

A. Name of the Institute	LOVELY PROFESSIONAL UNIVERSITY, PUNJAB, INDIA (A unit of Lovely International Trust), An ISO 9001:2015, ISO/ISE 27001:2013 Institute
B. Name / Title of the Course	Specialized course in IoT Technologies and Applications for Smart Cities
C. Proposed Dates and Duration of the Course in Weeks / Months	20th Sept 2022 – 17 <sup>th</sup> October 2022 4 weeks
D. Eligibility Criteria for Participants and Age Limits	Diploma/BSc with Computers / BCA / B Tech in Computer Science and engineering/Information Technology/Electronics and communication engineering  Maximum Age: any
E. Basic outline of the course	The training course is designed to enhance the understanding of participants in IoT technologies and applications for smart cities. The program will cover various aspects of IoT ecosystem like platform, communication technologies, deployment strategies, ubiquitous connectivity planning and the importance of building horizontal common service layer for smart cities applications. Further, this will discuss about smart governance and citizen services, smart cities use cases, security, privacy and regulatory issues pertaining to IoT based applications including data analytics, and other related aspects.
F. Content of the Course (What all would be covered in the course)	<ol style="list-style-type: none"> <li>1. Week 1: Introduction to Embedded Systems, IoT, design issues and communication protocols</li> <li>2. Week 2: Introduction to Arduino and its basic programming</li> <li>3. Week 3: Interfacing of various IoT communication modules with Arduino</li> <li>4. Some practical application IoT implementation</li> </ol>
G. Learning Outcome	<ol style="list-style-type: none"> <li>1. define the role of Embedded Systems in IoT</li> <li>2. understand the basics of Arduino</li> <li>3. develop Arduino applications with peripherals</li> <li>4. analyze the various communication protocols for IoT</li> <li>5. create practical IoT applications</li> </ol>
H. Instructional Strategy	Workshop based, first discussion on concept and

	then its implementation
I. Target audience	Diplomats, Senior and Middle Level officers of various ministries and Government Offices, School and College Principals / Rectors, Professional from different functional areas of I.T and Engineering
J. Mode of Evaluation of Performance of ITEC Participant	Offline