

COURSE OUTCOMES (COS) EVEN SEMESTER

Course Outcomes: C221– Laplace Transforms, Numerical Methods & Complex Variables Vear: II, II Sem A V: 2019-20

| Tear: II- II Sein A. I. 2019-20 | |
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| C221.1 | Understanding the concepts of Laplace transforms techniques for solving ODE's. |
| C221.2 | Estimate the value for the given data using different interpolation techniques. |
| C221.3 | Find the numerical solutions for a given ODE's using different numerical method techniques. |
| C221.4 | Analyze the complex function with reference to their analyticity, differentiation using harmonic functions. |
| C221.5 | Analyze the complex function with reference to their analyticity, integration using Cauchy's integral and residue theorems. |

Course Outcomes: C222– Electromagnetic Fields and Waves Year: II- II Sem A.Y: 2019-20

| C222.1 | Understand the Basic Laws, Concepts and proofs related to Electrostatic Fields. |
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| C222.2 | Understand the Basic Laws, Concepts and proofs related to Magneto static Fields. |
| C222.3 | Distinguish between the static and time-varying fields, establish the corresponding sets of Maxwell's Equations and Boundary Conditions. |
| C222.4 | Analyze the Wave Equations for good conductors, good dielectrics and evaluate the UPW Characteristics for several practical media of interest. |
| C222.5 | Analyze completely the rectangular waveguides, their mode characteristics, and design waveguides for solving practical problems. |

Course Outcomes: C223 – Analog and Digital Communications Year: II- II Sem A.Y: 2019-20

| 1 2773 1 | Analyze and design of various continuous wave and angle modulation and demodulation techniques and effects |
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| | of noise is studied. |
| C223.2 | Understand the effect of noise present in continuous wave and angle modulation techniques. |
| C223.3 | Understand the knowledge about AM, FM Transmitters and Receivers. |
| C223.4 | Analyze and design the various Pulse Modulation Techniques. |
| C223.5 | Understand the various contemporary management practices and also the project management techniques. |

Course Outcomes: C224 – Linear IC Applications Year: II- II Sem A.Y: 2019-20

| C224.1 | Understanding of operational amplifiers with linear integrated circuits. |
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| C224.2 | Understand the functionality of Opamp and its Applications |
| C224.3 | Understand the operation of Active Filters & Oscillators using linear IC's |
| C224.4 | Understand the theory and applications of analog multipliers and PLL. |
| C224.5 | Understand the operation of different types of data converters and their specifications. |

Course Outcomes: C225 – Electronic Circuit Analysis Year: II- II Sem A.Y: 2019-20

| C225.1 | Design the multistage amplifiers and understand the concepts of High Frequency Analysis of Transistors. |
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| C225.2 | Utilize the Concepts of negative feedback to improve the stability of amplifiers. |
| C225.3 | Understand the operation of RC and LC type oscillators and also derive its frequency of oscillation. |
| C225.4 | Design and realize different classes of Power Amplifiers and tuned amplifiers usable for audio and Radio applications. |
| C225.5 | Design Multivibrators and sweep circuits for various applications. |

Course Outcomes: C226 - Analog and Digital Communications Lab Year: II- II Sem A.Y: 2019-20

| C226.1 | Study and Verify the operation of different Analog modulation techniques along with its frequency spectrum. |
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| C226.2 | Study and Verify the operation of different Digital modulation techniques along with its frequency spectrum. |
| C226.3 | Understand the operation of Frequency Division Multiplexing & Demultiplexing. |
| C226.4 | Study and Verify the operation of different pulse modulation techniques. |
| C226.5 | Implement different digital modulation techniques such as FSK, BPSK, DPSK and QPSK. |

Course Outcomes: C227– IC Applications Lab Year: II- II Sem A.Y: 2019-20

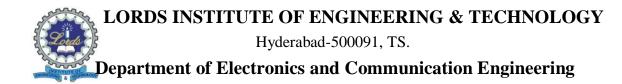
| C227.1 | Study and verify the functionality of opamp and its applications such as adder, subtractor, comparator, differentiator and integrator. |
|--------|--|
| C227.2 | Demonstrate the Active filter Applications - LPF, HPF (First Order) |
| C227.3 | Implement the waveform Generators and Schmitt trigger circuits using IC 741. |
| C227.4 | Design the Mono-Stable Multivibrator and Astable multivibrator using IC 555. |
| C227.5 | Implement the Voltage Regulator using different ICs. |

Course Outcomes: C228 – Electronic Circuit Analysis Lab Year: II- II Sem A.Y: 2019-20

| C228.1 | Study & Analysis of gain and bandwidth of BJT, FET Amplifiers. |
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| C228.2 | Design & Analysis of Feedback Amplifiers. |
| C228.3 | Study& Verify the operation of RC & LC Oscillators. |
| C228.4 | Demonstrate the Performance of power amplifiers. |
| C228.5 | Design of a Monostable Multivibrator and Miller Sweep Circuit. |

Course Outcomes: C229 – Gender Sensitization Lab Year: II- II Sem A.Y: 2019-20

| C228.1 | Understanding of important issues related to gender in contemporary India. |
|--------|---|
| C228.2 | Introduce students to information about some key biological aspects of genders. |
| C228.3 | Acquire insight into the gendered division of labor and its relation to politics and economics. |
| C228.4 | Illustrate the students to reflect critically on gender violence |
| C228.5 | Inculcate the students to more egalitarian interactions between men and women. |



COURSE OUTCOMES (COS)

Course Name: C321 Entrepreneurship and Small Business Enterprises Year: III-II Sem A.Y: 2019-20

| C321.1 | Understand the need, scope and definition of entrepreneurship and its process. |
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| C321.2 | Understand innovation and create a sustaining enterprising model. |
| C321.3 | Understand the managing process of MSME and sick enterprises. |
| C321.4 | Understand the concept of Marketing and Growth of Enterprises. |
| C321.5 | Comprehend the aspects related to understanding the strategic perspectives in Entrepreneurship of Start-Ups. |

Course Name: C322 Digital Image Processing Year: III-II Sem A.Y: 2019-20

| C322.1 | Explore the fundamental relations between pixels and utility of 2-D transforms in image processing. | |
|--------|---|--|
| C322.2 | Understand the Image enhancement in spatial domain and frequency domain using different processing | |
| | techniques | |
| C322.3 | Interpret the process of Image segmentation and restoration using different methods. | |
| C322.4 | Implement the various Morphological operations on an image | |
| C322.5 | Overview on the need of compression and evaluation of basic compression algorithms. | |

Course Name: C323 Antennas and Wave Propagation

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|--------|---|--|
| C323.1 | Understand the different characteristics of an antenna and determine radiation field patterns of it. | |
| C323.2 | Analyze radiation field characteristics of $\lambda/2$ dipole antenna, $\lambda/4$ monopole antenna, and different antenna arrays and demonstrate the characteristics of end fire, broad side and phased array antennas | |
| C323.3 | Demonstrate the working principle of different antennas and their applications. | |
| C323.4 | Demonstrate the working principle, design and applications of various horn and reflector antennas. | |
| C323.5 | Illustrate the various methods of radio wave propagation and explain different propagation parameters/terms such as virtual height, critical frequency, maximum usable frequency (MUF), skip distance. | |

Course Name: C324 Microprocessor and Microcontroller Year: III-II Sem A.Y: 2019-

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|--------|--|--|--|--|
| C324.1 | Visualization of architecture of 8086 microprocessor and recognize different types of addressing modes. | | | |
| C324.2 | Write assembly language programming using 8086 microprocessor instruction set. | | | |
| C324.3 | Familiarization of different interface peripherals to 8086 microprocessors. | | | |
| C324.4 | Comprehend the architecture of 8051 architecture and capable of assembly/C language programming using 8051 microcontrollers. | | | |
| C324.5 | Handshaking of different peripherals interfaces to 8051 microcontrollers. | | | |

Course Name: C325 Digital Signal Processing Year: III-II Sem A.Y: 2019-20

| C325.1 | Understand the LTI system characteristics and Multirate signal processing. | |
|--------|--|--|
| C325.2 | Understand the inter-relationship between DFT and various transforms. | |
| C325.3 | Design of a digital IIR filter for a given specifications using different techniques. | |
| C325.4 | Design of a digital FIR filter for a given specifications using different techniques. | |
| C325.5 | Understand the significance of various filter structures and effects of round off errors | |

Course Name: C326 Digital Signal Processing Lab Year: III-II Sem A.Y: 2019-20

| C326.1 | Understand how to calculate and plot DFT/IDFT of a given DT signal. | |
|--------|--|--|
| C326.2 | Apply the technique to find the Impulse Response and Frequency Response of a given system. | |
| C326.3 | Implement FFT of a given sequence and identify the reduction of computations using FFT. | |
| C326.4 | Implement Low Pass FIR filter and High Pass IIR filter for a given sequence and calculate the filter coefficients. | |
| C326.5 | Understand the Decimation process and Interpolation process and vary the sampling rate. | |

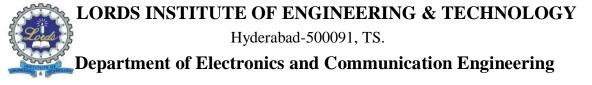
Year: III-II Sem A.Y: 2019-20

Course Name: C327 Microprocessor and Microcontroller Lab Year: III-II Sem A.Y: 2019-20

| C327.1 | Handling of MASM tool for 8086 microprocessor programming |
|--------|--|
| C327.2 | Write assembly language programming using 8086 microprocessor instruction set. |
| C327.3 | Familiarization of different interface peripherals to 8086 microprocessors. |
| C327.4 | Capable of assembly/C language programming using 8051 microcontrollers. |
| C327.5 | Handshaking of different peripherals interfaces to 8051 microcontrollers. |

Course Name: C328 Advanced English Communication Skills Lab Year: III-II Sem A.Y: 2019-20

| C328.1 | Acquire vocabulary and use it contextually |
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| C328.2 | Listen and speak effectively |
| C328.3 | Develop proficiency in academic reading and writing |
| C328.4 | Developing interview skills by conducting activities on Group Discussion in order to enhance the job prospects. |
| C328.5 | Communicate confidently in formal and informal contexts |



COURSE OUTCOMES (COS)

Course Name: C421 Entrepreneurship and Small Business Enterprises Year: IV-II Sem A.Y: 2019-20

| C421.1 | Understand the need, scope and definition of entrepreneurship and its process. | |
|--------|--|--|
| C421.2 | Understand innovation and create a sustaining enterprising model. | |
| C421.3 | Understand the managing process of MSME and sick enterprises. | |
| C421.4 | Understand the concept of Marketing and Growth of Enterprises. | |
| C421.5 | Comprehend the aspects related to understanding the strategic perspectives in Entrepreneurship of Start-Ups. | |

Course Name: C422 Optical Communication

Year: IV-II Sem A.Y: 2019-20

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| C422.1 | Understand and analyze the constructional parameters of optical fibers. |
| C422.2 | Understand the Signal Distortion in Optical Fibers and ascertain the losses |
| C422.3 | Understand the various optical sources and its power launching techniques. |
| C422.4 | Compare various optical detectors and choose suitable ones for different applications. |
| C422.5 | Understand the design of optical systems and WDM. |

Course Name: C423 Global Positioning System

Year: IV-II Sem A.Y: 2019-20

| C423.1 | Understand the GPS Architecture and its applications. |
|--------|--|
| C423.2 | Interpret the navigational message and signals received by the GPS receiver. |
| C423.3 | Identify error sources in GPS observations and mitigate them. |
| C423.4 | Apply the corrections for accurate positioning and to Map the geospatial features. |
| C423.5 | Understand the GPS applications in the real time world. |

Course Name: C424 Major Project

| Course Na | nme: C424 Major Project | Year: IV-II Sem | A.Y: 2019-20 |
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| C424.1 | Classify the projects and describe the phases involved in project for | mulation with feasibilit | y studies and SWOT |
| | (strengths, weaknesses, opportunities, and threats) analysis. | | |
| C424.2 | Devise a project's development cycle and get acquainted with the di | fferent appraisals in the | e process of deciding |
| C424.2 | the worthiness of the project. | | |
| C424.3 | Exhibit and apply the managerial skills and knowledge of financial | aspects required during | the implementation |
| C424.5 | of the project. | | |
| C424.4 | Identify sources for project finance and select the method of project | implementation which | is best suited for a |
| C424.4 | particular project. | _ | |