

**Five Day Faculty Development Workshop
On
*‘Outcome Based Teaching, Learning and
Assessment Strategies’***



27 NOVEMBER – 01 DECEMBER 2019

Organised by



**Internal Quality Assurance Cell (IQAC)
Cochin University of Science and Technology, Kerala**

Prof. Apparao had administrative experience of about 20 years in different capacities viz. Dean, Research & Consultancy, Founding Professor-in-charge, Centre for Innovation and Incubation, IPR Cell and MOUs, Head, Department of Biotechnology, Founding Professor in charge, Central Instrumentation Facility, Head, Department of Chemistry at NIT Warangal.

Prof. Apparao was a member of 22 Academic & Administrative Committees constituted by different institutions across the country. He was associated with the organization of 60 workshops/ conferences on various topics and many of them are related to the theme of pedagogy and outcome-based education. Prof. Apparao has trained so far about 3000 faculty members from several colleges and universities across the country. He delivered lectures in FDPs held at IIT, Madras, University of Hyderabad, BITD, NIT Warangal, JNTU Hyderabad, GITAM Hyderabad etc., on the topics, Teaching-Learning Techniques in Outcome-based Education, Student Centered Teaching and Learning, Active Learning Strategies, Bloom's taxonomy of learning, Formulation of learning outcomes, Outcomes based Assessment. He participated in many discussions on Academic Reforms. In recognition of his innovative and outstanding contribution as teacher, NIT Warangal bestowed Best Teacher Award -2014 in the entire Institute on Prof. B. V. Apparao.

Prof. B.V. Apparao superannuated as Professor of Chemistry from NIT Warangal on 31st January 2016. Nevertheless, he is active and energetic as evidenced by twelve research publications in reputed journals after his retirement. He has been associated till April 2019 with the Teaching-Learning Centre of NIT Warangal. Very recently Prof. B.V. Apparao has joined as Visiting Professor on invitation, at the University of Hyderabad.

Five Day Faculty Development Programme On 'Outcome Based Teaching, Learning and Assessment Strategies'

27 November–01 December 2019

Mini Conference Hall,
CUSAT Seminar Complex

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Cochin University of
Science and Technology, Kerala

Five Day Faculty Development Programme On 'Outcome Based Teaching, Learning and Assessment Strategies'

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About the Faculty Development Programme

So far, in all the FDPs on 'Outcome Based Education (OBE)' the structural part of OBE and the meaning of various components of OBE have been emphasized. But, how to implement OBE in colleges and universities by the faculty was not given any importance. The faculty must be trained in formulation of learning outcomes at course level, unit level and class session level. The faculty must be trained in the Outcome-based, students-centered teaching-learning strategies and instructional design. The faculty must also be given training in the Outcome-based assessment strategies and setting assignment questions and test-paper questions with an outcome-based approach. This Programme is essentially designed to empower the faculty members with the outcome-based teaching, learning and assessment strategies. This FDP is also unique in the sense that the morning sessions are devoted to the highly interactive lecture sessions and the afternoon sessions are devoted to provide hands-on experience to participants on formulation of learning outcomes, instructional design and question paper design. This FDP itself is designed with an 'Outcome-based and participant-centered' approach.

IQAC at CUSAT

The University has established Internal Quality Assurance Cell (IQAC) in 2007 in accordance with the guidelines of National Assessment and Accreditation Council (NAAC). The IQAC of CUSAT works to develop a system for conscious, consistent and catalytic improvement in the overall performance of the University. During the post accreditation period after 2016, IQAC has been channelizing all efforts to promote holistic academic excellence so as to achieve goals of quality enhancement and sustenance. IQAC constantly updates developments in the realm of Higher Education and conducts workshops and seminars to equip its team to be ready to take up challenges and tap opportunities. IQAC of CUSAT regularly intervenes in various academic matters to ensure and promote quality of academic processes. IQAC have implemented innovative schemes to promote research activities and to recognise the academic and research excellence of faculty members.

Learning outcomes of the FDP

- As a resultant outcome of the FDP, the participants will be able to
- > Explain Bloom's taxonomy of learning levels in the three domains of Learning viz. Cognitive, Psychomotor and Affective domains
 - > Formulate the learning outcomes for one unit of the course, being taught by them in the Cognitive domain
 - > Explain the modern student-centered and outcome-based teaching-learning strategies in order to enhance the quality of Science and Engineering Education
 - > Formulate the Instructional Design by integrating the active learning strategies, learning resources and assignments appropriate to the learning outcomes of any given topic
 - > Explain the outcome-based assessment strategies in order to enhance the quality of Science and Engineering Education
 - > Design Question papers in Theory Courses in accordance with the learning outcomes of the given syllabus of any given course.

Resource Person: Prof. B.V. Apparao, Visiting Professor, University of Hyderabad

Prof. B. V. Apparao had done both Masters and Doctoral programmes at Banaras Hindu University in the years 1972 and 1977 respectively. He was a postdoctoral fellow at the Central Electrochemical Research Institute. He had the choice of joining as Scientist or Lecturer. Out of passion for teaching Prof. B. V. Apparao chose teaching profession as his career. Prof. Apparao had 12 years of teaching and research experience. He taught several courses at B.Tech, M.Sc and M.Tech levels. He had consistently excellent feedback from the students in all the courses. His teaching has a very high impact on the learning outcomes of students towards excellence.

Prof. Apparao had produced 20 Ph.Ds under his guidance. His Areas of Research include Electrochemistry, Corrosion Science, Nano films for corrosion protection, Lithium ion batteries. He had 125 research publications to his credit. He has been associated with 9 major research projects, which included a pedagogy research project sponsored by IIT, Kharagpur under NMEICT. He had won many best paper awards in the field of 'Corrosion Science' and 'Corrosion Awareness Award' by NACE International -India Section in the year 2003. He has been a Life Fellow of the Society for Advancement of Electrochemical Science and Technology, Member of American Chemical Society, International Society of Electrochemistry, American Society of Engineering Education and Fellow of Jeebangana Academy of Sciences.

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■ **Learning outcomes of the FDP**

As a resultant outcome of the FDP , the participants are able to

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- Formulate the learning outcomes for one unit of the course ,being taught by them in the Cognitive domain
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- Formulate the Instructional Design by integrating the active learning strategies, learning resources and assignments appropriate to the learning outcomes of any given topic
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- Design Question papers in Theory Courses in accordance with the learning outcomes of the given syllabus of any given course

■ **Resource Person: Prof. B.V.Apparao, Visiting Professor, University of Hyderabad**

Prof. B. V. Apparao had done both Masters and Doctoral programmes at Banaras Hindu University in the years 1972 and 1977 respectively. He was a postdoctoral fellow at the Central Electrochemical Research Institute. He had the choice of joining as Scientist or Lecturer. Out of passion for teaching Prof. B. V. Apparao chose teaching profession as his career. Prof.Apparao had 42 years of teaching and research experience. He taught several courses at B.Tech, M.Sc and M.Tech levels. He had consistently excellent feedback from the students in all the courses. His teaching has a very high impact on the learning outcomes of students towards excellence.

Prof. Apparao had produced 20 Ph.Ds under his guidance. His Areas of Research include Electrochemistry, Corrosion Science, Nano films for corrosion protection, Lithium ion batteries. He had 125 research publications to his credit. He has been associated with 9 major research projects, which included a pedagogy research project sponsored by IIT, Kharagpur under NMEICT. He had won many best paper awards in the field of 'Corrosion Science', and 'Corrosion Awareness Award' by NACE International -India Section in the year 2003. He has been a Life Fellow of the Society for Advancement of Electrochemical Science and Technology, Member of American Chemical Society, International Society of Electrochemistry, American Society of Engineering Education and Fellow of Telangana Academy of Sciences.

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■ **Venue of the Programme**

Mini Conference Hall, CUSAT Seminar Complex

Schedule of Lecture Sessions and Hands-On Activity Sessions	
27/11/2019, 11.a.m to 12 noon	
Introductory Session	
28/11/2019, 9.00.a.m to 5.00 p.m	
Session1	Lecture on 'Bloom's taxonomy of Learning Levels in cognitive, psychomotor and affective domains'
Session 2	Lecture on 'Formulating learning outcomes in cognitive domain based on Bloom's taxonomy
Session 3	Hands- On session on 'Formulating learning outcomes for one unit of a course by the participants in groups'
Session 4	Presentation of outcome of each group (obtained in session 3) and Suggestions by other Participants, Resource person
29/11/2019, 9.00.a.m to 5.00 p.m	
Session1:	Lecture on 'Outcomes-Based and Student-Centered Teaching & Learning Strategies to enhance quality of Engineering Education'
Session 2:	Lecture on 'Instructional Design in Outcomes-Based Teaching & Learning'
Session 3:	Hands-On session on 'Instructional design for one unit of a course in outcomes-based teaching & learning' and for one class session (one hour)
Session 4:	Presentation of outcome of each group (obtained in session 3), Suggestions by other participants and Resource person
30/11/2019, 9.00.a.m to 5.00 p.m	
Session1:	Lecture on 'Outcomes-Based Assessment Methods and Strategies in Theory Courses to enhance quality of Engineering Education'
Session 2:	Lecture on 'Outcomes-Based Assessment Methods and Strategies in Lab Courses, Projects, Seminars to enhance quality of Engineering Education'
Session 3:	Hands-on session on 'Design of Outcomes- Based Question paper for one Unit Test of a theory Course' by the Participants
Session 4:	Presentation of outcome of each group (obtained in session 3), Suggestions by other Participants and Resource person
01/12/2019 (Sunday), 10.00.a.m to 12.00 Noon	
Concluding Session	



COCHIN UNIVERSITY OF SCIENCE AND TECHNOLOGY

No. IQAC/Seminars-Workshops/2019

16-11-2019

From,

Registrar

To,

The Heads of Departments / Directors of Schools / Centres

(as in the list attached)

CUSAT

Sir,

Sub: Conduct of Faculty Development Programme (FDP) on Outcome Based Education -
Informing of - Reg.

The University is in the process of implementing "Outcome Based Education". As a first step towards this, the Internal Quality Assurance Cell (IQAC) is conducting a five day Faculty Development Programme (FDP) on "Outcome- Based Teaching, Learning and Assessment Strategies" during 27th November to 1st December 2019, at Mini Conference Hall of CUSAT Seminar Complex.

This FDP is designed in such a way that training gained from this shall be useful in restructuring the syllabi of academic programmes. The faculty members who are attending this programme are expected to lead the concerned departments in restructuring the syllabi in an outcome based manner.

Please note that the IQAC is proposing the University to consider this FDP also in CAS Promotions of our University. As per the directions of the Vice Chancellor, the Heads of Departments are requested to nominate three competent faculty members from your department to participate in the FDP, on or before 21/11/2019. Please note that the participation is mandatory.

Yours faithfully,



REGISTRAR

Copy to:

1. PS to Vice Chancellor/PS to Pro-Vice Chancellor/PA to Registrar/PA to CE/PA to FO
2. Day File/Stock File/File Copy



List of Participants

ATTENDANCE SHEET WORKSHOP ON OUTCOME BASED EDUCATION(OBE)							
Sl. No.	Name of Faculty Members	Department	Signature				
			27/11/2019	28/11/2019	29/11/2019	30/11/2019	01/12/2019
✓ 1	Dr. Leena R	Applied Chemistry	<i>Leena</i>	<i>Leena</i>	<i>Leena</i>	<i>Leena</i>	<i>Leena</i>
✓ 2	Dr. Kala R	Applied Chemistry	<i>Kala</i>	<i>Kala</i>	<i>Kala</i>	<i>Kala</i>	<i>Kala</i>
✓ 3	Dr. Susmita De	Applied Chemistry	<i>Susmita</i>	<i>Susmita</i>	<i>Susmita</i>	<i>Susmita</i>	<i>Susmita</i>
✓ 4	Dr. V Madhu	Atmospheric Science					
✓ 5	Dr. S Abhilash <i>Dr. Abhilash S</i>	Atmospheric Science	<i>Abhilash</i>	<i>Abhilash</i>	<i>Abhilash</i>	<i>Abhilash</i>	<i>Abhilash</i>
✓ 6	Dr. Sarita G Bhat	Biotechnology	<i>Sarita</i>	<i>Sarita</i>	<i>Sarita</i>	<i>Sarita</i>	<i>Sarita</i>
✓ 7	Dr. Ajith Vengallur <i>Vengallur</i>	Biotechnology	<i>Ajith</i>	<i>Ajith</i>	<i>Ajith</i>	<i>Ajith</i>	<i>Ajith</i>
✓ 8	Dr. Baby Chakrapani P S	Biotechnology	<i>Baby</i>	<i>Baby</i>	<i>Baby</i>	<i>Baby</i>	<i>Baby</i>
✗ 9	Dr. S. Muralidharan Nair	Chemical Oceanography					
✗ 10	Dr. C.H. Sujatha	Chemical Oceanography					
✓ 11	Dr. Habeeb Rahman K	Chemical Oceanography	<i>Habeeb</i>	<i>Habeeb</i>	<i>Habeeb</i>		
✓ 12	Dr. A Sreekumar,	Computer Application					
✓ 13	Smt. Rafidha Rehiman K A	Computer Application	<i>Rafidha</i>	<i>Rafidha</i>	<i>Rafidha</i>	<i>Rafidha</i>	<i>Rafidha</i>

Sl. No.	Name of Faculty Members	Department	Signature				
			27/11/2019	28/11/2019	29/11/2019	30/11/2019	01/12/2019
✗ 14	Smt. Malathi S	Computer Application	<i>Malathi</i>	<i>Malathi</i>	<i>Malathi</i>	<i>Malathi</i>	<i>Malathi</i>
✓ 15	Dr. Philip Samuel	Computer Science	<i>Philip</i>	<i>Philip</i>	<i>Philip</i>	<i>Philip</i>	<i>Philip</i>
✓ 16	Dr. Madhu S Nair	Computer Science	<i>Madhu</i>	<i>Madhu</i>	<i>Madhu</i>	<i>Madhu</i>	<i>Madhu</i>
✓ 17	Mr. K.B. Muralidharan	Computer Science	<i>K.B.</i>	<i>K.B.</i>	<i>K.B.</i>	<i>K.B.</i>	<i>K.B.</i>
✓ 18	Dr. Deepti Das Krishna	Electronics	<i>Deepti</i>	<i>Deepti</i>	<i>Deepti</i>	<i>Deepti</i>	<i>Deepti</i>
✓ 19	Dr. Tripti S Warriar	Electronics	<i>Tripti</i>	<i>Tripti</i>	<i>Tripti</i>	<i>Tripti</i>	<i>Tripti</i>
✓ 20	Smt. Kumari V Y Vidhu	Electronics	<i>Vidhu</i>	<i>Vidhu</i>	<i>Vidhu</i>	<i>Vidhu</i>	<i>Vidhu</i>
✓ 21	Dr. Usha K	Environmental Studies	<i>Usha</i>	<i>Usha</i>	<i>Usha</i>	<i>Usha</i>	<i>Usha</i>
✓ 22	Dr. Anand M	Environmental Studies	<i>Anand</i>	<i>Anand</i>	<i>Anand</i>	<i>Anand</i>	<i>Anand</i>
✓ 23	Dr. Ratheesh Kumar . C . S	Environmental Studies	<i>Ratheesh</i>	<i>Ratheesh</i>	<i>Ratheesh</i>	<i>Ratheesh</i>	<i>Ratheesh</i>
✓ 24	Dr. Ancy V.P.	Industrial Fisheries	<i>Ancy</i>	<i>Ancy</i>	<i>Ancy</i>	<i>Ancy</i>	<i>Ancy</i>
✓ 25	Dr. Joney Issac <i>Joney Issac</i>	Instrumentation	<i>Joney</i>	<i>Joney</i>	<i>Joney</i>	<i>Joney</i>	<i>Joney</i>
✓ 26	Dr. Reju V G	Instrumentation	<i>Reju</i>	<i>Reju</i>	<i>Reju</i>	<i>Reju</i>	<i>Reju</i>
✗ 27	Mr. Ratheesh P M	Instrumentation					

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			27/11/2019	28/11/2019	29/11/2019	30/11/2019	01/12/2019
28	Dr Swapna P. Antony	Marine Biology, Microbiology & Biochemistry					
29	Dr. N. R. Nisha	Marine Geology & Geophysics					
30	Dr. P. Ajayakumar, P	Marine Geology & Geophysics					
31	Dr. Shery Fernandez	Mathematics					
32	Dr. V.B Kiran Kumar	Mathematics					
33	Dr. Ambily A.A	Mathematics					
34	Mr. Shibir S P	NCAAH					
35	Dr. Sajeevan T P	NCAAH					
36	Dr. Jayesh Puthumana	NCAAH					
37	Dr. Saji K J	Photonics					
38	Mr. K P Mohammed Rishad K P	Photonics					
39	Dr. Manu Vaishakh	Photonics					
40	Dr. P K Saji	Physical Oceanography					

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			27/11/2019	28/11/2019	29/11/2019	30/11/2019	01/12/2019
41	Dr. V Vijith	Physical Oceanography					
42	Dr. Asha A S	Physics					
43	Dr. Sabeena M	Physics					
44	Dr. Charles Jose	Physics					
45	Dr. Prasanth R	Polymer Science & Rubber Technology					
46	Dr. Sailaja G.S	Polymer Science & Rubber Technology					
47	Dr. Abhitha K	Polymer Science & Rubber Technology					
48	Dr. Asha Gopalakrishnan	Statistics					
49	Dr. Rajesh G	Statistics					
50	Dr. Irshad M R	Statistics					
51	Dr. Suja Haridas	Applied Chemistry					
52	Prof. M. Haikrishnan	Industrial Fisheries					
53	Dr. Minisekharan	"					

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✓ 54	Dr. S. Babu	Industrial Fisheries					
✓ 55	K. Sathesani	Atmospheric Sciences					
✓ 56	Asha Gokulakrishnan	Dept of Statistics					
✓ 57	Deepthi Jan Krishna	Dept of Electronics					
✓ 58	Kumary V. V. Vethu	Dept of Electronics					
✓ 59	Tripti S. Warrior	Dept. of Electronics					
✓ 60	Dr. K. B. Padmakumari	Dept. of Mathematics					
✓ 61	Dr. H. V. Judy M.V	(DCA) Dept of Comp Applica					
✓ 62	Sankish Kumar G	Dept. of Comp Sc.					
✓ 63	Dr. RHINE KUMAR AH	Dept. OF PHYSICS					
✓ 64	Dr. SHAIJU P	C-SiS					
✓ 65	Dr. ANOOP. K. K.	DEPT. OF PHYSICS					