

Plot No.1 (A), CNI Complex, Patia, Bhubaneswar – 751024, Odisha, India.

[AFFILIATED TO BPUT, ODISHA]

www.coeb.ac.in

DEPARTMENT OF ELECTRONICS AND TELECOMMUNICATION ENGINEERING

ADD-ON COURSE: Advances and challenges in telecommunication

[Programme: B.Tech, ETC]

Course Objectives:

To expose the students the fundamental concepts of Wireless Communication Systems/Networks; To impart knowledge to student about recent trends in telecommunication. It provides a brief introduction on the research area of 4G/5G communication systems.

SYLLABUS

Total Lecture Hours: 40

MODULE-I:

[10 Hours]

Evolution of Broadband Wireless; Fxied Broadband Wireless and Mobile Broadband Wireless; WiMAX, 3G,4G and beyond . Wi-Fi Systems; Spectrum Options for Broadband Wireless; Technical Challenges for Broadband Wireless - Wireless Radio Channel:Path loss and Shadowing; Spectrum Scarcity, Quality of Service, Mobility, Portability, Security, Supporting IP in Wireless.

MODULE-II

[10 Hours]

Orthogonal Frequency Division Multiplexing, Multicarrier Modulation – OFDM, Introduction to Multiple Antenna Techniques, SISO, SIMO, MISO and MIMO antenna schemes.

MODULE-III

[10 Hours]

Recent Trends in Tele-communication, Artificial intelligence and its uses in communication. Introduction to ML,DL and their uses in communication.

MODULE-IV

[10 Hours]

Limitations and future prospects of ML,DL,AI based communication. Technical perspective of these algorithms in communication

Course Outcomes: After completion of the course, the students will be able to

CO1: Explain the basic principles of Wireless communication.

CO2: Explain the different algorithms involved in communication

CO3: Able to explain the challenges in communication and future prospect.

Evaluation Process:

- 1. Attendance for the course is 75%, which is mandatory.
- 2. Minimum qualifying marks percentage for the course is 50.
- 3. Certificate will be issued after successful completion of course and assessment processes.

Learning resources:

Suggested Books:

- 1. Wireless Communication: Advancements and Challenges (Wireless Communications and Networking Technologies) by Krishna Kumar, Pankaj Sharma, Ram Shringar Rao.
- 2. Advances in Telecommunications Networks by William M. Lee Derrick C. Brown.
- 3. Advanced Communication System by Sapna Katiyar , S.K. Kataria & Sons

Other Sources:

e-Learning Resources:

1. https://www.youtube.com/watch?v=-ymnQ5rpcYA&list=PLbMVogVj5nJSi8FUsvglRxLtN1TN9y4nx

Design and Developed by: Prof. Snehasis Dey and Prof. Lokanath Sarangi

College of Engineering Bhubaness



DEPARTMENT OF ELECTRONICS & TELECOMMUNICATION ENGINEERING

NOTICE

ADD-ON/CERTIFICATE COURSE

Ref No: COEB/ETC/2020//1

Date: 05/09/2020

It is for the information of all the students of 3rd/5th/7th semester that the classes for the Add-On/Certificate Courses will commence in ON LINE Mode as per the time table given below. The registration process for the course will start from **05/09/2020**. The interested students to enroll themselves for the course are advised to contact the concerned Course Coordinators for the details.

Semester	Course Title	Course Coordinator	Date of Commencement
3rd	PCB Design	Prof. Snehasis Dey	14/09/2020
5th	Advances and challenges in telecommunication	Prof . Subrat Kumar Mohanty	14/09/2020
7th	Machine Learning Algorithms for Communication	Prof. Debarchana Jena	14/09/2020

The class timing will be from 5.30 pm to 7.30 pm.

Copy to:

- 1. Office of the Chairman/ Vice-Chairman for kind information.
- 2. Office of the Executive Director for kind Information.
- 3. Office of the Registrar for kind Information.
- 3. Office of the Principal for kind information.
- 4. Departmental Notice Board.
- 5. Guard File

Head of the Department

Dept. of ETC Engg.

COEB, Bhubaneswar



COLLEGE OF ENGINEERING BHUBANESWAR (COEB) ADD-ON COURSE ENROLLMENT SHEET

ON-LINE MODE

Name of the Department: Electronics and telecommunication engineering

Course Title: Advances and challenges in telecommunication

Semester: 5th Academic Year: 2020-21

Duration: 40 hours

Student's Declaration/Undertaking

- 1. I do hereby undertake to participate in the above mentioned add on course.
- 2. I do hereby, promise to abide by the admissible rules and regulations, concerning discipline, attendance, etc. of the department, and also to follow the Code of Conduct prescribed for the students of the Institute, as in force from time to time.

S1. No.	Registration No.	Name of the Student	Remarks by the Course Coordinator
1	1801219018	ASHISH KUMAR PARIDA	
2	1801219021	ASIF KHAN	Certified that the Enrollment Sheet is prepared by
3	1801219042	DAVID HANSDAH	taking the consents of the students to enroll
4	1801219062	JITU MISTRY	themselves in this Certificate Course (Add-On) to be
5	1801219065	KALYANI SWAGATIKA DASH	conducted in Virtual Mode (ON-LINE) during the
6	1801219079	MANORANJAN SAHOO	Pandemic COVID'19 through the link provided by the
7	1801219082	MEGHANTH NAIK	Department. They have also gone through the declaration/
8	1801219091	NUTAN NAYAK	undertaking to be strictly abided by them during the
9	1801219099	PRASANTA KUMAR THAKUR	course period.
10		PRIYABRATA KUMURA	
11	1801219112	PURNENDU SUNANI	
12	1801219130	SANKAT MOCHAN BISWAL	7
13		SUSHREE SANGITA	* 0
14	1801219170	TOKAN BEHERA	1 8 60
15	1801219227	ANANYA SAMAL	(C 00000 D
16	1801219228	BIJAY KUMAR PADHI	1 12 19
17		BISHNUPRIYA MOHARANA	The state of the s
18		MAHESH PRASAD MISHRA	S. Karadaa Y
19	The state of the s	NISHI TIRKEY	Course Coordinator
20	The second secon	SMRUTIREKHA MARANDI	(Signature with Seal)
21		SUBHASHREE BIDYASAGAR	1



DEPARTMENT OF ELECTRONICS AND TELECOMMUNICATION ENGINEERING COLLEGE OF ENGINEERING BHUBANESWAR (COEB)

ADD ON/CERTIFICATE COURSE

STUDENT ATTENDANCE

Name of the Course: Advances and challenges in telecommunication Programme: B. Tech in Electronics and telecommunication engineering

Semester: 5th

Academic Year: 2020-21

ON-LINE MODE

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DEPARTMENT OF ELECTRONICS AND TELECOMMUNICATION ENGINEERING COLLEGE OF ENGINEERING BHUBANESWAR (COEB)

ADD ON/CERTIFICATE COURSE

STUDENT ATTENDANCE

Name of the Course: Advances and challenges in telecommunication Programme: B.Tech in Electronics and telecommunication engineering

Semester: 5th

Academic Year: 2020-21

ON-LINE MODE

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Optificate of Completion

has successfully completed the ADD-ON Course titled_	of Electronics & Telecommunication Engg. semester Fifth bearing registration	This is to certify that Mr./MsJITU MISTRY
Advances and challenges in telecommunication	semester Fifth bearing registration number 1801219062	, student of the Department

TRUE COPY

conducted at College of Engineering Bhubaneswar in the academic year__

2020-21

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Course-Coordinator

Principal

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PLOT NO-1(A), CNI COMPLEX, PATIA, BHUBANESWAR, KHORDHA, ODISHA-751024





Certificate of Completion

as successfully completed the ADD-ON Course titledA $ m dv$	Electronics & Telecommunication Engg. semester Fifth bearing registration nu	his is to certify that Mr./Ms. MANORANJAN SAHOO
Advances and challenges in telecommunication	th bearing registration number 1801219079	, student of the D

TRUE COPY

conducted at College of Engineering Bhubaneswar in the academic year_

2020-21

Course-Coordinator

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Principal

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PLOT NO-1(A), CNI COMPLEX, PATIA, BHUBANESWAR, KHORDHA, ODISHA-751024





Octificate of Completion

Advances and challenges in telecommunication	has successfully completed the ADD-ON Course titled
Engg. semester Fifth bearing registration number 1801219082	of Electronics & Telecommunication Engg. semester Fifth
MEGHANTH NAIK , student of the Department	This is to certify that Mr./Ms. $MEGHA$

TRUE COPY

conducted at College of Engineering Bhubaneswar in the academic year_

2020-21

Course-Coordinator

Principal

PRINCIPAL College of Engineering Bridgeness



PLOT NO-1(A), CNI COMPLEX, PATIA, BHUBANESWAR, KHORDHA, ODISHA-751024





Octificate of Ocmpletion

has successfully completed the ADD-ON Course titled	of Electronics & Telecommunication Engg. semester Fifth bearing registration number	This is to certify that Mr./MsNUTAN NAYAK
	Engg. semester Fifth	NAYAK
Advances and challenges in telecommunication	bearing registration number1801219091	student of the Department

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conducted at College of Engineering Bhubaneswar in the academic year 2020-21

Course-Coordinator

Principal

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PLOT NO-1(A), CNI COMPLEX, PATIA, BHUBANESWAR, KHORDHA, ODISHA-751024





Oertificate of Completion

nas successfully completed the ADD-ON Course titled Adv	of Electronics & Telecommunication Engg. semester Fifth bearing registration number 1801219099	his is to certify that Mr./MsPRASANTA KUMAR THAKUR
Advances and challenges in telecommunication	th bearing registration number 1801219099	IAKUR, student of the Department

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conducted at College of Engineering Bhubaneswar in the academic year_

2020-21

Course-Coordinator

Principal

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