Report on an Interactive Webinar Series on "Outcome – Based Curriculum Design"
1st – 5th August 2022

A. Preamble

Office of Director, Internal Quality Assurance Cell (IQAC) and Office of Dean Academic Affairs (AA) organized an Interactive Webinar Series on Outcome - Based Curriculum Design during 1st - 5th August 2022 in Seminar – Hall I, Convention Centre. Around 150 faculty members from various departments / schools participated in the webinar series and got benefitted. An eminent personality and educationalist, Prof. Dr. N. J. Rao, Professor Rtd. IISC Bengaluru was the resource person for all the 5 days and the event was conducted through blended mode. Timings: 10 a.m. – 1 p.m. on all the days.

B. Details of webinar series, topics covered in sessions and faculty participation

The inaugural function of interactive webinar series was held on 01.08.2022, 9.30 a.m. Dr. A. Peer Mohamed, Vice Chancellor gave special address followed by felicitation from Dr. N. Raja Hussain, Registrar. Dr. A. Abudhahir, Director, IQAC introduced the resource person to the audience. Dr. M.S. Haji Sheik Mohammed gave welcome address and vote of thanks was delivered by Dr. M. Mohamed Ismail, Deputy Dean, AA.

i. Organizing committee

Conveners	Co-Conveners
	Dr. A. Mohammed Ismail Deputy Dean (Academic Affairs)
Dr. A. Abudhahir Director (IQAC)	
	Dr. M. Mohammed Thaha Assistant Director (IQAC)
Dr. M. S. Haji Sheik Mohammed Dean (Academic Affairs)	Dr. N. Rajendran Assistant Director (IQAC)

ii. Details of day wise topics covered

Session	Topics Covered
Day 1: 01.08.2022	Basics of Curriculum Design
Day 2: 02.08.2022	Taxonomy of Teaching, Learning and Assessment
Day 3: 03.08.2022	Assessment and Accreditation
Day 4: 04.08.2022	Design of Courses
Day 5: 05.08.2022	Cases of Curriculum Design

Day 1: Basics of Curriculum Design

- Curriculum design and evolution of engineering education in India
- Things to do in teaching, learning and assessment; OBE, accreditation, features of NEP 2020 and integration of ICT
- Current status of engineering education process and focus of NEP 2020
- Education 4.0 as blended learning
- Undergraduate level NEP sections and its relevancy
- Goals of NEP in higher education
- Planned instructional activities of organization towards the attainment of outcomes
- Framework for designing the curriculum

Day 2: Taxonomy of Teaching, Learning and Assessment

- Basics of learning outcome, introduction of outcome based education
- Taxonomy of learning - Bloom's Taxonomy and its dimensions
- Cognitive, affective, psychomotor, integrated and changing domains
- Action verbs in various levels of learning with sample activities and questions
- Critical thinking, problem solving and hierarchy of cognitive processes
- Higher orders of learning and nature of courses in engineering
- Categories of knowledge specific to Engineering
- Relation between Engineering, Science and Applied Science etc

- Fundamental design concepts and practical constrains

- Revised Bloom Vincenti (RBV) Taxonomy

- Elements of a course (course outcome, assessments and instructional activities)

- Structure of course outcome statement with action verbs with example

- Errors in course outcome and tagging course outcome with knowledge categories, PSOs

Day 3: Assessment and Accreditation

- ✓ Three levels of educational assessment (classroom, programme and institution)

- ✓ Types of assessment (formative, summative) and nature of assessment

- ✓ Test items and question: selection, supply and performance types of test items

- ✓ Assessment instruments: quiz, mid-term test, final exam and group projects etc.

- ✓ Evaluation: scoring and rubrics - elements and structure of a rubric with example

- ✓ Dimensions: weightage, scale, scoring criteria with sample rubric

- ✓ Complexity and difficulty of assessment items

- ✓ Sample items of different difficulty levels (task, content, stimulus and psychological)

Day 4: Design of Courses

- ➢ Components of teaching, course design and learning

- ➢ Instructional system design (ISD) or framework; Effective, Efficient and Engaging

- ➢ ADDIE - and ISD model; Analysis, Design, Development, Implement and Evaluate

- ➢ Detailed discussion on ADDIE and its important features

- ➢ Short description on other ISDs used; SAM (Successive Approximation Model)

- ➢ Rapid Prototyping, Dick and Carey Systems Approach Model

- ➢ Instructional Development Learning System (IDLS)

- ➢ Objectives-Resources-Activities (ORA) model, Smith/Ragan Model

- ➢ Morrison/Ross/Kemp Model, Understanding by Design (Backwards Design)

Day 5: Cases of Curriculum Design

- ❖ Evolution of Engineering Education

- ❖ Focus on National Education Policy (NEP) 2020 & related challenges

- ❖ Requirement of curriculum design

- ❖ Multiple Entry and Multiple Exit (MEME) programmes and its requirements

- ❖ Curriculum structure with example of ECE curriculum with programme specific outcomes

- ❖ Courses in each year (I-IV) with employable skills (ECE, CS and EEE programmes)
- ❖ Course outcome with the example of mechanical engineering course
- ❖ Responsibility of Institution in implementation of course outcomes

At the end of every session, exclusive question & answer session was conducted to clarify the doubts and understanding of participants which was moderated by Director, IQAC. The course materials were also shared to the participants for furthering their knowledge in the Outcome Based Education.

III. Details of participants - Annexure - 1
146 faculty members from Engineering and Science streams were actively participated and benefited. The list of participants is given in Annexure - 1.

IV. Photos taken during the event

Inaugural Address by Dr. A. Peer Mohammed, Vice Chancellor

Felicitation Address by Dr. N. Raja Hussain, Registrar

Welcome Address by Dean, AA and Introduction of Resource Person by Director (IQAC)

Participation of Faculty Members in the Webinar Series

Invitation of the Webinar Series

Program Schedule
Date 01.08.2022

10.00 AM	-	Qirath
10.05 AM	-	Welcome Address - Dean (Academic Affairs)
10.10 AM	-	Inaugural Address - Vice-Chancellor
10.15 AM	-	Felicitation Address - Registrar
10.20 AM	-	Introduction of the Resource Person - Director (IQAC)
10.25 AM	-	Vote of Thanks - Deputy Dean (Academic Affairs)
10.30 AM	-	Session Starts

Day-wise Session Schedule

01.08.2022	-	Basis for Curriculum Design
02.08.2022	-	Taxonomy of Teaching, Learning, and Assessment
03.08.2022	-	Assessment and Accreditation
04.08.2022	-	Design of Courses
05.08.2022	-	Cases of Curriculum Design

Programme Schedule of the Webinar Series

Dr. A. Abudhahir
Director, IQAC

Prof.A.Abudhahir,B.E.,M.E.E.,Ph.D.,
Director Internal Quality Assurance Cell (IQAC)
B.S.Abdur Rahman
Crescent Institute of Science & Technology
Vandalur,Chennai - 600 048.

Dr. M.S. Haji Sheik Mohammed
Dean, Academic Affairs

Dr. M.S. HAJI SHEIK MOHAMMED
B.E., M.S., Ph.D., MICI, MASCE, MRILEM, MNACE
Dean (Academic Affairs)
B.S. Abdur Rahman Crescent Institute of Science & Technology
Vandalur, Chennai - 600 048, India

Interactive Webinar Series on "Outcome – Based Curriculum Design", 1 - 5 August 2022
List of Participants

S. No.	Name of the Faculty Member	Designation	School / Department
1	Mr. Karthikeyan Selvaraj	Assistant Professor	Aerospace
2	Dr. S.M. Satheesh	Assistant Professor	Aerospace
3	Mr. Rajmohan Nagarajan	Assistant Professor	Automobile
4	Dr. C. Dineshkumar	Assistant Professor	Automobile
5	Dr. C.K. Arvinda Pandian	Assistant Professor (Sr. Gr.)	Automobile
6	Dr. P.D. Jayakumar	Associate Professor & HOD	Automobile
7	Dr. D. Easwaramoorthy	Professor	Chemistry
8	Dr. J. Herbert Mabel	Assistant Professor (Sr. Gr.)	Chemistry
9	Dr. M. Asha Jhonsi	Assistant Professor (Sr. Gr.)	Chemistry
10	Dr. K. Shakeela	Assistant Professor	Chemistry
11	Dr. N. Hajarabeevi	Professor	Chemistry
12	Dr. A. Shajahan	Associate Professor	Chemistry
13	Dr. S. Kutti Rani	Professor	Chemistry
14	Ms. K. Kanmani	Assistant Professor	Civil
15	Mr. A. Sheik Farid	Assistant Professor	Civil
16	Mr. S. Dhamodharan	Assistant Professor	Civil
17	Mr. Y. Ibrahim	Assistant Professor	Civil
18	Ms. N. Manicka Priya	Assistant Professor	Civil
19	Dr. K. Yogeswari	Professor	Civil
20	Ms. M. Ayisha Sidiqua	Assistant Professor	Civil
21	Dr. P. Gajalakshmi	Professor	Civil
22	Mr. A. Manivannan	Assistant Professor	Civil
23	Dr. M.S. Haji Sheik Mohammed	Professor	Civil
24	Dr. A.K. Kaliluthin	Associate Professor	Civil
25	Dr. S. Pakkir Mohideen	Professor	Computer Application
26	Dr. C. Senthil Selvi	Assistant Professor	Computer Application
27	Dr. N. Ayyanathan	Professor	Computer Application
28	Dr. P. Amudhavalli	Assistant Professor	Computer Application
29	Dr. A.K. Ashfauk Ahamed	Assistant Professor	Computer Application
30	Dr. R. Sonia	Assistant Professor	Computer Application
31	Ms. P. Padmavathy	Assistant Professor (Sr. Gr.)	Computer Application
32	Dr. S. Shahar Banu	Associate Professor	Computer Application
33	Dr. Md Oqail Ahmad	Assistant Professor	Computer Application

34	Dr. A. Jahir Husain	Assistant Professor	Computer Application
35	Dr. V. Prasanna	Assistant Professor	Computer Application
36	Dr. A. Abdul Azeez Khan	Associate Professor	Computer Application
37	Dr. K. Javubar Sathick	Associate Professor	Computer Application
38	Dr. A. Jaya	Professor	Computer Application
39	Dr. M. Deepika	Assistant Professor	Computer Application
40	Dr. S.P. Chithra Preetha	Assistant Professor	Computer Application
41	Dr. I. Parvin Begum	Assistant Professor	Computer Application
42	Dr. F. Abubecker	Assistant Professor (Sel. Gr.)	CSB / Management Studies
43	Dr. K. Srinivasan	Professor	CSB / Management Studies
44	Dr. H. Moideen Batcha	Assistant Professor	CSB / Management Studies
45	Dr. D. Asokk	Assistant Professor	CSB / Management Studies
46	Dr. Joseph Mary Rahila	Assistant Professor	CSB / Management Studies
47	Dr. M. Shanmugam	Professor	CSB / Management Studies
48	Dr. J. Hemalatha	Assistant Professor	CSB / Management Studies
49	Dr. T. Rocky Devi	Assistant Professor	CSB / Management Studies
50	Dr. S. Bhuvaneswari	Assistant Professor	CSB / Management Studies
51	Dr. Ritu Gangil	Assistant Professor	CSB / Management Studies
52	Dr. V. Muthupriya	Assistant Professor (Sel. Gr.)	CSE
53	Dr. S. Revathi	Professor	CSE
54	Dr. W. Aisha Banu	Professor	CSE
55	D. Madhina Banu	Assistant Professor (Sr. Gr.)	CSE
56	Ms. Preeti Verma	Assistant Professor	CSE
57	Dr. E. Syed Mohamed	Professor	CSE
58	Ms. Karthiga	Assistant Professor	CSE
59	Dr. M. Mohammed Thaha	Assistant Professor	CSE
60	Dr. L. Arun Raj	Associate Professor	CSE
61	Dr. A. Priya	Assistant Professor (Sr. Gr.)	ECE
62	Dr. A. Ambika	Assistant Professor (Sr. Gr.)	ECE
63	Dr. V. Jean Shilpa	Assistant Professor	ECE
64	Dr. S. Kalaivani	Assistant Professor (Sr. Gr.)	ECE
65	Dr. K. Indragandhi	Assistant Professor (Sr. Gr.)	ECE
66	Dr. M. Vanmathi	Assistant Professor (Sr. Gr.)	ECE
67	Dr. Parnasree Chakraborty	Assistant Professor (Sr. Gr.)	ECE
68	Dr. C. Tharini	Professor	ECE
69	Dr. G. Kannan	Associate Professor	ECE
70	Dr. M. Mohamed Ismail	Professor	ECE
71	Ms. M. Padma Usha	Assistant Professor (Sr. Gr.)	ECE
72	Ms. B. Sivashamugavalli	Assistant Professor	ECE
73	Ms. G. Anuradha	Assistant Professor (Sr. Gr.)	ECE
74	Dr. Y. Mohamed Shuaib	Professor	EEE

75	Ms. Belwin J.Brearley	Assistant Professor (Sr. Gr.)	EEE
76	Dr. K. Sarmila Har Begam	Assistant Professor	EEE
77	Ms. Bharanigha	Assistant Professor	EEE
78	Mr. S. Suresh	Assistant Professor	EEE
79	Dr. S. Jennathu Beevi	Assistant Professor (Sr. Gr.)	EEE
80	Dr. R. Jayashree	Professor	EEE
81	Dr. G. Anitha	Assistant Professor (Sel. Gr.)	EIE
82	Dr. M.S. Murshitha Shajahan	Assistant Professor (Sr. Gr.)	EIE
83	Dr. D. Najumnissa	Professor	EIE
84	Dr. A. Abudhahir	Professor	EIE
85	Dr. H. Sofia	Professor	English
86	Dr. A. Sulochana	Assistant Professor	English
87	Dr. S. Sakthivel	Assistant Professor	English
88	Dr. S.I. Muththamizh Selvi	Assistant Professor	English
89	Dr. N. Sheik Hameed	Assistant Professor	English
90	Mr. T. Sugadev	Assistant Professor	English
91	Dr. Sweta Ravindran	Assistant Professor	English
92	Dr. Uma Maheswari	Assistant Professor	English
93	Dr. P. Gnanasekaran	Assistant Professor	IT
94	Dr. I. Sathik Ali	Professor	IT
95	Dr. N. Prakash	Professor	IT
96	Dr. P. Latchoumy	Associate Professor	IT
97	Dr. G. Kavitha	Professor	IT
98	Dr. N. Rajendran	Assistant Professor (Sr. Gr.)	IT
99	Dr. M. Kabeer	Associate Professor	IT
100	Dr. C. Simon Durairaj	Assistant Professor	Life Sciences
101	Dr. A. Baskaran	Assistant Professor	Life Sciences
102	Dr. S.M. Fazeela Mahaboob Begum	Assistant Professor	Life Sciences
103	Dr. Mubarakali Davoodbasha	Assistant Professor	Life Sciences
104	Dr. S. Ranjani	Assistant Professor	Life Sciences
105	Dr. Karthikeyan Ramalingam	Professor	Life Sciences
106	Dr. I. Faridha Begum	Assistant Professor	Life Sciences
107	Dr. Naseer Hussain	Assistant Professor	Life Sciences
108	Dr. Shazia Jamal	Assistant Professor (Sel. Gr.)	Life Sciences
109	Dr. Md. Khurshid Alam Khan	Associate Professor	Life Sciences
110	Dr. P. Ashok Kumar	Associate Professor	Life Sciences
111	Dr. Ramesh Rao	Associate Professor	Mathematics & AS
112	Dr. A. Akilbasha	Assistant Professor	Mathematics & AS
113	Dr. P. Arathi	Assistant Professor	Mathematics & AS
114	Ms. M.V. Jeyanthi	Assistant Professor	Mathematics & AS
115	Dr. Mohamed Bak Kamaludeen	Assistant Professor	Mechanical

116	Dr. H. Siddhi Jailani	Professor	Mechanical
117	Dr. A.S. Selvakumar	Professor	Mechanical
118	Dr. M. A. Sai Balaji	Associate Professor	Mechanical
119	Dr. M. Thirumurugan	Associate Professor	Mechanical
120	Dr. S. Mohamed Illyas	Assistant Professor (Sr. Gr.)	Mechanical
121	Dr. S. Jeavudeen	Assistant Professor (Sr. Gr.)	Mechanical
122	Mr. N. Ravikumar	Assistant Professor	Mechanical
123	Dr. Md. Javeed Ahamed	Assistant Professor	Mechanical
124	Dr. N. Sirajudeen	Assistant Professor	Mechanical
125	Mr. A. Varunkumar	Assistant Professor	Mechanical
126	Mr. S. Loganathan	Assistant Professor	Mechanical
127	Mr. Syed Shaul Hameed	Assistant Professor	Mechanical
128	Dr. G. Rajesh	Assistant Professor	Mechanical
129	Dr. M. Pervaz Ahmed	Assistant Professor	Mechanical
130	Dr. Serajul Haque	Assistant Professor	Mechanical
131	Dr. D.R. Rajendran	Assistant Professor	Mechanical
132	Dr. Ravi Kumar	Assistant Professor	Mechanical
133	Dr. S. Rasool Mohideen	Professor	Mechanical
134	Dr. G. V. Vijayaraghavan	Professor & Head	Physics
135	Dr. M. Mohamed Shiek Sirajuddeen	Assistant Professor (Sel. Gr.)	Physics
136	Dr. R. Amiruddin	Assistant Professor	Physics
137	Dr. M. Vijayajayanthi	Assistant Professor	Physics
138	Dr. J. Shahitha Parveen	Assistant Professor	Polymer
139	Mr. Basanta Kumar Behera	Assistant Professor (Sr. Gr.)	Polymer
140	Dr. Revathi Purushothaman	Professor & HOD	Polymer
141	Dr. Nabeena Ameen	Assistant Professor (Sr. Gr.)	IT
142	Dr. Latha Tamilselvan	Professor	IT
143	Dr. S. Kaja Mohideen	Sr. Professor	ECE
144	Dr. Vasanthi Padmanaban	Professor & Dean	Civil
145	Dr. Mohd Shahanbaj Khan	Assistant Professor	Life Sciences
146	Dr. P.N. Kadiresh	Professor & HOD	Aerospace