

## CENTRE OF EXCELLENCE

**Industry Supported Laboratory** :Centre of Excellence (Lab 501 of Department of Computer Engineering) :

Code Unnati is a corporate-to-citizen digital literacy and IT skills development initiative, launched in June 2017. It is a multi-stakeholder, multi-year program that is a collaborative effort between SAP, CSR wings of different corporate companies, and Government as well as non-profit organizations. This program is aligned with the Digital India and Skill India initiatives of the Government of India under

Lokmanya Tilak college of Engineering has Centre of Excellence (CoE) funded by Unnati SAP centre for Deep Tech through Edunet Foundation .

### **Objectives:**

The objective of CoE is to enable students to adopt industry 4.0 technologies such as Machine Learning, IoT, Cloud Computing etc. and provide solutions to real-life, Industry Specific, Community problems.

This 120+ hour program equips the college with SAP center of excellence to enable experiential learning of deeptech. With elements such as capstone projects, mentoring, and capacity building of faculty, the program uses a sustainable hand-on approach towards levelling up the skills of underserved students, and establishing a pathway to industry.

### **Lab Details:**

Centre of Excellence (located at Lab 501 of Department of Computer Engineering) funded by Unnati SAP centre for Deep Tech through Edunet .

Code Unnati Funded equipments costing Rs. 27 Lakhs.

### **The List of Equipment Provided by Edunet Foundation for the Centre of Excellence lab 501 of Computer Department**

#	Item Description	Specification	Item Application/Usage	Qty
1	Tower Server	Dell/HP Intel Xeon Silver, 16 core. 16GB RAM, Tower Server with monitor, keyboard and mouse	High computational Server Unit will act as a Master node in the COE Cluster to run High computational work load, heavy ERP software and tools. Will also be used to train ML and DL models	1

2	Desktop Machines	Intel core i5, 8GB RAM, desktop with CPU, Monitor, Keyboard and mouse	Desktop machines to be used for programming and application development.	20
3	Neural Compute Stick-2 (NCS2)	Processor: Intel Movidius Myriad X Vision Processing Unit (VPU); Connectivity: USB 3.0 Type-A	A USB powered Deep Learning edge computing accelerator to develop edge computing applications, it acts as an accelerator at the edge to run high computational DL and vision processing workloads.	10
4	Raspberry Pi 4B	Broadcom BCM2711, Quad core Cortex-A72 (ARM v8) 64-bit SoC @ 1.5GHz with 4GB RAM	RPi is a single board computer for multipurpose application development, will be used to develop IoT and Edge computing applications.	20
5	GrovePi+ Starter Kit	GrovePi board, 2-sided Acrylic Case, 12 Grove sensors	The starter kit bundles the most popular sensors and devices for education and hobbyists, and lets learners to start developing and prototyping hardware with Raspberry Pi without any soldering requirements. It consists of RPi shield, sensors and cables to connect with Rpi.	20
6	Power Supply for Raspberry Pi 4 Model B	15.3W USB-C	Power supply to power up the RPi development board	20
7	USB Camera Accessory for Raspberry Pi	HD Camera	Camera to capture video and still pictures, it can be interfaced with Rpi and computer to develop computer vision applications .	10

8	Micro SD card	SanDisk 32GB Class 10	SD card to install Operating system for Rpi, it acts as a hard drive for development board	20
9	Micro SD card reader	USB Type	Card reader to connect and access the SD card with computer system	20
10	Ethernet Patch Cable	RJ45 Cat-6	Cable to connect Rpi with Computer for programming and interface	20
11	Projector and screen for the lab	Epson (4*6 Ft)	Projector to be installed in the Lab for delivering sessions and presentations	1
12	Whiteboard and markers	4*6 Ft	To be used for student & teacher training	1
13	Portable Audio system	portable speaker with wireless Mic	To be used for student & teacher training	1

### **Lab Utilisation:**

Orientation Session on Code Unnati LTCE Centre of Excellence was conducted on 7<sup>th</sup> August 2023. which was followed by an assessment Test. From assessment test, 180 students were selected from SE, TE, and BE.

<b>Course Curriculum</b>	<b>Hours</b>
<b>Core Deep Tech offering</b>	<b>80</b>
<b>Industry Specific Modular Offering</b>	<b>20</b>
<b>Employability skills</b>	<b>20</b>
<b>Capstone Project</b>	<b>30</b>
<b>Rapid Prototyping Camp</b>	<b>30</b>
<b>MOOC (optional) Open SAP Course, Learning Hub</b>	<b>30</b>

Photos:



