

LABORATORY PRACTICAL PLANNING

Academic Year: 2025-26 (EVEN)

Date: 15/12/2025

Institute Name: K. K. Wagh Polytechnic, Nashik

MSBTE Code: 0078

Program and Code: Information Technology (IF)

Course Code & Abbr.: 316325 (WMN)

Course Name: Wireless & Mobile Networks

Name of Faculty: Mr. Shinde R.J.

Class: TYIF-CRAY **Semester:** Sixth **Scheme:** K

Course Index: CO603

Learning Hrs.: 45

● **Teaching-Learning & Assessment Scheme:**

Course Code	Course Title & Abbr	Course Category	Learning Scheme						Credits	Paper Duration (Hrs.)	Assessment Scheme									
			Actual Contact Hrs/Week			SLH	NLH	Theory				Based on LL & TSL Practical				Based on SL		Total Marks		
			CL	TL	LL			FA TH			SA TH	Total		FA-PR		SA-PR			SLA	
												Max	Min	Max	Min	Max	Min		Max	Min
316325	Wireless & Mobile Networks - WMN	DSC	3	-	4	1	8	4	3	30	70	100	40	25	10			25	10	150

Abbreviations: CL- Class Room Learning, TL- Tutorial Learning, LL-Laboratory Learning, SLH-Self Learning Hours, NLH-Notional Learning Hours, FA - Formative Assessment, SA -Summative assessment, IKS – Indian Knowledge System, SLA - Self Learning Assessment
Legends: @ Internal Assessment, # External Assessment, *# On Line Examination, @\$ Internal Online Examination

● **COURSE LEVEL LEARNING OUTCOMES (COS)**

Students will be able to achieve & demonstrate the following COs on completion of course based learning

- CO1 - Identify various terminologies used in GSM network systems.
- CO2 - Establish wireless network with the given technology.
- CO3 - Differentiate between various generations of mobile network .
- CO4 - Expalin 5G network system architecture.
- CO5 - Establish wireless sensor networks for the given application.

● **COs, Practical Laboratory Learning Outcome (LLOs) and Mapping:**

Sr. No	LLO	Practical Title	Planned Date	Performance Date	Remark	Related Self Learning
1	LLO 1.1	* Identify different sections of mobile phone	A- 16/12/2025 B- 17/12/2025 C- 18/12/2025	A- B- C-		
2	LLO 2.1	* Perform process of call connection and call release of cellular mobile system(Using any simulation tool)	A- 20/12/2025 B- 19/12/2025 C- 20/12/2025	A- B- C-		
3	LLO 3.1	* Detect the hardware details of mobile handset. (Using any relevant mobile application)	A- 23/12/2025 B- 24/12/2025 C- 23/12/2025	A- B- C-		
4	LLO 4.1	* Detect operating system and its version(Windows, Blackberry and mac OS) using any relevant mobile application.	A- 27/12/2025 B- 26/12/2025 C- 27/12/2025	A- B- C-		
5	LLO 5.1	Establish Personal Area Network for two or more devices.	A- 03/01/2026 B- 31/12/2026 C- 01/01/2026	A- B- C-		

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6	LLO 6.1	Transfer an image, audio and video file using Bluetooth protocol with varying distance between two or more devices	A- 06/01/2026 B- 02/01/2026 C- 03/01/2026	A- B- C-		
Sr. No	LLO	Practical Title	Planned Date	Performance Date	Remark	Related Self Learning
7	LLO 7.1	* Make Hotspot connection on Wifi on any 2 devices	A- 10/01/2026 B- 07/01/2026 C- 08/01/2026	A- B- C-		
8	LLO 8.1	* Configure Wi-Fi setting in mobile devices using mobile tethering to connect two devices such as mobile phone to laptop	A- 13/01/2026 B- 09/01/2026 C- 10/01/2026	A- B- C-		
9	LLO 9.1 LLO 9.2	* Install and authenticate eSIM(virtual SIM)on mobile handset	A- 17/01/2026 B- 16/01/2026 C- 15/01/2026	A- B- C-		
10	LLO 10.1	* Identify Dual sim interface section, Touchscreen display section, battery charging circuit, power management unit of 4G or 5G smartphone and test working	A- 20/01/2026 B- 21/01/2026 C- 17/01/2026	A- B- C-		
11	LLO 11.1 LLO 11.2	Using appropriate mobile app locate and find Internet signal strength of mobile tower	A- 24/01/2026 B- 30/01/2026 C- 22/01/2026	A- B- C-		
12	LLO 12.1	Check network availability and network topology using any open share website	A- 31/01/2026 B- 04/02/2026 C- 24/01/2026	A- B- C-		
13	LLO 13.1	* Implement manual and auto selection of network using mobile handset	A- 03/02/2026 B- 06/02/2026 C- 31/01/2026	A- B- C-		
14	LLO 14.1	* Create seamless wireless connectivity using multiple access point.	A- 07/02/2026 B- 11/02/2026 C- 05/02/2026	A- B- C-		
15	LLO 15.1	* Develop a mobile application for wireless technology using any wizards such as available on www.appypie.com or any other website	A- 10/02/2026 B- 13/02/2026 C- 07/02/2026	A- B- C-		
16	LLO 16.1	Apply RFID technology for real life applications using RFID kit	A- 14/02/2026 B- 18/02/2026 C- 12/02/2026	A- B- C-		

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17	LLO 17.1	* Implement line coding technique Unipolar NRZ using MATLAB & Simulink	A- 17/02/2026 B- 20/02/2026 C- 14/02/2026	A- B- C-		
Sr. No	LLO	Practical Title	Planned Date	Performance Date	Remark	Related Self Learning
18	LLO 18.1	* Implement line coding technique Bipolar RZ using MATLAB and Simulink	A- 21/02/2026 B- 25/02/2026 C- 19/02/2026	A- B- C-		
19	LLO 19.1	* Implement line coding technique Manchester NRZ using MATLAB and Simulink	A- 24/02/2026 B- 27/02/2026 C- 21/02/2026	A- B- C-		
20	LLO 20.1	* Simulate binary amplitude shift keying using MATLAB and Simulink	A- 28/02/2026 B- 04/03/2026 C- 26/02/2026	A- B- C-		
21	LLO 23.1	* Implement pulse code modulation using MATLAB and Simulink	A- 03/03/2026 B- 06/03/2026 C- 28/02/2026	A- B- C-		
22	LLO 25.1	* Implement WSN node to determine position on node and blink LED using cubcarbon simulator and senscript	A- 07/03/2026 B- 11/03/2026 C- 05/03/2026	A- B- C-		
23	LLO 26.1	* Analyse a Wi-Fi network using related software (Like NetSpot or Wi- Fi analyzers)	A- 10/03/2026 B- 13/03/2026 C- 07/03/2026	A- B- C-		
** Study regarding G-Net Tracking Lite application using mobile phone.			Last week of March			

ASSESSMENT METHODOLOGIES/TOOLS

A. Formative assessment (Assessment for Learning) (FA-TH)

- Continuous assessment based on process and product related performance indicators. Each practical will be assessed considering 1) 60% weightage is to process 2) 40% weightage to product

B. Summative Assessment (Assessment of Learning) (SA-TH)

- End semester examination, Lab performance, Viva voce

Mr. Shinde R.J.
(Name & Signature of Staff)

Ms. M. S. Karande
(Name & Signature of HOD)