National Institute of Technical Teachers Training and Research Bhopal

Programme Plan

Programme Title: Blended Education and Augmented Training (GUJ-10)

(Scheduled from 03-07 July 2023)

1. **Rationale**

   In this modern world, the Industrial Revolution 4.0 has a serious impact on the educational system of our country to pursue or adapt to the changing pattern of global Academic Education 4.0 (AE-4.0). Academic Education 4.0, is a learning approach and this would require institutes to introduce an innovative blended educational learning and augmented training approach for engineering and vocational education.

   Blending classroom teaching using Information and Communication Technology (ICT) can promote active participation of the learner in the learning process and to provide access to the best quality of learning resources within and beyond a classroom situation. Using ICT the learner becomes active in the process of learning and thus the learning lasts for a longer period of time. There exists a large number of digital learning tools that can promote live interaction and active participation of the learners in the teaching-learning process. All these ICT and digital tools can be used by the teacher in blended mode. In this program discussion on cutting-edge technologies such as Virtual and Augmented Reality to provide augmented training will be held; for creating near-to-real industrial experience.

   The blended method of teaching and learning is possible by integrating face-to-face classroom teaching with online course material, ICT, and/or digital tools. These online courses can be offered through a Learning Management System (LMS) platform. The LMS can not only deliver course material online with a high-quality online learning experience but can also be used for peer to tutor or peer-to-peer interactions, and collaboration. Such a blending method can add quality to classroom-based teaching. One of the popular Learning Management systems (LMS) platforms that is used for developing online courses is called 'Modular Object-Oriented Dynamic Learning Environment (MOODLE)'.

   This training program aims to develop the ability of the teachers to – apply the blending method along with a face-to-face classroom teaching-learning situation

2. **Programme Outcomes**

   The participants of the programme will be able to:

   - Discuss innovative 'Blended Education Learning and Augmented Training Approach (BELATA)' for engineering and vocational education.
   - Apply the blended learning method to the face-to-face classroom situation using online course material, Information and Communication Technology (ICT), and/or digital tools.
   - Appreciate augmented training approach of Academic Education-04.

3. **Programme Contents**

   Innovative 'Blended Education Learning and Augmented Training Approach (BELATA)' for engineering and vocational education, 21st Century Skills & e-Learning, Concept of AR, VR, OER and its types. Plagiarism, IPR and copyright issues, SPOCs/MOOCs- Concept, its potential, and limitations, Models and Framework Applying a blended approach to the learning situation, Online Instructional System Design Model (ADDIE model), Apply ADDIE model for developing courseware,

Create and set up an LMS MOODLE account, Managing Users, roles & Editing Profiles, use of Synchronous ICT Tools for Online teaching-learning-I, Whiteboard. Padlet, Kahoot, Mentimeter, adding assignments, files, Adding chat, quiz, forum etc., Prepare a plan to implement the Blended approach of T/L, Micro teaching session in a simulated environment using the blended learning method

4. **Instructional Strategy:** Lecture cum hands-on practice
5. **Dates and Venue:** 03-07July 2022, SVNIT, SURAT, GUJARAT
6. **Target Group:** Faculty members of all disciplines from Polytechnics and Engineering Colleges of Maharashtra State who have fairly good skills in handling computers and applications.
7. **Coordinator: Dr.K. James Mathai, Associate Professor, DMRDE, NITTTR Bhopal.**
   Faculty members: Dr.S.S.Kedar, Professor, DMRDE, NITTTR Bhopal.
8. **Schedule**

Day	Session I 10: am-11:30 am	Session II 11:45 am: 1:15 pm	Session III 2:15 pm-3:45 pm	Session IV 4: pm-5:30 pm
I	• Registration, Welcome & Program Brief • Innovative 'Blended Education Learning and Augmented Training Approach (BELATA)' for engineering and vocational education	ICT for education • Use of ICT in contact mode- classroom situation, web conferencing situation • Concept of AR, VR • OER and its types.	• Plagiarism, IPR and copyright issues • SPOCs/MOOCs-Concept, its potential, and limitations, • Learning Management system (LMS) **Quiz-1**	**Task-1(a)-**Prepare a List of OER resources for teaching- learning and give their purpose **Task-1 (b)** Explore & prepare a list of LMS with their salient features useful to design & develop web-based courseware (minimum-3)
II	• Concept of Blended learning • Applying a blended Method to the learning situation • Implications for teaching and learning.	Online Instructional System Design Model (ADDIE model)	**Task-2:** Apply the ADDIE model and Develop Instructional Script for developing an E-learning course that includes learning material, Exercises, and Questions. Reference	Overview of LMS MOODLE, its features, various user models-cloud-based, creating own server • Make a MOODLE account • Create new users **(Demonstration)**
III	Create and set up a MOODLE account: Create new users **Task3:** Create and Setup MOODLE account	Managing Users, roles & Editing Profiles **(Demonstration and practice)**	Course Setting & Authentication/Enrollment methods **(Demonstration and practice)**	Working with the Identified course: adding assignments, files, Adding chat **(Demonstration and practice)**
IV	Adding quiz, Adding a forum **(Demonstration)** Synchronous ICT Tools for Online teaching-learning-I	Sensitization of Augmented training approach using Virtual and Augmented Technologies	**Task4:-**Prepare a plan to implement the Blended method of T/L. Identify content to be taught in a face-to-face classroom environment and online environment	Prepare/Organise the content/media for the micro-teaching session as per the plan prepared

V	**Task5:-** Microteaching session in a simulated environment using a blended learning method	Achievement test, Programme feedback and Valedictory

9. **Assessment method**
   - Quiz's, Assessment/Achievement Test.
   - The participant's ability to blend ICT/tools in teaching and learning.

10. **References**
   - https://moodle.org/, MOODLE- A Learning Management System to develop online learning courseware
   - https://swayam.gov.in/ , SWAYAM- An Initiative of MHRD, Government of India