

**Open Course Title:** Wireless Sensor Networks and It's Essentials

**Target Students from Branches:** ECE/TCE/EEE/CSE/Mech/MCA

**Total duration of the course:** 25 Hours.

**No. of Lecture hours:**

**No. of hands-on / Practical:**

**Abstract**

This course deals with WSN architectures, with routing protocols and security aspects. This course also covers hands-on sessions to routing protocols using NS-2 simulator and Security algorithms using OCTAVE.

**Open Course Details**

**Students are able to**

**CO1:** Understand the basics of WSN, Architecture, Routing protocols, Attacks and security.

**CO2:** Apply the knowledge to implement various attacks and security algorithms using OCTAVE

**CO3:** Analyse various routing protocols using NS-2 tool

**CO4:** To make a poster and present the same in a team on different aspects of WSN

**Note:** The coordinators shall provide at least three course outcomes for the open course.

**Schedule**

<b>Day 1:12/02/2019</b>			
<b>Time</b>	<b>Topics</b>	<b>Resource Person Details</b>	<b>CO-PO Mapping</b>
9.00 am to 10.30 am	Introduction to WSN	Prof. Raghunandan G H , Assistance Prof. , Dept. of TCE, BMSIT&M	CO1
11.00 am to 1.00 pm	Applications and Architecture of WSN		
1.00 pm to 2.00pm	Lunch Break		
2.00 pm to 4.00pm	Hands –on session on NS-2 tool	Prof. Sowmyashree M S, Assistance Prof. , Dept. of TCE, BMSIT&M	CO3 PO5
<b>Day 2:13/02/2019</b>			

Time	Topics	Resource Person Details	CO-PO Mapping
9.00 am to 10.30 am	Hands –on session on routing protocol using NS-2 tool	Prof. Sowmyashree M S, Assistance Prof. , Dept. of TCE, BMSIT&M	CO2 PO4, PO5,PO9, PO12
11.00 am to 1.00 pm			
2.00 pm to 4.00pm	WSN protocols	Prof. Mallikarjuna Gowda C P, Associate Prof., Dept. of TCE, BMSIT&M	CO1
<b>Day 3:14/02/2019</b>			
Time	Topics	Resource Person Details	CO-PO Mapping
9.00 am to 10.30 am	Different types of attacks in WSN	Prof. Siddiq Iqbal , Assistance Prof., Dept. of TCE, BMSIT&M	CO1
11.00 am to 1.00 pm			
2.00 pm to 4.00pm	Implementation of attacks using OCTAVE	Prof. Siddiq Iqbal , Assistance Prof., Dept. of TCE, BMSIT&M	CO2 PO5, PO9,PO12
<b>Day 4:15/02/2019</b>			
Time	Topics	Resource Person Details	CO-PO Mapping
9.00 am to 10.30 am	Introduction to Cryptography and algorithms. Implementation of algorithms using OCTAVE	Prof. Thejaswini S & Prof. Saritha I G Assistance Prof., Dept. of TCE, BMSIT&M	CO2 PO1, PO5, PO9,PO12
11.00 am to 1.00 pm			
2.00 pm to 4.00pm			
<b>Day 5:16/02/2019</b>			
Time	Topics	Resource Person Details	CO-PO Mapping
9.30am to 11.30 am	Poster presentation Activity	Prof. Siddiq Iqbal & Prof. Sowmyashree M S	CO4 PO9,PO10,PO12

		Assistance Prof., Dept. of TCE, BMSIT&M	
11.30 am to 12.00 noon	Valedictory		