	5/5/23 FN	5/5/23 AN	6/5/23 FN	6/5/23 AN	7/5 FN	7/5 AN	8/5 FN	8/5 AN	9/5 FN	9/5 AN
1	FCS002	Ms Divya B	<del>Divya</del>	<del>Divya</del>	<del>Divya</del>	<del>Divya</del>	<del>Divya</del>	<del>Divya</del>	<del>Divya</del>	<del>Divya</del>	<del>Divya</del>	<del>Divya</del>
2	FCS003	Dr Jeethu VDevasia	<del>Jeethu</del>	<del>Jeethu</del>	<del>Jeethu</del>	<del>Jeethu</del>	<del>Jeethu</del>	<del>Jeethu</del>	<del>Jeethu</del>	<del>Jeethu</del>	<del>Jeethu</del>	<del>Jeethu</del>
3	FCS005	Ms Neena V V	<del>Neena</del>	<del>Neena</del>	<del>Neena</del>	<del>Neena</del>	<del>Neena</del>	<del>Neena</del>	<del>Neena</del>	<del>Neena</del>	<del>Neena</del>	<del>Neena</del>
4	FAE24	Mr AbdulLatheef M. M.	<del>Latheef</del>	<del>Latheef</del>	<del>Latheef</del>	<del>Latheef</del>	<del>Latheef</del>	<del>Latheef</del>	<del>Latheef</del>	<del>Latheef</del>	<del>Latheef</del>	<del>Latheef</del>
5	FCS018	Ms Vidhya S S	<del>Vidhya</del>	<del>Vidhya</del>	<del>Vidhya</del>	<del>Vidhya</del>	<del>Vidhya</del>	<del>Vidhya</del>	<del>Vidhya</del>	<del>Vidhya</del>	<del>Vidhya</del>	<del>Vidhya</del>
6	FAE22	Ms Divya K	<del>Divya</del>	<del>Divya</del>	<del>Divya</del>	<del>Divya</del>	<del>Divya</del>	<del>Divya</del>	<del>Divya</del>	<del>Divya</del>	<del>Divya</del>	<del>Divya</del>
7	FCS054	Ms TintuDevasia	<del>Tintu</del>	<del>Tintu</del>	<del>Tintu</del>	<del>Tintu</del>	<del>Tintu</del>	<del>Tintu</del>	<del>Tintu</del>	<del>Tintu</del>	<del>Tintu</del>	<del>Tintu</del>
8	FCS057	Ms NayanaSuresh	<del>Nayana</del>	<del>Nayana</del>	<del>Nayana</del>	<del>Nayana</del>	<del>Nayana</del>	<del>Nayana</del>	<del>Nayana</del>	<del>Nayana</del>	<del>Nayana</del>	<del>Nayana</del>
9	FCS062	Ms SreerajiNarayanan	<del>Sreeraji</del>	<del>Sreeraji</del>	<del>Sreeraji</del>	<del>Sreeraji</del>	<del>Sreeraji</del>	<del>Sreeraji</del>	<del>Sreeraji</del>	<del>Sreeraji</del>	<del>Sreeraji</del>	<del>Sreeraji</del>
10	FCS063	Mr Rijin I K	<del>Rijin</del>	<del>Rijin</del>	<del>Rijin</del>	<del>Rijin</del>	<del>Rijin</del>	<del>Rijin</del>	<del>Rijin</del>	<del>Rijin</del>	<del>Rijin</del>	<del>Rijin</del>
11	FCS064	Ms DiyaRameshan	<del>Diya</del>	<del>Diya</del>	<del>Diya</del>	<del>Diya</del>	<del>Diya</del>	<del>Diya</del>	<del>Diya</del>	<del>Diya</del>	<del>Diya</del>	<del>Diya</del>
12	FCS067	Ms Najira Salam	<del>Najira</del>	<del>Najira</del>	<del>Najira</del>	<del>Najira</del>	<del>Najira</del>	<del>Najira</del>	<del>Najira</del>	<del>Najira</del>	<del>Najira</del>	<del>Najira</del>
13	FCS068	Ms UjwalaVijayan	<del>Ujwala</del>	<del>Ujwala</del>	<del>Ujwala</del>	<del>Ujwala</del>	<del>Ujwala</del>	<del>Ujwala</del>	<del>Ujwala</del>	<del>Ujwala</del>	<del>Ujwala</del>	<del>Ujwala</del>
14	FCS011	Ms Lincy A V	<del>Lincy</del>	<del>Lincy</del>	<del>Lincy</del>	<del>Lincy</del>	<del>Lincy</del>	<del>Lincy</del>	<del>Lincy</del>	<del>Lincy</del>	<del>Lincy</del>	<del>Lincy</del>
15	FCS073	Ms Rahna C M	<del>Rahna</del>	<del>Rahna</del>	<del>Rahna</del>	<del>Rahna</del>	<del>Rahna</del>	<del>Rahna</del>	<del>Rahna</del>	<del>Rahna</del>	<del>Rahna</del>	<del>Rahna</del>
16	FCS074	Ms Sisna P	<del>Sisna</del>	<del>Sisna</del>	<del>Sisna</del>	<del>Sisna</del>	<del>Sisna</del>	<del>Sisna</del>	<del>Sisna</del>	<del>Sisna</del>	<del>Sisna</del>	<del>Sisna</del>
17	FCS069	Ms Rajitha K V	<del>Rajitha</del>	<del>Rajitha</del>	<del>Rajitha</del>	<del>Rajitha</del>	<del>Rajitha</del>	<del>Rajitha</del>	<del>Rajitha</del>	<del>Rajitha</del>	<del>Rajitha</del>	<del>Rajitha</del>
18	FCS075	Ms Suhada C	<del>Suhada</del>	<del>Suhada</del>	<del>Suhada</del>	<del>Suhada</del>	<del>Suhada</del>	<del>Suhada</del>	<del>Suhada</del>	<del>Suhada</del>	<del>Suhada</del>	<del>Suhada</del>
19	FCS072	Ms Jyothsna SMohan	<del>Jyothsna</del>	<del>Jyothsna</del>	<del>Jyothsna</del>	<del>Jyothsna</del>	<del>Jyothsna</del>	<del>Jyothsna</del>	<del>Jyothsna</del>	<del>Jyothsna</del>	<del>Jyothsna</del>	<del>Jyothsna</del>
20	FCS076	Mr Abhiram P	<del>Abhiram</del>	<del>Abhiram</del>	<del>Abhiram</del>	<del>Abhiram</del>	<del>Abhiram</del>	<del>Abhiram</del>	<del>Abhiram</del>	<del>Abhiram</del>	<del>Abhiram</del>	<del>Abhiram</del>
21	FCS077	Ms SreelakshmiM	<del>Sreelakshmi</del>	<del>Sreelakshmi</del>	<del>Sreelakshmi</del>	<del>Sreelakshmi</del>	<del>Sreelakshmi</del>	<del>Sreelakshmi</del>	<del>Sreelakshmi</del>	<del>Sreelakshmi</del>	<del>Sreelakshmi</del>	<del>Sreelakshmi</del>
22	FCS079	Ms Manju M	<del>Manju</del>	<del>Manju</del>	<del>Manju</del>	<del>Manju</del>	<del>Manju</del>	<del>Manju</del>	<del>Manju</del>	<del>Manju</del>	<del>Manju</del>	<del>Manju</del>
23	FCS080	Ms Sreedaya M	<del>Sreedaya</del>	<del>Sreedaya</del>	<del>Sreedaya</del>	<del>Sreedaya</del>	<del>Sreedaya</del>	<del>Sreedaya</del>	<del>Sreedaya</del>	<del>Sreedaya</del>	<del>Sreedaya</del>	<del>Sreedaya</del>
24	FCS081	Ms Dinsha P K	<del>Dinsha</del>	<del>Dinsha</del>	<del>Dinsha</del>	<del>Dinsha</del>	<del>Dinsha</del>	<del>Dinsha</del>	<del>Dinsha</del>	<del>Dinsha</del>	<del>Dinsha</del>	<del>Dinsha</del>
25	FCS083	Ms Liji MerlinKurian	<del>Liji</del>	<del>Liji</del>	<del>Liji</del>	<del>Liji</del>	<del>Liji</del>	<del>Liji</del>	<del>Liji</del>	<del>Liji</del>	<del>Liji</del>	<del>Liji</del>
26	FCS086	Ms Lijisha T	<del>Lijisha</del>	<del>Lijisha</del>	<del>Lijisha</del>	<del>Lijisha</del>	<del>Lijisha</del>	<del>Lijisha</del>	<del>Lijisha</del>	<del>Lijisha</del>	<del>Lijisha</del>	<del>Lijisha</del>
27	FCS085	Ms Ashila K A	<del>Ashila</del>	<del>Ashila</del>	<del>Ashila</del>	<del>Ashila</del>	<del>Ashila</del>	<del>Ashila</del>	<del>Ashila</del>	<del>Ashila</del>	<del>Ashila</del>	<del>Ashila</del>
28	FCS 087	Dr. S. Vadhanam Luman										

CSE

June 20/5/2023  
Dr. Jayashankar

Department ECE

Sl. No	Employee ID	NAME	5/5/23 FN	5/5/23 AN	6/5/23 FN	6/5/23 AN	7/5 FN	7/5 AN	8/5 FN	8/5 AN	9/5 FN	9/5 AN
1	FEC035	Dr D Anto Sahaya Dhas	Ansant	AB	AB	AB	AB	AB	AB	AB	AB	AB
2	FEC12	Ms Jerrin Yomas	Jerrin	AB	Jerrin	Jerrin	Jerrin	Jerrin	Jerrin	Jerrin	Jerrin	Jerrin
3	FEC006	Mr Vinod J Thomas	Vinod	AB	Vinod	Vinod	Vinod	Vinod	Vinod	Vinod	Vinod	Vinod
4	FEC02	Dr Roshini T V	Roshini	AB	Roshini	Roshini	Roshini	Roshini	Roshini	Roshini	Roshini	Roshini
5	FEC05	Ms Bindu Sebastian	Bindu	AB	Bindu	Bindu	Bindu	Bindu	Bindu	Bindu	Bindu	Bindu
6	FEC007	Mr Manoj K. C	Manoj	AB	Manoj	Manoj	Manoj	Manoj	Manoj	Manoj	Manoj	Manoj
7	FEC14	Mr Adarsh K S	Adarsh	AB	Adarsh	Adarsh	Adarsh	Adarsh	Adarsh	Adarsh	Adarsh	Adarsh
8	FEC016	Ms Shimna P K	Shimna	AB	Shimna	Shimna	Shimna	Shimna	Shimna	Shimna	Shimna	Shimna
9	FEC22	Ms Lekshmy S	Lekshmy	AB	Lekshmy	Lekshmy	Lekshmy	Lekshmy	Lekshmy	Lekshmy	Lekshmy	Lekshmy
10	FEC026	Mr Binil Kumar K	Binil	AB	Binil	Binil	Binil	Binil	Binil	Binil	Binil	Binil
11	FEC029	Ms Grace John M	Grace	AB	Grace	Grace	Grace	Grace	Grace	Grace	Grace	Grace
12	FEC031	Dr Jayesh George M	Jayesh	AB	Jayesh	Jayesh	Jayesh	Jayesh	Jayesh	Jayesh	Jayesh	Jayesh
13	FEC033	Ms Anusha Chacko	Anusha	AB	Anusha	Anusha	Anusha	Anusha	Anusha	Anusha	Anusha	Anusha
14	FEC034	Ms Ann Mathew	Ann	AB	Ann	Ann	Ann	Ann	Ann	Ann	Ann	Ann
15	FAE047	Ms Sudharsana Vijayan	Sudharsana	AB	Sudharsana	Sudharsana	Sudharsana	Sudharsana	Sudharsana	Sudharsana	Sudharsana	Sudharsana


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 Dr. Jayesh George  
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Department EEE

Sl. No	Employee ID	NAME	5/5/23 FN	5/5/23 AN	6/5/23 FN	6/5/23 AN	7/5 FN	7/5 AN	8/5 FN	8/5 AN	9/5 FN	9/5 AN
1	FEE02	Ms Laly James	<del>AB</del>	<del>AB</del>	<del>AB</del>	<del>AB</del>	<del>AB</del>	<del>AB</del>	<del>AB</del>	<del>AB</del>	<del>AB</del>	<del>AB</del>
2	FEE07	Ms TintuGeorge	<del>AB</del>	<del>AB</del>	<del>AB</del>	<del>AB</del>	<del>AB</del>	<del>AB</del>	<del>AB</del>	<del>AB</del>	<del>AB</del>	<del>AB</del>
3	FEE22	Ms TeenaGeorge	<del>AB</del>	<del>AB</del>	<del>AB</del>	<del>AB</del>	<del>AB</del>	<del>AB</del>	<del>AB</del>	<del>AB</del>	<del>AB</del>	<del>AB</del>
4	FEE031	Mr PrabinJames	<del>AB</del>	<del>AB</del>	<del>AB</del>	<del>AB</del>	<del>AB</del>	<del>AB</del>	<del>AB</del>	<del>AB</del>	<del>AB</del>	<del>AB</del>
5	FEE037	Mrs TinuFrancis	<del>AB</del>	<del>AB</del>	<del>AB</del>	<del>AB</del>	<del>AB</del>	<del>AB</del>	<del>AB</del>	<del>AB</del>	<del>AB</del>	<del>AB</del>
6	FEE041	Ms ShelmaGeorge	<del>AB</del>	<del>AB</del>	<del>AB</del>	<del>AB</del>	<del>AB</del>	<del>AB</del>	<del>AB</del>	<del>AB</del>	<del>AB</del>	<del>AB</del>
7	FEE042	Ms JyothiJoseph	ABSENT	AB	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
8	FEE047	Dr G JustinSunil Dhas	ABSENT	AB	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
9	FEE050	Dr Senthilkumar	ABSENT	AB	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
10	FEE060	Ms Athira MThomas	ABSENT	AB	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
11	FEE062	Mr Rojith K	ABSENT	AB	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
12	FEE063	Mr Rijoy G N	ABSENT	AB	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT

EEE

  
 Page 43 of 160 / 10/05/2023  
 Coordinator  
 Dr. Jeyanth George

Department ME

Sl. No	Employee ID	NAME	5/5/23 FN	5/5/23 AN	6/5/23 FN	6/5/23 AN	7/5 FN	7/5 AN	8/5 FN	8/5 AN	9/5 FN	9/5 AN
1	FME034	Cdr rtd Raju K Kuriakose	ABSENT	AB	AB	AB	AB	AB	AB	AB	AB	AB
2	SME01	Mr Shaji George	ABSENT	AB	AB	AB	AB	AB	AB	AB	AB	AB
3	FME02	Mr Ryne P M	ABSENT	AB	AB	AB	AB	AB	AB	AB	AB	AB
4	FME23	Mr MidhunMukundan	ABSENT	AB	AB	AB	AB	AB	AB	AB	AB	AB
5	FME043	Mr Mejo M.Francis	ABSENT	AB	AB	AB	AB	AB	AB	AB	AB	AB
6	FME051	Mr Appu CKurian	ABSENT	AB	AB	AB	AB	AB	AB	AB	AB	AB
7	FME066	Mr ShaminmuthK K	ABSENT	AB	AB	AB	AB	AB	AB	AB	AB	AB
8	FME072	Dr P Sridharan	ABSENT	AB	AB	AB	AB	AB	AB	AB	AB	AB
9	FME075	Mr Aji Augustine	ABSENT	AB	AB	AB	AB	AB	AB	AB	AB	AB
10	FME084	Mr Niyas K M	ABSENT	AB	AB	AB	AB	AB	AB	AB	AB	AB
11	FME085	Mr Dilin Dinesh	ABSENT	AB	AB	AB	AB	AB	AB	AB	AB	AB
12	FME087	Dr S ChristopherEzhil Singh	ABSENT	AB	AB	AB	AB	AB	AB	AB	AB	AB
13	FME091	Dr Sreekanth MP	ABSENT	AB	AB	AB	AB	AB	AB	AB	AB	AB
14	FME093	Mr Arunlal M P	ABSENT	AB	AB	AB	AB	AB	AB	AB	AB	AB
15	FME007	Dr Jithin E V	ABSENT	AB	AB	AB	AB	AB	AB	AB	AB	AB
16	FME038	Mr RamprasidhA	ABSENT	AB	AB	AB	AB	AB	AB	AB	AB	AB
17	FME098	Mr Anoop K R	ABSENT	AB	AB	AB	AB	AB	AB	AB	AB	AB
18	FME099	Mr Vysakh K V	ABSENT	AB	AB	AB	AB	AB	AB	AB	AB	AB

ME

Dr. Jayesh George  
Coordinator

# Assessment Score

Timestamp	Email address	Score
5-5-2023 10:09:17	margaret@vjec.ac.in	22 / 25
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5-5-2023 10:09:26	divyab@vjec.ac.in	24 / 25
5-5-2023 10:10:06	logibobyabraham@vjec.ac.in	21 / 25
5-5-2023 10:10:31	ashwinjoy@vjec.ac.in	18 / 25
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5-5-2023 10:11:41	rajukk@vjec.ac.in	21 / 25
5-5-2023 10:11:46	bijupmathews@vjec.ac.in	23 / 25
5-5-2023 10:12:24	akhilkk@vjec.ac.in	22 / 25
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5-5-2023 10:15:22	sinaimichel@vjec.ac.in	24 / 25
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5-5-2023 10:15:55	sreekanth@vjec.ac.in	24 / 25
5-5-2023 10:16:25	anittajose@vjec.ac.in	24 / 25
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5-5-2023 10:16:57	anithababu@vjec.ac.in	24 / 25
5-5-2023 10:17:01	jomyjose@vjec.ac.in	17 / 25
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5-5-2023 10:18:25	jeethuthomas@vjec.ac.in	22 / 25
5-5-2023 10:18:35	vasu@vjec.ac.in	19 / 25
5-5-2023 10:19:03	manojkurissinkal@vjec.ac.in	22 / 25
5-5-2023 10:19:05	vysakhkv@vjec.ac.in	22 / 25
5-5-2023 10:19:21	rsenthilkumar@vjec.ac.in	15 / 25
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5-5-2023 10:19:30	abhiramp@vjec.ac.in	25 / 25
5-5-2023 10:19:30	nayanasuresh@vjec.ac.in	25 / 25
5-5-2023 10:19:53	appu.kurian@vjec.ac.in	22 / 25
5-5-2023 10:19:53	reemamathew@vjec.ac.in	21 / 25
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5-5-2023 10:19:58	manjum@vjec.ac.in	17 / 25
5-5-2023 10:20:01	kcmanojkc@vjec.ac.in	23 / 25

5-5-2023 10:20:01	jobinkv@vjec.ac.in	22 / 25
5-5-2023 10:20:01	vinodkurisinkal@vjec.a	20 / 25
5-5-2023 10:20:01	dinshapk@vjec.ac.in	22 / 25
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5-5-2023 10:20:13	najirasalam@vjec.ac.in	18 / 25
5-5-2023 10:20:20	subhalakshmi@vjec.ac	18 / 25
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5-5-2023 10:23:57	lekshmyhari@vjec.ac.in	24 / 25
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5-5-2023 10:24:41	divyathomas@vjec.ac.i	22 / 25
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5-5-2023 10:31:06	reshmakv@vjec.ac.in	21 / 25
5-5-2023 10:31:27	anutreesa10@gmail.co	22 / 25
5-5-2023 10:37:17	athiramthomas@vjec.a	24 / 25
5-5-2023 10:39:38	rjjoygn@gmail.com	23 / 25
5-5-2023 10:48:03	jinsamathew@vjec.ac.i	23 / 25
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5-5-2023 11:17:44	tinufrancis@vjec.ac.in	22 / 25



No: VJ\_FDP/22-23/181

***CERTIFICATE OF PARTICIPATION***



This is to certify that

**Jerrin Yomas**

Associate Professor

Electronics and Communication  
Engineering

has participated 30 hours Faculty Development Program on ***OBE Philosophy & Practice*** organized by the Internal Quality Assurance Cell, Vimal Jyothi Engineering College, Chemperi, Kannur during 05 - 09 May,2023.



Dr Jayesh George M  
IQAC Coordinator  
Associate Professor/ECE

Dr. Roshini T V  
IQAC Coordinator  
Dean Academics

Dr. Benny Joseph  
Principal  
Vimal Jyothi Engineering College





No: VJ\_FDP/22-23/180

***CERTIFICATE OF PARTICIPATION***



This is to certify that

**Vidhya S S**

Assistant Professor

Computer Science and Engineering



has participated 30 hours Faculty Development Program on ***OBE Philosophy & Practice*** organized by the Internal Quality Assurance Cell, Vimal Jyothi Engineering College, Chemperi, Kannur during 05 - 09 May,2023.

Dr Jayesh George M  
IQAC Coordinator  
Associate Professor/ECE

Dr. Roshini T V  
IQAC Coordinator  
Dean Academics

Dr. Benny Joseph  
Principal  
Vimal Jyothi Engineering College



No: VJ\_FDP/22-23/179

***CERTIFICATE OF PARTICIPATION***



This is to certify that

**RESHMA K V**

Assistant Professor

Applied Science and Humanities



has participated 30 hours Faculty Development Program on ***OBE Philosophy & Practice*** organized by the Internal Quality Assurance Cell, Vimal Jyothi Engineering College, Chemperi, Kannur during 05 - 09 May,2023.

Dr Jayesh George M  
IQAC Coordinator  
Associate Professor/ECE

Dr. Roshini T V  
IQAC Coordinator  
Dean Academics

Dr. Benny Joseph  
Principal  
Vimal Jyothi Engineering College



No: VJ\_FDP/22-23/177

***CERTIFICATE OF APPRECIATION***



This is to certify that

**Mr. SHINU M M**

Assistant Professor

Applied Electronics and Instrumentation Engineering



has served as Resource Person in the Faculty Development Program on ***OBE Philosophy & Practice*** organized by the Internal Quality Assurance Cell, Vimal Jyothi Engineering College, Chemperi, Kannur during 05 - 09 May,2023.

Dr Jayesh George M  
Coordinator  
Associate Professor/ECE

Dr. Roshini T V  
IQAC Coordinator  
Dean Academics

Dr. Benny Joseph  
Principal  
Vimal Jyothi Engineering College



No: VJ\_FDP/22-23/176

***CERTIFICATE OF APPRECIATION***



This is to certify that

**Ms. Divya B**

Associate Professor & HOD

Computer Science and Engineering



has served as Resource Person in the Faculty Development Program on ***OBE Philosophy & Practice*** organized by the Internal Quality Assurance Cell, Vimal Jyothi Engineering College, Chemperi, Kannur during 05 - 09 May,2023.

Dr Jayesh George M  
Coordinator  
Associate Professor/ECE

Dr. Roshini T V  
IQAC Coordinator  
Dean Academics

Dr. Benny Joseph  
Principal  
Vimal Jyothi Engineering College



No: VJ\_FDP/22-23/175

***CERTIFICATE OF APPRECIATION***



This is to certify that

**Ms. Laly James**



Associate Professor & HOD

Electrical and Electronics Engineering

has served as Resource Person in the Faculty Development Program on ***OBE Philosophy & Practice*** organized by the Internal Quality Assurance Cell, Vimal Jyothi Engineering College, Chemperi, Kannur during 05 - 09 May,2023.

Dr Jayesh George M  
Coordinator  
Associate Professor/ECE

Dr. Roshini T V  
IQAC Coordinator  
Dean Academics

Dr. Benny Joseph  
Principal  
Vimal Jyothi Engineering College

# Feedback Day 1\_ FDP on OBE Philosophy and Practice

69 responses

Internal Quality Assurance Cell, VJEC



## Faculty Name

69 responses

Lekshmy S

Dr. Manoj V. Thomas

Dominic N Thomas

Shelma George

Hridya P

Anu Treesa George

Ujwala Vijayan

SHINU NM

Aji Augustine

Dr.G.Justin Sunil Dhas

jomy jose

Leena P V

Vineethamol Abraham

Jijina MT

Ancy K Sunny

RJIN I K

Manju M

Tintu George T

RESHMA K V

AKHIL KK

PRABIN JAMES

JOBIN K V

ASHILA K A

Rojin P

Prof George KV

Rijoy G N

Sreelakshmi M

Binil Kumar K

Namitha P

Ann Mathew

Sreeraji Narayanan

Anoop K R



Ance Maria Thomas

Aswathi K

Sisna P

Arunlal M P

DR Biju mathew

Abdul Latheef

Abhiram P

Sithara Tom

Dr. JEETHU V. DEVASIA

Sreekanth M P

Najira Salam

Anitta Jose

Bindu Sebastian

Anitha Babu

SUBHALAKSHMI.V

Grace John M

ashwin joy

NAYANA SURESH

Jinsa Mathew

Rahna C M

Divya Thomas

Adarsh K S

Anit Thomas M

shamya A

Vinod J Thomas

Dr. Vibhoosha

Resmitha Rani Antony

MANOJ K C

Vidhya S S

Niyas KM

Shimna P K

SHAJI GEORGE

Dinsha P K

Neena V V





Lijisha t

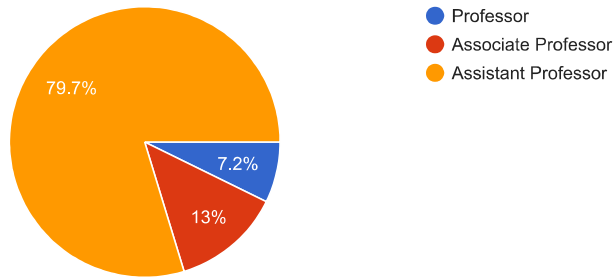
Parvanendu K

Diya Rameshan

### Designation

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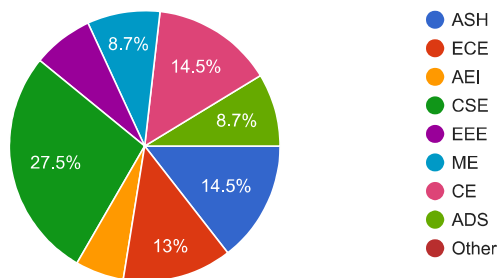
69 responses



### Department

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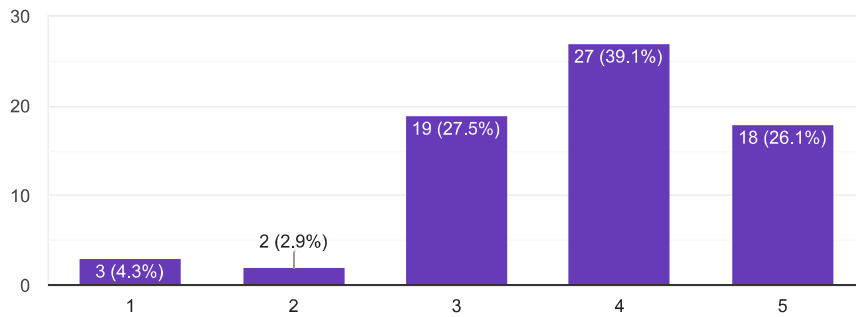
69 responses



### FDP objectives were clearly stated and met

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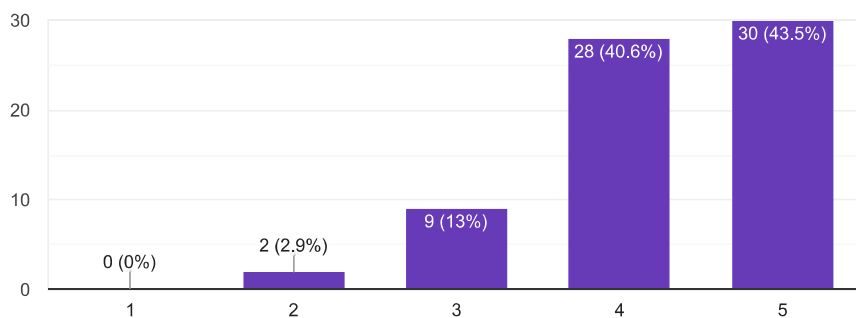
69 responses



### The FDP was well organized

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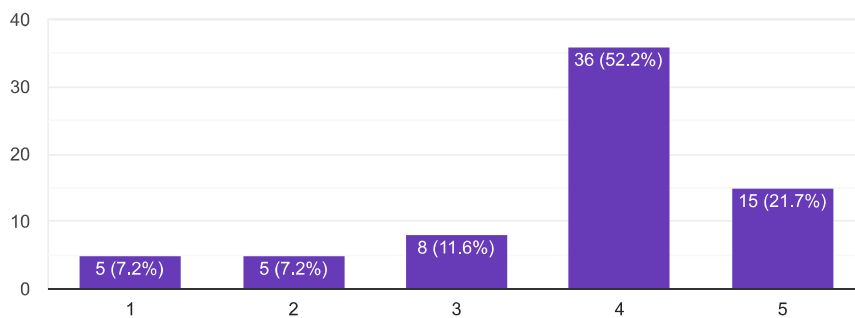
69 responses



### FDP helped me to understand NBA Criterion 2 and 3

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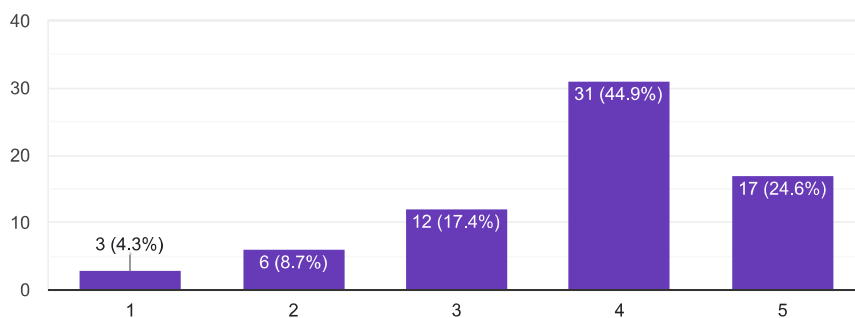
69 responses



### FDP helped me to understand Attainment and Curriculum gap identification

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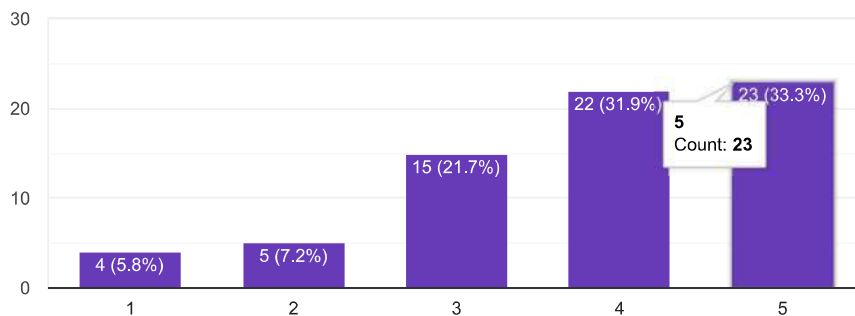
69 responses



### The information presented were relevant and useful

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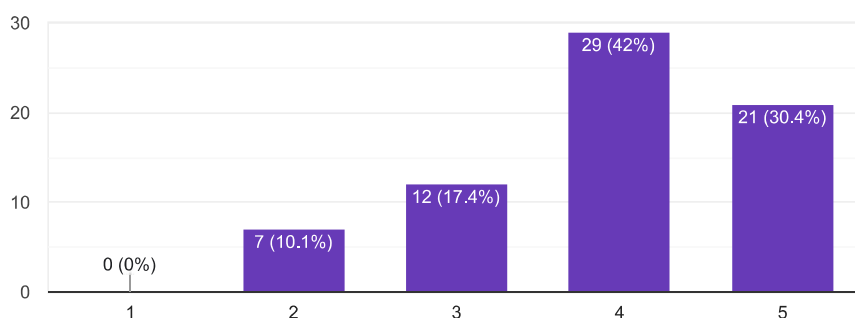
69 responses



### The presenters provided adequate time for questions and answered them satisfactorily

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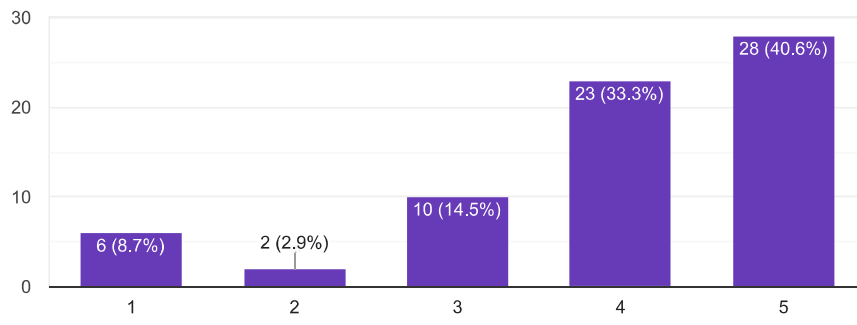
69 responses



# The FDP increased my knowledge in Attainment Calculation



69 responses



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# Feedback Day 4 & 5\_ FDP on OBE Philosophy and Practice

78 responses

Internal Quality Assurance Cell, VJEC



## Faculty Name

78 responses

Bindu Sebastian

Dominic N Thomas

Ancy K Sunny

SHAMINMUTH K K

Resmitha Rani Antony

Abhiram P

ROJIN P

Shimna P K

Dr. Jeethu V. Devasia

SUBHALAKSHMI.V

jijina mt

Dilin Dinesh

Athira M. Thomas

Glan Devadhas G

Divya B

Vineethamol Abraham

Najira Salam

MANOJ K C

Anitta Jose

Dr Biju Mathew

Binil Kumar K

RESHMA K V

Jinsa Mathew

Dr.R.Senthilkumar

SHAMYA A

Dr Reema Mathew A

AKHIL KK

Divya Thomas

ashwin joy

Sisna P

Suhada c

Shelma George



Dhanoj M

Mr. Vysakh KV

RAJITHA K V

Hridya P

Sreeraji Narayanan

Dr. Manoj V. Thomas

Manju M.

Rijoy G N

Shaji George

Sreelakshmi M

Liji Merlin Kurian

Dr.P.Sridharan

Tintu George T

Sithara Tom

Niyas KM

Tintu Devasia

LALY JAMES

Aji Augustine

NAYANA SURESH

Diya Rameshan

Anju Sunny

Neena V V

Tinu francis

Sreedaya m

Rahna C M

Grace John M

Logi n boby

Sreekanth M P

Vidhya S S

Anitha Babu

Jerrin Yomas

PRABIN JAMES

Parvanendu K

Dr.G.Justin Sunil Dhas



Leena V

Arunlal M P

Aswathi K

ANCE MARIA THOMAS

MIDHUN MUKUNDAN MK

Anit Thomas M

Anusha Chacko

Lekshmy S

Thripathi P Balakrishnan

RIJIN I K

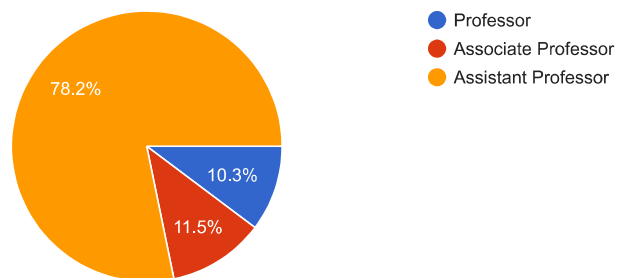
Vinod J Thomas

Anuragi P

### Designation

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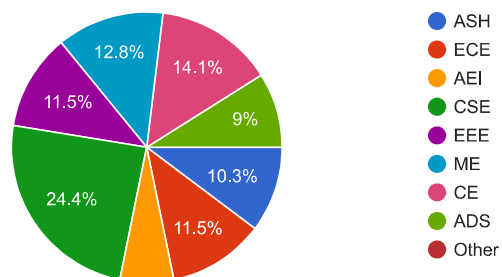
78 responses



### Department

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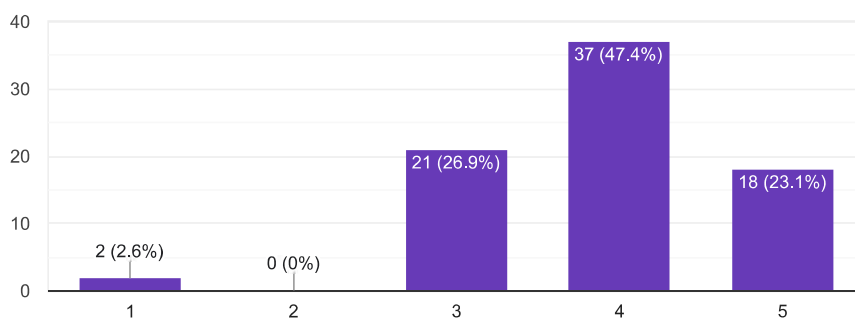
78 responses



### FDP objectives were clearly stated and met

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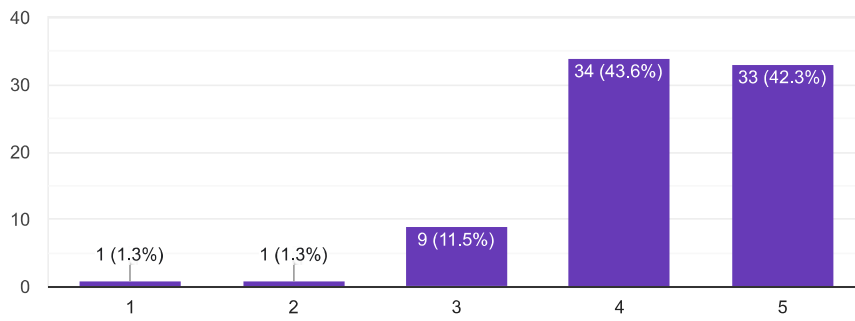
78 responses



### The FDP was well organized

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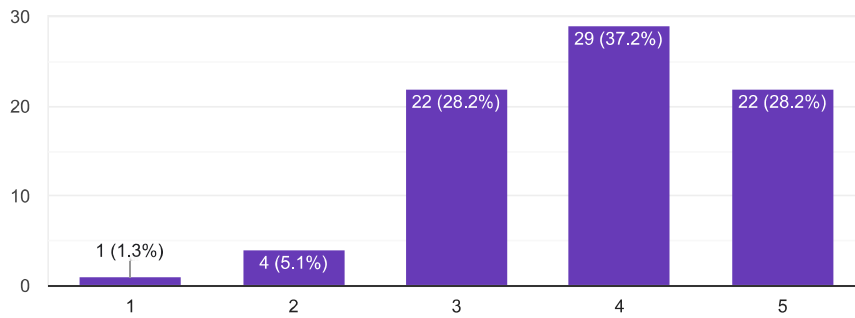
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### FDP helped me to understand NBA Cognitive Levels

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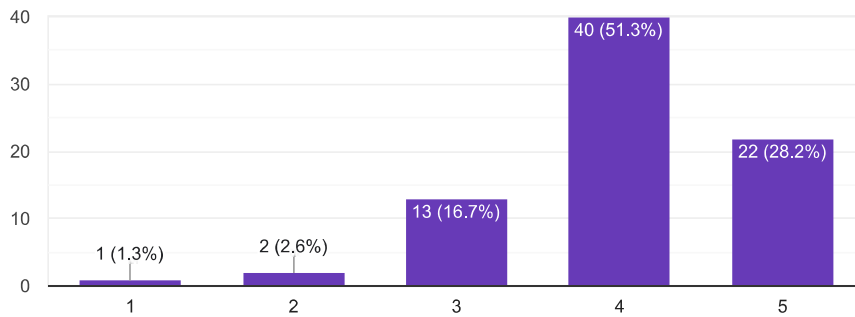
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### FDP helped me to understand Bloom Taxonomy Keywords and CO PO Mapping

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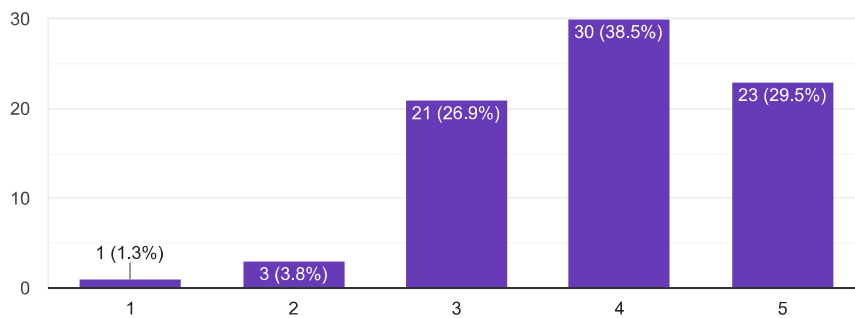
78 responses



### The information presented were relevant and useful

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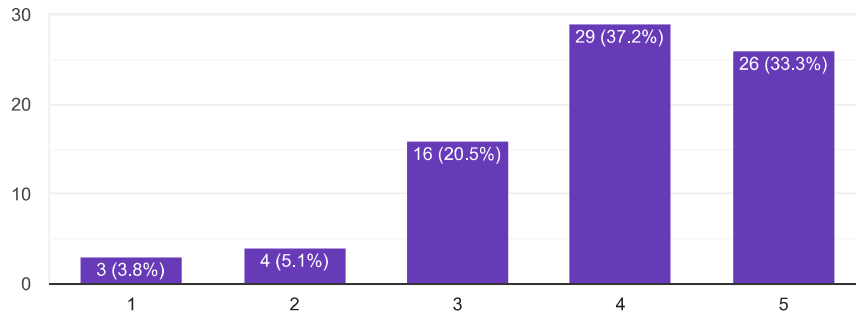
78 responses





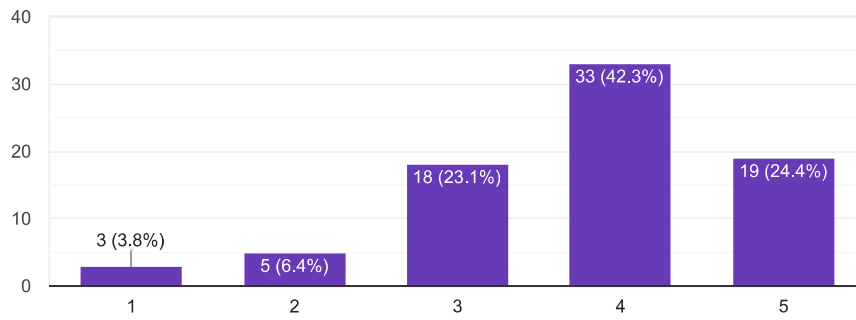
The presenters provided adequate time for questions and answered them satisfactorily [Copy](#)

78 responses



The FDP increased my knowledge in Attainment Calculation [Copy](#)

78 responses



Other comments that must be addressed by the coordinator in the future events.

78 responses

Nil

NIL

nil

NA

N

No comments

No

-

Slight confusions in PEO explanations and PEO statements & course end survey is inadequate.

Attainment calculation must be done as a task

no comments

Instead of making us do different subject, it will be better to calculate CO PO for the same subject and perform calculations till we attain final CO PO attainment value so that all steps will be more clear and then do our own subject as an assignment.

More pedagogy techniques

Please focus more on what we need. Felt the session was too much lagging and irrelevant

No comments

.

felt exhausted

No other comments

Please provide extra time for doubt clearance.

Not met expected outcome

Please incorporate attainment calculation as an assignment

Overall, it was effective.

No Issues

other criterias

Presentation was not visible

Clear explanation of course level gap is not clear

Arrange Basic OBE workshop for newly joined faculty only

Number of participants are very huge. So it is difficult to actively involved in this session.

Not provided adequate time for answering assignments and gave less time interval for important sections

I



Please add more real example to address the concepts

Nil

It will be better if it was conducted as Q&A session only

CO PO mapping was not clear, which felt suitable for tier 2 institutions; Vegetarians were not considered

Nil

Nothing

It would be better to conduct activity sessions at the end of explaining all concepts.

It would be helpful if the presenters could give adequate time for us to complete the tasks .

1.From these experts we have exploit maximum information, we have to prepare a questionnaire from the inputs from faculty, we may get answers to those questions from these experts. We have to try

2.Vegetarians are not considered during tea sessions

Curriculum gap identification need to be explained in detail

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Google Forms



From

Dr. Jayesh George  
IQAC

To,

The Principal  
VSEC

Res. Sir.

Sub: 1. Remuneration for FDP Resource persons  
a. Venkatesh Babu  
b. Nageswar Aputa

2. Travel from CAN to Bangalore of  
Dr. Venkatesh Babu - reimbursement

IQAC VSEC plans to conduct FDP on OBE  
philosophy and practice on 5/5/2023 to 9/5/2023.

The remuneration of the resource persons is  
detailed below.

Name	amount	Credit details
1. Venkatesh Babu	20,000/-	Venkatesh's Account.
2. Nageswar Aputa	20,000/-	Aputa's Account

Also, the flight ticket of Venkatesh Babu is not  
reimbursed when request for flight ticket requested  
(Kannur to Bangalore). Kindly reimburse the  
flight ticket amount of 3375/- to my account  
(Dr. Jayesh George, IQAC Coordinator)

3/5/2023  
VSEC

Sincerely

10/05/23

Dr. Jayesh George

Sincerely  
Dr. Jayesh George

**IQAC VJEC Faculty Training Program**  
**OBE Philosophy & Practice**  
**May 05-09, 2023**

**Preamble:** A five days Faculty Development Program on OBE Philosophy & Practice was conducted by IQAC VJEC for the faculty Members on 05- 09 May, 2023 at Vimal Jyothi Engineering College. The resource Persons were Dr. Nageswara Gupta, Dr. Venkatesh babu D L, Dr. Ms. Laly James, Ms. Divya B and Mr. Shinu M M. 117 Staff members from different department were participated in this FDP.

**Introduction:** The following report provides an overview of a faculty development program conducted on the topic of Outcome-Based Education (OBE). The purpose of this program was to enhance the understanding and implementation of OBE principles among faculty members. The program aimed to equip the faculty with the necessary knowledge and skills to align their teaching methods and assessments with the desired learning outcomes.

**Objective:** The primary objective of the faculty development program was to enable faculty members to effectively incorporate the principles of Outcome-Based Education in their teaching practices. The program aimed to help faculty members understand the significance of defining clear learning outcomes, designing instructional strategies, and implementing appropriate assessments to measure student achievement.

**Program Design and Implementation:**

**Needs Assessment:** A thorough needs assessment was conducted prior to the program to identify the existing understanding of OBE among faculty members, as well as their areas of improvement and concerns. This assessment helped tailor the program to address specific needs.

**Workshop Sessions:** The program consisted of a series of interactive workshop sessions conducted over a period of five days. The sessions were designed to provide a comprehensive understanding of OBE principles and their practical implementation. Key topics covered in the workshops included: a. Introduction to Outcome-Based Education b. Blooms Taxonomy c. Aligning Instructional Strategies with Learning Outcomes d. Designing Authentic Assessments for OBE e. Cognitive levels.

**Resource Materials:** Participants were provided with resource materials, including handouts, templates, and examples, to support their understanding and application of OBE principles. These materials served as reference guides and tools for faculty members to develop their course outcomes and assessments.

**Case Studies and Best Practices:** Real-life case studies and examples of best practices from various educational institutions were shared during the program. This allowed participants to gain insights into successful OBE implementation and provided them with practical strategies for addressing challenges.

**Hands-on Activities:** The program incorporated hands-on activities to engage participants actively. These activities included group discussions, interactive exercises, and the development of sample course outcomes and assessments. The practical application of OBE principles Page 69 of 160 learning experience and encouraged participants to apply their knowledge in real-world scenarios.

**Follow-up and Support:** To ensure the sustainability of the program's impact, a follow-up plan was established. It included post-program mentoring, consultation sessions, and ongoing support from educational experts. This support aimed to assist faculty members in implementing OBE effectively within their respective disciplines.

**Pre- and Post-Assessment:** Participants were evaluated through pre- and post-assessments to measure the improvement in their understanding of OBE principles and their ability to implement them in practice. The assessments consisted of multiple-choice questions.

**Participant Feedback:** A feedback survey was administered to gather participants' perspectives on the program's effectiveness, relevance, and overall satisfaction. The feedback allowed for further refinement of the program in subsequent iterations.

**Outcome and Impact:** The faculty development program on Outcome-Based Education yielded positive outcomes and impact, including:

Increased understanding of OBE principles among faculty members.

Enhanced ability to write clear and measurable learning outcomes.

Improved alignment of instructional strategies with learning outcomes.

Development of authentic assessments that measure desired outcomes effectively.

Strengthened faculty collaboration and exchange of best practices.

Integration of OBE principles in the curriculum design process.

Improved student learning outcomes and achievement.

**Conclusion:** The faculty development program on Outcome-Based Education successfully equipped faculty members with the knowledge and skills required to implement OBE principles effectively. The program fostered a culture of continuous improvement, collaboration, and student-centered teaching practices.

## Photos















**Report Prepared by**  
Dr Jayesh George M  
IQAC Associate Coordinator

**Report Approved by**  
Dr Benny Joseph  
Principal.

Booking ID  
230427763104



BANGALORE TO KANNUR

 <b>IndiGo</b> 6E-7363 Economy	Bangalore <b>BLR 16:45</b> SUN, 07 MAY '23 Kempegowda International Airport Terminal 1	 1h 20m	Kannur <b>CNN 18:05</b> SUN, 07 MAY '23 Kannur International Airport
--	--	---	---

PASSENGER NAME	PNR	E-TICKET NO.	SEAT
1. Mr Venkatesh Babu, Adult	NTRU7N	NTRU7N	
1. Mr Nageswara Guptha, Adult	NTRU7N	NTRU7N	

IMPORTANT INFORMATION

Type	Sector	Check-in Baggage	Cabin Baggage
Adult	BLR-CNN	15kg(1 Piece)	7kg

BAGGAGE INFORMATION

- For queries or communication with Flipkart regarding your booking, please use the Booking ID as a reference.
- Kindly note that check-in counters will close 60 minutes prior to departure for all domestic flights.
- It is mandatory for all passengers to carry valid photo ID proof in order to enter the airport and present at the time of check-in. Permitted ID proofs include - Aadhaar Card, Passport or any other government recognized ID. For infant travellers (0-2 yrs), it is mandatory to carry a birth certificate as a proof.
- Passengers must carry a copy of their E-ticket on a tablet/mobile/laptop or a printed copy of the ticket to enter the airport and show at the time of check-in.

CANCELLATION & DATE CHANGE CHARGES

- For booking cancellation, log in to the Flipkart app and visit the 'My Bookings' section.
- In the case of booking cancellation, both Flipkart and the airline will levy a cancellation fee. The airline cancellation fee may vary depending on the duration before flight departure. Flipkart will charge a ₹400 cancellation fee per passenger, per flight/sector
- Bookings can be cancelled on Flipkart up to 5 hours before flight departure. For cancellations within 3 hours of departure time, kindly contact the airline partner directly.
- Any refund claims arising due to cancellation or delay of the flight due to the airline will be received by Flipkart. In the event that the airline does not refund the amount to Flipkart, we shall not be held liable.
- In the event of a cancellation made in case of a layover or a connecting flight booking, all the flight bookings (for that journey) will be cancelled, i.e no partial cancellation will be allowed. Also, flights booked under a single PNR (in case of cancellation), will be cancelled together.
- In case of booking cancellation, the refund (if applicable) will be refunded to your bank account or the original mode of payment within 7 days.
- If the flight is cancelled or in case of a 'No Show', please initiate your refund request via Flipkart.

PAYMENT DETAILS

Fare Type	partially refundable
Base Fare	5,352
Taxes & Fees	2,012
Convenience Fee	598
Discount	0
<b>Total Amount</b>	<b>7,962</b>

CUSTOMER SUPPORT

Flipkart Support travelcustomersupport@flipkart.com 1800 258 3535	Airline Support 0124-6173838, 0124-4973838
---	---

Booking ID  
230427763814



KANNUR TO BANGALORE

 <b>IndiGo</b> 6E-7364 Economy	Kannur <b>CNN 18:25</b> TUE, 09 MAY '23 Kannur International Airport	 1h 20m	Bangalore <b>BLR 19:45</b> TUE, 09 MAY '23 Kempegowda International Airport Terminal 1
--	---	---	--

PASSENGER NAME	PNR	E-TICKET NO.	SEAT
1. Mr Nageswara Guptha, Adult	YP7ZYS	YP7ZYS	

IMPORTANT INFORMATION

Type	Sector	Check-in Baggage	Cabin Baggage
Adult	CNN-BLR	15kg(1 Piece)	7kg

BAGGAGE INFORMATION

- For queries or communication with Flipkart regarding your booking, please use the Booking ID as a reference.
- Kindly note that check-in counters will close 60 minutes prior to departure for all domestic flights.
- It is mandatory for all passengers to carry valid photo ID proof in order to enter the airport and present at the time of check-in. Permitted ID proofs include - Aadhaar Card, Passport or any other government recognized ID. For infant travellers (0-2 yrs), it is mandatory to carry a birth certificate as a proof.
- Passengers must carry a copy of their E-ticket on a tablet/mobile/laptop or a printed copy of the ticket to enter the airport and show at the time of check-in.

CANCELLATION & DATE CHANGE CHARGES

- For booking cancellation, log in to the Flipkart app and visit the 'My Bookings' section.
- In the case of booking cancellation, both Flipkart and the airline will levy a cancellation fee. The airline cancellation fee may vary depending on the duration before flight departure. Flipkart will charge a ₹400 cancellation fee per passenger, per flight/sector
- Bookings can be cancelled on Flipkart up to 5 hours before flight departure. For cancellations within 3 hours of departure time, kindly contact the airline partner directly.
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- In the event of a cancellation made in case of a layover or a connecting flight booking, all the flight bookings (for that journey) will be cancelled, i.e no partial cancellation will be allowed. Also, flights booked under a single PNR (in case of cancellation), will be cancelled together.
- In case of booking cancellation, the refund (if applicable) will be refunded to your bank account or the original mode of payment within 7 days.
- If the flight is cancelled or in case of a 'No Show', please initiate your refund request via Flipkart.

PAYMENT DETAILS

Fare Type	partially refundable
Base Fare	2,419
Taxes & Fees	840
Convenience Fee	299
Discount	0
<b>Total Amount</b>	<b>3,558</b>

CUSTOMER SUPPORT

Flipkart Support  
 travelcustomersupport@flipkart.com  
 1800 258 3535

Airline Support  
 0124-6173838, 0124-4973838

Booking ID  
23043085950



KANNUR TO BANGALORE

 <b>IndiGo</b> 6E-7364 Economy	Kannur <b>CNN 18:25</b> TUE, 09 MAY '23 Kannur International Airport	 1h 20m	Bangalore <b>BLR 19:45</b> TUE, 09 MAY '23 Kempegowda International Airport Terminal 1
--	---	---	--

PASSENGER NAME	PNR	E-TICKET NO.	SEAT
1. Mr Venkatesh Babu, Adult	ORICKW	ORICKW	

IMPORTANT INFORMATION

Type	Sector	Check-in Baggage	Cabin Baggage
Adult	CNN-BLR	15kg(1 Piece)	7kg

BAGGAGE INFORMATION

- For queries or communication with Flipkart regarding your booking, please use the Booking ID as a reference.
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- It is mandatory for all passengers to carry valid photo ID proof in order to enter the airport and present at the time of check-in. Permitted ID proofs include - Aadhaar Card, Passport or any other government recognized ID. For infant travellers (0-2 yrs), it is mandatory to carry a birth certificate as a proof.
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- Bookings can be cancelled on Flipkart up to 5 hours before flight departure. For cancellations within 3 hours of departure time, kindly contact the airline partner directly.
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- In case of booking cancellation, the refund (if applicable) will be refunded to your bank account or the original mode of payment within 7 days.
- If the flight is cancelled or in case of a 'No Show', please initiate your refund request via Flipkart.

PAYMENT DETAILS

Fare Type	partially refundable
Base Fare	2,245
Taxes & Fees	831
Convenience Fee	299
Discount	0
<b>Total Amount</b>	<b>3,375</b>

CUSTOMER SUPPORT

Flipkart Support  
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Airline Support  
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# **Vimal Jyothi Engineering College, Chemperi**

**INTERNAL QUALITY ASSURANCE CELL**

**Workshop on OBE and CO Attainment Calculation**

**15 March 2022, 10.00 AM to 4.00 PM**

## **INDEX**

- 1. Poster**
- 2. Schedule**
- 3. Attendance Sheet**
- 4. Feedback Questions**
- 5. Feedback Responses**
- 6. Sample certificates**
- 7. Report**

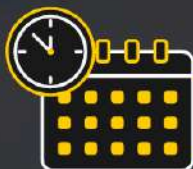


**WORKSHOP**



# Internal Quality Assurance cell

workshop on OBE and CO Attainment calculation



15 MARCH 2022, 10.00 AM TO 4.00 PM

## COORDINATORS



DR. JAYESH GEORGE  
ASSOCIATE PROFESSOR



DR. ANTO SAHAYA DHAS  
PROFESSOR & HOD



# **Vimal Jyothi Engineering College, Chemperi**

## **INTERNAL QUALITY ASSURANCE CELL**

### **Workshop on OBE and CO Attainment Calculation**

**15 March 2022, 10.00 AM to 4.00 PM**

#### **Schedule**

10.00 AM – Welcome Address - Dr Anto Sahaya Dhas (IQAC Coordinator)

10.05 AM – Overview on OBE – Dr. Benny Joseph (Principal)

11.00 AM – Outcome based education and its importance – Ms. Lekshmy S, AP/ECE

2.00 PM – CO attainment Calculation- Mr. Shinu M M, AP/AEI

3.55 PM – Vote of Thanks- Dr Jayesh George M (Workshop Coordinator)

# VIMAL JYOTHI ENGINEERING COLLEGE, CHEMPERI

## Workshop on OBE and CO Attainment Calculation

15 March 2022, 10.00 AM to 4.00 PM

### Attendance sheet

The following staff members have attended the IQAC Workshop

Sl. No	Faculty Name	Dept
1	Dr G. Glan Devadhas	AEI
2	Mrs Reshma KV	AEI
3	Mr Dhanoj M	AEI
4	Mrs Jinsa Mathew	AEI
5	Dr.D.Anto Sahaya Dhas	ECE
6	Dr.Roshini T V	ECE
7	Ms.Jerrin Yomas	ECE
8	Ms.Reema Mathew	ECE
9	Mr.Vinod J Thomas	ECE
10	Mr.Manoj K C	ECE
11	Ms.Bindu Sebastian	ECE
12	Dr.Jayesh George	ECE
13	Mr.Adarsh K S	ECE
14	Ms.Shimna P K	ECE
15	Mr.Binil Kumar K	ECE
16	Ms.Grace John M	ECE
17	Ms.Anusha Chacko	ECE
18	Ms.Ann Mathew	ECE
19	Mr.Jithin James	ECE
20	Ms.Sudharsana Vijayan	ECE
21	Prof. George K V	ASH
22	Dominic N Thomas	ASH
23	Vineethamol Abraham	ASH
24	Siji P	ASH
25	Ammu Jose	ASH
26	Raiza Yousuf	ASH
27	Vasudevan M	ASH
28	Jomy Jose	ASH
29	Shijith Thomas	ASH
30	Soumya John	ASH

Coordinator

Dr Jayesh George M

# OBE and CO Attainment Calculation Workshop

15 March 2022

[jayeshg1988@vjec.ac.in](mailto:jayeshg1988@vjec.ac.in) [Switch account](#)



Your email will be recorded when you submit this form

\* Required

Internal Quality Assurance Cell, VJEC

Fill this form before 2 PM Today

Faculty Name ( This name will be seen as such in the certificate) \*

Your answer

Designation \*

Your answer

Department \*

ASH

ECE

AEI



Workshop objectives were clearly stated and met \*

	1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly Agree

The workshop was well organized \*

1	2	3	4	5
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Workshop helped me to understand OBE \*

1	2	3	4	5
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Workshop helped me to understand CO attainment Calculation \*

1	2	3	4	5
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

The information presented were relevant and useful \*

1	2	3	4	5
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



The presenters provided adequate time for questions and answered them satisfactorily \*

1	2	3	4	5
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

The workshop increased my knowledge in OBE \*

1	2	3	4	5
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Send me a copy of my responses.

Page 1 of 1

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Timestamp	Email Address	Faculty Name	Designation	Department	Workshop objectives where clearly stated and met	The workshop was well organized	Workshop helped me to understand OBE	Workshop helped me to understand CO attainment Calculation	The information presented were relevant and useful	The presenters provided adequate time for questions and answered them satisfactorily	The workshop increased my knowledge in OBE
3/16/2022 9:48:01	jayeshg1988@vjec.ac.in	Dr Jayesh George M	Associate Professor	ECE	5	5	5	5	5	5	5
3/16/2022 9:49:45	vinodkurisinkal@vjec.ac.in	VINOD J THOMAS	Associate Professor	ECE	3	3	3	3	3	3	2
3/16/2022 9:55:59	jithinjames@vjec.ac.in	Jithin James	Assistant Professor	ECE	3	4	3	3	3	3	2
3/16/2022 10:07:20	kcmanojkc@vjec.ac.in	MANOJ K C	ASSOCIATE PROFESSOR	ECE	5	5	5	5	5	5	5
3/16/2022 10:09:11	shimna@vjec.ac.in	SHIMNA P K	Assistant Professor	ECE	5	5	5	5	5	5	5
3/16/2022 10:56:51	jinsamathew@vjec.ac.in	Jinsa Mathew	Assistant Professor	AEI	4	4	4	4	4	4	4
3/16/2022 11:03:22	shijiththomas@vjec.ac.in	Shijith Thomas	Asst Professor	ASH	2	1	1	2	2	2	2
3/16/2022 11:03:22	reemamathew@vjec.ac.in	Dr Reema Mathew A	Assoc Professor	ECE	4	4	4	3	4	4	3
3/16/2022 11:12:16	adarshks@vjec.ac.in	ADARSH K S	Assistant Proessor	ECE	3	3	3	3	3	3	3
3/16/2022 11:16:16	anushachacko@vjec.ac.in	Anusha Chacko	Assistant Professor	ECE	5	5	5	4	5	5	5
3/16/2022 11:25:50	bindujohn@vjec.ac.in	Bindu Sebastian	AP	ECE	5	5	5	5	5	5	5
3/16/2022 11:28:04	gracejohn@vjec.ac.in	Grace John M	Assistant professor	ECE	3	3	4	4	4	3	3
3/16/2022 11:29:02	shinummm@vjec.ac.in	Shinu MM	Assistant Professor	AEI	5	5	5	5	5	5	5
3/16/2022 12:09:24	sudharsanavijayan@vjec.ac.in	SUDHARSANA VIJAYAN	ASSISTANT PROFESSOR	ECE	3	3	3	3	3	3	3



**VIMAL JYOTHI ENGINEERING COLLEGE**  
**CHEMPERI, KANNUR**

**INTERNAL QUALITY ASSURANCE CELL**

**CERTIFICATE OF PARTICIPATION**

**Jithin James**

**Assistant Professor**

has participated in the one day workshop on **OBE and CO Attainment Calculation** on March 15, 2022, organized by Internal Quality Assurance Cell, Vimal Jyothi Engineering College, Kannur, Kerala.

*Dr. Jayesh George M*  
*IQAC Co-coordinator*

*Dr. D. Anto Sahaya Dhas*  
*IQAC Coordinator*

*Dr. Benny Joseph*

*Pri* Page 87 of 160



**VIMAL JYOTHI ENGINEERING COLLEGE**  
**CHEMPERI, KANNUR**

**INTERNAL QUALITY ASSURANCE CELL**  
**CERTIFICATE OF PARTICIPATION**

**Shijith Thomas**

**Asst Professor**

has participated in the one day workshop on **OBE and CO Attainment Calculation** on March 15, 2022, organized by Internal Quality Assurance Cell, Vimal Jyothi Engineering College, Kannur, Kerala.

**Dr. Jayesh George M**  
**IQAC Co-coordinator**

**Dr. D . Anto Sahaya Dhas**  
**IQAC Coordinator**

**Dr. Benny Joseph**  
**Pri** Page 88 of 160



# **Vimal Jyothi Engineering College, Chemperi**

## **INTERNAL QUALITY ASSURANCE CELL**

### **Workshop on OBE and CO Attainment Calculation**

**15 March 2022, 10.00 AM to 4.00 PM**

#### **Report**

IQAC of Vimal Jyothi Engineering College conducted a Workshop on OBE and CO Attainment Calculation on 15 March 2022, 10.00 AM to 4.00 PM. The workshop is started with the welcome address by the IQAC Coordinator Dr. Anto Sahaya Dhas. The schedule of the events as follows.

10.00 AM – Welcome Address - Dr Anto Sahaya Dhas (IQAC Coordinator)

10.05 AM – Overview on OBE – Dr. Benny Joseph (Principal)

11.00 AM – Outcome based education and It's importance – Ms. Lekshmy S, AP/ECE

2.00 PM – CO attainment Calculation- Mr. Shinu MM, AP/AEI

3.55 PM – Vote of Thanks- Dr Jayesh George M (Workshop Coordinator)

Workshop has been attended by 30 staff members from ECE, AEI and ASH departments. The workshop was concluded at 4.00 PM after the Vote of Thanks by Dr. Jayesh George, Assoc. Prof/ECE

Report Prepared by



Dr Jayesh George M

Workshop Coordinator

Associate Professor

ECE Dept, VJEC

16 March 2022

# **Vimal Jyothi Engineering College, Chemperi**

**INTERNAL QUALITY ASSURANCE CELL**

**Workshop on AICTE EXAM REFORMS POLICY**

**4 March 2021, 10.00 Am to 3.00 PM**

## **INDEX**

- 1. Poster**
- 2. Schedule**
- 3. Attendance Sheet**
- 4. AICTE Exam Reforms Policy Document**
- 5. Feedback Questions**
- 6. Feedback Responses**
- 7. Sample certificates**
- 8. Report**

**VIMAL JYOTHI ENGINEERING COLLEGE**

**INTERNAL QUALITY ASSURANCE CELL**

# **AICTE EXAM REFORMS POLICY**

**4 March 2021, Varikkattu Hall**

**Workshop is open to all VJEC Faculty Members**

**10.00 AM: Dr. Benny Joseph**(Principal) - AICTE Exam Reforms Policy & Overview

**10.30 AM: Dr. Roshini TV** (Dean Academic) - POs, Competencies and PIs

**11.30 AM: Dr. VRA Saathappan** (Professor/CE) - Sample Question Papers

**2.00 - 3.00 PM** - Discussion on Even Semester First Internal Question Paper Prepared  
by Participants

*Prerequisites: Participants are expected to keep the question paper for first internal exams of even semester in the current format before attending the workshop*



**Coordinators: Dr. Anto Sahaya Dhas D  
Dr. Jayesh George M**

# **Vimal Jyothi Engineering College, Chemperi**

**INTERNAL QUALITY ASSURANCE CELL**

**Workshop on AICTE EXAM REFORMS POLICY**

**4 March 2021, 10.00 Am to 3.00 PM**

## **Schedule**

10.00 AM – Welcome Address - Dr Anto Sahaya Dhas (IQAC Coordinator)

10.05 AM – AICTE Exam Reforms Policy and Overview – Dr. Benny Joseph (Principal)

10.30 AM – POs, Competencies and PIs - Dr Roshini TV (Dean Academics)

11.30 AM - Sample question papers based on new policy - Dr. VR A Sathappan (Professor/CE)

2.00 PM - Discussion on the Question Papers prepared by Faculty

3.00 PM – Vote of Thanks- Dr Jayesh George M (Workshop Coordinator)


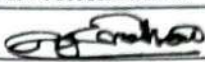


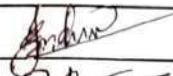



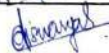
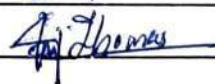




# VIMAL JYOTHI ENGINEERING COLLEGE, CHEMI

## AICTE EXAM REFORMS POLICY

4-Mar-21

10.00 AM to 3.00 PM

### Department of Civil Engineering

Sl. No	Faculty Name	FN Attendance	AN Attendance
1	Dr. Biju Mathew		
2	Dr. VRA Sathappan		
3	Ms. Anuragi P		
4	Ms. Margaret Abraham		
5	Ms. ANITTA JOSE		
6	Mr. SREEJITH K		
7	Ms. INDU T		
8	Mr. Peter Jobe		
9	Ms. Aiswara M		
10	Ms. Anitha Babu		
11	Mr. Linjesh Sebastian		
12	Mr. Logi.N.Boby		
13	Mr. Saneesh K		
14	Mr Rojin P		
15	Ms. Hridya P		
16	Ms. Aiswarya S		
17	Ms. Sigi Thomas		
18	Mr Ashwin Joy		
19	Ms. Athira Rajendran		
20	Mr. Abhijath I P		
21	Ms. Rinnet Francis		
22	Ms. MAQSOODA J H S		
23	Ms. VINAYA S M		


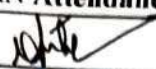






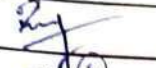

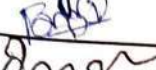
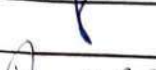
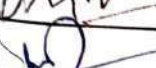



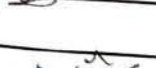


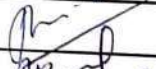









# VIMAL JYOTHI ENGINEERING COLLEGE, CHEMPERI

## AICTE EXAM REFORMS POLICY

4-Mar-21

10.00 AM to 3.00 PM

### Department of Electronics and Communication Engineering

Sl. No	Faculty Name	FN Attendance	AN Attendance
1	Dr.D.Anto Sahaya Dhas		
2	Dr.Roshini T V		
3	Ms.Jerrin Yomas		
4	Ms.Reema Mathew		
5	Mr.Vinod J Thomas		
6	Mr.Manoj K C		
7	Ms.Bindu Sebastian		
8	Dr.Jayesh George		
9	Mr.Adarsh K S		
10	Ms.Shimna P K		
11	Ms.Lekshmy S		
12	Mr.Binil Kumar K		
13	Ms.Grace John M		
14	Ms.Anusha Chacko		
15	Ms.Ann Mathew		
16	Mr.Jithin James		
17	Ms.Sudharsana Vijayan		

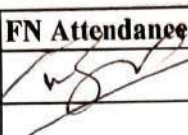

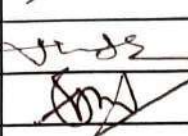




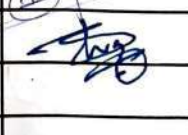





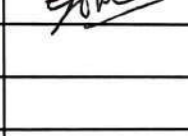
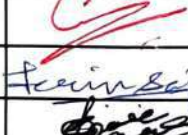
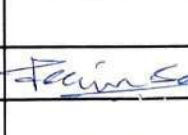

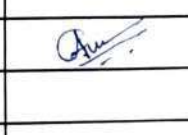

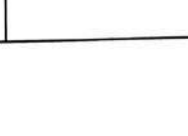








# VIMAL JYOTHI ENGINEERING COLLEGE, CHEMPERI

## AICTE EXAM REFORMS POLICY

4-Mar-21

10.00 AM to 3.00 PM

### Department of Mechanical Engineering

Sl. No	Faculty Name	FN Attendance	AN Attendance
1	Cdr. Raju K K (Retd.)		
2	Dr. T. D John		
3	Dr.S Christopher Ezhil Singh		
4	Dr.P Sridharan		
5	Mr.Ryne P M		
6	Mr. Rameshan K P		
7	Mr. Midhun Mukundan		
8	Mr. Shaji George		
9	Mr. Mejo M Francis		
10	Mr. Appu Kurian		
11	Mr. Shaminmuth K K		
12	Mr. Johny P Joseph		
13	Mr. Aji Augustine		
14	Mr. Alex George		
15	Mr.Gokulnath R		
16	Dr.Sreekanth M P		
17	Mr. Niyas K M		
18	Mr. Dilin Dinesh		
19	Mr. Jerin Saji		
20	Mr Deepak Kumar		
21	Mr.Arunlal R M.P		
	ARUN. B.S		

# VIMAL JYOTHI ENGINEERING COLLEGE, CHEMP

## AICTE EXAM REFORMS POLICY

4-Mar-21

10.00 AM to 3.00 PM

### Department of Computer Science and Engineering

Sl. No	Faculty Name	FN Attendance	AN Attendance
1	Dr. JEETHU V. DEVASIA		
2	Dr. MANOJ V. THOMAS		
3	Dr. RENJI P. CHERIAN		
4	Ms. DIVYA B.		
5	Ms. NEENA V. V.		
6	Ms. VIDHYA S. S.		
7	Sr. JISHA C. T.		
8	Ms. ANCY K SUNNY		
9	Ms. ASHA BABY	<i>Sunny</i>	<i>Sunny</i>
10	Ms. DERROLL DAVID		
11	Ms. ANISHA JOSEPH	<i>Anisha</i>	<i>Anisha</i>
12	Ms. AKHILA MATHEW		
13	Ms. KEERTHIJITH P.		
14	Ms. ACHALA PRASAD		
15	Mr. ANSIL NAZAR		
16	Ms. TINTU DEVASIA		
17	Ms. DIVYA K.		
18	Mr. ABDUL LATHEEF		
19	Ms. ANKITA SEBASTIAN		
20	Ms. ANGEL VARGHESE		
21	Mr. ARJUN R		



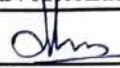
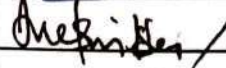
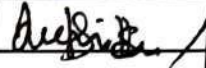



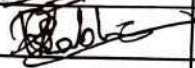






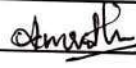

# VIMAL JYOTHI ENGINEERING COLLEGE, CHE

## AICTE EXAM REFORMS POLICY

4-Mar-21

10.00 AM to 3.00 PM

### Department of Electrical and Electronics Engineering

Sl. No	Faculty Name	FN Attendance	AN Attendance
1	Ms.Laly James		
2	Dr.Justin sunil Dhas . G		
3	Dr.Senthil Kumar		
4	Ms.Tintu george		
5	Ms.Teena George		
6	Mr.Prabin James		
7	Mr.Jijo Joseph		
8	Ms.Shelma George		
9	Ms. Indulekha K M		
10	Ms. Jyothi Joseph		
11	Ms. Lipina Gopal		
12	Ms. Amrutha Maria		
13	Mr. Dinesh C K		




# VIMAL JYOTHI ENGINEERING COLLEGE, CHEM

## AICTE EXAM REFORMS POLICY

4-Mar-21

10.00 AM to 3.00 PM

### Department of Applied Science and Humanities

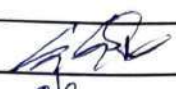




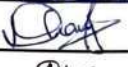

Sl. No	Faculty Name	FN Attendance	AN Attendance
1	Jagannath M P		
2	Dominic N Thomas		
3	Vineethamol Abraham		
4	Siji P		
5	Prof. George K V		
6	Ammu Jose		
7	Raiza Yousuf		
8	Vasudevan M		
9	Jomy Jose		
10	Shijith Thomas		
11	Soumya John		

VIMAL JYOTHI ENGINEERING COLLEGE, CHEMI  
AICTE EXAM REFORMS POLICY

4-Mar-21

10.00 AM to 3.00 PM

Department of Applied Electronics and Instrumentation Engineering

Sl. No	Faculty Name	FN Attendance	AN Attendance
1	Dr V Sampath Kumar		
2	Dr G. Glan Devadhas		
3	Mrs Shamy A		
4	Mrs Reshma KV		
5	Mr Dhanoj M		
6	Mr Shinu MM		
7	Mrs Jinsa Mathew		



# EXAMINATION REFORMS POLICY



**ALL INDIA COUNCIL FOR TECHNICAL EDUCATION**  
Nelson Mandela Marg, Vasant Kunj, New Delhi-110070





	<p><i>Examination Reforms Policy</i></p>





## PREFACE

Globalisation of the world economy and higher education are driving profound changes in engineering education system. Worldwide adaptation of Outcome-Based Education (OBE) framework and enhanced focus on higher-order learning and professional skills necessitates paradigm shift in traditional practices of curriculum design, education delivery and assessment. In recent years, worldwide sweeping reforms are being undertaken to bring about essential changes in engineering education in terms of what to teach (content) and how to teach (knowledge delivery) and how to assess (student learning).

Examinations/student assessments play a very important role in deciding the quality of education. The academic quality of examinations (question papers) in Indian engineering education system has been a matter of concern from a long time. This report attempts to bring out recommendations for reforms in examination system to meet challenges of emerging engineering education landscape.

The recommendations are presented in four sections. Beginning in Section-1, the most important drivers for examination reforms in Indian engineering education system are discussed. Section-2 brings out strategies to be adopted to align assessment with the desired student learning outcomes. A two-step method is proposed for mapping the examination questions with course outcomes. Section-3 highlights the necessity of designing question papers to test higher order abilities and skills. Application of blooms taxonomy framework to create an optimal structure of examination papers to test the different cognitive skills is discussed in detail. Challenge of assessing higher order abilities and professional skills through traditional examination system is brought out in Section-4. Several educational experiences and assessment opportunities are identified to overcome the challenges. Appendices contain the supplement material that is helpful for Universities/ Colleges to implement recommendations.

At this juncture, reforms in examinations are critical for the improvement of the quality and relevance of Indian engineering education. It is hoped that the Report will be of use to Universities and Colleges to bring out the much-needed change. The cooperation received from AICTE officials in bringing out the Report is gratefully acknowledged.

Prof. Ashok S. Shettar

Prof. Rama Krishna Challa

Prof. Sanjay Agarwal

Prof. Upendra Pandel

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## 1. INTRODUCTION

Globalisation of the world economy and higher education are driving profound changes in engineering education system. There is a continuing need to dynamically adapt to these changes, to ensure that we remain competitive and can respond effectively to the challenges of globalisation. Future engineering graduates not only need to be knowledgeable in his/her discipline but also needs a new set of soft, professional skills and competencies [1].

In recent years, there have been essential changes in engineering education in terms of what to teach (content) and how to teach (knowledge delivery) and how to assess (student learning).

AICTE has already taken initiation to come out with model curriculum for engineering programs. The digital initiatives of MHRD and AICTE have made available very large number of MOOC courses through SWAYAM, that can help the colleges and teachers to adopt innovative methodologies in the delivery of course.

The present report focusses on the recommendations for reforms in examinations (assessment of student) in the context of emerging landscape of engineering education.

Examinations/student assessments play a very important role in deciding the quality of education. They must not only assess student's achievements (and grades) but also measure whether the desired learning outcomes have been achieved. The achievement of objectives and program outcomes are crucial and needs to be proven through accurate and reliable assessments.

The academic quality of examinations (question papers) in Indian engineering education system has been a matter of concern from a long time. It is widely acknowledged that "assessment drives learning", what and how students learn depends to a major extent on how they think they will be assessed [2]. The question papers that require simple memory recall will not ensure deep, meaningful learning. High expectations for learning motivate the students to rise to the occasion. The assessment (examination) must embed those high expectations to ensure that the learner is motivated to attain them.

Considering the above imperatives, it is clear that reforms in Examinations are critical for improvement of the quality of Indian engineering education. The most important drivers for reforms in examination system of Indian engineering education are:

### 1. Adaptation of Outcome-Based Education Framework

Outcome-based education (OBE)- a performance-based approach has emerged as a major reform model in the global engineering education scenario [3]. The country that wants to be a signatory member of a multinational agreement for the mutual recognition of engineering degrees, i.e. the Washington Accord (WA) must implement OBE. This will be an endorsement that the engineering education system has demonstrated a strong, long-term commitment to quality assurance in producing engineers ready for industry practice in the international scene. Being signatory to the Washington Accord, Indian accreditation agency 'National Board of Accreditation (NBA)' has made it mandatory for engineering institutions to adapt OBE framework for their curriculum design, delivery and assessment. In OBE framework, the educational outcomes of a program are clearly and unambiguously specified. These determine the curriculum content and its organization, the teaching methods and strategies and the assessment process.

Though Indian Universities and Colleges have started adapting OBE framework for their engineering programs,



the focus is limited to the curriculum design part, i.e. connecting curriculum components to the program outcomes. Very little attention is being given for connecting examination questions/assessment tools to the program outcomes. The absence of proper mapping between program outcomes and assessment tools lead to the inaccurate and unreliable measurement of attainment of outcomes by the students. This missing connect creates a big gap in the effective adaptation of OBE framework, making the whole exercise futile.

## 2. Importance of Higher-order Abilities and Professional Skills

In the present examination system, memorization occupies a dominant place. The recall of factual knowledge, though essential to any examination, is only one of several major abilities to be demonstrated by the graduates. The assessment process must also test higher level skills viz. ability to apply knowledge, solve complex problems, analyse, synthesise and design. Further, professional skills like the ability to communicate, work in teams, lifelong learning have become important elements for employability of the graduates [4]. It is important that the examinations also give appropriate weightage to the assessment of these higher-level skills and professional competencies.

Keeping in view of the above challenges and looking at some of the worldwide best practices in assessment, the present report comes up with several recommendations that can be used by Universities/Colleges to design their assessment strategies.

## 2. ASSESSMENT STRATEGY FOR OUTCOME-BASED EDUCATION

### 2.1 Mapping Program Outcomes to Assessment (Examinations)

Graduate attributes (GAs) articulate the generic abilities to be looked for in a graduate of any undergraduate degree program. They form the Program Outcomes (POs) that reflect the skills, knowledge and abilities of graduates regardless of the field of study. This does not mean that POs are necessarily independent of disciplinary knowledge –rather, these qualities may be developed in various disciplinary contexts.

In outcome-based education, a “design down” process is employed which moves from POs to Course Outcomes (COs) and outcomes for individual learning experiences. Outcomes at each successive level need to be aligned with, and contribute to, the program outcomes.

Courses are the building blocks of a program. Teaching strategies, learning activities, assessments and resources should all be designed and organized to help students achieve the learning outcomes at the course level. In the assessment activities, students demonstrate their level of achievement of the course learning outcomes. In a constructively aligned program, the courses are carefully coordinated to ensure steady development or scaffolding from the introduction to mastery of the learning outcomes, leading to achievement of the intended POs. For the effectiveness of the program, the achievement of POs is crucial which needs to be proven through accurate and reliable assessments.

### 2.2 Two-step Process for Bringing Clarity to POs

POs give useful guidance at the program level for the curriculum design, delivery and assessment of student learning. However, they represent fairly high-level generic goals that are not directly measurable. Real observability and measurability of the POs at course level is very difficult. To connect high-level learning outcomes (POs) with course content, course outcomes and assessment, there is a necessity to bring further clarity and specificity to the program outcomes [5]. This can be achieved through the following two-step

process of identifying Competencies and Performance Indicators (PI).

- (1) Identify Competencies to be attained: For each PO define competencies –different abilities implied by program outcome statement that would generally require different assessment measures. This helps us to create a shared understanding of the competencies we want students to achieve. They serve as an intermediate step to the creation of measurable indicators.

**Example:**

Program Outcome (Attribute 3)

**Design:**

PO3: Design/Development of Solutions: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for public health and safety, and cultural, societal, and environmental considerations.

**Competencies**

1. Demonstrate an ability to define a complex, open-ended problem in engineering terms.
  2. Demonstrate an ability to generate a diverse set of alternative design solutions.
  3. Demonstrate an ability to select the optimal design scheme for further development.
  4. Demonstrate an ability to advance an engineering design to the defined end state.
- (2) Define Performance Indicators: For each of the competencies identified, define performance Indicators (PIs) that are explicit statements of expectations of the student learning. They can act as measuring tools in assessment to understand the extent of attainment of outcomes. They can also be designed to determine the appropriate achievement level or competency of each indicator so that instructors can target and students can achieve the acceptable level of proficiency.

**Example:**

For the Competency -2

Demonstrate an ability to generate a diverse set of alternative design solutions

**Performance Indicators:**

1. Apply formal idea generation tools to develop multiple engineering design solutions
2. Build models, prototypes, algorithms to develop a diverse set of design solutions
3. Identify the functional and non-functional criteria for evaluation of alternate design solutions.

It should be noted that, when we consider the program outcome, it looks like, it can be achieved only in the Capstone project. But if we consider the competencies and performance indicators, we start seeing the opportunities of addressing them (and hence PO) in various courses of the program.

Once the above process is completed for the program, the assessment of COs for all the courses is designed by connecting assessment questions (used in various assessment tools) to the PIs. By following this process, where examination questions map with PIs, we get clarity and better resolution for the assessment of COs and POs. The pictorial representation of the process is given in Fig. 1

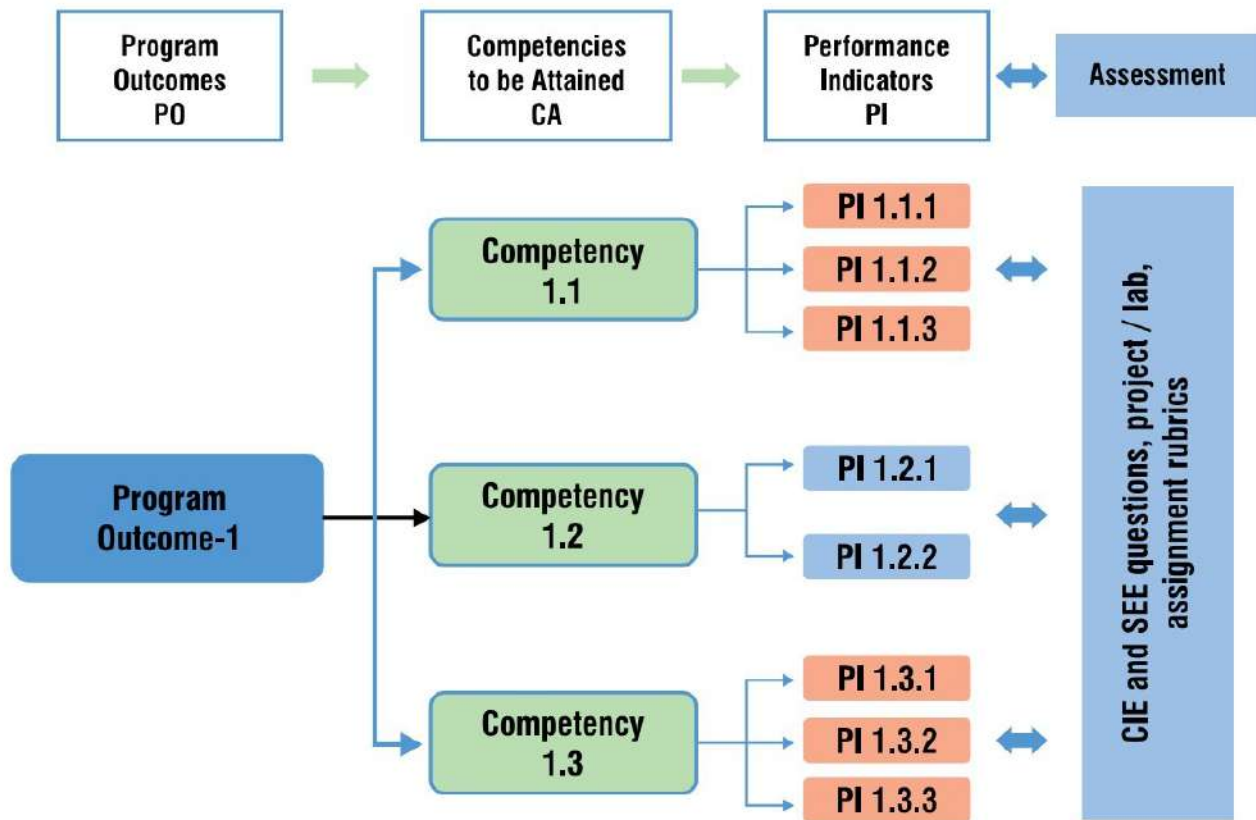


Fig.1 Connecting POs to Assessment

### 2.3 Program Outcomes – Competencies – Performance Indicators

Following table gives the suggestive list of competencies and associated performance indicators for each of the PO in Mechanical Engineering Program.

PO 1: Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialisation for the solution of complex engineering problems.			
Competency		Indicators	
1.1	Demonstrate competence in mathematical modelling	1.1.1	Apply mathematical techniques such as calculus, linear algebra, and statistics to solve problems
		1.1.2	Apply advanced mathematical techniques to model and solve mechanical engineering problems
1.2	Demonstrate competence in basic sciences	1.2.1	Apply laws of natural science to an engineering problem
1.3	Demonstrate competence in engineering fundamentals	1.3.1	Apply fundamental engineering concepts to solve engineering problems
1.4	Demonstrate competence in specialized engineering knowledge to the program	1.4.1	Apply Mechanical engineering concepts to solve engineering problems.

**PO 2: Problem analysis:** Identify, formulate, research literature, and analyse complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.

Competency	Indicators
2.1 Demonstrate an ability to identify and formulate complex engineering problem	2.1.1 Articulate problem statements and identify objectives 2.1.2 Identify engineering systems, variables, and parameters to solve the problems 2.1.3 Identify the mathematical, engineering and other relevant knowledge that applies to a given problem
2.2 Demonstrate an ability to formulate a solution plan and methodology for an engineering problem	2.2.1 Reframe complex problems into interconnected sub-problems 2.2.2 Identify, assemble and evaluate information and resources. 2.2.3 Identify existing processes/solution methods for solving the problem, including forming justified approximations and assumptions 2.2.4 Compare and contrast alternative solution processes to select the best process.
2.3 Demonstrate an ability to formulate and interpret a model	2.3.1 Combine scientific principles and engineering concepts to formulate model/s (mathematical or otherwise) of a system or process that is appropriate in terms of applicability and required accuracy. 2.3.2 Identify assumptions (mathematical and physical) necessary to allow modeling of a system at the level of accuracy required.
2.4 Demonstrate an ability to execute a solution process and analyze results	2.4.1 Apply engineering mathematics and computations to solve mathematical models 2.4.2 Produce and validate results through skilful use of contemporary engineering tools and models 2.4.3 Identify sources of error in the solution process, and limitations of the solution. 2.4.4 Extract desired understanding and conclusions consistent with objectives and limitations of the analysis

**PO 3: Design/Development of Solutions:** Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for public health and safety, and cultural, societal, and environmental considerations.

Competency	Indicators
3.1 Demonstrate an ability to define a complex/open-ended problem in engineering terms	3.1.1 Recognize that need analysis is key to good problem definition 3.1.2 Elicit and document, engineering requirements from stakeholders 3.1.3 Synthesize engineering requirements from a review of the state-of-the-art 3.1.4 Extract engineering requirements from relevant engineering Codes and Standards such as ASME, ASTM, BIS, ISO and ASHRAE. 3.1.5 Explore and synthesize engineering requirements considering health, safety risks, environmental, cultural and societal issues 3.1.6 Determine design objectives, functional requirements and arrive at specifications



3.2	Demonstrate an ability to generate a diverse set of alternative design solutions	3.2.1 Apply formal idea generation tools to develop multiple engineering design solutions
		3.2.2 Build models/prototypes to develop a diverse set of design solutions
		3.2.3 Identify suitable criteria for the evaluation of alternate design solutions
3.3	Demonstrate an ability to select an optimal design scheme for further development	3.3.1 Apply formal decision-making tools to select optimal engineering design solutions for further development
		3.3.2 Consult with domain experts and stakeholders to select candidate engineering design solution for further development
3.4	Demonstrate an ability to advance an engineering design to defined end state	3.4.1 Refine a conceptual design into a detailed design within the existing constraints (of the resources)
		3.4.2 Generate information through appropriate tests to improve or revise the design
<b>PO 4: Conduct investigations of complex problems:</b> Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.		
<b>Competency</b>		<b>Indicators</b>
4.1	Demonstrate an ability to conduct investigations of technical issues consistent with their level of knowledge and understanding	4.1.1 Define a problem, its scope and importance for purposes of investigation
		4.1.2 Examine the relevant methods, tools and techniques of experiment design, system calibration, data acquisition, analysis and presentation
		4.1.3 Apply appropriate instrumentation and/or software tools to make measurements of physical quantities
		4.1.4 Establish a relationship between measured data and underlying physical principles.
4.2	Demonstrate an ability to design experiments to solve open-ended problems	4.2.1 Design and develop an experimental approach, specify appropriate equipment and procedures
		4.2.2 Understand the importance of the statistical design of experiments and choose an appropriate experimental design plan based on the study objectives
4.3	Demonstrate an ability to analyze data and reach a valid conclusion	4.3.1 Use appropriate procedures, tools and techniques to conduct experiments and collect data
		4.3.2 Analyze data for trends and correlations, stating possible errors and limitations
		4.3.3 Represent data (in tabular and/or graphical forms) so as to facilitate analysis and explanation of the data, and drawing of conclusions
		4.3.4 Synthesize information and knowledge about the problem from the raw data to reach appropriate conclusions
<b>PO 5: Modern tool usage:</b> Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modelling to complex engineering activities with an understanding of the limitations.		
<b>Competency</b>		<b>Indicators</b>
5.1	Demonstrate an ability to identify/ create modern engineering tools, techniques and resources	5.1.1 Identify modern engineering tools such as computer-aided drafting, modeling and analysis; techniques and resources for engineering activities
		5.1.2 Create/adapt/modify/extend tools and techniques to solve engineering problems

5.2	Demonstrate an ability to select and apply discipline-specific tools, techniques and resources	5.2.1 Identify the strengths and limitations of tools for (i) acquiring information, (ii) modeling and simulating, (iii) monitoring system performance, and (iv) creating engineering designs.
		5.2.2 Demonstrate proficiency in using discipline-specific tools
5.3	Demonstrate an ability to evaluate the suitability and limitations of tools used to solve an engineering problem	5.3.1 Discuss limitations and validate tools, techniques and resources
		5.3.2 Verify the credibility of results from tool use with reference to the accuracy and limitations, and the assumptions inherent in their use.
<b>PO 6: The engineer and society:</b> Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal, and cultural issues and the consequent responsibilities relevant to the professional engineering practice.		
<b>Competency</b>		<b>Indicators</b>
6.1	Demonstrate an ability to describe engineering roles in a broader context, e.g. pertaining to the environment, health, safety, legal and public welfare	6.1.1 Identify and describe various engineering roles; particularly as pertains to protection of the public and public interest at the global, regional and local level
6.2	Demonstrate an understanding of professional engineering regulations, legislation and standards	6.2.1 Interpret legislation, regulations, codes, and standards relevant to your discipline and explain its contribution to the protection of the public
<b>PO 7: Environment and sustainability:</b> Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and the need for sustainable development.		
<b>Competency</b>		<b>Indicators</b>
7.1	Demonstrate an understanding of the impact of engineering and industrial practices on social, environmental and in economic contexts	7.1.1 Identify risks/impacts in the life-cycle of an engineering product or activity 7.1.2 Understand the relationship between the technical, socio-economic and environmental dimensions of sustainability
7.2	Demonstrate an ability to apply principles of sustainable design and development	7.2.1 Describe management techniques for sustainable development 7.2.2 Apply principles of preventive engineering and sustainable development to an engineering activity or product relevant to the discipline
<b>PO 8: Ethics:</b> Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.		
<b>Competency</b>		<b>Indicators</b>
8.1	Demonstrate an ability to recognize ethical dilemmas	8.1.1 Identify situations of unethical professional conduct and propose ethical alternatives
8.2	Demonstrate an ability to apply the Code of Ethics	8.2.1 Identify tenets of the ASME professional code of ethics 8.2.2 Examine and apply moral & ethical principles to known case studies
<b>PO 9: Individual and team work:</b> Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.		
<b>Competency</b>		<b>Indicators</b>
9.1	Demonstrate an ability to form a team and define a role for each member	9.1.1 Recognize a variety of working and learning preferences; appreciate the value of diversity on a team 9.1.2 Implement the norms of practice (e.g. rules, roles, charters, agendas, etc.) of effective team work, to accomplish a goal.





9.2	Demonstrate effective individual and team operations-- communication, problem-solving, conflict resolution and leadership skills	9.2.1	Demonstrate effective communication, problem-solving, conflict resolution and leadership skills
		9.2.2	Treat other team members respectfully
		9.2.3	Listen to other members
		9.2.4	Maintain composure in difficult situations
9.3	Demonstrate success in a team-based project	9.3.1	Present results as a team, with smooth integration of contributions from all individual efforts

**PO 10: Communication:** Communicate effectively on complex engineering activities with the engineering community and with the society at large, such as being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions

Competency		Indicators	
10.1	Demonstrate an ability to comprehend technical literature and document project work	10.1.1	Read, understand and interpret technical and non-technical information
		10.1.2	Produce clear, well-constructed, and well-supported written engineering documents
		10.1.3	Create flow in a document or presentation - a logical progression of ideas so that the main point is clear
10.2	Demonstrate competence in listening, speaking, and presentation	10.2.1	Listen to and comprehend information, instructions, and viewpoints of others
		10.2.2	Deliver effective oral presentations to technical and non-technical audiences
10.3	Demonstrate the ability to integrate different modes of communication	10.3.1	Create engineering-standard figures, reports and drawings to complement writing and presentations
		10.3.2	Use a variety of media effectively to convey a message in a document or a presentation

**PO 11: Project management and finance:** Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's work, as a member and leader in a team, to manage projects and in multidisciplinary environments.

Competency		Indicators	
11.1	Demonstrate an ability to evaluate the economic and financial performance of an engineering activity	11.1.1	Describe various economic and financial costs/benefits of an engineering activity
		11.1.2	Analyze different forms of financial statements to evaluate the financial status of an engineering project
11.2	Demonstrate an ability to compare and contrast the costs/benefits of alternate proposals for an engineering activity	11.2.1	Analyze and select the most appropriate proposal based on economic and financial considerations.
11.3	Demonstrate an ability to plan/manage an engineering activity within time and budget constraints	11.3.1	Identify the tasks required to complete an engineering activity, and the resources required to complete the tasks.
		11.3.2	Use project management tools to schedule an engineering project, so it is completed on time and on budget.

**PO 12: Life-long learning:** Recognise the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

Competency		Indicators	
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12.1	Demonstrate an ability to identify gaps in knowledge and a strategy to close these gaps	12.1.1 Describe the rationale for the requirement for continuing professional development 12.1.2 Identify deficiencies or gaps in knowledge and demonstrate an ability to source information to close this gap
12.2	Demonstrate an ability to identify changing trends in engineering knowledge and practice	12.2.1 Identify historic points of technological advance in engineering that required practitioners to seek education in order to stay current 12.2.2 Recognize the need and be able to clearly explain why it is vitally important to keep current regarding new developments in your field
12.3	Demonstrate an ability to identify and access sources for new information	12.3.1 Source and comprehend technical literature and other credible sources of information 12.3.2 Analyze sourced technical and popular information for feasibility, viability, sustainability, etc.

The above table can be used for most of the engineering programs. However, for Computer Science & Engineering/ Information Technology programs it requires some modifications.

**A suggestive list of competencies and associated performance indicators for Computer Science & Engineering/ Information Technology Programs is given in Appendix- A**

### 3. IMPROVING STRUCTURE AND QUALITY OF ASSESSMENTS

For improving the structure and quality of assessment in various engineering programs following points need to be remembered:

1. In Indian engineering education system, written examinations play a major role in assessing the learning and awarding of grades to the student. Universities and colleges give highest weightage to the outcomes of the written examinations in overall grading. Questions raised in the examination/test papers play an important role in defining the level of learning the student is expected to achieve in the courses and hence in the program. Since assessment drives learning, the design of question papers needs to go beyond the mere test of memory recall. They also need to test higher-order abilities and skills.
2. Written examinations assess a very limited range of outcomes and cognitive levels. Particularly in the courses, where course outcomes (COs) cover a broad range of expectations, written examinations alone will not be sufficient to make valid judgements about student learning. A wide range of assessment methods (e.g., term papers, open-ended problem-solving assignments, course/lab project rubrics, portfolios etc.) need to be employed to ensure that assessment methods match with learning outcomes.
3. It is advisable to formulate assessment plans for each of the course in the program that brings clarity to the following:
  - a. Alignment of assessment with learning outcome of the course
  - b. Level of learning (cognitive) student is expected to achieve
  - c. Assessment method to be adapted

The method to align examination questions/assessment to COs and hence POs was discussed in the section-1.



The following sections discuss the application of Bloom's taxonomy framework to create the optimal structure of examination papers to test the different cognitive skills.

### 3.1 Bloom's Taxonomy for Assessment Design

Bloom's Taxonomy provides an important framework to not only design curriculum and teaching methodologies but also to design appropriate examination questions belonging to various cognitive levels. Bloom's Taxonomy of Educational Objectives developed in 1956 by Benjamin Bloom [6] was widely accepted by educators for curriculum design and assessment. In 2001, Anderson and Krathwohl modified Bloom's taxonomy [7] to make it relevant to the present-day requirements. It attempts to divide learning into three types of domains (cognitive, affective, and behavioural) and then defines the level of performance for each domain. Conscious efforts to map the curriculum and assessment to these levels can help the programs to aim for higher-level abilities which go beyond remembering or understanding, and require application, analysis, evaluation or creation.

Revised Bloom's taxonomy in the cognitive domain includes thinking, knowledge, and application of knowledge. It is a popular framework in engineering education to structure the assessment as it characterizes complexity and higher-order abilities. It identifies six levels of competencies within the cognitive domain (Fig. 2) which are appropriate for the purposes of engineering educators.

According to revised Bloom's taxonomy, the levels in the cognitive domain are as follows:

Level	Descriptor	Level of attainment
1	Remembering	Recalling from the memory of the previously learned material
2	Understanding	Explaining ideas or concepts
3	Applying	Using the information in another familiar situation
4	Analysing	Breaking information into the part to explore understandings and relationships
5	Evaluating	Justifying a decision or course of action
6	Creating	Generating new ideas, products or new ways of viewing things

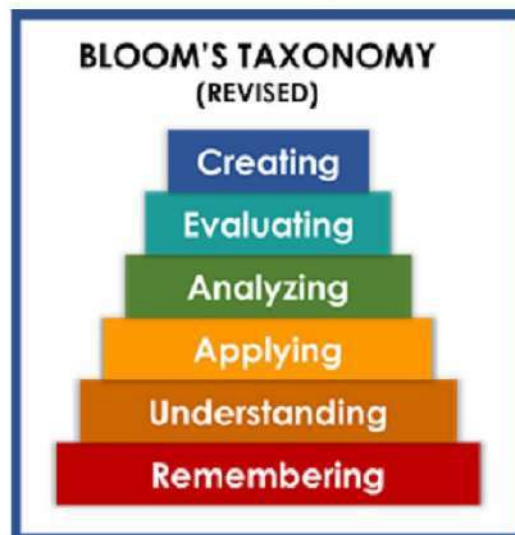


Fig. 2: Revised Bloom's Taxonomy

Bloom's taxonomy is hierarchical, meaning that learning at the higher level requires that skills at a lower level are attained.

### 3.2 Action Verbs for Assessment

Choice of action verbs in constructing assessment questions is important to consider. Quite often, the action verbs are indicators of the complexity (level) of the question. Over time, educators have come up with a taxonomy of measurable verbs corresponding to each of the Bloom's cognitive levels [8]. These verbs help us not only to describe and classify observable knowledge, skills and abilities but also to frame the examination or assignment questions that are appropriate to the level we are trying to assess.

Suggestive list of skills/ competencies to be demonstrated at each of the Bloom's level and corresponding cues/ verbs for the examination/ test questions is given below:

Level	Skill Demonstrated	Question cues / Verbs for tests
1. Remember	<ul style="list-style-type: none"> <li>Ability to recall of information like facts, conventions, definitions, jargon, technical terms, classifications, categories, and criteria</li> <li>ability to recall methodology and procedures, abstractions, principles, and theories in the field</li> <li>knowledge of dates, events, places</li> <li>mastery of subject matter</li> </ul>	list, define, tell, describe, recite, recall, identify, show, label, tabulate, quote, name, who, when, where
2. Understand	<ul style="list-style-type: none"> <li>understanding information</li> <li>grasp meaning</li> <li>translate knowledge into new context</li> <li>interpret facts, compare, contrast</li> <li>order, group, infer causes</li> <li>predict consequences</li> </ul>	describe, explain, paraphrase, restate, associate, contrast, summarize, differentiate interpret, discuss
3. Apply	<ul style="list-style-type: none"> <li>use information</li> <li>use methods, concepts, laws, theories in new situations</li> <li>solve problems using required skills or knowledge</li> <li>Demonstrating correct usage of a method or procedure</li> </ul>	calculate, predict, apply, solve, illustrate, use, demonstrate, determine, model, experiment, show, examine, modify
4. Analyse	<ul style="list-style-type: none"> <li>break down a complex problem into parts</li> <li>Identify the relationships and interaction between the different parts of a complex problem</li> <li>identify the missing information, sometimes the redundant information and the contradictory information, if any</li> </ul>	classify, outline, break down, categorize, analyze, diagram, illustrate, infer, select
5. Evaluate	<ul style="list-style-type: none"> <li>compare and discriminate between ideas</li> <li>assess value of theories, presentations</li> <li>make choices based on reasoned argument</li> <li>verify value of evidence</li> <li>recognize subjectivity</li> <li>use of definite criteria for judgments</li> </ul>	assess, decide, choose, rank, grade, test, measure, defend, recommend, convince, select, judge, support, conclude, argue, justify, compare, summarize, evaluate



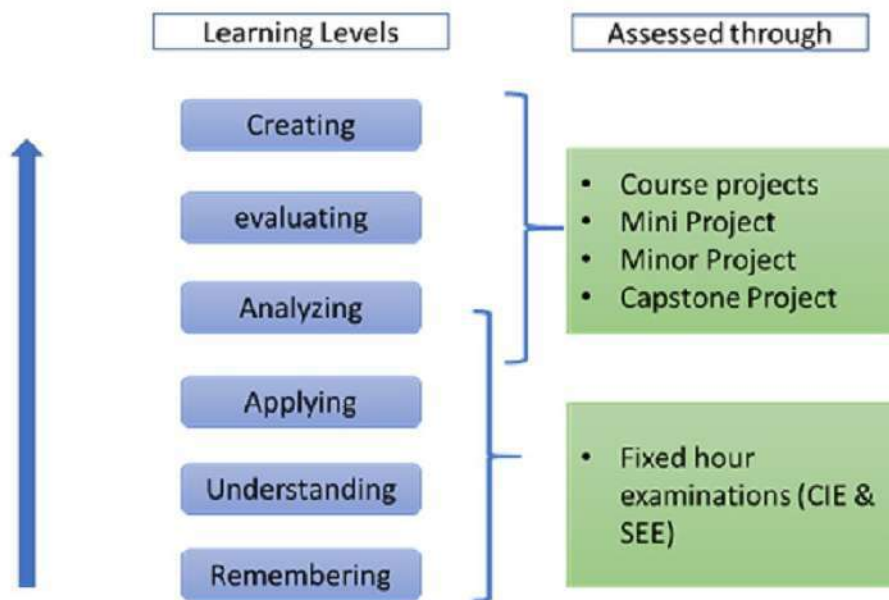
6. Create	<ul style="list-style-type: none"> <li>• use old ideas to create new ones</li> <li>• Combine parts to make (new) whole,</li> <li>• generalize from given facts</li> <li>• relate knowledge from several areas</li> <li>• predict, draw conclusions</li> </ul>	design, formulate, build, invent, create, compose, generate, derive, modify, develop, integrate
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It may be noted that some of the verbs in the above table are associated with multiple Bloom's Taxonomy levels. These verbs are actions that could apply to different activities. We need to keep in mind that it's the skill, action or activity we need students to demonstrate that will determine the contextual meaning of the verb used in the assessment question.

### 3.3 Assessment Planning

While using Bloom's taxonomy framework in planning and designing of assessment of student learning, following points need to be considered:

1. Normally the first three learning levels; remembering, understanding and applying and to some extent fourth level analysing are assessed in the Continuous Internal Evaluation (CIE) and Semester End Examinations (SEE), where students are given a limited amount of time. And abilities; analysis, evaluation and creation can be assessed in extended course works or in a variety of student works like course projects, mini/ minor projects, internship experience and final year projects.



**Fig. 3: Assessment methods for different Bloom's cognitive levels**

2. Before adopting this framework for reforms in examination system of a University/Institution, it is worthwhile to study the present pattern of assessment in each of the course in the program to gain insight about:

- a) Alignment of assessment questions with course learning outcomes
- b) Whether all the learning outcomes are tested; sometimes some learning outcomes are over tested at the expense of others which may be not tested at all.
- c) Overall weightage in the assessment, to each of Bloom's learning levels
- d) Assessment methods used to adequately assess the content and desired learning outcomes

Based on the study, improvement priorities for each of the above factors need to be arrived at. The reform process needs to be well planned and implemented through institutional strategy and communicated to all stakeholders particularly to the students.

3. A good and reasonable examination paper must consist of various difficulty levels to accommodate the different capabilities of students. Bloom's taxonomy framework helps the faculty to set examination papers that are well balanced, testing the different cognitive skills without a tilt towards a tough or easy paper perception. If the present examination questions are more focused towards lower cognitive skills, conscious efforts need to be made to bring in application skills or higher cognitive skills in the assessment. It is recommended that at institution/ University level, upper limit need to be arrived for lower order skills (for example, no more than 40% weightage for knowledge-oriented questions). It is important to note that, as nature of every course is different, the weightage for different cognitive levels in the question papers can also vary from course to course.
  - Examples of typical questions for each of Bloom's cognitive level are given in Appendix-B
  - Model Question Papers are given in Appendix- C

## 4. ASSESSING HIGHER-ORDER ABILITIES & PROFESSIONAL SKILLS

In the 21st century, professional skills (also known as soft skills, generic skills or transferable skills) have emerged as important attributes of a graduate engineer. Studies show that Industry/ employers around the world value these abilities more than the disciplinary knowledge. This is also reflected in the NBA graduate attributes wherein six out of twelve attributes belong to this category, viz. (1) communication, (2) teamwork, (3) understanding ethics and professionalism, (4) understanding global and societal contexts, (5) lifelong learning, and (6) knowledge of contemporary issues. Further, higher-order cognitive abilities like critical thinking, problem-solving and making informed decisions are also crucial for a graduate to succeed in the emerging world. Though the employers consider these professional skills and higher abilities as important, students are weak in them. The main challenge surrounding them is that they are difficult to assess through existing conventional examination system.

### 4.1 Innovative Educational Experiences to Teach and Assess

One of the main obstacles in addressing these outcomes is the limitation of educational experience we create within our engineering programs. Most of the coursework in our programs are oriented towards teaching technical knowledge and skills; hence, the assessment is limited to those abilities. However, acquiring the professional outcomes may not result simply from participation in a particular class or set of classes. Rather, these outcomes are more often acquired or influenced through sources both in and outside the classroom [4].



To address these challenges, comprehensive reforms are needed in the way we design our curriculum, student learning experiences and assessment of the outcomes. Worldwide several attempts are being made to address these challenges. Following are the few educational experiences that are recommended to teach and assess professional outcomes and higher-order cognitive abilities:

- Course projects
- Open-ended experiments in laboratories
- Project-based learning modules
- MOOCs
- Co-Curricular experiences
- Mini / Minor projects
- Final year projects
- Internship experiences
- E-portfolios of student works

#### 4.2 Using Scoring Rubrics as Assessment Tool

To evaluate the above, student works for attainment of course outcomes and hence POs, it is of utmost importance to have reliable methods / proper assessment tools. Rubrics provide a powerful tool for assessment and grading of student work. They can also serve as a transparent and inspiring guide to learning. Rubrics are scoring, or grading tool used to measure a students' performance and learning across a set of criteria and objectives. Rubrics communicate to students (and to other markers) your expectations in the assessment, and what you consider important.

There are three components within rubrics namely (i) criteria / performance Indicator: the aspects of performance that will be assessed, (ii) descriptors: characteristics that are associated with each dimension, and (iii) scale/level of performance: a rating scale that defines students' level of mastery within each criterion.

Communication Skills				
	Unsatisfactory 1	Developing 2	Satisfactory 3	Exemplary 4
Performance criteria				
Performance criteria				
Performance criteria				
Performance criteria				

The diagram illustrates the components of a rubric. A bracket labeled 'Scales' spans across the four performance levels (1-4). A bracket labeled 'Descriptors' spans across the four performance levels for each criterion. A bracket labeled 'Dimensions' spans across the four performance levels for each criterion. An arrow points from the 'Dimensions' label to the 'Performance criteria' label.

Fig. 3: Examples of Rubrics (Accessed from Rogers (2010))

### 4.3 Open-Book Examinations

In the earlier sections it was noted that the traditional written examinations have a significant weakness that they tend to encourage rote learning and more superficial application of knowledge. This deficiency can be overcome by “open-book examination”. Open-book examination is similar to time constrained written examinations but designed in a way that allows students to refer to either class notes, textbooks, or other approved material while answering questions. They are particularly useful if you want to test skills in application, analysis and evaluation, i.e. higher levels of Bloom’s taxonomy. However, in a program, the courses or the curriculum areas that are best suited to an open-book exam are to be carefully chosen.

#### **Advantages of open-book examinations**

1. Less demanding on memory and hence less stressful
2. Questions can emphasise more on problem-solving, application of knowledge and higher-order thinking rather than simple recall of facts.
3. Assessment questions can reflect real-life situations that require comprehension, information retrieval and synthesising skills of the students to solve.

#### **Designing a good open-book examination**

- Set questions that require students to do things with the information available to them, rather than to merely locate the correct information and then summarize or rewrite it.
- The questions in open-book exam must take advantage of the format, and give more weightage to the application of knowledge, critical thinking and use of resources for solving real complex engineering problems.
- As the nature of questions is complex, it is to be ensured that the students get enough time. Open book test questions typically take longer time compared to traditional examinations. It is advisable either to set less number of questions that encompass 2 or 3 concepts taught or allocate longer duration of time for the examinations.

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# APPENDIX-A

Competencies and Performance Indicators (PIs)  
Computer Science & Engineering/Information Technology Programs



**PO 1: Engineering knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialisation for the solution of complex engineering problems.

Competency	Indicators
1.2 Demonstrate competence in mathematical modelling	1.2.1 Apply the knowledge of discrete structures, linear algebra, statistics and numerical techniques to solve problems 1.2.2 Apply the concepts of probability, statistics and queuing theory in modeling of computer-based system, data and network protocols.
1.5 Demonstrate competence in basic sciences	1.5.1 Apply laws of natural science to an engineering problem
1.6 Demonstrate competence in engineering fundamentals	1.6.1 Apply engineering fundamentals
1.7 Demonstrate competence in specialized engineering knowledge to the program	1.7.1 Apply theory and principles of computer science and engineering to solve an engineering problem

**PO 2: Problem analysis:** Identify, formulate, research literature, and analyse complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.

Competency	Indicators
2.1 Demonstrate an ability to identify and formulate complex engineering problem	2.5.1 Evaluate problem statements and identifies objectives 2.5.2 Identify processes/modules/algorithms of a computer-based system and parameters to solve a problem 2.5.3 Identify mathematical algorithmic knowledge that applies to a given problem
2.6 Demonstrate an ability to formulate a solution plan and methodology for an engineering problem	2.6.1 Reframe the computer-based system into interconnected subsystems 2.6.2 Identify functionalities and computing resources. 2.6.3 Identify existing solution/methods to solve the problem, including forming justified approximations and assumptions 2.6.4 Compare and contrast alternative solution/methods to select the best methods 2.6.5 Compare and contrast alternative solution processes to select the best process.
2.7 Demonstrate an ability to formulate and interpret a model	2.7.1 Able to apply computer engineering principles to formulate modules of a system with required applicability and performance. 2.7.2 Identify design constraints for required performance criteria.
2.8 Demonstrate an ability to execute a solution process and analyze results	2.8.1 Applies engineering mathematics to implement the solution. 2.8.2 Analyze and interpret the results using contemporary tools. 2.8.3 Identify the limitations of the solution and sources/causes. 2.8.4 Arrive at conclusions with respect to the objectives.

**PO 3: Design/Development of Solutions:** Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for public health and safety, and cultural, societal, and environmental considerations.

Competency	Indicators
3.5 Demonstrate an ability to define a complex/open-ended problem in engineering terms	3.5.1 Able to define a precise problem statement with objectives and scope. 3.5.2 Able to identify and document system requirements from stake- holders. 3.5.3 Able to review state-of-the-art literature to synthesize system requirements. 3.5.4 Able to choose appropriate quality attributes as defined by ISO/IEC/IEEE standard. 3.5.5 Explore and synthesize system requirements from larger social and professional concerns. 3.5.6 Able to develop software requirement specifications (SRS).
3.6 Demonstrate an ability to generate a diverse set of alternative design solutions	3.6.1 Able to explore design alternatives. 3.6.2 Able to produce a variety of potential design solutions suited to meet functional requirements. 3.6.3 Identify suitable non-functional requirements for evaluation of alternate design solutions.
3.7 Demonstrate an ability to select optimal design scheme for further development	3.7.1 Able to perform systematic evaluation of the degree to which several design concepts meet the criteria. 3.7.2 Consult with domain experts and stakeholders to select candidate engineering design solution for further development
3.8 Demonstrate an ability to advance an engineering design to defined end state	3.8.1 Able to refine architecture design into a detailed design within the existing constraints. 3.8.2 Able to implement and integrate the modules. 3.8.3 Able to verify the functionalities and validate the design.

**PO 4: Conduct investigations of complex problems:** Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

Competency	Indicators
4.4 Demonstrate an ability to conduct investigations of technical issues consistent with their level of knowledge and understanding	4.4.1 Define a problem for purposes of investigation, its scope and importance 4.4.2 Able to choose appropriate procedure/algorithm, dataset and test cases. 4.4.3 Able to choose appropriate hardware/software tools to conduct the experiment.
4.5 Demonstrate an ability to design experiments to solve open-ended problems	4.5.1 Design and develop appropriate procedures/methodologies based on the study objectives
4.6 Demonstrate an ability to analyze data and reach a valid conclusion	4.6.1 Use appropriate procedures, tools and techniques to collect and analyze data 4.6.2 Critically analyze data for trends and correlations, stating possible errors and limitations 4.6.3 Represent data (in tabular and/or graphical forms) so as to facilitate analysis and explanation of the data, and drawing of conclusions 4.6.4 Synthesize information and knowledge about the problem from the raw data to reach appropriate conclusions



**PO 5: Modern tool usage:** Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modelling to complex engineering activities with an understanding of the limitations.

Competency		Indicators	
5.4	Demonstrate an ability to identify/create modern engineering tools, techniques and resources	5.4.1	Identify modern engineering tools, techniques and resources for engineering activities
		5.4.2	Create/adapt/modify/extend tools and techniques to solve engineering problems
5.5	Demonstrate an ability to select and apply discipline-specific tools, techniques and resources	5.5.1	Identify the strengths and limitations of tools for (i) acquiring information, (ii) modeling and simulating, (iii) monitoring system performance, and (iv) creating engineering designs.
		5.5.2	Demonstrate proficiency in using discipline-specific tools
5.6	Demonstrate an ability to evaluate the suitability and limitations of tools used to solve an engineering problem	5.6.1	Discuss limitations and validate tools, techniques and resources
		5.6.2	Verify the credibility of results from tool use with reference to the accuracy and limitations, and the assumptions inherent in their use.

**PO 6: The engineer and society:** Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal, and cultural issues and the consequent responsibilities relevant to the professional engineering practice.

Competency		Indicators	
6.3	Demonstrate an ability to describe engineering roles in a broader context, e.g. pertaining to the environment, health, safety, legal and public welfare	6.3.1	Identify and describe various engineering roles; particularly as pertains to protection of the public and public interest at the global, regional and local level
6.4	Demonstrate an understanding of professional engineering regulations, legislation and standards	6.4.1	Interpret legislation, regulations, codes, and standards relevant to your discipline and explain its contribution to the protection of the public

**PO 7: Environment and sustainability:** Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and the need for sustainable development.

Competency		Indicators	
7.3	Demonstrate an understanding of the impact of engineering and industrial practices on social, environmental and in economic contexts	7.3.1	Identify risks/impacts in the life-cycle of an engineering product or activity
		7.3.2	Understand the relationship between the technical, socio-economic and environmental dimensions of sustainability
7.4	Demonstrate an ability to apply principles of sustainable design and development	7.4.1	Describe management techniques for sustainable development
		7.4.2	Apply principles of preventive engineering and sustainable development to an engineering activity or product relevant to the discipline

**PO 8: Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

Competency		Indicators	
8.3	Demonstrate an ability to recognize ethical dilemmas	8.3.1	Identify situations of unethical professional conduct and propose ethical alternatives
8.4	Demonstrate an ability to apply the Code of Ethics	8.4.1	Identify tenets of the ASME professional code of ethics
		8.4.2	Examine and apply moral & ethical principles to known case studies

**PO 9: Individual and team work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

Competency	Indicators
9.4 Demonstrate an ability to form a team and define a role for each member	9.4.1 Recognize a variety of working and learning preferences; appreciate the value of diversity on a team 9.4.2 Implement the norms of practice (e.g. rules, roles, charters, agendas, etc.) of effective team work, to accomplish a goal.
9.5 Demonstrate effective individual and team operations-- communication, problem-solving, conflict resolution and leadership skills	9.5.1 Demonstrate effective communication, problem-solving, conflict resolution and leadership skills 9.5.2 Treat other team members respectfully 9.5.3 Listen to other members 9.5.4 Maintain composure in difficult situations
9.6 Demonstrate success in a team-based project	9.6.1 Present results as a team, with smooth integration of contributions from all individual efforts

**PO 10: Communication:** Communicate effectively on complex engineering activities with the engineering community and with the society at large, such as being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions

Competency	Indicators
10.4 Demonstrate an ability to comprehend technical literature and document project work	10.4.1 Read, understand and interpret technical and non-technical information 10.4.2 Produce clear, well-constructed, and well-supported written engineering documents 10.4.3 Create flow in a document or presentation - a logical progression of ideas so that the main point is clear
10.5 Demonstrate competence in listening, speaking, and presentation	10.5.1 Listen to and comprehend information, instructions, and viewpoints of others 10.5.2 Deliver effective oral presentations to technical and non-technical audiences
10.6 Demonstrate the ability to integrate different modes of communication	10.6.1 Create engineering-standard figures, reports and drawings to complement writing and presentations 10.6.2 Use a variety of media effectively to convey a message in a document or a presentation

**PO 11: Project management and finance:** Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's work, as a member and leader in a team, to manage projects and in multidisciplinary environments.

Competency	Indicators
11.4 Demonstrate an ability to evaluate the economic and financial performance of an engineering activity	11.4.1 Describe various economic and financial costs/benefits of an engineering activity 11.4.2 Analyze different forms of financial statements to evaluate the financial status of an engineering project
11.5 Demonstrate an ability to compare and contrast the costs/benefits of alternate proposals for an engineering activity	11.5.1 Analyze and select the most appropriate proposal based on economic and financial considerations.



11.6	Demonstrate an ability to plan/manage an engineering activity within time and budget constraints	11.6.1 Identify the tasks required to complete an engineering activity, and the resources required to complete the tasks. 11.6.2 Use project management tools to schedule an engineering project, so it is completed on time and on budget.
<b>PO 12: Life-long learning:</b> Recognise the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.		
<b>Competency</b>		<b>Indicators</b>
12.4	Demonstrate an ability to identify gaps in knowledge and a strategy to close these gaps	12.4.1 Describe the rationale for the requirement for continuing professional development 12.4.2 Identify deficiencies or gaps in knowledge and demonstrate an ability to source information to close this gap
12.5	Demonstrate an ability to identify changing trends in engineering knowledge and practice	12.5.1 Identify historic points of technological advance in engineering that required practitioners to seek education in order to stay current 12.5.2 Recognize the need and be able to clearly explain why it is vitally important to keep current regarding new developments in your field
12.6	Demonstrate an ability to identify and access sources for new information	12.6.1 Source and comprehend technical literature and other credible sources of information 12.6.2 Analyze sourced technical and popular information for feasibility, viability, sustainability, etc.

## APPENDIX-B

Sample questions for Bloom's Taxonomy levels





## SAMPLES QUESTIONS FOR BLOOMS TAXONOMY LEVELS:

### 1. REMEMBER

Skill Demonstrated	Question Ques / Verbs for tests
<ul style="list-style-type: none"> <li>Ability to recall of information like, facts, conventions, definitions, jargon, technical terms, classifications, categories, and criteria</li> <li>ability to recall methodology and procedures, abstractions, principles, and theories in the field</li> <li>knowledge of dates, events, places</li> <li>mastery of subject matter</li> </ul>	list, define, describe, state, recite, recall, identify, show, label, tabulate, quote, name, who, when, where, etc.

#### Sample Questions:

1. State Ohm's law
2. List the physical and chemical properties of silicon
3. List the components of A/D converter
4. List the arithmetic operators available in C in increasing order of precedence.
5. Define the purpose of a constructor.
6. Define the terms: Sensible heat, Latent heat and Total heat of evaporation
7. List the assembler directives.
8. Describe the process of galvanisation and tinning
9. Write truth table and symbol of AND, OR, NOT, XNOR gates
10. Define the terms: Stress, Working stress and Factor of safety.
11. What is the difference between declaration and definition of a variable/function?
12. List the different storage class specifiers in C.
13. What is the use of local variables?
14. What is a pointer to a pointer?
15. What are the valid places for the keyword "break" to appear?
16. What is a self-referential structure?

### 2. UNDERSTAND

Skill Demonstrated	Question Ques / Verbs for tests
<ul style="list-style-type: none"> <li>understanding information</li> <li>grasp meaning</li> <li>translate knowledge into new context</li> <li>interpret facts, compare, contrast</li> <li>order, group, infer causes</li> <li>predict consequences</li> </ul>	describe, explain, paraphrase, restate, associate, contrast, summarize, differentiate interpret, discuss

**Sample Questions:**

1. Explain the importance of sustainability in Engineering design
2. Explain the behaviour of PN junction diode under different bias conditions
3. Describe the characteristics of SCR and transistor equivalent for a SCR
4. Explain the terms: Particle, Rigid body and Deformable body giving two examples for each.
5. How many values of the variable num must be used to completely test all branches of the following code fragment?  

```

if (num > 0)
    if (value < 25)
    {
        value = 10 * num;
        if (num < 12)
            value = value / 10;
    }
else
    Value = 20 * num;
else
    Value = 30 * num

```
6. Discuss the effect of Make in India initiative on the Indian manufacturing Industry.
7. Summarise the importance of ethical code of conduct for engineering professionals
8. Explain the syntax for 'for loop'.
9. What is the difference between including the header file with-in angular braces < > and double quotes " "?
10. What is the meaning of base address of the array?
11. What is the difference between actual and formal parameters?
12. Explain the different ways of passing parameters to the functions.
13. Explain the use of comma operator (,).
14. Differentiate between entry and exit controlled loops.
15. How is an array different from linked list?

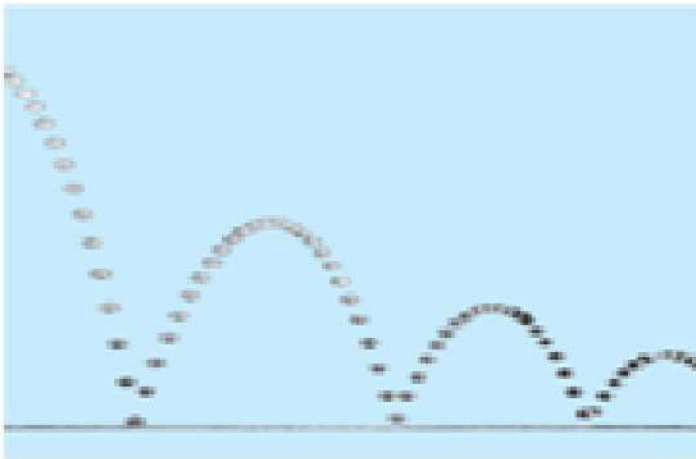
**3. APPLY**

Skill Demonstrated	Question Ques / Verbs for tests
<ul style="list-style-type: none"> <li>• use information</li> <li>• use methods, concepts, laws, theories in new situations</li> <li>• solve problems using required skills or knowledge</li> <li>• Demonstrating correct usage of a method or procedure</li> </ul>	calculate, predict, apply, solve, illustrate, use, demonstrate, determine, model, experiment, show, examine, modify



### Sample Questions:

- Model and realize the following behaviors using diodes with minimum number of digital inputs.
  - Turning on of a burglar alarm only during night time when the locker door is opened.
  - Providing access to an account if either date of birth or registered mobile number or both are correct.
  - Updating the parking slot empty light in the basement of a shopping mall.
- One of the resource persons needs to address a huge crowd (nearly 400 members) in the auditorium. A system is to be designed in such a way that everybody attending the session should be able to hear properly and clearly without any disturbance. Identify the suitable circuit to boost the voice signal and explain its functionality in brief.
- A ladder 5.0 m long rests on a horizontal ground & leans against a smooth vertical wall at an angle  $20^\circ$  with the vertical. The weight of the ladder is 900 N and acts at its middle. The ladder is at the point of sliding, when a man weighing 750 N stands on a rung 1.5 m from the bottom of the ladder. Calculate the coefficient of friction between the ladder & the floor.
- A ball is dropped from 6 meters above a flat surface. Each time the ball hits the surface after falling a distance  $h$ , it rebounds a distance  $rh$ . What will be the total distance the ball travels in each of the following cases.
  - $r > 1$
  - $0 < r < 1$
  - $r = 1$



- The region bounded by the curves  $y = e^{(-1)x}$ ,  $y = 0$ ,  $x = 1$ , and  $x = 5$  is rotated about the  $x$ -axis. Use Simpson's Rule with  $n = 8$  to estimate the volume of the resulting solid.
- An electric train is powered by machine which takes the supply from 220 V DC rail running above the train throughout. Machine draws current of 100 A from the DC rail to account for high torque during starting and runs at 700 r.p.m initially. Calculate the new speed of the train once it picks up the speed where the torque output required is only 70% of starting torque. Assume the motor has a resistance of  $0.1 \Omega$  across its terminals.

7. Write an algorithm to implement a stack using queue.
8. A single array  $A[1..MAXSIZE]$  is used to implement two stacks. The two stacks grow from opposite ends of the array. Variables  $top1$  and  $top2$  ( $top1 < top2$ ) point to the location of the topmost element in each of the stacks. What is the condition for "stack full", if the space is to be used efficiently.
9. Consider the following table of arrival time and burst time for three processes P0, P1 and P2.

Process	Arrival time	Burst Time
P0	0 ms	9 ms
P1	1 ms	4 ms
P2	2 ms	9 ms

The pre-emptive shortest job first scheduling algorithm is used. Scheduling is carried out only at arrival or completion of processes. What is the average waiting time for the three processes?

10. A CPU generates 32-bit virtual addresses. The page size is 4 KB. The processor has a translation look-aside buffer (TLB) which can hold a total of 128-page table entries and is 4-way set associative. What is the minimum size of the TLB tag?

#### 4. ANALYZE

Skill Demonstrated	Question Ques / Verbs for tests
<ul style="list-style-type: none"> <li>• break down a complex problem into parts.</li> <li>• Identify the relationships and interaction between the different parts of complex problem</li> </ul>	classify, outline, break down, categorize, analyse, diagram, illustrate, infer, select

#### Sample Questions:

1. A class of 10 students consists of 5 males and 5 females. We intend to train a model based on their past scores to predict the future score. The average score of females is 60 whereas that of male is 80. The overall average of the class is 70. Give two ways of predicting the score and analyse them for fitting model.
2. Suppose that we want to select between two prediction models, M1 and M2. We have performed 10 rounds of 10-fold cross-validation on each model, whereas the same data partitioning in round one is used for both M1 and M2. The error rates obtained for M1 are 30.5, 32.2, 20.7, 20.6, 31.0, 41.0, 27.7, 26.0, 21.5, 26.0. The error rates for M2 are 22.4, 14.5, 22.4, 19.6, 20.7, 20.4, 22.1, 19.4, 16.2, 35.0. Comment on whether one model is significantly better than the other considering a significance level of 1%.
3. Return statement can only be used to return a single value. Can multiple values be returned from a function? Justify your answer.
4. Bob wrote a program using functions to find sum of two numbers whereas Alex wrote the statements to find the sum of two numbers in the main() function only. Which of the two methods is efficient in execution and why?



5. Carly wants to store the details of students studying in 1st year and later on wishes to retrieve the information about the students who score the highest marks in each subject. Specify the scenario where the data can be organized as a single 2-D array or as multiple 1-D arrays.
6. Dave is working on a Campus Management Software but is unable to identify the maximum number of students per course. He decided to implement the same using arrays but discovered that there is memory wastage due to over-provisioning. Which method of memory storage should be used by Dave and how it can be implemented using C?
7. Albert is working on a 32-bit machine whereas Julie is working on a 64-bit machine. Both wrote the same code to find factorial of a number but Albert is unable to find factorial of a number till 9 whereas Julie is able to find the factorial of higher number. Identify the possible reason why Albert is unable to find the factorial. Suggest some changes in the code so that Albert can handle bigger inputs.
8. While writing a C code, the problem faced by the programmers is to find if the parenthesis is balanced or not. Write an algorithm to check if the parenthesis in C code are balanced. Initially your code should work for balanced { and } braces.
9. Swapping of the data in a linked list can be performed by swapping the contents in the linked list. Can the contents of a linked list be swapped without actually swapping the data?

## 5. EVALUATE

Skill Demonstrated	Question Ques / Verbs for tests
<ul style="list-style-type: none"> <li>• compare and discriminate between ideas</li> <li>• assess value of theories, presentations</li> <li>• make choices based on reasoned argument</li> <li>• verify value of evidence</li> <li>• recognize subjectivity</li> <li>• use of definite criteria for judgments</li> </ul>	assess, decide, choose, rank, grade, test, measure, defend, recommend, convince, select, judge, support, conclude, argue, justify, compare, summarize, evaluate

## 6. CREATE

Skill Demonstrated	Question Ques / Verbs for tests
<ul style="list-style-type: none"> <li>• use old ideas to create new ones</li> <li>• Combine parts to make (new) whole,</li> <li>• generalize from given facts</li> <li>• relate knowledge from several areas</li> <li>• predict, draw conclusions</li> </ul>	design, formulate, build, invent, create, compose, generate, derive, modify, develop, integrate

Both higher order cognitive skills 'Evaluate' and 'Create' are difficult to assess in time-limited examinations. These need to be assessed in variety of student works like projects, open ended problem-solving exercises etc. Typical examples of problem statements or need statements which need higher order abilities to solve are given below

**Sample Problem / Need statements:**

1. Automatic tethering of milking machine to the udder of a cow. A milk diary wants to automate the milking process. The milking process involves attaching the milking cups to the teats. Design a system for the same.
2. An electric vehicle uses LiON batteries. The batteries have to be charged and get discharged during use. The batteries require continuous monitoring during charging and discharging so that they remain healthy and yield a long life. Design a system to monitor and manage the health of the batteries.
3. A Biotech industry needs automation for filling its product into 20 ltr bottles. Design a system to meter the flow into the bottles so that each bottle has 20 ltr of the liquid. There will be more than one filling station and the system has to monitor all the filling stations as well as keep count of the total production on a daily basis.
4. Microwave Doppler radar with a range of 9m are available for motion detection. Design a surround view monitoring system for a 3 wheeler to detect human obstacles while the vehicle is in motion.
5. Design a system to assist the driver by using cameras to detect lane markers and pedestrians while the vehicle is in motion.
6. Develop a small size USB 2.0 / 3.0 CMOS camera system which can be used for industrial inspection, medical applications, microscopy, etc. The system should be able to capture the image quickly and be able to process the captured image and then store it also



# APPENDIX-C

Model Question Papers



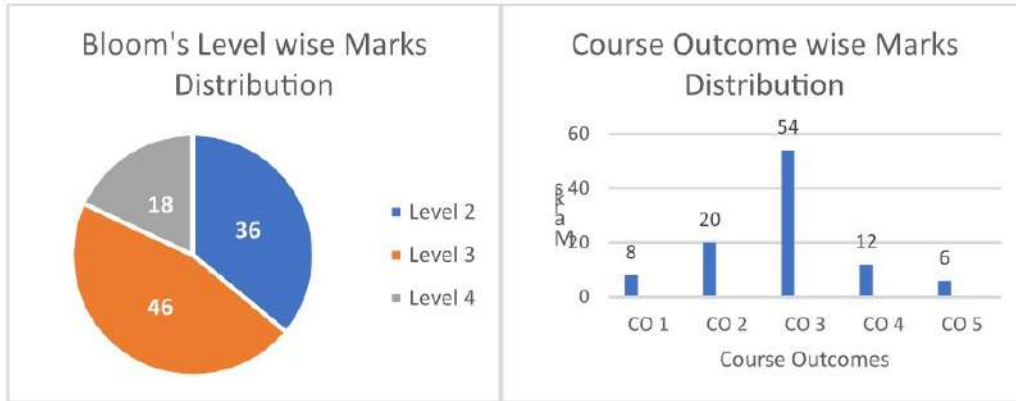


## MODEL QUESTION PAPER

Course: Programming for Problem solving (ESC 103)

Maximum Marks :100; Duration: 03 hours

Q.No	Questions	Marks	C0	BL	PI
1(a)	Explain the steps involved in solving a problem using computer.	08	C01	L2	1.4.1
1(b)	Write an algorithm to find roots of a quadratic equation $ax^2 + bx + c = 0$ reading the values of a, b and c.	12	C02	L3	1.4.1
2(a)	Compare if-else-if and switch statement giving examples for their relevant use.	08	C02	L2	1.4.1
2b	Write a C program that reads a given integer number and checks whether it a palindrome. A palindrome is a number that has same value even when it is reversed. Eg: 12321 is a palindrome.	12	C03	L3	1.4.1
3a	Compare the working of three looping constructs of C language giving their syntax.	08	C03	L2	1.4.1
3b	<p>What does the following program do?</p> <pre>#include &lt;stdio.h&gt; int main() {     char ch;     int vcnt = 0, ccnt=0;     for ( ch = getchar(); ch != '\n'; ch=getchar()){         if(ch=='a'    ch=='e'    ch=='i'    ch=='o'    ch=='u'               ch=='A'    ch=='E'    ch=='I'    ch=='O'    ch=='U')             vcnt++;         else if((ch &gt;= 'a' &amp;&amp; ch &lt;= 'z')    (ch &gt;= 'A' &amp;&amp; ch &lt;= 'Z'))             ccnt++;     }     printf( " %d  %d\n", vcnt, ccnt); } </pre> <p>Rewrite the above program using while and switch constructs.</p>	12	C04	L4	1.4.1
4a	Compare call by value and call by reference with relevant examples.	8	C03	L2	1.4.1
4b	Write a C function to find the largest and smallest in a given list of integers of size n using call by reference: void minmax( int list[ ], int n, int *min, int *max);	12	C03	L3	1.4.1
5a	Explain at least four file handling operations available in C language giving their syntax.	4	C03	L2	1.4.1
5b	Identify the bug in the following function written to return the swapped values of two integer variables given:				
	<pre>int swap( int *x, int *y) {     int *temp;     temp = x, x=y, y = temp; } </pre>	6	C05	L4	1.4.1
5c	Define a structure to store time with three components hours, mins and seconds. Write a modular C program to compute the time taken by an athlete to complete a marathon reading the start and end time of his run.	10	C03	L3	1.4.1



BL – Bloom's Taxonomy Levels (1- Remembering, 2- Understanding, 3 – Applying, 4 – Analysing, 5 – Evaluating, 6 - Creating)

CO – Course Outcomes

PO – Program Outcomes; PI Code – Performance Indicator Code



## MODEL QUESTION PAPER FOR END SEMESTER EXAMINATION

**Course Name:** Programming for Problem Solving

**Duration:** 3 hrs. ; Max. Marks: 100

### Instructions:

- Attempt five questions selecting ONE from each section. Question 9 (Section E) is compulsory.
- All the questions carry equal marks.
- Draw neat diagrams wherever applicable.

Q. No	Question	Marks	BL	CO	PO	PI Code
<b>Section-A</b>						
1.	a. What is an algorithm? Explain the characteristics of an algorithm.	2+6	1,2	2	1	1.4.1
	b. Write an algorithm to find angle between hour and minute hands of a clock at a given time.	7	3	3	1	1.4.1
	c. Is it mandatory to declare main() function with return type as void or int. What will be the effect if there is no return type declared for main() function?	3+2	4	3	1	1.4.1
OR						
2.	a. What is the difference between definition and declaration in C? When a user writes "int x;" is it treated as declaration or definition in C.	3+2	2,4	3	1	1.4.1
	b. Write a program in C to find largest of 3 positive integer numbers using conditional operators.	7	3	3	1,2	1.4.1, 2.2.4
	c. What is meant by iterative statements? What are the different types of iterative statements in C?	8	1,2	3	1	1.4.1
<b>Section-B</b>						
3.	a. Bob has placed N objects in a row which are marked with a number equal to their weight in Kg. He wants to check whether the objects are in increasing order of their weights or not. Write a C program to help Bob.	12	3	3,6,7	1,2	1.4.1, 2.2.4
	b. Differentiate between Big-O and Big-Omega notation.	4	2	3	1	1.4.1
	c. What is the role of index in an array? How are the elements of a 2D array accessed in C?	2+2	2	3	1	1.4.1
OR						
4.	a. Ram is conducting a study which is based on counting the number of cars crossing the highway. Every hour he generates a random string containing sequence of characters <rbwbr...>, where r represents red color, w denotes white color and b denotes blue color cars. The string is forwarded to Shyam for analysis who computes the number of red, blue and white color cars crossing Ram every hour. Assume that Ram works for 5 hours in a day, help Shyam generate a daily report containing the following: <ol style="list-style-type: none"> <li>Total number of different colour cars crossing Ram in an hour.</li> <li>Total number of different colour cars crossing Ram in a day.</li> <li>Total number of cars crossing Ram in a day.</li> </ol>	4+4+4	3	3,6,7	1,2	1.4.1, 2.2.4

	b. What is a variable? Explain the ways to declare scope of a variable.	2+6	1,2	3	1	1.4.1
<b>Section-C</b>						
5.	a. Write a program which will read positive integer numbers from the users and compute the sum if the number can be expressed as power of 2. The test whether a number can be expressed as power of 2 will be done using a function power_of_two(int a).	12	3	3,6,7	1,2	1.4.1
	b. What is recursion? Differentiate between homogeneous and heterogeneous recursion with the help of an example.	2+3+3	2	3	1	1.4.1
OR						
6.	a. What are the different ways to pass parameters to a function? Explain with the help of a suitable example.	4+4	2	3,5	1	1.4.1
	b. Is it possible to return multiple values from a function? Justify the statement with the help of an example.	4+8	3	3,6,7	1,2	1.4.1
<b>Section-D</b>						
7.	a. What is a structure? What is the benefit offered by using a structure over multiple arrays?	2+6	2	5	1	1.4.1
	b. Ram is working on a project which requires returning multiple values from a function. He observed that a return statement can only be used to return a single value from a function. How the function should be implemented so that multiple values can be returned by Ram?	12	4	5	1	1.4.1
OR						
8.	a. Write a program that reads a number as input from the user. The entered number is written to a file "even.txt" if the input is even else it is written to "odd.txt". Write a C code to perform the desired task.	12	3	5	1	1.4.1
	b. What are the different methods to open a file? Explain each with the help of a C program.	3+5	2	5	1	1.4.1
<b>Section-E (Compulsory Question)</b>						
9.	a. What is a compiler? List names of any 2 compilers.	2 ½	1	1	1	1.4.1
	b. What are the benefits of designing a flowchart for solving a problem?	2 ½	4	2	1	1.4.1
	c. What is the output of the following code? int main(){ int x=10; int y=sizeof(x/2); printf("%d",y); }	2 ½	3	4	1	1.4.1
	d. What is the difference between creating constant using #define macro and const keyword?	2 ½	3	3	1	1.4.1
	e. What is the role of function prototype? When is it required in C?	2 ½	2	3	1	1.4.1



f. Which of the following are unary operators in C? State reason for your answer. a. ! b. sizeof c. ~ d. &&	2 ½	2	3	1	1.4.1
g. Which of the following special symbol allowed in a variable name? State reason for your answer. a. * (asterisk) b.   (pipeline) c. - (hyphen) d. _ (underscore)	2 ½	2	3	1	1.4.1
h. In which header file is the NULL macro defined? State reason for your answer. a. stdio.h b. stddef.h c. stdio.h and stddef.h d. math.h	2 ½	2	3	1	1.4.1

BL – Bloom's Taxonomy Levels (1- Remembering, 2- Understanding, 3 – Applying, 4 – Analysing, 5 – Evaluating, 6 - Creating)

CO – Course Outcomes

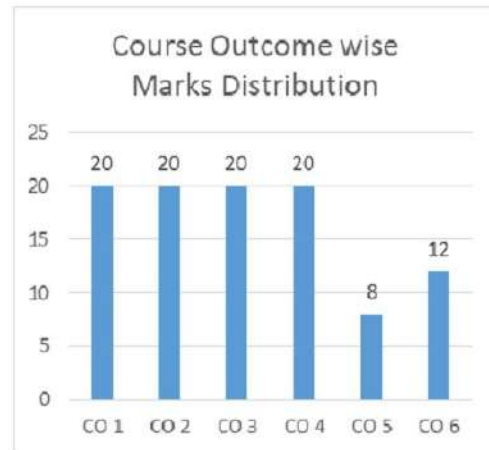
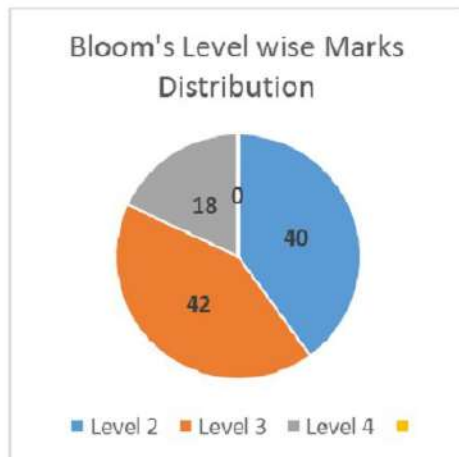
PO – Program Outcomes; PI Code – Performance Indicator Code

**MODEL QUESTION PAPER****Total Duration (H:M): 3:00****Course : Basic Electrical Engineering (ESC101)****Maximum Marks :100**

Q.No	Questions	Marks	CO	BL	PI
1(a)	<p>Calculate current through <math>4\ \Omega</math> resistor using Kirchoff's Laws? Verify the same using Superposition Theorem.</p>	12	C01	L3	1.3.1
1(b)	Derive the expression for the transient current in a series 'R-L' circuit when a 'dc' voltage of $V$ volts is applied. Sketch time variation of current in the circuit.	8	C01	L2	1.3.1
2(a)	Two impedances $Z_1 = 15 + j12\ \Omega$ and $Z_2 = 8 - j5\ \Omega$ are connected in parallel. If the potential difference across one of the impedance is $250\ V$ , calculate i) total current and branch currents ii) total power and power consumed in each branch iii) overall p.f. iv) draw the phasor diagram	12	C02	L3	1.3.1
2b	It is desired to operate a $100\ W$ , $120\ V$ , electric bulb at its rated current on a $240\ V$ , $50\ Hz$ supply. The simplest arrangement is to use either (a) a resistor, or (b) a capacitor or (c) an inductor having $10\ \Omega$ resistance in series with the electric bulb so as to drop the excess voltage. Determine the value of the component used, the total power consumed and the power factor in each case. Giving reasons, state which alternative is the best.	8	C02	L4	1.3.1
3a	A single phase $25\ kVA$ $1000/2000\ V$ , $50\ Hz$ transformer has maximum efficiency of $98\%$ at full load upf. Determine its efficiency at, (a) $3/4$ th full load, unity power factor (b) $3/4$ th full load $0.8$ power factor	12	C03	L3	1.3.1
3b	Explain the working of a practical transformer with relevant phasor diagram. and define voltage regulation.	8	C03	L2	1.3.1
4a	A two pole 3 phase $50\ Hz$ induction motor is running on load with a slip of $4\%$ . Calculate the actual speed and the synchronous speed of the machine. Sketch the speed/ load characteristic of the machine.	8	C04	L2	1.3.1
4b	A wireless battery powered drilling machine operates on $24\ V$ DC with constant speed and negligible field current. Initially when the machine is powered it runs at $1200\ rpm$ and draws $0.5\ A$ from the battery. Further when the drill bit starts drilling the hole, the speed reduces to $1120\ rpm$ . Determine power requirement from the battery for drilling if the resistance of the armature is $0.2\ \Omega$ . What is the power drawn initially?	12	C04	L4	1.3.1



5a	Explain the working principle of a single phase pulse width modulated voltage source inverter with relevant circuit diagram and draw the output voltage wave form.	8	C05	L2	1.3.1
5b	To protect an expensive circuit component from being delivered too much power, you decide to incorporate a fast blowing fuse into the design. Knowing that the circuit component is connected to 12 V, its minimum power consumption is 12 watts and the maximum power it can safely dissipate is 100 watts, which of the three available fuse ratings should you select: 1A , 4A or 10 A? Give reasons.	6	C06	L4	1.3.1
5c	Calculate the i) ampere-hour and ii) watt-hour efficiency of a secondary cell which is discharged at a uniform rate of 30 A for 6 hours at an average terminal voltage of 2 V. It is then charged at a uniform rate of 40 A for 5 hours to restore it to its original condition. The terminal voltage during charging is 2.5 V.	6	C06	L3	1.3.1



BL – Bloom's Taxonomy Levels (1- Remembering, 2- Understanding, 3 – Applying, 4 – Analysing, 5 – Evaluating, 6 - Creating)

CO – Course Outcomes

PO – Program Outcomes; PI Code – Performance Indicator Code

## APPENDIX-D

### Sample Scoring Rubrics





## RUBRICS FOR COMMUNICATION (WRITTEN & ORAL)

Component	Proficient	Acceptable	Needs Improvements
Written Communication	Report is well organized and clearly written. The underlying logic is clearly articulated and easy to follow. Words are chosen that precisely express the intended meaning and support reader comprehension. Diagrams or analyses enhance and clarify presentation of ideas. Sentences are grammatical and free from spelling errors.	Report is organized and clearly written for the most part. In some areas the logic or flow of ideas is difficult to follow. Words are well chosen with some minor exceptions. Diagrams are consistent with the text. Sentences are mostly grammatical and only a few spelling errors are present but they do not hinder the reader.	Report lacks an overall organization. Reader has to make considerable effort to understand the underlying logic and flow of ideas. Diagrams are absent or inconsistent with the text. Grammatical and spelling errors make it difficult for the reader to interpret the text in places.
Presentation			
Visual Aids	Slides are error-free and logically present the main components of the process and recommendations. Material is readable and the graphics highlight and support the main ideas.	Slides are error-free and logically present the main components of the process and recommendations. Material is mostly readable and graphics reiterate the main ideas.	Slides contain errors and lack a logical progression. Major aspects of the analysis or recommendations are absent. Diagrams or graphics are absent or confuse the audience.
Oral Presentation	Speakers are audible and fluent on their topic, and do not rely on notes to present or respond. Speakers respond accurately and appropriately to audience questions and comments.	Speakers are mostly audible and fluent on their topic, and require minimal referral to notes. Speakers respond to most questions accurately and appropriately.	Speakers are often inaudible or hesitant, often speaking in incomplete sentences. Speakers rely heavily on notes. Speakers have difficulty responding clearly and accurately to audience questions.
Body Language	Body language, as indicated by appropriate and meaningful gestures (e.g., drawing hands inward to convey contraction, moving arms up to convey lift, etc.) eye contact with audience, and movement, demonstrates a high level of comfort and connection with the audience.	Body language, as indicated by a slight tendency to repetitive and distracting gestures (e.g., tapping a pen, wringing hands, waving arms, clenching fists, etc.) and breaking eye contact with audience, demonstrates a slight discomfort with the audience.	Body language, as indicated by frequent, repetitive and distracting gestures, little or no audience eye-contact, and / or stiff posture and movement, indicate a high degree of discomfort interacting with audience.

## RUBRICS FOR ASSESSMENT OF DESIGN PROJECTS

Category	Needs Improvements	Acceptable	Proficient
Purpose of the Project	Does not clearly explain the intended outcome of the project or provides little information about the problem that was being solved, the need being met, or why the project was selected	Provides a description of the intended outcome of the project which includes information about the problem that was being solved or the need being met, and why the project was selected	Provides a detailed intended outcome of the project which includes information about the problem that was being solved or the need being met, and clearly articulates the reasons and decision-making process used to select the project
Research	Lacks awareness of similar work done by others in an unacceptable literary form	Reflects awareness of similar work done by others and presents it in an acceptable literary format	• Reflects thorough understanding of similar work done by others and presents it in an acceptable literary format
Choices	Lacks justification of choices with little or no references to functional, aesthetic, social, economic, or environmental considerations	Justifies choices made with reference to functional, aesthetic, social, economic, or environmental considerations	Demonstrates sophisticated justification of choices with reference to functional, aesthetic, social, economic, or environmental consideration
Alternative Designs	Only one design presented or clearly infeasible alternative given. Serious deficiencies in exploring and identifying alternative designs.	Alternative approaches identified to some degree.	Final design achieved after review of reasonable alternatives.
Application of Engineering Principles	No or erroneous application of engineering principles yielding unreasonable solution. Serious deficiencies in proper selection and use of engineering principles.	Effective application of engineering principles resulting in reasonable solution.	Critical selection and application of engineering principles ensuring reasonable results.
Final Design	Not capable of achieving desired objectives.	Design meets desired objectives.	Design meets or exceeds desired objectives.
Interpretation of Results	No or erroneous conclusions based on achieved results. Serious deficiencies in support for stated conclusions.	Sound conclusions reached based on achieved results.	Insightful, supported conclusions and recommendations.



Rubrics can also be used effectively to design the continuous assessment of the student projects. The Performance Indicators referred to in the previous sections can be used measurement criteria in the rubric. In the following example, we can see that for different phases of the students projects, we can design the rubrics keeping in mind the deliverables of the project at that particular stage.

## 5 - SEMESTER MINI PROJECT

### RUBRICS FOR REVIEW – I

PI Code	PI	Marks	Very Poor Up to 20%	Poor Up to 40%	Average Up to 60%	Good Up to 80%	Very good Up to 100%
2.1.1	Articulate problem statements and identify objectives - GA	02	Problem statement and objectives are not identified	Problem statement and objectives are not clear	Problem statement is clear and objectives are not in line with problem statement	Problem statement is clear and objectives are not completely defined.	Problem statement is clear and objectives are completely defined
2.1.2	Identify engineering systems, variables, and parameters to solve the problems - IA	02	Engineering systems are not identified. Variables, and parameters to solve the problems are not defined	Engineering systems are identified but not clear. Variables, and parameters to solve the problems are not defined	Engineering systems are clear. Variables, and parameters to solve the problems are not defined	Engineering systems are identified. Variables, and parameters to solve the problems are partially defined	Engineering systems are identified. Variables, and parameters to solve the problems are completely defined
2.2.3	Identify existing processes/ solution methods for solving the problem, including forming justified approximations and assumptions - GA	02	Not able to identify existing solution for solving the problem. The assumptions, approximations and justifications are also not identified.	Not able to identify existing solution for solving the problem. The assumptions, approximations and justifications are identified but not clear	Not able to identify existing solution for solving the problem. But assumptions and approximations are aligned to the objectives.	Able to identify existing solution for solving the problem. Assumptions, and approximations are clear	Able to identify existing solution for solving the problem. But assumptions, approximations and justifications are clear
2.2.4	Compare and contrast alternative solution processes to select the best process - GA	02	Not able to identify alternative solution processes	Not able to compare alternative solution processes	Able to compare alternative solution processes but could not contrast clearly	Able to compare alternative solution processes and contrast clearly but not able to select best process	Able to compare alternative solution processes, contrast it and also able to select best process
10.1.1	Read, understand and interpret technical and non-technical information - GA	02	Not able to identify technical and non-technical information	Able to identify non-technical information	Able to read technical and non-technical information, but could not understand and interpret	Able to read, understand technical and non-technical information, but could not interpret	Able to read, understand and interpret technical and non-technical information

GA – Group Assessment

IA – Individual Assessment

**RUBRICS FOR REVIEW – II**

PI Code	PI	Marks	Very Poor Up to 20%	Poor Up to 40%	Average Up to 60%	Good Up to 80%	Very good Up to 100%
3.2.1	Apply formal idea generation tools to develop multiple engineering design solutions - GA	02	Not able to identify tools to develop solutions	Able to identify but not able to use it effectively	Able to use the tool but not able to generate engineering designs	Able to generate engineering designs but not able to justify	Able to generate engineering designs with justification
3.2.3	Identify suitable criteria for evaluation of alternate design solutions - GA	02	Not able to identify criteria	Able to identify criteria but not able to use them	Able to use criteria but not able to compare alternatives	Not able to justify the comparison with criteria	Able to justify the comparison with criteria
3.3.1	Apply formal decision-making tools to select optimal engineering design solutions for further development - GA	02	Not able to identify decision-making tools	Able to identify but not able to choose optimum one	Able to identify optimum one but not able to use it	Able to use optimum one but not able to justify	Able to use optimum one with justification
3.2.2	Build models/ prototypes to develop diverse set of design solutions - IA	02	Not able to identify tool to build model/ prototype	Able to choose the tool but not able to use it effectively	Able to use the tool but not able to generate alternatives	Able to generate alternatives but not able to justify the best solution	Able to generate and justify the best solution
13.1.1	Develop 2D drawings of components/ systems using modern CAD tools - IA	02	Not able to identify CAD tools	Able to identify but not able to use CAD tool	Able to use CAD tool but not able to generate drawings	Able to generate drawings but not able to follow drawing standards	Able to generate drawings with standards
13.1.2	Develop 3D models of components/systems using modern CAD tools - IA	03	Not able to identify CAD tools	Able to identify but not able to use CAD tool	Able to use CAD tool but not able to generate 3D models	Able to generate models but not able to follow standards	Able to generate models with standards
13.1.3	Apply GD&T principles as per ASME standards to manufacturing drawings, with all relevant data like material, hardness, surface finish, and tolerances - IA	02	Not able to extract GD&T principles from ASME standards	Able to extract but not able to understand them	Able to understand but not able to apply GD&T standards	Able to apply GD&T standards to drawings but not able to justify	Able to apply and justify GD&T standards to drawings



GA – Group Assessment

IA – Individual Assessment

**RUBRICS FOR REVIEW – III**

PI Code	PI	Marks	Very Poor Up to 20%	Poor Up to 40%	Average Up to 60%	Good Up to 80%	Very good Up to 100%
3.4.2	Generate information through appropriate tests to improve or revise design - GA	02	Not able to identify suitable tests to be done	Able to identify but not able to follow testing procedure	Able to follow testing procedures but not able to collect information	Able to collect information but not able to apply it for improvement	Able to apply information for the improvement
4.3.1	Use appropriate procedures, tools and techniques to conduct experiments and collect data - GA	04	Not able to identify tools, techniques and procedures	Able to identify but not able to conduct experiments	Able to conduct experiments but not able to follow procedure	Able to follow procedure but not able to collect data	Able to collect data as per the standards
4.3.2	Analyze data for trends and correlations, stating possible errors and limitations - GA	03	Not able to understand data	Able to understand but not able to analyze data	Able to analyze data but not able to correlate them	Able to correlate but not able to identify errors and limitations	Able to identify errors and limitations
10.2.2	Deliver effective oral presentations to technical and non-technical audiences - IA	03	Could not deliver effective presentations.	Could not deliver presentation, but presentation was prepared and attempted.	Able to deliver fair presentation but not able to answer to the audiences	Deliver effective presentations but able to answer partially to the audience queries.	Deliver effective presentation and able to answer all queries of the audience.
9.3.1	Present results as a team, with smooth integration of contributions from all individual efforts – GA + IA	03	No Contribution from an individual to a team	Contributions from an individual to a team is minimal	Contributions from an individual to a team is moderate	A contribution from an individual to a team is good but not well groomed in team.	Contribution from an individual to a team is good and results in an integrated team presentation.

GA – Group Assessment

IA – Individual Assessment

**AICTE COMMITTEE ON EXAMINATION REFORMS****Members of the Committee**

- 1. Prof. Ashok S. Shettar, Chairman**  
Vice Chancellor, KLE Technological University, Hubballi, Karnataka
- 2. Prof. Rama Krishna Challa,**  
Prof and Head, Dept. of Computer Science and Engineering, NITTTR, Chandigarh
- 3. Prof. Sanjay Agrawal**  
Professor, Dept. of Computer Engineering and Applications, NITTR, Bhopal (M.P)
- 4. Prof. Upendra Pandel**  
Professor, Dept. of Metallurgical & Material Engineering, MNIT, Jaipur





**ALL INDIA COUNCIL FOR TECHNICAL EDUCATION**  
Nelson Mandela Marg, Vasant Kunj, New Delhi-110070

# AICTE Exam Reforms Policy- 2018 Workshop

4 March 2021

[jayeshg1988@vjec.ac.in](#) [Switch account](#)



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\* Required

Faculty Name ( This name will be seen as such in the certificate) \*

Your answer

Designation \*

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Department \*

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- CE
- ME
- CSE
- ECE
- AEI
- EEE





Workshop objectives where clearly stated and met \*

	1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly Agree

The workshop was well organized \*

1	2	3	4	5
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Workshop helped me to understand competencies \*

1	2	3	4	5
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Workshop helped me to understand Performance Index \*

1	2	3	4	5
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Your ability to do mapping a question with relevant PI \*

1	2	3	4	5
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



The information presented were relevant and useful \*

1

2

3

4

5

The presenters provided adequate time for questions and answered them satisfactorily \*

1

2

3

4

5

The workshop increased my knowledge in AICTE Exam Reforms Policy \*

1

2

3

4

5

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## VimalJyothi Engineering College, Chemperi

### INTERNAL QUALITY ASSURANCE CELL

Workshop on AICTE EXAM REFORM POLICY

4 March 2021, 10.00 Am to 3.00 PM

#### Feedback Response sheet

Timestamp	Email Address	Faculty Name ( This name will be seen as such in the certificate)	Designation	Department	Workshop objectives where clearly stated and met	The workshop was well organized	Workshop helped me to understand competencies	Workshop helped me to understand Performance Index	Your ability to do mapping a question with relevant PI	The information presented were relevant and useful	The presenters provided adequate time for questions and answered them satisfactorily	The workshop increased my knowledge in AICTE Exam Reforms Policy
3/5/2021 13:58:55	adarshks@vjec.ac.in	Adarsh K S	Assistant Professor	ECE	3	3	3	3	3	3	3	3
3/5/2021 14:15:28	amruthamaria@vjec.ac.in	Amrutha Maria Mathew	Assistant Professor	EEE	5	5	5	5	4	5	4	5
3/5/2021 14:15:53	kcmanojkc@vjec.ac.in	MANOJ K C	Associate Professor	ECE	4	4	4	4	4	4	3	4
3/5/2021 14:18:32	glandeva@vjec.ac.in	Dr.G.Glan Devadhas	Professor	AEI	4	4	3	3	4	3	4	4
3/5/2021 14:19:17	agjustin@vjec.ac.in	Dr.G.Justin Sunil Dhas	Professor	EEE	5	5	5	5	5	5	5	5
3/5/2021 14:21:24	shinumm@vjec.ac.in	Shinu MM	Assistant Professor	AEI	5	5	5	5	5	5	5	5
3/5/2021 14:25:32	reemamathew@vjec.ac.in	REEMA MATHEW A	Associate Professor	ECE	4	4	4	4	3	3	4	4
3/5/2021 14:30:15	sigithomasj@vjec.ac.in	SIGI THOMAS	Asso.Prof.	CE	3	2	2	2	2	2	1	2
3/5/2021 14:33:23	shelimageorge@vjec.ac.in	SHELMA GEORGE	Assistant Professor	EEE	4	4	5	5	5	4	4	4
3/5/2021 14:39:01	johnypjoseph@vjec.ac.in	JOHNY P JOSEPH	ASSISTANT PROFES	ME	4	5	4	5	5	5	5	5
3/5/2021 14:43:29	ashababy@vjec.ac.in	Asha Baby	Assistant professor	CSE	3	4	3	4	3	5	5	4
3/5/2021 14:46:16	sridharanp@vjec.ac.in	Dr.P.Sridharan	Associate Professor	ME	5	5	5	5	5	5	5	5
3/5/2021 14:47:56	lalyjames@vjec.ac.in	LALY JAMES	Associate Professor	EEE	4	5	4	4	4	4	4	4
3/5/2021 15:09:50	annmathew@vjec.ac.in	Ann Mathew	Asst. Professor	ECE	3	3	4	4	3	4	3	3
3/5/2021 15:41:04	gokulnath@vjec.ac.in	GOKULNATH R	Assistant Professor	ME	4	4	4	4	4	4	5	4
3/5/2021 16:01:24	rajukk@vjec.ac.in	RAJU K KURIAKOSE	ASSOCIATE PROFES	ME	2	3	3	3	3	3	5	2
3/5/2021 16:14:02	anisha@vjec.ac.in	Anisha Joseph	Assistant Professor	CSE	3	4	4	4	3	3	4	4
3/5/2021 16:45:56	jerinsaji@vjec.ac.in	JERIN SAJI	Assistant Professor	ME	3	3	4	4	3	4	5	4
3/5/2021 16:46:12	midhunmukundan@vjec.ac.in	MIDHUN MUKUNDAN M	Assistant Professor	ME	5	5	5	5	4	4	5	4
3/5/2021 18:16:35	kmindulekha@vjec.ac.in	Indulekha K M	Assistant Professor	EEE	3	3	3	3	3	3	3	3
3/5/2021 21:00:16	bindujohn@vjec.ac.in	Ms. Bindu Sebastian	Associate Professor	ECE	5	5	4	4	4	5	5	5
3/5/2021 21:31:49	teenag@vjec.ac.in	Teena George	Assistant Professor	EEE	3	3	5	5	3	3	4	4
3/6/2021 9:07:26	dhanoj24@vjec.ac.in	Dhanoj M	Assistant Professor	AEI	4	4	4	4	4	4	4	4
3/6/2021 10:05:19	jerrinyomas@vjec.ac.in	Jerrin Yomas	Associate profesor	ECE	3	3	4	4	4	4	3	3
3/6/2021 10:16:04	reshmakv@vjec.ac.in	Reshma K V	Assistant Professor	AEI	3	2	3	4	3	3	3	3
3/6/2021 10:16:14	shamyasanthosh@vjec.ac.in	SHAMYA A	Assistant Professor	AEI	1	3	4	4	4	4	4	4
3/6/2021 12:38:57	binil@vjec.ac.in	Binil Kumar K	Assistant Professor	ECE	3	5	3	3	3	3	4	3
3/8/2021 10:02:36	jyothijoseph@vjec.ac.in	JYOTHI JOSEPH	ASSISTANT PROFES	EEE	3	3	3	3	3	3	3	3

## VimalJyothi Engineering College, Chemperi

### INTERNAL QUALITY ASSURANCE CELL

Workshop on AICTE EXAM REFORM POLICY

4 March 2021, 10.00 Am to 3.00 PM

#### Feedback Response sheet

Timestamp	Email Address	Faculty Name ( This name will be seen as such in the certificate)	Designation	Department	Workshop objectives where clearly stated and met	The workshop was well organized	Workshop helped me to understand competencies	Workshop helped me to understand Performance Index	Your ability to do mapping a question with relevant PI	The information presented were relevant and useful	The presenters provided adequate time for questions and answered them satisfactorily	The workshop increased my knowledge in AICTE Exam Reforms Policy
3/8/2021 11:38:20	shajgc@vjec.ac.in	SHAJI GEORGE	Assistant Professor	ME	4	4	4	3	4	5	5	4
3/8/2021 14:29:31	arunlalm@vjec.ac.in	ARUNLAL M P	Asst. Professor	ME	4	5	4	4	4	5	4	4
3/9/2021 8:39:04	mejofrancis@vjec.ac.in	Mejo M Francis	Assistant Professor	ME	4	4	4	4	4	4	4	4



**VIMAL JYOTHI ENGINEERING COLLEGE**  
**CHEMPERI, KANNUR**

**INTERNAL QUALITY ASSURANCE CELL**  
**CERTIFICATE OF PARTICIPATION**

**Adarsh K S**

**Assistant Professor**

has participated in the one day workshop on **AICTE Exam Reforms Policy 2018** on March 4, 2021, organized by Internal Quality Assurance Cell, Vimal Jyothi Engineering College, Kannur, Kerala.

**Dr. Jayesh George M**  
**IQAC Co-coordinator**

**Dr. D. Anto Sahaya Dhas**  
**IQAC Coordinator**

**Dr. Benny Joseph**



**VIMAL JYOTHI ENGINEERING COLLEGE**  
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**Dr.P.Sridharan**

**Associate Professor**

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**Dr. Jayesh George M**  
**IQAC Co-coordinator**

**Dr. D . Anto Sahaya Dhas**  
**IQAC Coordinator**

**Dr. Benny Joseph**



**VIMAL JYOTHI ENGINEERING COLLEGE**  
**CHEMPERI, KANNUR**

**INTERNAL QUALITY ASSURANCE CELL**  
**CERTIFICATE OF PARTICIPATION**

**LALY JAMES**

**Associate Professor**

has participated in the one day workshop on **AICTE Exam Reforms Policy 2018** on March 4, 2021, organized by Internal Quality Assurance Cell, Vimal Jyothi Engineering College, Kannur, Kerala.

**Dr. Jayesh George M**  
**IQAC Co-coordinator**

**Dr. D. Anto Sahaya Dhas**  
**IQAC Coordinator**

**Dr. Benny Joseph**

# **Vimal Jyothi Engineering College, Chemperi**

## **INTERNAL QUALITY ASSURANCE CELL**

### **Workshop on AICTE EXAM REFORMS POLICY**

**4 March 2021, 10.00 Am to 3.00 PM**

#### **Report**

IQAC of Vimal Jyothi Engineering College conducted a Workshop on AICTE EXAM REFORM POLICY on 4 March 2021, 10.00 AM to 3.00 PM. The workshop is started with the welcome address by the IQAC Coordinator Dr. Anto Sahaya Dhas. The schedule of the events as follows.

10.00 AM – AICTE Exam Reforms Policy and Overview

10.30 AM – POs, Competencies and PIs.

11.30 AM - Sample question papers based on new policy

2.00 PM- Discussion on the Question Papers prepared by Faculty

The above topics were handled by Dr. Benny Joseph (Principal), Dr Roshini TV (Dean Academics) and Dr. VR A Sathappan (Professor/CE). Workshop has been attended by 64 staff members from various departments. The workshop was concluded at 3.00 PM after the Vote of Thanks by Dr. Jayesh George, Assoc. Prof/ECE

Report Prepared by



Dr Jayesh George M

Workshop Coordinator  
Associate Professor  
ECE Dept, VJEC