
Department of Electronics and Communication Engineering

A Report on

Five-Day workshop on

"Outcome-Based Curriculum Design and Implementation"

from 21/04/2025 to 25/04/2025

A Five-Day Workshop on "Outcome-Based Curriculum Design and Implementation" was organized by the Department of Electronics and Communication Engineering from 21/04/2025 to 25/04/2025 for the faculty members of the institution. A total of 50 faculty members actively participated in the workshop. The primary objective of the program was to strengthen faculty competencies in Outcome-Based Education (OBE), outcome-based curriculum design, effective curriculum implementation, assessment and attainment methodologies, and Continuous Quality Improvement (CQI) practices.

Day-1: 21 April 2025 Inaugural Session 9:15 am to 9:45 am

The workshop commenced with the lighting of the ceremonial lamp followed by the welcome address delivered by **Dr. Ravi Bolimera**, Convener of the workshop. The Director, **Prof. C.V Krishna Reddy**, emphasized the importance of curriculum innovation in autonomous institutions and highlighted the role of Outcome-Based Education in enhancing the quality of engineering graduates and encouraged faculty members to actively participate in curriculum reforms to meet industry expectations and global educational standards.

Department of Electronics and Communication Engineering

Organizing

A Five Day Workshop on

Outcome-Based Curriculum Design and Implementation

Date: 21-04-2025 to 25-04-2025

Venue: ECE Seminar Hall

Coordinator
Dr. Ravi Bolimera
HoD - ECE, NNRG

Day-1: 21 April 2025 (9:45 am - 11:00 am)

Session 1: Introduction to Curriculum Development in Engineering Education

Speaker: Prof. C.V Krishna Reddy, Director, NNRG

The inaugural session introduced the concept and significance of curriculum development in engineering education. The speaker explained the evolution of engineering curricula from content-based to outcome-based models and emphasized the need for curriculum flexibility to address technological advancements and societal needs. The session highlighted the role of autonomous institutions in designing innovative curricula that enhance graduate quality and employability.



Prof C.V Krishna Reddy, Director, NNRG, delivering talk on Curriculum development

Day-1: 21 April 2025 (11:10 am-1:15 pm)

Session 2: Principles and Models of Curriculum Design

Speaker: Prof. C.V Krishna Reddy, Director, NNRG

The speaker discussed the fundamental principles governing curriculum design, including relevance, flexibility, progression, integration, and learner-centeredness. Various curriculum models such as subject-centered, competency-based, and Outcome-Based Education (OBE) models were explained with suitable examples. Faculty members were guided on selecting an appropriate model based on institutional objectives and stakeholder expectations.

Day-1: 21 April 2025 (2:00 pm-4:00 pm)

Session 3: Institutional Vision, Mission, and Program Educational Objectives (PEOs)

Speaker: Prof. G Janardhana Raju, Dean-SoE, NNRG

This session focused on aligning curriculum development with the institutional Vision, Mission, and Program Educational Objectives (PEOs). The resource person explained how PEOs reflect the expected accomplishments of graduates and should be formulated considering stakeholder expectations. The importance of ensuring consistency between institutional goals and program objectives was emphasized.



Day-2: 22 April 2025 (9:15 am-11:00 am)

Session 4: NBA Accreditation Requirements for Curriculum Development

Speaker: Dr P.A Harshavardhini, Professor, VITS

The speaker elaborated on the curriculum-related requirements of NBA accreditation under Outcome-Based Education. The session covered Program Outcomes (POs), Program Specific Outcomes (PSOs), Course Outcomes (COs), curriculum mapping, and Continuous Quality Improvement (CQI). Faculty members were also introduced to the documentation and evidence required during NBA accreditation.

Day-2: 22 April 2025 (11:10 am-1:15 pm)

Session 5: Stakeholder Participation in Curriculum Development

Speaker: Dr P.A Harshavardhini, Professor, VITS

This session highlighted the importance of involving stakeholders such as students, alumni, employers, industry experts, faculty members, and parents in curriculum development. The speaker explained different mechanisms for collecting and analyzing stakeholder feedback and demonstrated how these inputs contribute to curriculum revision, ensuring academic relevance and industry alignment.

Day-2: 22 April 2025 (2:00 am-4:00 am)

Session 6: Curriculum Structure and Credit Framework

Speaker: Dr Ramesh, IQAC Convener, NNRG

The speaker explained the principles of designing an effective curriculum structure and credit distribution in accordance with AICTE and NEP guidelines. Topics included categorization of courses, credit allocation, interdisciplinary learning, open electives, and skill enhancement courses. The session emphasized balancing theory, laboratory work, projects, internships, and experiential learning.

Day-3: 23 April 2025 (9:15 am-11:00 am)

Session 7: Syllabus Design and Course Planning

Speaker: Prof. C.V Krishna Reddy, Director, NNRG

The session focused on preparing comprehensive course syllabi that clearly define course objectives, outcomes, learning resources, and assessment strategies. The speaker explained the importance of sequencing topics logically and incorporating practical applications, laboratory exercises, case studies, and emerging technologies to improve student learning experiences.

Day-3: 23 April 2025 (11:10 am-1:15 pm)

Session 8: Writing Course Outcomes (COs) Using Revised Bloom's Taxonomy

Speaker: Dr Ramesh, IQAC Convener, NNRG

The speaker provided detailed guidance on formulating measurable Course Outcomes using the Revised Bloom's Taxonomy. Faculty members learned to write COs using appropriate action verbs representing different cognitive levels such as Remember, Understand, Apply, Analyze, Evaluate, and Create. Practical exercises helped participants develop well-defined and measurable outcomes.

Day-3: 23 April 2025 (2:00 pm-4:00 pm)

Session 9: CO–PO Mapping Methodology

Speaker: Dr Ramesh, IQAC Convener, NNRG

The resource person explained the methodology for mapping Course Outcomes with Program Outcomes and Program Specific Outcomes. The significance of assigning appropriate correlation levels and preparing CO–PO mapping matrices was discussed in detail. The session demonstrated how effective mapping supports outcome attainment analysis and NBA compliance.

Day-4: 24 April 2025 (9:15 am-11:00 am)

Session 10: Course Assessment and Evaluation Methodology

Speaker: Prof. G Janardhana Raju, Dean-SoE, NNRG

This session covered various assessment tools used for measuring student learning, including internal examinations, assignments, laboratory assessments, quizzes, seminars, projects, and end-semester examinations. The speaker explained the alignment between assessment methods and Course Outcomes and discussed the preparation of comprehensive assessment plans.

Day-4: 24 April 2025 (11:10 am-1:15 pm)

Session 11: Teaching-Learning Strategies for Effective Curriculum Implementation

Speaker: Dr T Kishore Kumar, Senior Professor, NIT Warangal

The speaker introduced innovative teaching-learning methodologies that support Outcome-Based Education. Active learning, flipped classrooms, project-based learning, experiential learning, collaborative learning, ICT-enabled teaching, and industry interactions were discussed. Faculty members were encouraged to adopt student-centered pedagogical approaches for improved learning outcomes.



Dr T. Kishore Kumar, Senior Professor, NIT Warangal, delivering talk on Teaching Learning Strategies

Day-4: 24 April 2025 (2:00 pm-4:00 pm)

Session 12: Assessment and Outcome Attainment

Speaker: Dr T Kishore Kumar, Senior Professor, NIT Warangal

The session explained the systematic process of calculating Course Outcome attainment, Program Outcome attainment, and Program Specific Outcome attainment. Methods for analyzing direct and indirect assessment data were presented along with attainment targets and gap analysis. The role of attainment analysis in Continuous Quality Improvement was emphasized.

Day-5: 25 April 2025 (9:15 am-11:00 am)

Session 13: Integration of Employability, Skill Development, and Emerging Technologies

Speaker: Dr G Mallikarjuna Rao, SC-Group Director, DRDO

The speaker discussed strategies for incorporating employability skills, industry certifications, entrepreneurship, internships, innovation, and emerging technologies into the curriculum. Topics such as Artificial Intelligence, Data Science, Internet of Things, Cyber Security, and sustainable engineering practices were highlighted to ensure graduates remain industry-ready and globally competitive.



Dr G Mallikarjuna Rao, SC-Group Director, DRDO, delivering talk on Employability Skills

Day-5: 25 April 2025 (11:10 am-1:15 pm)

Session 14: Continuous Quality Improvement (CQI) and Curriculum Revision Process

Speaker: Dr G Mallikarjuna Rao, SC-Group Director, DRDO

This session focused on the Continuous Quality Improvement process adopted in Outcome-Based Education. The speaker explained how stakeholder feedback, attainment analysis, industry expectations, and academic reviews are utilized to identify curriculum gaps and implement systematic improvements. The importance of periodic curriculum revision for maintaining academic excellence was emphasized.

Day-5: 25 April 2025 (2:00 pm-3:00 pm)

Session 15: Preparation and Presentation of Departmental Curriculum Framework

Speaker: Prof. G Janardhana Raju, Dean-SoE, NNRG

In the concluding session, faculty members prepared and presented departmental curriculum frameworks incorporating the concepts learned during the workshop. Each department demonstrated the alignment of Vision, Mission, PEOs, POs, PSOs, COs, curriculum structure, assessment strategies, and CQI practices. The presentations were reviewed by experts, who provided constructive feedback for further enhancement of curriculum quality.

Day-5: 25 April 2025 Valedictory Function (3:00 pm-4:00 pm)

The valedictory session was presided over by **Prof. C.V Krishna Reddy, Director, NNRG**. Participants shared their learning experiences and appreciated the efforts of the organizing committee. The Director congratulated the faculty members for their enthusiastic participation and encouraged them to implement the concepts learned during the workshop in their respective departments.

Outcomes of the Workshop

At the end of the workshop, the participants were able to:

- Understand the principles of Outcome-Based Education.
- Design curricula aligned with Vision, Mission, PEOs, POs, and PSOs.
- Formulate measurable Course Outcomes using Revised Bloom's Taxonomy.
- Perform CO–PO and CO–PSO mapping effectively.
- Develop appropriate assessment and attainment methodologies.

- Integrate employability skills and emerging technologies into the curriculum.

Workshop Co-Coordinator



Dr B. Hariprasad Naik, Prof.

Workshop Coordinator



Dr B. Ravi, HOD, ECE