



# ACCREDITATION AND OUTCOME BASED LEARNING

## **PROF. ANUP KUMAR RAY (RETD.)**

Department of Electronics and Telecommunication Engineering  
IIT Kharagpur

## **PROF. SHYAMAL KUMAR DAS MANDAL**

Department of Electronics and Telecommunication Engineering  
IIT Kharagpur

**INTENDED AUDIENCE :** Any Interested Learners

### **COURSE OUTLINE :**

Globalization, changing demographics and technological advancements are some of the key driving forces of the future. Our students will have to be prepared to face these challenges and seize the opportunities brought about by these forces. In Twenty-first Century Learning, students use educational technologies to apply knowledge to new situations, analyze information, collaborate, solve problems, and make decisions. Twenty-first century education structured should be outcome based which developed certain critical core competencies such as collaboration, digital literacy, critical thinking, and problem-solving, self learning. The curriculum should incorporate higher order thinking skills, multiple intelligences, technology and multimedia, communication skill and self learning methodology along with authenticated scientific assessments and evaluation. Curriculum should provide direction so that student can learn by themselves and work both independently and interdependently. The curriculum and instruction are designed to challenge all students, and provides for differentiation. So the curriculum is not a syllabus or textbook-driven or fragmented, it should be set of Specific, Measurable, Appropriate, Challenging but Achievable educational objective or Skills (outcome) which students will be acquire at the end. Evaluation of student achievement can be made more valid and reliable as the benchmark of achievements is explicitly stated. The course equips the learner with the tools and techniques for effective teaching and hand on practices through specially designed software with appropriate pedagogic framework for design outcome based curricula. Course outcome

- Identify and write down the outcome based course, module and unit objectives based on Bloom Taxonomy
- Develop appropriate test items for all outcome based objectives for both summative and formative evaluation.
- Plan an outcome-based curriculum document to meet NBA and Washington Accord requirements.

### **ABOUT INSTRUCTOR :**

Prof. Anup Kumar Ray did his bachelor's degree in Electronics and Telecommunication Engineering from Jadavpur University and PhD from Essex, UK. He has more than 45 years of teaching and research experience in the Industry and academic institutions in India and abroad. He has served as a Faculty member of TTTI Chandigarh, IIT Delhi and IIT Kharagpur spanning a period of more than 36 years. He was an expert member of/advisor to numerous regional, national, international committees/organizations and played a significant role in getting the Educational Technology recognized as a Thrust area by the Planning Commission in 1986 and persuading MHRD to include it as key policy tool in the National Policy on Education -1986.

Prof. S K. Das Mandal was born on October 1975; He received the B.E degree in Electronics and Telecommunication engineering in 1998 and Ph.D degree in 2007 from Jadavpur University, India and currently working in Indian institute of Technology Kharagpur as an Assistant Professor. His current research interests include automatic speech recognition, speech synthesis, and computer assisted spoken language acquisition.

### **COURSE PLAN :**

**Week 1:** Graduate attribute and accreditation (Washington Accord, NBA etc.)

**Week 2:** Introduction to Outcome based Learning

**Week 3:** Taxonomies and Instructional Objectives

**Week 4:** Assessment and Evaluation

**Week 5:** ICT for Assessment and Evaluation

**Week 6:** Outcome-based Curriculum Design framework

**Week 7:** Outcome-based Curriculum Design

**Week 8:** Mapping of outcome based curriculum with Graduate attribute, Outcome-based Curriculum Design framework, Learning style and learning approaches, What is good teaching and its Attributes, Good teaching practices