



Stella Mary's College Of Engineering
(Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai)
Aruthengavillai, Kallukatti Junction, Azhikal (p.o), Kanyakumari District - 629 202

DEPARTMENT OF ELECTRONICS AND COMMUNICATIONS

ACADEMIC YEAR : 2023-2024

ELECTIVE COURSE SYSTEM

2023-2024 (ODD)				
S.No	Subject Code	Subject	No.of.Students	YEAR/ SEM
1	CBM352	Human Assist Devices	57	III / 05
2	CEC352	Satellite Communication	57	III / 05
3	CEC331	4G/5G Communication Networks	57	III / 05
4	OBM 752	Hospital Management	40	IV / 07
2023-2024 (EVEN)				
1	CBM370	Wearable Devices	57	III/ 06
2	CEC333	Advanced Wireless Communication Techniques	57	III/ 06
3	CCW332	Digital Marketing	57	III/ 06
4	MX3089	Industrial Safety	57	III/ 06
5	EC8094	Satellite Communication	40	IV/08
5	GE8076	Professional Ethics in Engineering	40	IV/08



Stella Mary's College Of Engineering
(Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai)
Aruthengavillai, Kallukatti Junction, Azhikal (p.o), Kanyakumari District - 629 202

Department of Electronics and Communication Engineering

Academic Year : 2023-2024(ODD/EVEN)

Year / Semester : III / V

ELECTIVE COURSE SYSTEM

NAME OF THE ELECTIVE COURSE I : CBM352 - HUMAN ASSIST DEVICES

COURSE OBJECTIVES:

- To study the role and importance of machines that takes over the functions of the heart and lungs,
- To study various mechanical techniques that help a non-functioning heart.
- To learn the functioning of the unit which does the clearance of urea from the blood
- To understand the tests to assess the hearing loss and development of electronic devices to compensate for the loss.
- To study about recent techniques used in modern clinical applications

UNIT I HEART LUNG MACHINE AND ARTIFICIAL HEART 9

Condition to be satisfied by the H/L System. Different types of Oxygenators, Pumps, Pulsatile and Continuous Types, Monitoring Process, Shunting, The Indication for Cardiac Transplant, Driving Mechanism, Blood Handling System, Functioning and different types of Artificial Heart, Schematic for temporary bypass of left ventricle.

UNIT II CARDIAC ASSIST DEVICES

9

Assisted through Respiration, Right and left Ventricular Bypass Pump, Auxiliary ventricle, Open Chest and Closed Chest type, Intra Aortic Balloon Pumping, Prosthetic Cardiac valves, Principle of External Counter pulsation techniques.

UNIT III ARTIFICIAL KIDNEY

9

Indication and Principle of Haemodialysis, Membrane, Dialysate, types of filter and membranes, Different types of hemodialyzers, Monitoring Systems, Wearable Artificial Kidney, Implanting Type.

UNIT IV RESPIRATORY AND HEARING AIDS

9

Ventilator and its types-Intermittent positive pressure, Breathing Apparatus Operating Sequence, Electronic IPPB unit with monitoring for all respiratory parameters. Types of Deafness, Hearing Aids, SISI, masking techniques, wearable devices for hearing correction.

UNIT V RECENT TRENDS

9

Transcutaneous electrical nerve stimulator, bio-feedback, Diagnostic and point-of-care platforms.

COURSE OUTCOMES:

At the end of this course the students will be able to:

CO1: Explain the principles and construction of artificial heart

CO2: Understand various mechanical techniques that improve therapeutic technology

CO3: Explain the functioning of the membrane or filter that cleanses the blood.

CO4: Describe the tests to assess the hearing loss and development of wearable devices for the same.

CO5: Analyze and research on electrical stimulation and biofeedback techniques in rehabilitation and physiotherapy.



Stella Mary's College Of Engineering
(Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai)
Aruthengavillai, Kallukatti Junction, Azhikal (p.o), Kanyakumari District - 629 202
Department of Electronics and Communication Engineering

Academic Year : 2023-2024(ODD/EVEN)

Year / Semester : III / V

NAME OF ELECTIVE COURSE II : CEC352-SATELLITE COMMUNICATION

COURSE OBJECTIVES:

The student should be made to:

- Understand the basics of satellite orbits
- Understand the satellite segment and earth segment
- understand Link Power budget calculation
- Understand the various satellite access and coding technology
- Understand the applications of satellite

UNIT I SATELLITE ORBITS

9

Kepler's Laws, Newton's law, orbital parameters, orbital perturbations, station keeping, geo stationary and non Geo-stationary orbits – Look Angle Determination- Limits of visibility – eclipse- Sub satellite point –Sun transit outage-Launching Procedures - launch vehicles and propulsion.

UNIT II SPACE SEGMENT

9

Spacecraft Technology- Structure, Primary power, Attitude and Orbit control, Thermal control

and Propulsion, communication Payload and supporting subsystems, Telemetry, Tracking and command-Transponders Antenna Subsystem.

UNIT III SATELLITE LINK DESIGN

9

Basic link analysis, Uplink and Downlink Design equation, Free space loss-Atmospheric effects, Ionospheric scintillation, Rain induced attenuation and interference, system noise temperature, Link Design with and without frequency reuse.

UNIT IV SATELLITE ACCESS AND CODING Techniques

9

Modulation and Multiplexing: Voice, Data, Video, Analog – digital transmission system, Digital video Broadcast, multiple access: FDMA, TDMA, CDMA, PAMA and DAMA Assignment Methods, compression – encryption, Coding Schemes.

UNIT V SATELLITE APPLICATIONS

9

INTELSAT Series, INSAT, VSAT, Mobile satellite services: GSM, GPS, LEO, MEO, Satellite Navigational System. GPS-Position Location Principles, Differential GPS, Direct Broadcast satellites(DBS/DTH).

TOTAL:45 PERIODS

COURSE OUTCOMES:

At the end of the course, the student will be able to:

CO1:Identify the satellite orbits

CO2:Analyze the satellite subsystems

CO3:Evaluate the satellite link power budget

CO4:Identify access technology for satellite

CO5:Design various satellite applications



Stella Mary's College Of Engineering
(Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai)
Aruthengavillai, Kallukatti Junction, Azhikal (p.o), Kanyakumari District - 629 202

Department of Electronics and Communication Engineering

Academic Year : 2023-2024(ODD/EVEN)

Year / Semester : III / V

NAME OF ELECTIVE COURSE III : CEC331- 4G/5G Communication Networks

COURSE OBJECTIVES

- To learn the evolution of wireless networks.
- To get acquainted with the fundamentals of 5G networks.
- To study the processes associated with 5G architecture.
- To study spectrum sharing and spectrum trading.
- To learn the security features in 5G networks.

UNIT I

EVOLUTION OF WIRELESS NETWORKS

6

Networks evolution: 2G,3G,4G, evolution of radio access networks, need for 5G. 4G versus 5G, Next Generation core(NG-core), visualized Evolved Packet core(vEPC).

UNIT II

5G CONCEPTS AND CHALLENGES

6

Fundamentals of 5G technologies, overview of 5G core network architecture,5G new radio and cloud technologies, Radio Access Technologies (RATs), EPC for 5G.

UNIT III NETWORK ARCHITECTURE AND THE PROCESSES 6

5G architecture and core, network slicing, multi access edge computing(MEC)visualization of 5G components, end-to-end system architecture, service continuity, relation to EPC, and edge computing. 5G protocols: 5G NAS,NGAP, GTP-U, IPSec and GRE.

UNIT IV DYNAMIC SPECTRUM MANAGEMENT AND MM-WAVES 6

Mobility management, Command and control, spectrum sharing and spectrum trading, cognitive radio based on 5G, millimeter waves.

UNIT V SECURITY IN 5G NETWORKS 6

Security features in 5G networks, network domain security, user domain security, flow based QoS framework,mitigating the threats in 5G.

30 PERIODS

COURSE OUTCOMES

- CO1:**To understand the evolution of wireless networks.
- CO2:**To learn the concepts of 5G networks.
- CO3:**To comprehend the 5G architecture and protocols.
- CO4:**To understand the dynamic spectrum management.
- CO5:**To learn the security aspects in 5G networks.



Stella Mary's College Of Engineering

(Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai)

Aruthengavillai, Kallukatti Junction, Azhikal (p.o), Kanyakumari District - 629 202

Department of Electronics and Communication Engineering

Academic Year : 2023-2024(ODD/EVEN)

Year / Semester : III / V

NAME OF ELECTIVE COURSE IV : OBM752 - HOSPITAL MANAGEMENT

OBJECTIVES:

- To understand the fundamentals of hospital administration and management.
- To know the market related research process
- To explore various information management systems and relative supportive services.
- To learn the quality and safety aspects in hospital.

UNIT I OVERVIEW OF HOSPITAL ADMINISTRATION 9

Distinction between Hospital and Industry, Challenges in Hospital Administration – Hospital Planning- Equipment Planning – Functional Planning

UNIT II HUMAN RESOURCE MANAGEMENT IN HOSPITAL 9

Principles of HRM – Functions of HRM – Profile of HRD Manager – Human Resource Inventory – Manpower Planning.

UNIT III RECRUITMENT AND TRAINING 9

Different Departments of Hospital, Recruitment, Selection, Training Guidelines – Methods of Training – Evaluation of Training – Leadership grooming and Training, Promotion – Transfer.

UNIT IV SUPPORTIVE SERVICES 9

Medical Records Department – Central Sterilization and Supply Department – Pharmacy – Food

Services - Laundry Services.

UNIT V COMMUNICATION AND SAFETY ASPECTS IN HOSPITAL 9

Purposes – Planning of Communication, Modes of Communication – Telephone, ISDN, Public Address and Piped Music – CCTV. Security – Loss Prevention – Fire Safety – Alarm System – Safety Rules.

OUTCOMES:

At the end of the course, the student should be able to:

- Explain the principles of Hospital administration.
- Identify the importance of Human resource management.
- List various marketing research techniques.
- Identify Information management systems and its uses.
- Understand safety procedures followed in hospitals



Stella Mary's College Of Engineering
(Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai)
Aruthengavillai, Kallukatti Junction, Azhikal (p.o), Kanyakumari District - 629 202

Department of Electronics and Communication Engineering

Academic Year : 2023-2024(ODD/EVEN)

Year / Semester : III / VI

ELECTIVE COURSE SYSTEM

NAME OF THE ELECTIVE COURSE I : CBM370 - WEARABLE DEVICES

COURSE OBJECTIVES:

The student should be made to:

- To know the hardware requirement of wearable systems
- To understand the communication and security aspects in the wearable devices
- To know the applications of wearable devices in the field of medicine

UNIT I INTRODUCTION TO WEARABLE SYSTEMS AND SENSORS 9

Wearable Systems- Introduction, Need for Wearable Systems, Drawbacks of Conventional Systems for Wearable Monitoring, Applications of Wearable Systems, Types of Wearable Systems, Components of wearable Systems. Sensors for wearable systems-Inertia movement sensors, Respiration activity sensor, Impedance plethysmography, Wearable ground reaction force sensor.

**UNIT II SIGNAL PROCESSING AND ENERGY HARVESTING
FOR WEARABLE DEVICES 9**

Wearability issues -physical shape and placement of sensor, Technical challenges - sensor design, signal acquisition, sampling frequency for reduced energy consumption, Rejection of irrelevant information. Power Requirements- Solar cell, Vibration based, Thermal based, Human body as a heat source for power generation, Hybrid thermoelectric photovoltaic energy harvests, Thermopiles.

UNIT III WIRELESS HEALTH SYSTEMS 9

Need for wireless monitoring, Definition of Body area network, BAN and Healthcare, Technical Challenges-

System security and reliability, BAN Architecture – Introduction, Wireless communication Techniques.

UNIT IV SMART TEXTILE

9

Introduction to smart textile- Passive smart textile, active smart textile. Fabrication Techniques- Conductive Fibres, Treated Conductive Fibres, Conductive Fabrics, Conductive Inks. Case study- smart fabric for monitoring biological parameters - ECG, respiration.

UNIT V APPLICATIONS OF WEARABLE SYSTEMS

9

Medical Diagnostics, Medical Monitoring-Patients with chronic disease, Hospital patients, Elderly patients, neural recording, Gait analysis, Sports Medicine

COURSE OUTCOMES:

On successful completion of this course, the student will be able to

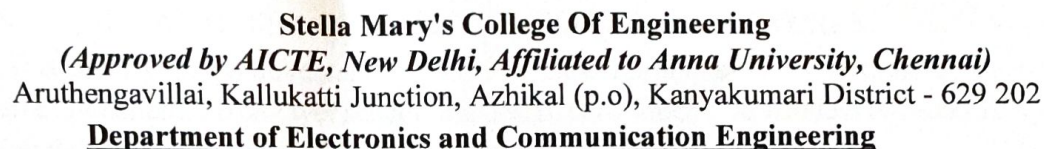
CO1: Describe the concepts of wearable system.

CO2: Explain the energy harvestings in wearable device.

CO3: Use the concepts of BAN in health care.

CO4: Illustrate the concept of smart textile

CO5: Compare the various wearable devices in healthcare system



Academic Year : 2024-2025(ODD/EVEN)

Year / Semester : III / VI

ELECTIVE COURSE SYSTEM

NAME OF THE ELECTIVE COURSE I: CEC333 - ADVANCED WIRELESS

COMMUNICATION TECHNIQUES

COURSE OBJECTIVES

- To understand the evolving paradigm of cooperative communication
- To understand concepts related to green wireless communication
- To enable the student to understand the different power saving strategies and energy efficient signal, system and network design.
- To expose the student to the energy saving techniques adopted in existing wireless components
- To provide understanding on protocols and networks related to green future wireless communication technologies.

UNIT I COOPERATIVE COMMUNICATIONS AND GREEN CONCEPTS 9

Network architectures and research issues in cooperative cellular wireless networks ; Cooperative communications in OFDM and MIMO cellular relay networks: issues and approaches; Fundamental trade-offs on the design of green radio networks, Green modulation and coding schemes.

UNIT II COOPERATIVE TECHNIQUES 9

Cooperative techniques for energy efficiency, Cooperative base station techniques for cellular wireless networks; Turbo base stations; Antenna architectures for cooperation; Cooperative communications in 3GPP LTE-Advanced, Partial information relaying and Coordinated multi-point transmission in LTE-Advanced.

UNIT III RELAY-BASED COOPERATIVE CELLULAR NETWORKS 9

Distributed space-time block codes ; Collaborative relaying in downlink cellular systems ; Radio resource optimization; Adaptive resource allocation ; Cross-layer scheduling design for cooperative wireless two-way relay networks ; Network coding in relay-based networks.

UNIT IV GREEN RADIO NETWORKS 9

Base Station Power-Management Techniques- Opportunistic spectrum and load management, Energy-saving techniques in cellular wireless base stations , Power-management for base stations in smart grid environment, Cooperative multi cell processing techniques for energy-efficient cellular wireless communications.

UNIT V ACCESS TECHNIQUES FOR GREEN RADIO NETWORKS 9

Cross-layer design of adaptive packet scheduling for green radio networks; Energy-efficient relaying for cooperative cellular wireless networks ; Energy performance in TDD-CDMA multihop cellular networks ; Resource allocation for green communication in relay-based cellular networks ; Green Radio Test-Beds and Standardization Activities.

TOTAL: 45 PERIODS

COURSE OUTCOMES:

- CO1:** The student would be able to appreciate the necessity and the design aspects of cooperative communication
- CO2:** The student would be able to appreciate the necessity and the design aspects of green wireless communication.
- CO3:** The student would be able to evolve new techniques in wireless communication
- CO4:** The students would be able to demonstrate the feasibility of using mathematical models using simulation tools.
- CO5:** The student would be able to demonstrate the impact of the green engineering solutions in a global, economic, environmental and societal context.



Stella Mary's College Of Engineering
(Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai)
Aruthengavillai, Kallukatti Junction, Azhikal (p.o), Kanyakumari District - 629 202
Department of Electronics and Communication Engineering

Academic Year : 2023-2024(ODD/EVEN)

Year / Semester : III / VI

ELECTIVE COURSE SYSTEM

NAME OF THE ELECTIVE COURSE I : CCW332 - DIGITAL MARKETING

COURSE OBJECTIVES:

- The primary objective of this module is to examine and explore the role and importance of digital marketing in today's rapidly changing business environment.
- It also focuses on how digital marketing can be utilized by organizations and how its effectiveness can be measured.

UNIT I INTRODUCTION TO ONLINE MARKET

6

Online Market space- Digital Marketing Strategy- Components - Opportunities for building Brand Website - Planning and Creation - Content Marketing.

UNIT II SEARCH ENGINE OPTIMISATION

6

Search Engine optimisation - Keyword Strategy- SEO Strategy - SEO success factors -On-Page Techniques - Off-Page Techniques. Search Engine Marketing- How Search Engine works- SEM components- PPC advertising -Display Advertisement

UNIT III E- MAIL MARKETING

6

E- Mail Marketing - Types of E- Mail Marketing - Email Automation - Lead Generation - Integrating Email with Social Media and Mobile- Measuring and maximizing email campaign effectiveness. Mobile Marketing- Mobile Inventory/channels- Location based; Context based; Coupons and offers, Mobile Apps, Mobile Commerce, SMS Campaigns-Profiling and targeting

UNIT IV SOCIAL MEDIA MARKETING

6

Social Media Marketing - Social Media Channels- Leveraging Social media for brand conversations and buzz. Successful /benchmark Social media campaigns. Engagement Marketing- Building Customer relationships - Creating Loyalty drivers - Influencer Marketing.

UNIT V DIGITAL TRANSFORMATION

6

Digital Transformation & Channel Attribution- Analytics- Ad-words, Email, Mobile, Social Media, Web Analytics - Changing your strategy based on analysis- Recent trends in Digital marketing.

30 PERIODS

PRACTICAL EXERCISES:

30 PERIODS

1. Subscribe to a weekly/quarterly newsletter and analyze how its content and structure aid with the branding of the company and how it aids its potential customer segments.
2. Perform keyword search for a skincare hospital website based on search volume and competition using Google keyword planner tool.
3. Demonstrate how to use the Google WebMasters Indexing API
4. Discuss an interesting case study regarding how an insurance company manages leads.
5. Discuss negative and positive impacts and ethical implications of using social media for political advertising.
6. Discuss how Predictive analytics is impacting marketing automation

COURSE OUTCOMES:

- CO1:** To examine and explore the role and importance of digital marketing in today's rapidly changing business environment..
- CO2:** To focus on how digital marketing can be utilized by organizations and how its effectiveness can be measured.
- CO3:** To know the key elements of a digital marketing strategy.
- CO4:** To study how the effectiveness of a digital marketing campaign can be measured
- CO5:** To demonstrate advanced practical skills in common digital marketing tools such as SEO, SEM, Social media and Blogs.



Stella Mary's College Of Engineering
(Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai)
Aruthengavillai, Kallukatti Junction, Azhikal (p.o), Kanyakumari District - 629 202

Department of Electronics and Communication Engineering

Academic Year : 2023-2024(ODD/EVEN)

Year / Semester : III / VI

MANDATORY COURSE SYSTEM

NAME OF THE ELECTIVE COURSE I : OME754 - INDUSTRIAL SAFETY

OBJECTIVES :

To impart knowledge on safety engineering fundamentals and safety management practices.

UNIT I INTRODUCTION

9

Evolution of modern safety concepts – Fire prevention – Mechanical hazards – Boilers, Pressure vessels, Electrical Exposure.

UNIT II CHEMICAL HAZARDS

9

Chemical exposure – Toxic materials – Ionizing Radiation and Non-ionizing Radiation - Industrial Hygiene – Industrial Toxicology.

UNIT III ENVIRONMENTAL CONTROL

9

Industrial Health Hazards – Environmental Control – Industrial Noise - Noise measuring instruments, Control of Noise, Vibration, - Personal Protection.

UNIT IV HAZARD ANALYSIS

9

System Safety Analysis – Techniques – Fault Tree Analysis (FTA), Failure Modes and Effects Analysis (FMEA), HAZOP analysis and Risk Assessment

UNIT V

SAFETY REGULATIONS 9

Explosions – Disaster management – catastrophe control, hazard control, Safety education and training -
Factories Act, Safety regulations Product safety – case studies.

TOTAL : 45 PERIODS

OUTCOMES:

- Students must be able to identify and prevent chemical, environmental mechanical, fire hazard through analysis and apply proper safety techniques on safety engineering and management.



Stella Mary's College Of Engineering
(Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai)
Aruthengavillai, Kallukatti Junction, Azhikal (p.o), Kanyakumari District - 629 202

Department of Electronics and Communication Engineering

Academic Year : 2023-24 EVEN

Student Namelist for Elective Course Enrollment for Professional Elective

YEAR : IV

SEMESTER : VIII

REGULATION:2017

Subject Code : 1.EC8094 - SATELLITE COMMUNICATION

2.GE8076 -PROFESSIONAL ETHICS IN ENGINEERING

Sl. No	Reg.No.	Name of the Student
1	963520106001	ABINANTHU R A
2	963520106002	ABINAYA P
3	963520106003	ABINAYA S
4	963520106004	AGASH T
5	963520106005	AHIL S
6	963520106006	AMAT RASEETH J
7	963520106007	ANAND M
8	963520106008	ANISHA L
9	963520106009	ANUSUYA J
10	963520106010	ARUL S
11	963520106011	ARUNA DEVI G
12	963520106012	ASHIKA RAM SREE N A
13	963520106013	ASHIKHA A
14	963520106014	ASWIN N
15	963520106015	BALA DEVIKA B
16	963520106017	DHANUSHA S
17	963520106018	DIVYA VARSHINI R
18	963520106019	FARHAN B
19	963520106020	INFANT LISHA MAYNI S
20	963520106021	JAYARAM C
21	963520106022	JEMI J A BENISHA J A
22	963520106023	JENIKA S
23	963520106024	JENISADEVI U
24	963520106025	JENISH J

25	963520106026	JOHN TENI JIO F
26	963520106027	KASTHURI M
27	963520106028	KAVIYA S
28	963520106029	LIVINGSTON I
29	963520106030	MANJU K M
30	963520106031	NAGA RAJ K
31	963520106032	NARESH KUMAR M P
32	963520106033	NATHEESH N
33	963520106034	PRAGANESH M
34	963520106035	RAHUL BRIGHT PRINCE B
35	963520106036	RIJO AAGASH A
36	963520106037	SABITHA S
37	963520106038	SANJAY KUMAR S
38	963520106039	SANTHYA M
39	963520106040	SEBA E
40	963520106041	VIJAYASREE V
41	963520106042	VISWA R L
42	963520106302	RAROJIN
43	963520106303	REXLIN NAYAGAM P



Mr. N. MICHAEL FRANKLIN, M.E.,
Head of the Department,
Department of Electronics & Communication Engineering,
Stella Mary's College of Engineering,
Arutnenkanvilai, Azhikal Post,
Kanyakumari District - 629 202.



Stella Mary's College Of Engineering
(Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai)
Aruthengavillai, Kallukatti Junction, Azhikal (p.o), Kanyakumari District - 629
202

Department of Electronics and Communication Engineering
Academic Year : 2023-24 EVEN

Student Namelist for Elective Course Enrollment for Professional Elective And Open Elective

YEAR : III

SEMESTER : VI

REGULATION:2021

Subject Code : 1.CBM370 - Wearable Devices

2.CEC333 -Advanced Wireless Communication Techniques

3.CCW332 -Digital Marketing

Sl. No	Reg.No.	Name of the Student
1	963521106001	ABINESH R S
2	963521106003	AHUNSHIYA A
3	963521106004	AJIN R
4	963521106005	AKALYA R S
5	963521106006	AKASH K
6	963521106007	AKASH R V
7	963521106008	AKSHAYA V S
8	963521106009	ALLWIN SANJAY D
9	963521106010	ANIESH T
10	963521106011	ANJANA J
11	963521106012	ANTO MONISHA A
12	963521106013	ANTRIA LAGANI J
13	963521106015	ARUN G
14	963521106016	ASHIK S
15	963521106017	ASWIN S
16	963521106018	ATHARSH G
17	963521106019	ATHITHYA A
18	963521106020	BAVISH P
19	963521106021	BAVITH P S
20	963521106022	BERJIN SINGH J F
21	963521106023	BHISMA DEEPAK R G
22	963521106024	BOMMIYAPPAN B
23	963521106025	BRAMUEL NIJOE G S

24	963521106026	CHANCHU S U
25	963521106027	DHANEESH A
26	963521106028	DHANISHA M
27	963521106029	DHANUSH R
28	963521106030	DINESH T N
29	963521106031	DIXON J
30	963521106032	GIFTY G
31	963521106033	GIRIJA A
32	963521106034	HARIHARA SUBRAMANIAN M G
33	963521106035	HARISH S M
34	963521106036	HITY MAMATHY S
35	963521106037	IRULANDI S
36	963521106038	JENISH KUMAR L
37	963521106039	Jenisha S
38	963521106040	JENITH J
39	963521106041	JERIN J
40	963521106042	LAVANYA V J
41	963521106043	LYNET BREEZA L
42	963521106044	MARY TINTU S
43	963521106045	MOHAMED ASHIK S
44	963521106046	NAFIL A
45	963521106047	RAHUL CHURCHIL R E
46	963521106048	SARANYA S
47	963521106049	SASI REKHA M
48	963521106050	SHABIN S K
49	963521106053	SIVA SUGANESH R
50	963521106054	SREEJA R
51	963521106055	SUBIN K I
52	963521106056	SUDHAN R
53	963521106058	THIRUMAL C S
54	963521106059	UNISH B
55	963521106060	VEERANANDHINI K
56	963521106301	NISSY JUDE
57	963521106701	BREESTLIN UGESH.A
58	963521106702	NIJANTH DERIXON.A



Stella Mary's College Of Engineering
(Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai)
Aruthengavillai, Kallukatti Junction, Azhikal (p.o), Kanyakumari District - 629
202

Department of Electronics and Communication Engineering

Academic Year : 2023-24 EVEN

Student Namelist for Elective Course Enrollment for Mandatory Course

YEAR : III

SEMESTER : VI

REGULATION:2021

Subject Code: MX3089 - Industrial Safety

Sl. No	Reg.No.	Name of the Student
1	963521106001	ABINESH R S
2	963521106003	AHUNSHIYA A
3	963521106004	AJIN R
4	963521106005	AKALYA R S
5	963521106006	AKASH K
6	963521106007	AKASH R V
7	963521106008	AKSHAYA V S
8	963521106009	ALLWIN SANJAY D
9	963521106010	ANIESH T
10	963521106011	ANJANA J
11	963521106012	ANTO MONISHA A
12	963521106013	ANTRIA LAGANI J
13	963521106015	ARUN G
14	963521106016	ASHIK S
15	963521106017	ASWIN S
16	963521106018	ATHARSH G
17	963521106019	ATHITHYA A
18	963521106020	BAVISH P
19	963521106021	BAVITH P S
20	963521106022	BERJIN SINGH J F
21	963521106023	BHISMA DEEPAK R G
22	963521106024	BOMMIYAPPAN B
23	963521106025	BRAMUEL NIJOE G S
24	963521106026	CHANCHU S U
25	963521106027	DHANEESH A
26	963521106028	DHANISHA M
27	963521106029	DHANUSH R
28	963521106030	DINESH T N
29	963521106031	DIXON J

30	963521106032	GIFTY G
31	963521106033	GIRIJA A
32	963521106034	HARIHARA SUBRAMANIAN M G
33	963521106035	HARISH S M
34	963521106036	HITY MAMATHY S
35	963521106037	IRULANDI S
36	963521106038	JENISH KUMAR L
37	963521106039	Jenisha S
38	963521106040	JENITH J
39	963521106041	JERIN J
40	963521106042	LAVANYA V J
41	963521106043	LYNET BREEZA L
42	963521106044	MARY TINTU S
43	963521106045	MOHAMED ASHIK S
44	963521106046	NAFIL A
45	963521106047	RAHUL CHURCHIL R E
46	963521106048	SARANYA S
47	963521106049	SASI REKHA M
48	963521106050	SHABIN S K
49	963521106053	SIVA SUGANESH R
50	963521106054	SREEJA R
51	963521106055	SUBIN K I
52	963521106056	SUDHAN R
53	963521106058	THIRUMAL C S
54	963521106059	UNISH B
55	963521106060	VEERANANDHINI K
56	963521106301	NISSY JUDE
57	963521106701	BREESTLIN UGESH.A
58	963521106702	NIJANTH DERIXON.A



Mr. N. MICHAEL FRANKLIN, M.E.,
Head of the Department,
Department of Electronics & Communication Engineering,
Stella Mary's College of Engineering,
Arutnenkanvilai, Azhikal Post,
Tanyakumari District - 629 202.



Stella Mary's College Of Engineering
(Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai)
 Aruthengavillai, Kallukatti Junction, Azhikal (p.o), Kanyakumari District - 629 202
Department of Electronics and Communication Engineering

Elective Willingness

Academic Year: 2023-2024(ODD/EVEN)

Year / Semester : III / V

Name of the student : **Abinеш . R . S**

Vertical I Semiconductor Chip Design and Testing	Vertical II Signal Processing	Vertical III RF Technologies	Vertical IV Bio Medical Technologies	Vertical V Underwater Technologies	Vertical VI Sensor Technologies and IoT	Vertical VII Space Technologies	Vertical VIII High Speed Communications
Wide Band gap Devices	Advanced Digital Signal Processing	RF Transceivers	Wearable Devices	Underwater Instrumentation System	IoT Processors	Radar Technologies	Optical Communication & Networks
Validation and Testing Technology	Image Processing	Signal Integrity	Human Assist Devices ✓	Underwater Imaging Systems and Image Processing	IoT Based System Design	Avionics Systems	Wireless BroadBand Networks
Low Power IC Design	Speech Processing	Antenna Design	Therapeutic Equipment	Underwater Communication	Wireless Sensor Network Design	Positioning and Navigation Systems	✓ 4G/5G Communication Networks
VLSI Testing and Design For Testability	Software Defined Radio	MICs and RF System Design	Medical Imaging Systems	Ocean Observation Systems	Industrial IoT and Industry 4.0	✓ Satellite Communication	Software Defined Networks
Mixed Signal IC Design Testing	DSP Architecture and Programming	EMI/EMC Pre Compliance Testing	Brain Computer Interface and Applications	Underwater Navigation Systems	MEMS Design	Remote Sensing	Massive MIMO Networks
Analog IC Design	Computer Vision	RFID System Design & Testing	Body Area Networks	Ocean Acoustics	Fundamentals of Nanoelectronics	Rocketry and Space Mechanics	Advanced Wireless Communication Techniques

Abinеш .
 Signature of the Student



Stella Mary's College Of Engineering
(Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai)
Aruthengavillai, Kallukatti Junction, Azhikal (p.o), Kanyakumari District - 629 202
Department of Electronics and Communication Engineering

Elective Willingness

Academic Year: 2023-2024(ODD/~~EVEN~~)

Year / Semester : III / V

Name of the student : *Ahunshiga. A*

Vertical I Semiconductor Chip Design and Testing	Vertical II Signal Processing	Vertical III RF Technologies	Vertical IV Bio Medical Technologies	Vertical V Underwater Technologies	Vertical VI Sensor Technologies and IoT	Vertical VII Space Technologies	Vertical VIII High Speed Communications
Wide Band gap Devices	Advanced Digital Signal Processing	RF Transceivers	Wearable Devices	Underwater Instrumentation System	IoT Processors	Radar Technologies	Optical Communication & Networks
Validation and Testing Technology	Image Processing	Signal Integrity	Human Assist Devices	Underwater Imaging Systems and Image Processing	IoT Based System Design	Avionics Systems	Wireless BroadBand Networks
Low Power IC Design	Speech Processing	Antenna Design	Therapeutic Equipment	Underwater Communication	Wireless Sensor Network Design	Positioning and Navigation Systems	4G/5G Communication Networks
VLSI Testing and Design For Testability	Software Defined Radio	MICs and RF System Design	Medical Imaging Systems	Ocean Observation Systems	Industrial IoT and Industry 4.0	Satellite Communication	Software Defined Networks
Mixed Signal IC Design Testing	DSP Architecture and Programming	EMI/EMC Pre Compliance Testing	Brain Computer Interface and Applications	Underwater Navigation Systems	MEMS Design	Remote Sensing	Massive MIMO Networks
Analog IC Design	Computer Vision	RFID System Design & Testing	Body Area Networks	Ocean Acoustics	Fundamentals of Nanoelectronics	Rocketry and Space Mechanics	Advanced Wireless Communication Techniques

Ahunshiga
Signature of the Student



Stella Mary's College Of Engineering
(Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai)
 Aruthengavillai, Kallukatti Junction, Azhikal (p.o), Kanyakumari District - 629 202
Department of Electronics and Communication Engineering

Elective Willingness

Academic Year: 2023-2024(ODD/EVEN)

Year / Semester : III / V

Name of the student : **Ajin. R**

Vertical I Semiconductor Chip Design and Testing	Vertical II Signal Processing	Vertical III RF Technologies	Vertical IV Bio Medical Technologies	Vertical V Underwater Technologies	Vertical VI Sensor Technologies and IoT	Vertical VII Space Technologies	Vertical VIII High Speed Communications
Wide Band gap Devices	Advanced Digital Signal Processing	RF Transceivers	Wearable Devices	Underwater Instrumentation System	IoT Processors	Radar Technologies	Optical Communication & Networks
Validation and Testing Technology	Image Processing	Signal Integrity	Human Assist Devices	Underwater Imaging Systems and Image Processing	IoT Based System Design	Avionics Systems	Wireless BroadBand Networks
Low Power IC Design	Speech Processing	Antenna Design	Therapeutic Equipment	Underwater Communication	Wireless Sensor Network Design	Positioning and Navigation Systems	4G/5G Communication Networks
VLSI Testing and Design For Testability	Software Defined Radio	MICs and RF System Design	Medical Imaging Systems	Ocean Observation Systems	Industrial IoT and Industry 4.0	Satellite Communication	Software Defined Networks
Mixed Signal IC Design Testing	DSP Architecture and Programming	EMI/EMC Pre Compliance Testing	Brain Computer Interface and Applications	Underwater Navigation Systems	MEMS Design	Remote Sensing	Massive MIMO Networks
Analog IC Design	Computer Vision	RFID System Design & Testing	Body Area Networks	Ocean Acoustics	Fundamentals of Nanoelectronics	Rocketry and Space Mechanics	Advanced Wireless Communication Techniques

Signature of the Student



Stella Mary's College Of Engineering
(Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai)
Aruthengavillai, Kallukatti Junction, Azhikal (p.o), Kanyakumari District - 629 202
Department of Electronics and Communication Engineering

Elective Willingness

Academic Year: 2023-2024(ODD/EVEN)

Year / Semester : III / V

Name of the student : Akalya. R.S

Vertical I Semiconductor Chip Design and Testing	Vertical II Signal Processing	Vertical III RF Technologies	Vertical IV Bio Medical Technologies	Vertical V Underwater Technologies	Vertical VI Sensor Technologies and IoT	Vertical VII Space Technologies	Vertical VIII High Speed Communications
Wide Band gap Devices	Advanced Digital Signal Processing	RF Transceivers	Wearable Devices	Underwater Instrumentation System	IoT Processors	Radar Technologies	Optical Communication & Networks
Validation and Testing Technology	Image Processing	Signal Integrity	✓ Human Assist Devices	Underwater Imaging Systems and Image Processing	IoT Based System Design	Avionics Systems	Wireless BroadBand Networks
Low Power IC Design	Speech Processing	Antenna Design	Therapeutic Equipment	Underwater Communication	Wireless Sensor Network Design	Positioning and Navigation Systems	✓ 4G/5G Communication Networks
VLSI Testing and Design For Testability	Software Defined Radio	MICs and RF System Design	Medical Imaging Systems	Ocean Observation Systems	Industrial IoT and Industry 4.0	✓ Satellite Communication	Software Defined Networks
Mixed Signal IC Design Testing	DSP Architecture and Programming	EMI/EMC Pre Compliance Testing	Brain Computer Interface and Applications	Underwater Navigation Systems	MEMS Design	Remote Sensing	Massive MIMO Networks
Analog IC Design	Computer Vision	RFID System Design & Testing	Body Area Networks	Ocean Acoustics	Fundamentals of Nanoelectronics	Rocketry and Space Mechanics	Advanced Wireless Communication Techniques

Akalya.R.S
Signature of the Student



Stella Mary's College Of Engineering
(Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai)
Aruthengavillai, Kallukatti Junction, Azhikal (p.o), Kanyakumari District - 629 202
Department of Electronics and Communication Engineering

Elective Willingness

Academic Year: 2023-2024(ODD/EVEN)

Year / Semester : III / V

Name of the student : Akash.K

Vertical I Semiconductor Chip Design and Testing	Vertical II Signal Processing	Vertical III RF Technologies	Vertical IV Bio Medical Technologies	Vertical V Underwater Technologies	Vertical VI Sensor Technologies and IoT	Vertical VII Space Technologies	Vertical VIII High Speed Communications
Wide Band gap Devices	Advanced Digital Signal Processing	RF Transceivers	Wearable Devices	Underwater Instrumentation System	IoT Processors	Radar Technologies	Optical Communication & Networks
Validation and Testing Technology	Image Processing	Signal Integrity	Human Assist Devices	Underwater Imaging Systems and Image Processing	IoT Based System Design	Avionics Systems	Wireless BroadBand Networks
Low Power IC Design	Speech Processing	Antenna Design	Therapeutic Equipment	Underwater Communication	Wireless Sensor Network Design	Positioning and Navigation Systems	4G/5G Communication Networks
VLSI Testing and Design For Testability	Software Defined Radio	MICs and RF System Design	Medical Imaging Systems	Ocean Observation Systems	Industrial IoT and Industry 4.0	Satellite Communication	Software Defined Networks
Mixed Signal IC Design Testing	DSP Architecture and Programming	EMI/EMC Pre Compliance Testing	Brain Computer Interface and Applications	Underwater Navigation Systems	MEMS Design	Remote Sensing	Massive MIMO Networks
Analog IC Design	Computer Vision	RFID System Design & Testing	Body Area Networks	Ocean Acoustics	Fundamentals of Nanoelectronics	Rocketry and Space Mechanics	Advanced Wireless Communication Techniques

Signature of the Student



Stella Mary's College Of Engineering
(Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai)
Aruthengavillai, Kallukatti Junction, Azhikal (p.o), Kanyakumari District - 629 202
Department of Electronics and Communication Engineering

Elective Willingness

Academic Year: 2023-2024(ODD/EVEN)

Year / Semester : III / V

Name of the student : Akash.R.V

Vertical I Semiconductor Chip Design and Testing	Vertical II Signal Processing	Vertical III RF Technologies	Vertical IV Bio Medical Technologies	Vertical V Underwater Technologies	Vertical VI Sensor Technologies and IoT	Vertical VII Space Technologies	Vertical VIII High Speed Communications
Wide Band gap Devices	Advanced Digital Signal Processing	RF Transceivers	Wearable Devices	Underwater Instrumentation System	IoT Processors	Radar Technologies	Optical Communication & Networks
Validation and Testing Technology	Image Processing	Signal Integrity	Human Assist Devices	Underwater Imaging Systems and Image Processing	IoT Based System Design	Avionics Systems	Wireless BroadBand Networks
Low Power IC Design	Speech Processing	Antenna Design	Therapeutic Equipment	Underwater Communication	Wireless Sensor Network Design	Positioning and Navigation Systems	4G/5G Communication Networks
VLSI Testing and Design For Testability	Software Defined Radio	MICs and RF System Design	Medical Imaging Systems	Ocean Observation Systems	Industrial IoT and Industry 4.0	Satellite Communication	Software Defined Networks
Mixed Signal IC Design Testing	DSP Architecture and Programming	EMI/EMC Pre Compliance Testing	Brain Computer Interface and Applications	Underwater Navigation Systems	MEMS Design	Remote Sensing	Massive MIMO Networks
Analog IC Design	Computer Vision	RFID System Design & Testing	Body Area Networks	Ocean Acoustics	Fundamentals of Nanoelectronics	Rocketry and Space Mechanics	Advanced Wireless Communication Techniques

Akash R.V

Signature of the Student



Stella Mary's College Of Engineering
(Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai)
Aruthengavillai, Kallukatti Junction, Azhikal (p.o), Kanyakumari District - 629 202
Department of Electronics and Communication Engineering

Elective Willingness

Academic Year: 2023-2024(ODD/EVEN)

Year / Semester : III / V

Name of the student : **Akshaya . v . S**

Vertical I Semiconductor Chip Design and Testing	Vertical II Signal Processing	Vertical III RF Technologies	Vertical IV Bio Medical Technologies	Vertical V Underwater Technologies	Vertical VI Sensor Technologies and IoT	Vertical VII Space Technologies	Vertical VIII High Speed Communications
Wide Band gap Devices	Advanced Digital Signal Processing	RF Transceivers	Wearable Devices	Underwater Instrumentation System	IoT Processors	Radar Technologies	Optical Communication & Networks
Validation and Testing Technology	Image Processing	Signal Integrity	Human Assist Devices	Underwater Imaging Systems and Image Processing	IoT Based System Design	Avionics Systems	Wireless BroadBand Networks
Low Power IC Design	Speech Processing	Antenna Design	Therapeutic Equipment	Underwater Communication	Wireless Sensor Network Design	Positioning and Navigation Systems	4G/5G Communication Networks
VLSI Testing and Design For Testability	Software Defined Radio	MICs and RF System Design	Medical Imaging Systems	Ocean Observation Systems	Industrial IoT and Industry 4.0	Satellite Communication	Software Defined Networks
Mixed Signal IC Design Testing	DSP Architecture and Programming	EMI/EMC Pre Compliance Testing	Brain Computer Interface and Applications	Underwater Navigation Systems	MEMS Design	Remote Sensing	Massive MIMO Networks
Analog IC Design	Computer Vision	RFID System Design & Testing	Body Area Networks	Ocean Acoustics	Fundamentals of Nanoelectronics	Rocketry and Space Mechanics	Advanced Wireless Communication Techniques

Akshaya . V . S
Signature of the Student



Stella Mary's College Of Engineering
(Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai)
Aruthengavillai, Kallukatti Junction, Azhikal (p.o), Kanyakumari District - 629 202
Department of Electronics and Communication Engineering

Elective Willingness

Academic Year: 2023-2024(ODD/EVEN)

Year / Semester : III / V

Name of the student : *Allwin Sanjay. A*

Vertical I Semiconductor Chip Design and Testing	Vertical II Signal Processing	Vertical III RF Technologies	Vertical IV Bio Medical Technologies	Vertical V Underwater Technologies	Vertical VI Sensor Technologies and IoT	Vertical VII Space Technologies	Vertical VIII High Speed Communications
Wide Band gap Devices	Advanced Digital Signal Processing	RF Transceivers	Wearable Devices	Underwater Instrumentation System	IoT Processors	Radar Technologies	Optical Communication & Networks
Validation and Testing Technology	Image Processing	Signal Integrity	Human Assist Devices	Underwater Imaging Systems and Image Processing	IoT Based System Design	Avionics Systems	Wireless BroadBand Networks
Low Power IC Design	Speech Processing	Antenna Design	Therapeutic Equipment	Underwater Communication	Wireless Sensor Network Design	Positioning and Navigation Systems	4G/5G Communication Networks
VLSI Testing and Design For Testability	Software Defined Radio	MICs and RF System Design	Medical Imaging Systems	Ocean Observation Systems	Industrial IoT and Industry 4.0	Satellite Communication	Software Defined Networks
Mixed Signal IC Design Testing	DSP Architecture and Programming	EMI/EMC Pre Compliance Testing	Brain Computer Interface and Applications	Underwater Navigation Systems	MEMS Design	Remote Sensing	Massive MIMO Networks
Analog IC Design	Computer Vision	RFID System Design & Testing	Body Area Networks	Ocean Acoustics	Fundamentals of Nanoelectronics	Rocketry and Space Mechanics	Advanced Wireless Communication Techniques

Allwin Sanjay.
Signature of the Student



Stella Mary's College Of Engineering
(Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai)
Aruthengavillai, Kallukatti Junction, Azhikal (p.o), Kanyakumari District - 629 202
Department of Electronics and Communication Engineering

Elective Willingness

Academic Year: 2023-2024(ODD/EVEN)

Year / Semester : III / V

Name of the student : **Aniesh.T**

Vertical I Semiconductor Chip Design and Testing	Vertical II Signal Processing	Vertical III RF Technologies	Vertical IV Bio Medical Technologies	Vertical V Underwater Technologies	Vertical VI Sensor Technologies and IoT	Vertical VII Space Technologies	Vertical VIII High Speed Communications
Wide Band gap Devices	Advanced Digital Signal Processing	RF Transceivers	Wearable Devices	Underwater Instrumentation System	IoT Processors	Radar Technologies	Optical Communication & Networks
Validation and Testing Technology	Image Processing	Signal Integrity	✓ Human Assist Devices	Underwater Imaging Systems and Image Processing	IoT Based System Design	Avionics Systems	Wireless BroadBand Networks
Low Power IC Design	Speech Processing	Antenna Design	Therapeutic Equipment	Underwater Communication	Wireless Sensor Network Design	Positioning and Navigation Systems	↗ 4G/5G Communication Networks
VLSI Testing and Design For Testability	Software Defined Radio	MICs and RF System Design	Medical Imaging Systems	Ocean Observation Systems	Industrial IoT and Industry 4.0	↗ Satellite Communication	Software Defined Networks
Mixed Signal IC Design Testing	DSP Architecture and Programming	EMI/EMC Pre Compliance Testing	Brain Computer Interface and Applications	Underwater Navigation Systems	MEMS Design	Remote Sensing	Massive MIMO Networks
Analog IC Design	Computer Vision	RFID System Design & Testing	Body Area Networks	Ocean Acoustics	Fundamentals of Nanoelectronics	Rocketry and Space Mechanics	Advanced Wireless Communication Techniques

Aniesh.T

Signature of the Student