

PROGRAM STRUCTURE

I SEMESTER

| S. No | Course Code | Name of the Course | Employability | Skill Development | Entrepreneurship | Remarks |
|-------|-------------|-----------------------------------|---------------|-------------------|------------------|--|
| 1 | 192VD1T01 | CMOS Analog IC Design | ✓ | | | Students are able to acquire knowledge related to different analog IC Design techniques enabling them to be employed in the field of VLSI |
| 2 | 192VD1T02 | CMOS Digital IC Design | ✓ | | | Students are able to acquire knowledge related to different digital IC Design techniques enabling them to be employed in the field of VLSI |
| 3 | 192HS1T01 | Research methodology and IPR | | | | |
| 4 | 192VD1E01 | VLSI Technology | ✓ | | | Students are able to acquire knowledge related to fabrication process of VLSI enabling them to be employed for fabrication and testing of Ics |
| 5 | 192VD1E02 | Nano materials and Nanotechnology | ✓ | | | Students are able to acquire knowledge related to fabrication process and applications of nano materials enabling them to be employed in the field of nanotechnology |
| 6 | 192VD1E03 | MEMS Technology | ✓ | | | Students are able to acquire knowledge related to fabrication process and applications of MEMS enabling them to be employed in the field of VLSI and ES |
| 7 | 192VD1E04 | Device Modelling | ✓ | | | Students are able to acquire knowledge related to fabrication process and modelling of devices to be fabricated enabling them to be employed in the field of VLSI |
| 8 | 192VD1E05 | Nano-Electronics | ✓ | | | Students are able to acquire knowledge related to different nanoelectronics building blocks such as carbon nanotubes, quantum dots, nano wires enabling them to be employed in the field of VLSI |
| 9 | 192VD1E06 | Photonics | | | | |
| 10 | 192VD1L01 | CMOS Analog IC Design Lab | | ✓ | | Students are able to acquire knowledge related to different analog IC Design techniques enabling them to be employed in the field of VLSI |

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| 11 | 192VD1L02 | CMOS Digital IC Design Lab | | ✓ | | Students are able to acquire knowledge related to different digital IC Design techniques enabling them to be employed in the field of VLSI |
| 12 | 192MC1A01/19 2MC2A01 | English for Research Paper Writing | | ✓ | | Students are able to demonstrate communication writing skills to express fluently in writing form of language which is very much essential for the career growth in research |
| 13 | 192MC1A02/19 2MC2A02 | Disaster Management | | | | |
| 14 | 192MC1A03/19 2MC2A03 | Sanskrit for Technical Knowledge | | | | |
| 15 | 192MC1A04/19 2MC2A04 | Value Education | | | | |
| 16 | 192MC1A05/19 2MC2A05 | Constitution of India | | | | |
| 17 | 192MC1A06/19 2MC2A06 | Pedagogy Studies | | | | |
| 18 | 192MC1A07/19 2MC2A07 | Stress Management by Yoga | | | | |
| 19 | 192MC1A08/19 2MC2A08 | Personality Development through Life Enlightenment Skills | | | | |
| 20 | 192MC1A09/19 2MC2A09 | Soft Skills | | ✓ | | The students are able to demonstrate Business Communication skills to analyze the mistakes in Body language ,formal written communication in the organizations. |

II SEMESTER

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|-------|-------------|---|---------------|-------------------|------------------|--|
| 21 | 192VD2T03 | Mixed Signal & RF IC Design | ✓ | | | Students are able to acquire knowledge related to different mixed signal and RF IC design techniques enabling them to be employed in industries fabricating rf communication equipment. |
| 22 | 192VD2T04 | Physical Design Automation | ✓ | | | Students are able to acquire knowledge related to partitioning, placement and routing techniques in a physical design , enabling them to be employed for designing and manufacturing and utilisation of ICs. |
| 23 | 192VD2E07 | Design For Testability | ✓ | | | Students are able to acquire skills related to design, implement and evaluate the performance of test circuits built within the chip enabling them to be employed for designing and testing of complex systems |
| 24 | 192VD2E08 | IoT & Its Applications | ✓ | | | Students will be able to acquire technical skills to develop real time IOT devices which can be used in the field of medicine, agriculture, Vigilance, safety and security services which enable them to be employed as IOT developer. |
| 25 | 192VD2E09 | VLSI Signal Processing | ✓ | | | Students are able to acquire skills related to design and development of visa signal processing, enabling them to be employed for designing and manufacturing of ICs |
| 26 | 192VD2E10 | Microcontrollers & programmable Digital Signal Processors | ✓ | | | Students will be able to acquire technical skills to program and interface microcontrollers and DSP processors which enable them to be employed as ES developer. |
| 27 | 192EM2E11 | Network Security & Cryptography | | | | |
| 28 | 192VD2E11 | Low Power VLSI Design | ✓ | | | Students are able to acquire skills related to design and development of ices that consume less power, increasing the operating time of battery operated systems, enabling them to be employed for |

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| | | | | | | designing and manufacturing of Ics |
| 29 | 192VD2L03 | Mixed Signal IC Design Lab | | ✓ | | Students are able to acquire technical skills related to simulate mixed signal circuits , enabling them to be employed for designing and manufacturing and utilisation of ICs. |
| 30 | 192VD2L04 | Physical Design Automation Lab | | ✓ | | Students are able to acquire technical skills related to partitioning, placement and routing techniques in a physical design , enabling them to be employed for designing and manufacturing and utilisation of ICs. |
| 31 | 192VD2P01 | Mini Project with Seminar | ✓ | | | students will be able to demonstrate problem identification, analysis, design solutions or applications in electronics and communication domain through the acquired technical, cognitive, communication and creative skills to address societal needs. |

III SEMESTER


| S. No | Course Code | Name of the Course | Employability | Skill Development | Entrepreneurship | Remarks |
|-------|-------------|-------------------------|---------------|-------------------|------------------|---|
| 32 | 172VD3C01 | Comprehensive Viva-Voce | ✓ | | | Students will be able to demonstrate problem identification, analysis, design solutions or applications in communication engineering domain through the acquired technical, cognitive, communication and creative skills to address societal needs. |
| 33 | 172VD3R01 | Seminar – I | ✓ | | | Students will be able to demonstrate problem identification, analysis, design solutions or applications in communication engineering domain through the acquired technical, cognitive, communication and creative skills to address societal needs. |
| 34 | | Project Work Part – I | ✓ | | | Students will be able to demonstrate problem identification, analysis, design solutions or applications in electronics and communication domain through the acquired technical, cognitive, communication and creative skills to address societal needs. |

IV SEMESTER

| S. No | Course Code | Name of the Course | Employability | Skill Development | Entrepreneurship | Remarks |
|--------------|-------------|------------------------|---------------|-------------------|------------------|---|
| 35 | 172VD4R02 | Seminar – II | ✓ | | | Students will be able to demonstrate problem identification, analysis, design solutions or applications in communication engineering domain through the acquired technical, cognitive, communication and creative skills to address societal needs |
| 36 | 172VD4P01 | Project Work Part - II | ✓ | | | Students will be able to demonstrate problem identification, analysis, design solutions or applications in electronics and communication domain through the acquired technical, cognitive, communication and creative skills to address societal needs. |
| TOTAL | | 36 | 20 | 6 | 0 | |



PROGRAM COORDINATOR



HEAD OF THE DEPARTMENT
Head of the Department
Department of E.C.E.
Aditya Engineering College (A9)