



# BAPATLA WOMEN'S ENGINEERING COLLEGE::BAPATLA

AN ISO 9001:2015 CERTIFIED INSTITUTION

## DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

**Class/Sem: III/IV B. Tech, I Sem      A.Y: 2023-24**

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### Course Outcomes

After Successful completion of this course, Students should be able to learn

<b>Course Name: Linear Control Systems</b>		<b>Code:EC311,R20</b>
<b>CO No.</b>	<b>Course Outcome Statement</b>	<b>Bloom's Taxonomy Level</b>
C311.1	<b>Discuss</b> the Basic concepts, Types and Components of Control systems	Understand
C311.2	<b>Determine</b> the transfer function for Physical Systems	Apply
C311.3	<b>Illustrate</b> the State Space models	Apply
C311.4	<b>Examine</b> the Stability of Linear Time Invariant system by using Routh - Hurwitz criterion, Root Locus, Bode plot, Polar plot and Nyquist stability criterion	Analyze
C311.5	<b>Analyze</b> Transient and Steady state response by using Time domain Analysis	Analyze
<b>Course Name: Analog Communications</b>		<b>Code: EC-312, R-20</b>
<b>CO No.</b>	<b>Course Outcome Statement</b>	<b>Bloom's Taxonomy Level</b>
C312.1	<b>Understand</b> the basic concepts of analog communication, angle modulation and different angle modulation types	Understand
C312.2	<b>Distinguish between SSB and VSB modulation</b>	Apply
C312.3	<b>Implement</b> the principles of sampling in deriving different pulse modulation	Analyze

	approaches.	
C312.4	<b>Determine</b> the operation of radio transmitter and radio receiver with the role of AGC	Apply
<b>Course Name: Digital Signal Processing</b>		<b>Code: EC-313, R-20</b>
<b>CO No.</b>	<b>Course Outcome Statement</b>	<b>Bloom's Taxonomy Level</b>
C 313.1	<b>APPLY</b> the principles of Z-transforms to finite difference equations for stability analysis.	<b>Understand</b>
C313.2	<b>Analyze</b> the digital signals using various digital transforms DFT, FFT	<b>Analyze</b>
C313.3	<b>Design &amp; Analyze</b> various IIR analog & digital filters	<b>Create</b>
C313.4	<b>Design &amp; Analyze</b> various FIR filters using window techniques.	<b>Create</b>
C313.5	<b>Discuss</b> word length issues, multi rate signal processing and application.	<b>Understand</b>
<b>Course Name: VLSI Design</b>		<b>Code: EC-314, R-20</b>
<b>CO No.</b>	<b>Course Outcome Statement</b>	<b>Bloom's Taxonomy Level</b>
C314.1	To <b>evaluate</b> the electrical properties of Mos and BiCMOS circuits	Evaluate
C314.2	To <b>apply</b> the knowledge of stick and layout diagram for various logic circuits	Apply
C314.3	To <b>design</b> various ALU subsystem	Design
C314.4	To <b>Understand</b> the concept of ASIC, FPGA, PLA, PAL, CPLD and <b>VHDL</b> programming language	Understand
<b>Course Name: Pulse Circuits &amp; Linear IC Applications</b>		<b>Code: EC315/1-R20</b>
<b>CO No</b>	<b>Course Outcome Statement</b>	<b>Bloom's Taxonomy Level</b>
C315.1	Discuss the responses of Linear and Non-Linear networks for sinusoidal and non-sinusoidal waveforms.	Understand
C315.2	Describe the operation of Multivibrators and Sweep Circuits.	Understand
C315.3	Demonstrate the fundamental principles of Op-Amps, Op-Amp parameters, Differential Op-Amp Configurations, the various linear and non-linear	Apply

	applications and active filter circuits design based on Op-Amps.	
C315.4	Illustrate the functions of Specific ICs such as Voltage Regulators, PLL, VCOs and it's applications in communication.	Apply
<b>Course Name: Constitution Of India</b>		<b>Code: EC316-R20</b>
<b>CO No.</b>	<b>Course Outcome Statement</b>	<b>Bloom's Taxonomy Level</b>
C316.1	Explain the background of the present constitution of India and features.	Understand
C316.2	Utilize the fundamental rights and duties.	Apply
C316.3	Understand the working of the union executive, parliament and judiciary.	Understand
C316.4	Understand the working of the state executive, legislature and judiciary.	Understand
<b>Course Name: Analog Communication Lab</b>		<b>Code:EC351 R20</b>
<b>CO No.</b>	<b>Course Outcome Statement</b>	<b>Bloom's Taxonomy Level</b>
C351.1	<b>Demonstrate</b> Analog and Pulse Modulation and Demodulation Techniques	Understand
C351.2	<b>Illustrating</b> Frequency response of Pre-emphasis and De-emphasis Circuits	Analyze
C351.3	<b>Examining</b> Basic Multiplexing Techniques	Apply
C351.4	<b>Verify</b> Sampling Theorem	Evaluate
<b>Course Name: Digital Signal Processing Lab</b>		<b>Code:EC352 R20</b>
<b>CO No.</b>	<b>Course Outcome Statement</b>	<b>Bloom's Taxonomy Level</b>
C352.1	Generate the waveforms for Amplitude Modulation (AM) and Frequency Modulation (FM)	Apply
C352.2	Generate the waveforms for Amplitude shift keying (ASK) and Frequency shift keying (FSK)phase shift keying(PSK)	Apply
C352.3	Obtain Fourier transform, convolution of two signals	Analyze
C352.4	Obtain correlation of two signals	Analyze

C352.5	Evaluate DFT and IDFT of 16 sample sequence using DIT and DIF algorithm	Evaluate
C352.6	Design IIR Butter worth filter using Impulse Invariant Method	Create
<b>Course Name: Mobile APP Development Lab</b>		<b>Code:EC353 R20</b>
<b>CO No.</b>	<b>Course Outcome Statement</b>	<b>Bloom's Taxonomy Level</b>
C353.1	Build various mobile applications related to GUI components, Font and Colours using Layout managers and Event Listeners	Apply
C353.2	Make use of database concepts for data related mobile applications	Apply
C353.3	Develop mobile applications using Internal & External Storage, SMS Notification, Multithreading, and GPS.	Apply
C353.4	Model the mobile application using RSS Feed, Alert upon receiving a message and send an E-Mail	Apply
C353.5	Develop Mobile App for simple real time needs	Apply