**Annexure - II**

**INDIVIDUAL COURSE DETAILS**

**Advanced Certificate Course on**

**“Design of Educational Applications using Web Technologies”**

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| A. Name of the Institute | **NATIONAL INSTITUTE OF TECHNICAL TEACHERS TRAINING AND RESEARCH**  TARAMANI, CHENNAI – 600 113. INDIA  [An Autonomous Institute under Ministry of Education, Government of India] |
| B. Name / Title of the Course | **Certificate Course on**  **“Design of Educational Applications using Web Technologies”** |
| C. Course Dates with Duration in Weeks | 16th March 2022 to 29th March 20222 Weeks |
| D. Eligibility Criteria for Participants | Applicants for this course must be |
| 1. Educational Qualification | Information Technology (IT) Teachers /IT professionals/ Programmers andICT Trainers |
| 2. Work Experience required, if any | Minimum of One Year experience in teaching / IT / Networking / ICT application design, Development and TrainingHave a good proficiency in English which is the medium of instruction |
| 3.Age Limit | Preferably not more than 45 years |
| 4. Target Group | Computer Science and Information Technology professionals |

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| E. Aims & Objectives of the Course | | To develop appropriate and necessary competencies in Web Technologies, Web Application Development, Educational Applications and Web Application Security  * Understand the emerging Information technologies in Internet world * Implement client side programming using java script and CSS * To practice the database technologies with Open Source RDBMS * Implement server side programming using Server Technologies with Framework * Design the Teaching and Training applications using FOSS tools * Design exclusive assessment and assignment tools using FOSS . |
| F. Course Contents / Syllabus | Internet technologies - overview –HTML tags – XHTML - CSS – JavaScript – Server Script – Web Server - Content Management System - Joomla  Database Technologies – MySQL – Design of Database - Normalization  Design of Assessment tool – Hotpotatoes – Mind map tools – eXeLearning.net – Collaboration tools – Video Content Preparation  Introduction to Cloud Computing - Cloud computing vs. Cluster computing - Software as a Service(PaaS) – Cyber Security | |
| G. Mode of Evaluation of Performance of the Participants | Attainment of course objectives will be periodically reviewed by course review, internal assessment and project work. At the end of the course, candidates will be awarded with an Advanced Certificate on **“Advanced Certificate Course on “Design of Educational Applications using Web Technologies”** | |
| 1. Name of the Department | Department of Computer Science and Engineering | |
| 1. Name of the Coordinator | Dr. V.Shanmuganeethi | |
| 1. Resource Persons | Dr. P. Malliga Guest Faculty members from IIT, Anna University, C-DAC, NIC | |

**Annexure - III**

**“Advanced Certificate Course on “Design of Educational Applications using Web Technologies”**

**Preamble**

The internet is a primary communication tool for individuals, communities, educational societies, organizations and corporations. The current advancement in technology, the growth of the e-business and the increased popularity of the internet and World Wide Web has all made web technologies an important in the world. Web technologies are the base for cloud computing. Cloud computing is everywhere. Cloud computing is the delivery of computing services over the Internet. Cloud services allow individuals and businesses to use software and hardware that are managed by third parties at remote locations. Examples of cloud services include online file storage, social networking sites, webmail, and online business applications. The cloud computing model allows access to information and computer resources from anywhere that a network connection is available. Cloud computing provides a shared pool of resources, including data storage space, networks, computer processing power, and specialized corporate and user applications.

This programme covers the emerging technologies in the web environment and Web Application and Education Application technologies.

**Objectives of the Programme**

* Understand the emerging Information technologies in Internet world
* Implement client side programming using java script and CSS
* To practice the database technologies with Open Source RDBMS
* Implement server side programming using Server Technologies with Framework
* Design the Teaching and Training applications using FOSS tools
* Design exclusive assessment and assignment tools using FOSS
* Install and configure Open Source Learning Management System.
* To understand the cloud computing concepts for Education

**Course Content**

**Module – 1:** Internet technologies - overview –HTML tags – XHTML - CSS – JavaScript – Server Script – Web Server - Content Management System – Joomla

**Module – 2:** Database Technologies – MySQL – Design of Database

**Module – 3:** Design of Assessment tool – Hotpotatoes – Mind map tools – eXeLearning.net – Video Content Preparation Tool - Collaboration tools

**Module – 4:** Introduction to Cloud Computing – Cloud Services - Cyber Security

**Assessment and Award**

**Successful candidates will be awarded “Advanced Certificate course on “Design of Educational Applications using Web Technologies ".**