

# Velagapudi Ramakrishna Siddhartha Engineering College

Department of CSE and Internal Quality Assurance Cell

REPORT ON  
Three Day Faculty Development Program (FDP)  
ON

## **“OBE: Importance of Outcomes, Assessment, and Evaluation for Accreditation”**

14<sup>th</sup> – 16<sup>th</sup> August 2020

**Under AICTE MARGDARSHAN**

IQAC cell and Department of Computer Science and Engineering, VRSEC has successfully organized a Three-day FDP on "OBE: Importance of Outcomes, Assessment and Evaluation for Accreditation" exclusively for Margdarshan Mentee Colleges from 14<sup>th</sup> - 16<sup>th</sup> August 2020.

**A total of 365 participants from 11 mentee colleges and host institutions have been deputed and attended the program.**

### **THE OBJECTIVES OF THIS FDP ARE:**

1. To understand the NBA Accreditation Processes
2. Demonstrate how to write the vision, mission statements
3. Demonstrate how to write PSOs and forming various committees
4. Able to illustrate CO framing, mapping Cos with POs
5. Able to measure CO and PO attainment processes
6. Building course files and program files.

### **COURSE SCHEDULE**

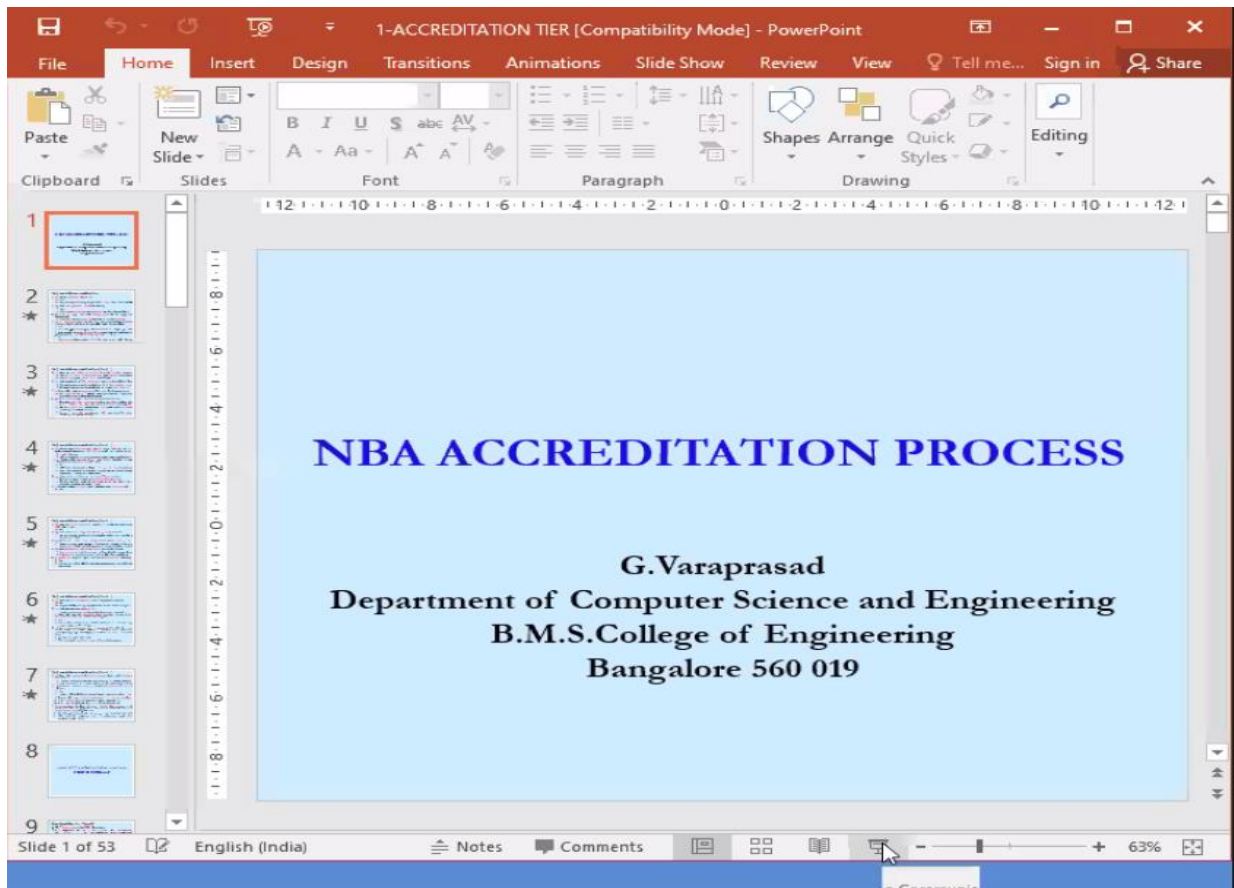
<b>Day 1: 14<sup>th</sup> August 2020</b>		
<b>Timing</b>	<b>Name of the Event</b>	<b>Name of the Speaker</b>
<b>2:10 PM to 2:15 PM</b>	<b>Registration/Inauguration</b>	
<b>2:15 PM to 3:30 PM</b>	NBA Accreditation Process	Dr.G.Varaprasad
<b>Break</b>		
<b>3:45 PM to 5:00 PM</b>	Framing Vision, Mission, PEOs, PSOs, and Various Committees	Dr.G.Varaprasad
<b>Day 2: 15<sup>th</sup> August 2020</b>		
<b>2:00 PM to 3:25 PM</b>	CO Framing and CO-PO	Dr.G. Varaprasad

	Mapping	
<b>Break</b>		
<b>3:40 PM to 5:00 PM</b>	CO Attainment Process	Dr.G. Varaprasad
<b>Day 3: 16<sup>th</sup> August 2020</b>		
<b>2:00 PM to 3:25 PM</b>	PO Attainment Process	Dr.G. Varaprasad
<b>Break</b>		
<b>3:40 PM to 5:00 PM</b>	Building Course File and Program File.	Dr.G. Varaprasad
<b>5:15 PM to 5:30 PM</b>	Valedictory	

**Speaker for these 3 days:**

Dr.G.Varaprasad

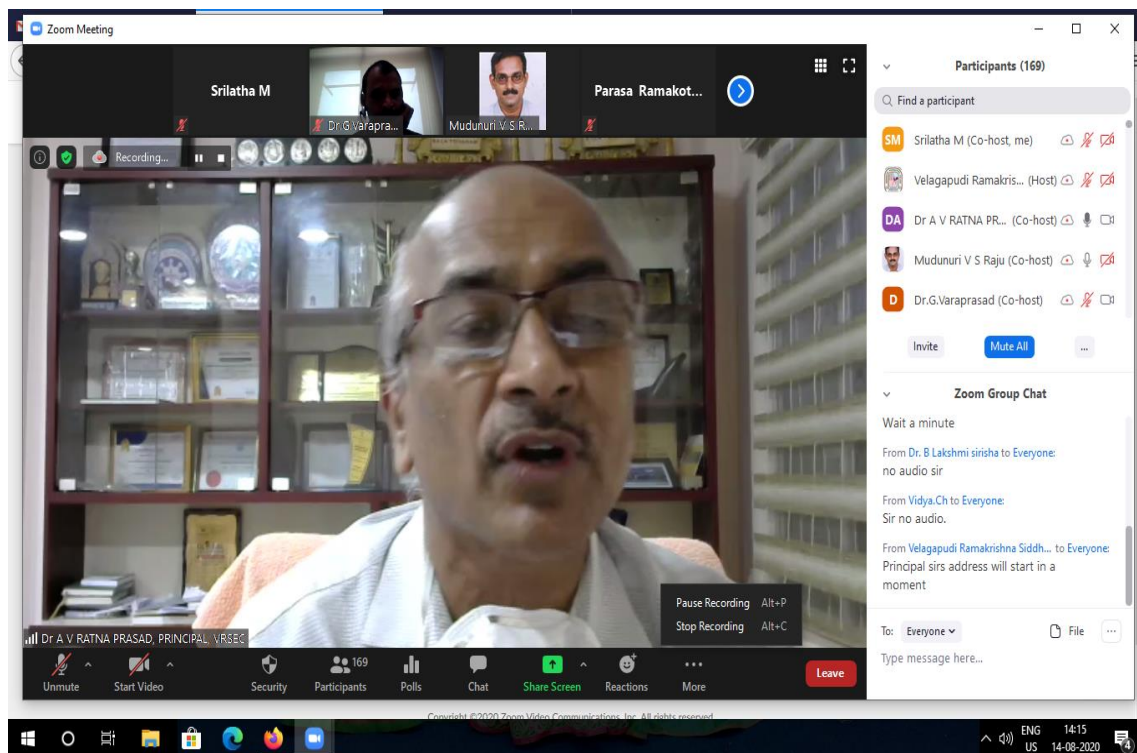
Professor, BMS College of Engineering, Bangalore.



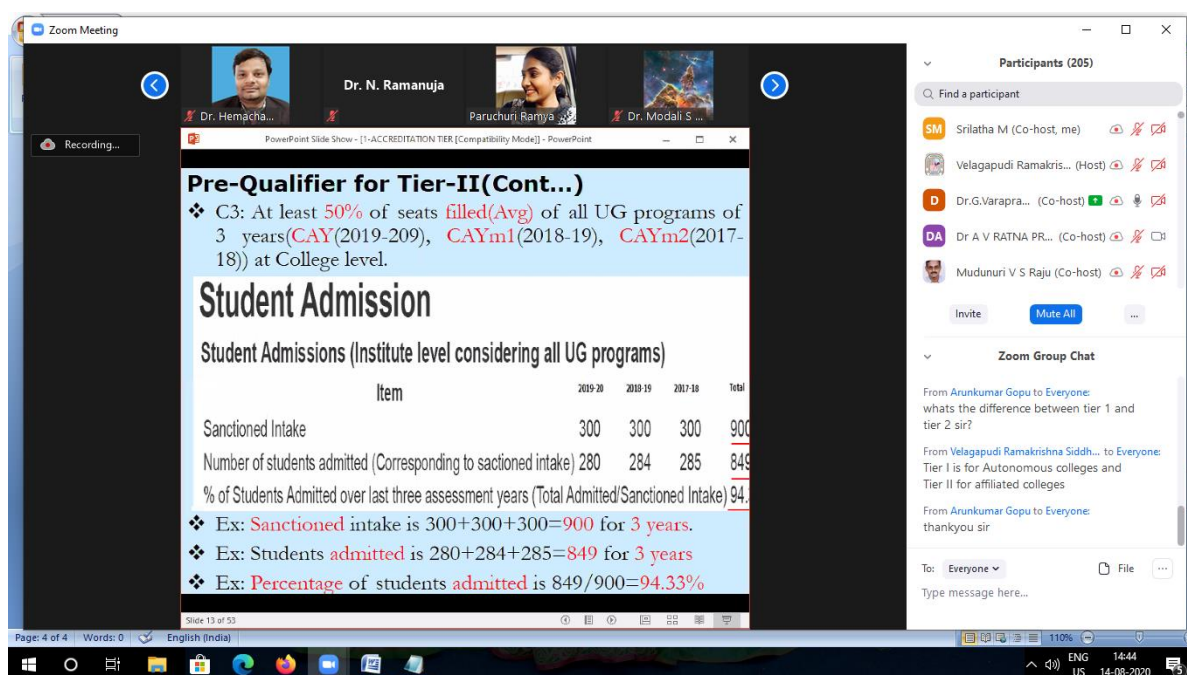
**Day 1: 14<sup>th</sup> August 2020**

**Topic: NBA Accreditation Process, Framing Vision, Mission, PEOs, PSOs, and Various Committees.**

The session started by Dr. M.V.Raju IQAC coordinator stating the importance of accreditation and outcome-based education, and the Dr. A.V Ratna Prasad, principal VRSEC explained the objective of the program, effective utilization of FDP by each faculty.



In the first half of the session, the speaker Dr. G. Vara Prasad delivered a brief lecture on Tire 1 and Tire 2 accreditation processes, the colleges which come under tire 1 and tire2 accreditation, the validity of accreditation period, pre-qualifiers for Tire1 and 2, list of criteria's and the weightage for each criterion in both Tire 1 and Tire 2 accreditation.



The screenshot shows a Zoom meeting interface. The main window displays a PowerPoint slide titled "List of Criteria & Marks and Grade". The slide contains a table with 10 rows and 7 columns. The columns are: Cn, Name, Marks, Compliance Y, Concern C, Weakness W, and Deficiency D. The rows list various criteria such as "Vision, mission and program educational objectives", "Program curriculum and teaching - learning processes", "Course outcomes and program outcomes", "Students' performance", "Faculty information and contributions", "Facilities and technical support", "Continuous improvement", "First year academics", "Student support systems", and "Governance, institutional support and financial resources".

Cn	Name	Marks	Compliance Y: >=75% to <=100%	Concern C: >=60% to <=74%	Weakness W: >=40% to <=59%	Deficiency D: >=0% to <=39%
1	Vision, mission and program educational objectives	50	37.5 to 50	30 to 37	20 to 29.5	0 to 19.5
2	Program curriculum and teaching - learning processes	100	75 to 100	60 to 74	40 to 59	0 to 39
3	Course outcomes and program outcomes	175	131.25 to 175	105 to 129.5	70 to 103.25	0 to 68.25
4	Students' performance	100	75 to 100	60 to 74	40 to 59	0 to 39
5	Faculty information and contributions	200	150 to 200	120 to 148	80 to 118	0 to 78
6	Facilities and technical support	80	60 to 80	48 to 59.2	32 to 47.2	0 to 31.2
7	Continuous improvement	75	56.25 to 75	45 to 55.5	30 to 44.25	0 to 29.5
8	First year academics	50	37.5 to 50	30 to 37	20 to 29.5	0 to 19.5
9	Student support systems	50	37.5 to 50	30 to 37	20 to 29.5	0 to 19.5
10	Governance, institutional support and financial resources	120	90 to 120	72 to 88.8	48 to 70.8	0 to 46.8

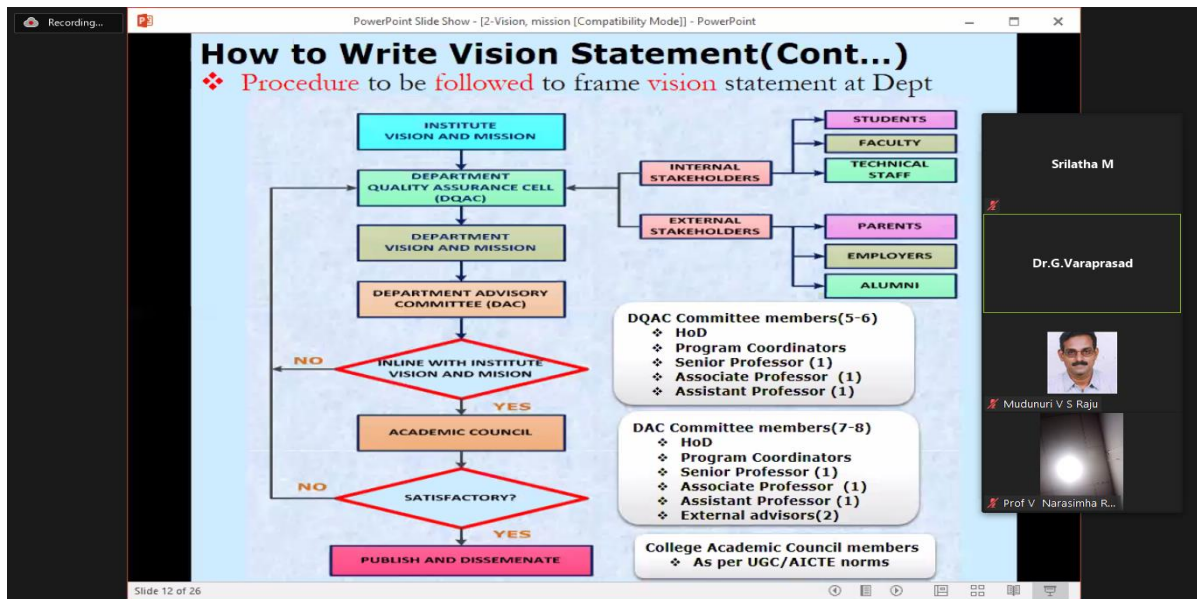
The Zoom interface also shows a list of participants on the right, including Srilatha M (Co-host), Mudunuri V S Raju (Host), Dr.G.Varaprasad (Co-host), and others. A chat window is visible at the bottom right with messages from participants.

In the second half, the complete session was oriented about how to write vision statements, mission statements concerning an institution's objective.

The screenshot shows a Zoom meeting interface. The main window displays a PowerPoint slide titled "How to Write Vision Statement(cont...)". The slide contains a list of bullet points providing guidance on writing vision statements. The Zoom interface also shows a list of participants on the right, including Srilatha M, Dr.G.Varaprasad, Mudunuri V S Raju, and Prof V Narasimha R...

- ❖ Before writing vision statement, think following questions
  - ❖ What are our hopes and dreams?
    - ❖ Ex: ABC College wants to be in top 100 Engineering Colleges in India
  - ❖ What problems are we solving for the greater good?
    - ❖ Ex: Societal problems/research programs/Industry problems
- ❖ Vision statements should be
  - ❖ Clarity
    - ❖ Ex: No ambiguity statements
  - ❖ Describing a bright future (hope)
    - ❖ Ex: Tomorrow you want to be
  - ❖ Realistic aspirations
    - ❖ Ex: Achievable
  - ❖ Alignment with organizational values and culture value
    - ❖ Ex: No compromise with ethical value
  - ❖ Time bound for achieving goal or objective
    - ❖ Typically, they are achievable after some years (6-9 years)

Next, the speaker has explained the procedure to be followed to write a vision statement and mission statement, the common mistakes which are generally reflected in PSOs, various committees for PEOs and PSOs.



## Day 2: 15<sup>th</sup> August 2020

### Topic: CO Framing, CO-PO Mapping, and CO Attainment Process

On the second day of the first session, the speaker has taken enlighten sessions on writing course outcomes following the Bloom's Taxonomy, how any Ops can be mapped to a single course, rules to be followed while writing Cos, assessment tools to evaluate COs, mapping a CO with POs.

**CO-PO Mapping for Theod** Mid exam:25 ; Assignment:5  
❖ Computer networks(Non-integrated course)→List of COs

Course outcome	Skill	PO	Bloom's	Assessing tools can be used to measure CO
CO1: Ability to <b>define, understand and explain</b> concepts of computer networks	Remember/ Understand	--	L1/L2	Exam/assignment (5 marks)
CO2: Ability to <b>apply</b> the concepts of computer networks for a given scenario.	Apply	PO1	L3	Exam/assignment (10 marks)
CO3: Ability to <b>analyse</b> given scenario and use appropriate network protocol technique.	Analyse	PO2	L4	Exam/assignment (10 marks)
CO4: Ability to <b>investigate</b> various network protocols/ techniques available in literature and <b>submit report in a team</b>	Investigations, individual work, communication	PO4, PO9, P10	L5	Assignment (3 marks)
CO5: Ability to make an effective <b>written documentation on security issues</b> followed in computer network.	Security, communication	PO6, P10	Derived it from lower blooms	Assignment (2 marks)

❖ Computer networks→CO-PO mapping

Course outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	-	-	-	-	-	-	-	-	-	-	-	-
CO2	3	-	-	-	-	-	-	-	-	-	-	-
CO3	-	3	-	-	-	-	-	-	-	-	-	-
CO4	-	-	-	3	-	-	-	-	2	2	-	-
CO5	-	-	-	-	-	3	-	-	-	2	-	-

**Participants (202)**

- Lakshmi Keshav
- Lakshmi Sowjanya Koneru
- Leema Roselin G(CSE/IFET)
- M.Ravi...
- M.V.S.Raju

**Zoom Group Chat**

Sir, Why CO1 is not mapped here?

From Dr.S.Vasavi Professor,VRSEC to Everyone: assignment assessment comes under formative or summative ?

From Durga bhavani to Everyone: formative

From Dr. Kudipudi Srinivas to Everyone: Sir, Is it necessary to design the different COs for theory course and lab course

Finally illustrated CO attainment processes concerning direct and indirect assessment tools.

Zoom Meeting

Recording... PowerPoint Slide Show - [4-CO attainment-3 [Compatibility Mode]] - PowerPoint

### Direct Assessment Tools for CO(cont.)

- ❖ Direct Assessment- CIE-Assignment (2 assignments given)
- ❖ C1: If student scores less than 60% of marks on assignment, then attainment value(AT) is 0
- ❖ C2: If student scores more than or equal 60% of marks on assignment, then attainment value(AT) is 1
- ❖ Attainment =Average value of AT X 3 of all students
- ❖ CO Attainment is (10/10)X3=3 & CO4 Attainment is (9/10)X3=2.7

COs mapped		CO4			CO5			
		Assignment 1			Assignment 2			
Maximum Marks		3			2			
SN	USN/Reg no.	Student Name	Q1a	%	AT	Q1a	%	AT
1	1NM14CS001	KRISHNAMURTHY Y G	3	100	1	2	100	1
2	1NM14CS002	M PRASHANTH	2	66.7	1	1	50	0
3	1NM14CS003	MADHURI P A	3	100	1	2	100	1
4	1NM14CS004	MANOJ V	3	100	1	2	100	1
5	1NM14CS005	MEGHANA S VASTRAMATH	2	66.7	1	2	100	1
6	1NM14CS006	MOHAN H HALUBAI	3	100	1	2	100	1
7	1NM14CS007	MOOLA OMKAR TEJA	3	100	1	2	100	1
8	1NM14CS008	MUHAMMED BASHEER	2	66.7	1	2	100	1
9	1NM14CS009	N NIKHIL JAIN	3	100	1	2	100	1
10	1NM14CS010	NIDHI JAGADEESHA	3	100	1	2	100	1
			ATX3=3			2.7		
			CO4			CO5		

Slide 28 of 38

Participants (196)

Find a participant

- Akshaya Venkat
- AJ Alaparthy Jitendra
- AR Alapati Rama Devi
- Alekhyia Gajula
- AD Ambati Dattatreya Kumar

Zoom Group Chat

2.4 for two of them sir

From Dr. Hemachandu Pattur to Everyone: both 2.4 only

From Dr. Medali S S Srinivas to Everyone: please share todays video sir for reference for us also

From M.V.S.Raju to Everyone: what is the logic for considering 0 for less than 60 and 1 for more than 60

To: Everyone

Type message here...

Zoom Meeting

Recording... PowerPoint Slide Show - [4-CO attainment-3 [Compatibility Mode]] - PowerPoint

### Indirect Assessment Tools for CO(Cont...)

- ❖ In course end survey:
- ❖ In CN course, no. of students are 10, let us assume that all 10 students submitted "course end survey forms".

Indirect Survey(ID)	CO	Exc	Good	Poor	Eff	Per
	CO1	8	2	0	2.8	93.33
	CO2	7	2	1	2.6	86.67
	CO3	9	0	1	2.8	93.33
	CO4	8	1	1	2.7	90
	CO5	9	1	0	2.9	96.67
		3	2	1	Att	%

- ❖  $CO2 = ((7*3) + (2*2) + (1*1)) / 10 = 26 / 10 = 2.6$  or  $2.6 / 3 = 86.67\%$
- ❖ CO2 attainment is 2.6 (in the scale of 3).
- ❖ CO2 attainment is  $2.6 / 3 = 86.67$  (in percentage).

Slide 22 of 38

Participants (192)

Find a participant

- AJ Alaparthy Jitendra
- AR Alapati Rama Devi
- Alekhyia Gajula
- AD Ambati Dattatreya Kumar
- A Anupama

Zoom Group Chat

co1:2.8

From Ambati Dattatreya Kumar to Everyone: 2.8 co2

From Bhavani to Everyone: sir, will u send us the recordings

From Ravi Muthamala to Everyone: while calculating direct assessment shall we consider total no. of students or total no. of attended students??

To: Raghuvira Pratap Adimul... (Privately)

Type message here...

## Day 3: 16<sup>th</sup> August 2020

### Topic: PO Attainment Process, Building Course File and Program File

On the last day of FDP, the speaker continued with PO attainment processes with assessment tolls and weights used to measure PO values in terms of direct and indirect assessment tools.

PowerPoint Slide Show - [5-PO attainment-3 [Compatibility Mode]] - PowerPoint

## FAQ on Program Outcome

- ❖ Q: Should I measure PO/PSO in scale of 3 or percentage.
  - ❖ Both can be acceptable
  - ❖ Since CO-PO mapping has done in scale of 3 (It is preferable).
  - ❖ All 12 POs and PSOs should be measured
- ❖ Q: What are assessment tools & weights used to measure PO value
  - ❖ Direct assessment tools=80%
  - ❖ Indirect assessment tools=20%
- ❖ Q: Can we use only indirect assessment tool to measure PO/PSO value
  - ❖ No.
- ❖ Q: When we should measure all PO/PSO value.
  - ❖ Generally, all POs/PSOs are to be measured at end of the year.
- ❖ Q: What is target value, I can keep for a PO/PSO.
  - ❖ Target value of PO/PSO can keep based on previous results

Next, the speaker explained about a list of direct assessment tools and indirect assessment tools for a PO, calculating the PO attainment level, 3 levels of academic audits.

PowerPoint Slide Show - [5-PO attainment-3 [Compatibility Mode]] - PowerPoint

## Final PO Attainment Level

- ❖ Direct assessment(DA) tools weightage is 80%.
- ❖ Indirect assessment(IA) tools weightage is 20%.
- ❖ Final PO attainment is  $DA \times 80\% + IA \times 20\%$ .

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
Direct	2.925	2.59	2.72	2.62	2.73	2.725	2.74	2.64	2.9	2.81	2.51	
Indirect	2.818	2.727	2.818	2.67	2.673	2.655	2.82	2.73	2.6	2.7091	2.673	
Direct (80%)	2.34	2.072	2.176	2.1	2.184	2.18	2.19	2.11	2.32	2.248	2.008	
Indirect(20%)	0.564	0.545	0.564	0.53	0.535	0.531	0.56	0.55	0.52	0.5418	0.535	
Total(80%)+20 %)	2.904	2.617	2.74	2.63	2.719	2.711	2.76	2.66	2.84	2.7898	2.543	
%	96.79	87.25	97	91.32	87.7	90.62	90.36	91.9	88.6	94.667	92.994	84.75

- ❖ Ex:PO2 attainment for Direct is 2.59; Scale down(80) is 2.072
- ❖ Ex:PO2 attainment for Indirect is 2.727;Scale down(20) is 0.545
- ❖ PO2 attainment is  $2.072 + 0.545 = 2.617$  or  $2.617/3 = 87.25\%$

kishorenandamuri@gmail.com

**Academic Auditing**

- ❖ 3 level auditing
- ❖ Focussed on POs/PSOs/COs

SN	Name of the auditing	Level	Assessment based on
1	Self Auditing	Faculty level	COs/POs/PSOs
2	PAC Auditing	Program level	COs/POs/PSOs
3	DAC auditing	Department level	COs/POs/PSOs

In the second half, the speaker presented on various contents to be included in the course file, maintaining a course file, necessity of updating course files every year.

In the valedictory Dr.A.V. Ratna Prasad, Principal addressed about the experiences with in the 3 days of FDP and at the last the vote of thanks given by Dr.D. Rajeshwara Rao, Head Department of CSE.

<b><u>Co-Ordinators</u></b>	<b><u>Chief Co-Ordinator</u></b>	<b><u>Principal</u></b>
Dr. K Suvarna Vani Professor, Department of CSE Ms. Srilatha M Asst Prof, CSE	AICTE Margdarshan Dr. D. Rajeswara Rao Professor & Head Dept of CSE	Dr. A.V Ratna Prasad