



**Vidya Vikas Education Trust's**  
**Universal College of Engineering, Kaman Road, Vasai-401208**

**DEPARTMENT OF ELECTRONICS ENGINEERING**

**COURSE OUTCOMES**

**Year/Class/Semester: S.E./ELX/ IV**

<b>Subject Code</b>	<b>Subject Name</b>	<b>CO's</b>
ELX401	Applied Mathematics IV	At the end of the course student will be able to:  CO1- Demonstrate basic knowledge of Calculus of variation, Vector Spaces, Matrix Theory, Random Variables, Probability Distributions, Correlation and Complex Integration.  CO2- Demonstrate an ability to identify and Model the problems in the field of Electronics and Telecommunication and solve it.  CO3- Apply the application of Mathematics in Telecommunication Engineering.
ELX402		At the end of the course student will be able to:  CO1- Understand amplifiers through frequency response. CO2- Perform DC and Ac analysis of single stage and multistage amplifiers, oscillators, differential amplifiers and power amplifiers. CO3- Derive expression for performance parameters in terms of circuit and device parameters. CO4- Select appropriate circuit for given specifications/applications. CO5- Explain working and construction details of special, semiconductor devices.
ELX403	Microprocessors & Applications	At the end of the course student will be able to: <b>CO1-</b> Understand and explain 16-bit microprocessor architecture. <b>CO2-</b> Understand and write programs for 8086 microprocessor. <b>CO3-</b> Use various peripheral devices to design Single Board Computer (SBC). <b>CO4-</b> Understand and explain 32-bit microprocessor architecture.
ELX404	Digital System Design	At the end of the course student will be able to:  CO1- Design and implement synchronous sequential logic circuits.  CO2- Analyze various types of digital logic circuits.



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		<p>CO3- Understand engineering concepts in the design of digital circuits.</p> <p>CO4- Understand the role of hardware description languages in digital circuit implementation.</p> <p>CO5- Describe simple hardware functions using a hardware description language.</p> <p>CO6- Understand the purpose of and steps involved in digital circuit implementation using Field-Programmable Gate Arrays.</p>
ELX405	Principles of Communication Engineering	<p>At the end of the course student will be able to:</p> <p>CO1- Comprehend the need for various components in analog communication systems</p> <p>CO2- Analyze various analog modulation methods</p> <p>CO3- Design modulators, demodulators for amplitude and frequency modulated systems.</p> <p>CO4- Assess the characteristics of pulse modulation techniques.</p> <p>CO5- Recognize the need for multiplexing techniques.</p>
ELX406	Linear Control System	<p>At the end of the course student will be able to:</p> <p><b>CO1-</b> Understand the basic concepts of control system and identify control systems in real life applications.</p> <p><b>CO2-</b> Derive the mathematical model of different types of control systems and represent them in various forms</p> <p><b>CO3-</b> Analyze systems using time domain analysis techniques</p> <p><b>CO4-</b> Apply concepts of frequency domain techniques in stability analysis of control systems</p> <p><b>CO5-</b> Create state variable models of systems and analyze their controllability, observability and time response</p> <p><b>CO6-</b> Identify controllers and compensators in different controllers.</p>