Second Year

Electronics&Telecommunication

Engineering(2019Course)CourseOutcome&

CourseOutcomes

Sr.No.	Nameof thesubject	EngineeringMathematics –III
1	CourseObjectives1	Tomakethestudentsfamiliarizewithconceptsandtechniquesin Ordinarydifferentialequations,FourierTransform,Z-Transform,Numericalmethods, Vectorcalculusandfunctionsofa Complexvariable.
	CourseObjectives2	Theaimistoequipthemwiththetechniquestounderstandadvancedlevelmathematicsanditsapplicationsthatwouldenhanceanalyticalthinking power,usefulintheirdisciplines
	CourseOutcomes1	Solvehigherorderlineardifferentialequationusingappropriatetechniques For modelling ,analyzing of electrical circuits and control systems.
	CourseOutcomes2	ApplyconceptofFourier transform&Z-transformanditsapplicationstocontinuous & discrete systems, signal & image processing and Communication systems.
	CourseOutcomes3	ObtainInterpolatingpolynomials,numericallydifferentiateandintegratefunctions, numericalsolutionsofdifferentialequationsusingsinglestepand multi- stepiterative methods used in modern scientific computing.
	CourseOutcomes4	Performvectordifferentiation&integration,analyzethevectorfieldsand apply toelectro-magneticfields&wavetheory.
	CourseOutcomes5	AnalyzeComplex functions, conformal mappings, Contour integration applicabletoelectrostatics,digitalfilters,signalandimageprocessing
2	Nameofthe subject	ElectronicCircuits
	CourseObjectives1	Semiconductor device MOSFET, its characteristics, parameters & applications.
	CourseObjectives2	Conceptsoffeedbacksinamplifiers& oscillators
	CourseObjectives3	Operationalamplifier,concept,parameters&applications.
	CourseObjectives4	ADC,DACasaninterface between analog &digital domains.
	CourseObjectives5	Voltagetocurrentandcurrenttovoltageconverters.
	CourseObjectives6	Concepts,characteristics&applicationsofPLL.
	CourseOutcomes1	Assimilatethephysics,characteristicsandparametersofMOSFETtowardsits

		Application as amplifier.
	CourseOutcomes2	DesignMOSFETamplifiers,withandwithoutfeedback,&MOSFEToscillators, Forgiven specifications.
	CourseOutcomes3	Analyzeandassesstheperformanceoflinearandswitchingregulators,with Their variants, towards applications in regulated power supplies.
	CourseOutcomes4	Explaininternal schematic of Op-Amp and define its performance parameters.
	CourseOutcomes5	Design,Build and test Op-amp based analog signal processing and Conditioning circuits towards various real time applications.
	CourseOutcomes6	Understandand compare the principles of various data conversion techniques andPLLwiththeirapplications.
3	**Nameof thesubject**	**DigitalCircuits**
	CourseObjectives1	Thefundamentalprinciplesoftwo-valuedlogicandvariousdevicesusedto Implementlogical operations on variables.
	CourseObjectives2	Booleanalgebra, Karnaughmaps and its application to the design and characterizationofdigitalcircuits
	CourseObjectives3	Toanalyze logic processes and implement logical operations using Combination all ogiccircuits.
	CourseObjectives4	Theprinciplesoflogicdesignanduseofsimplememorydevices,flip-flops, andsequentialcircuits
	CourseObjectives5	Conceptsofsequentialcircuitsandtoanalyzesequentialsystemsintermsof State machines.
	CourseObjectives6	Systemdesignapproachusingprogrammablelogicdevices.
	CourseOutcomes1	Identify and prevent various hazards and timing problems in adigitaldesign.
	CourseOutcomes2	Usethebasiclogicgatesandvariousreductiontechniquesofdigitallogic circuit.
	CourseOutcomes3	Analyze,designandimplementcombinationallogiccircuits.
	CourseOutcomes4	Analyze,designandimplementsequentialcircuits.
	CourseOutcomes5	DifferentiatebetweenMealyandMooremachines.
	CourseOutcomes6	Analyzedigitalsystem designusingPLD.
4	**NameoftheSubject**	**ElectricalCircuits**
	CourseObjectives1	ToanalyzesimpleDCandACcircuitswithcircuitsimplificationtechniques.
	CourseObjectives2	To formulateandanalyzedrivenandsourcefree RLandRCcircuits.
	CourseObjectives3	Toformulate& determinenetworkparametersforgivennetwork.
	CourseObjectives4	Tounderstandtheconstructionaldetails,characteristics,featuresand Application are as of various types of electricmotors.

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	CourseOutcomes1	Analyze the simple DC and AC circuit with circuits implification techniques.
	CourseOutcomes2	Formulate andanalyzedrivenandsourcefree RLandRCcircuits.
	Course Outcomes3	Formulate&determinenetworkparametersforgivennetworkandanalyze The given net work using Laplace Transform to find the net work transfer function.
	CourseOutcomes4	Explainconstruction,workingand applicationsofDCMachines/SinglePhase &ThreePhase ACMotors.
	CourseOutcomes5	Explainconstruction,workingandapplicationsofspecialpurposemotors& Understand motors used in electrical vehicles.
	CourseOutcomes6	Analyzeandselectasuitablemotorfordifferentapplications.
5	**Nameof thesubject**	**DataStructures**
	CourseObjectives1	To learndifferentsortingandsearchingalgorithmsandtheiranalysis.
	CourseObjectives2	Tolearnlineardatastructures:StackandQueue,LinkedListandtheir applications.
	CourseObjectives3	Tolearnnonlineardatastructures:Tree, Graphandtheirapplications.
	CourseObjectives4	Tostudythesystematicwaysofsolvingproblem,variousmethodsof Organizing large amount of data.
	CourseObjectives5	Tosolveproblemsusingdatastructuressuchasbinarytree,binarysearch tree,andgraph and writingprograms.
	CourseOutcomes1	SolvemathematicalproblemsusingCprogramminglanguage.
	CourseOutcomes2	Implementsortingandsearchingalgorithmsandcalculatetheircomplexity.
	CourseOutcomes3	Developapplicationsofstackandqueueusingarray.
	CourseOutcomes4	DemonstrateapplicabilityofLinkedList.
	CourseOutcomes5	Demonstrateapplicabilityofnonlineardatastructures-BinaryTreewith Respect to its time complexity.
	CourseOutcomes6	Applytheknowledgeofgraphforsolvingtheproblemsofspanningtreeand Shortest path algorithm.
6	**Nameof thesubject**	**Signals &Systems**
	CourseObjectives1	Tounderstandthemathematicalrepresentationofcontinuousanddiscrete Time signals and systems.
	CourseObjectives2	Toclassifysignalsandsystemsintodifferentcategories
	CourseObjectives3	ToanalyzeLinearTimeInvariant(LTI)systemsintimeandtransform domains.
	CourseObjectives4	Tobuildbasicsforunderstandingofcoursessuchassignalprocessing, Control system and communication.

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	CourseObjectives5	Todevelopbasisofprobability andrandom variables.
	CourseOutcomes1	Identify classify basic signals and per form operations on signals.
	CourseOutcomes2	Identify,Classifythesystemsbasedontheirpropertiesintermsofinput Output relation and interms of impulseresponse and will be able to determine the convolution between to signals.
	CourseOutcomes3	AnalyzeandresolvethesignalsinfrequencydomainusingFourierseriesand FourierTransform.
	CourseOutcomes4	ResolvethesignalsincomplexfrequencydomainusingLaplaceTransform,andwillbe abletoapplyandanalyzetheLTIsystemsusingLaplace Transforms.
	CourseOutcomes5	Defineanddescribetheprobability,randomvariablesandrandomsignals. Compute theprobabilityofagivenevent,model,computetheCDFandPDF.
	CourseOutcomes6	Computethemean,meansquare,varianceandstandarddeviationforgiven Random variables using PDF.
7	**Nameof thesubject**	**ControlSystems**
	CourseObjectives1	ToIntroduceelementsofcontrolsystemandtheirmodelingusingvarious Techniques
	CourseObjectives2	Togetacquaintedwiththemethodsforanalyzingthetimeresponseand StabilityofSystem
	CourseObjectives3	ToIntroduceandanalyzethefrequencyresponseandStabilityofSystem
	CourseObjectives4	ToIntroduceconceptofrootlocus,Bodeplots,Nyquistplots.
	CourseObjectives5	To IntroduceStateVariableAnalysismethod.
	CourseObjectives6	TogetacquaintedwithConceptsofPIDcontrollersandIoTbasedIndustrial Automation.
	CourseOutcomes1	Determineandusemodelsofphysicalsystemsinformssuitableforusein the analysisanddesignofcontrolsystems.
	CourseOutcomes2	Determinethe(absolute)stabilityof aclosed-loopcontrolsystem.
	CourseOutcomes3	Performtimedomainanalysisofcontrolsystemsrequiredforstability analysis.
	CourseOutcomes4	Performfrequencydomainanalysisofcontrolsystemsrequiredforstability analysis.
	CourseOutcomes5	Applyroot-locus,FrequencyPlotstechniqueto analyzecontrolsystems.
	CourseOutcomes6	Expressandsolvesystem equationsinstatevariableform.
	CourseOutcome7	Differentiatebetweenvariousdigitalcontrollersandunderstandtheroleof The controllers in Industrial automation.
8	**Nameof thesubject**	**PrinciplesofCommunicationSystems**

	CourseObjectives1	Toequip/familiarizestudentswithbasicmathematicaltoolsfortimeand Frequency domain analysis of communication signal and systems.
	CourseObjectives2	Toacquaintthestudentswiththefundamental principlesofmodulation Process and different amplitude and angle modulation systems.
	CourseObjectives3	TointroducethestudentswiththeconceptofSamplingtheoremandpulse Modulation techniques PAM,PWM, PPM.
	CourseObjectives4	To impartpre-requisitesofdigital communicationsystemsandexploredigital representationtechniqueslikePCM,DPCM,DM andADM.
	CourseObjectives5	Tohighlighttheissuesinbasebanddigitaltransmissionsuchasdata Representation , synchronization, multiplexing and ISI.
	CourseOutcomes1	To compute & compare the bandwidth and transmission powerrequirementsbyanalyzingtimeandfrequencydomainspectraofsignal Required form odulation schemes unde rstudy.
	CourseOutcomes2	Describeandanalyzethetechniquesofgeneration,transmissionand Reception of Amplitude Modulation Systems.
	CourseOutcomes3	Explain generation and detection of FM systems and compare with AM systems.
	CourseOutcomes4	ExhibittheimportanceofSamplingTheoremandcorrelatewithPulse Modulationtechnique(PAM,PWM,andPPM).
	CourseOutcomes5	Characterizethequantizationprocessandelaboratedigitalrepresentation techniques (PCM,DPCM,DMandADM).
	CourseOutcomes6	Illustratewaveformcoding,multiplexingandsynchronizationtechniquesand Articulate the irimportance in baseb and digital transmission.
9	**Nameof thesubject**	**ObjectOrientedProgramming**
	CourseObjectives1	Make the students familiar with basic concepts and techniques of objectoriented programming in C++ To acquaint the students with the fundamentalprinciplesofmodulationprocessanddifferentamplitudeandangle Modulation systems.
	CourseObjectives2	Developanabilityto writeprogramsinC++forproblem solving.
	CourseOutcomes1	Describetheprinciplesofobjectorientedprogramming.
	Course Outcomes2	Apply theconceptsofdataencapsulation,inheritanceinC++.
	CourseOutcomes3	UnderstandOperatoroverloadingandfriendfunctionsinC++.
	CourseOutcomes4	Applytheconceptsofclasses,methodsinheritanceandpolymorphismto Write programs C++.
	CourseOutcomes5	ApplyTemplates,NamespacesandExceptionHandlingconceptstowrite Programs in C++.
	CourseOutcomes6	DescribeanduseofFilehandlinginC++.

10	**Nameof thesubject**	**EmployabilitySkillsDevelopment**
	CourseObjectives 1	Developgoodcommunicationskills – bothoralaswellaswritten.
	CourseObjectives2	Encouragecreativeandcriticalthinkingamongstudents.
	CourseObjectives3	Nurturecollaborativebehaviortoworkefficiently ingroups.
	CourseOutcomes1	Definepersonalandcareergoalsusingintrospectiveskillsand SWOC assessment. Outline andevaluateshort-termandlong-termgoals.
	CourseOutcomes2	Developeffectivecommunicationskills(listening,reading,writing,andspeaking),self-managementattributes,problemsolvingabilitiesandteam working&buildingcapabilitiesin order tofetch employment opportunitiesandfurther succeedintheworkplace.
	CourseOutcomes3	Beapartofamulti-culturalprofessionalenvironmentandworkeffectivelybyenhancinginter-personalrelationships,conflictmanagementand Leadership skills.
	CourseOutcomes4	Comprehendtheimportanceofprofessionalethics,etiquettes&moralsand Demonstrate sensitivity towards it throughout certified career.
	CourseOutcomes5	Developpracticallydeployableskillsetinvolvingcriticalthinking,effective Presentations and leadership qualities to one the opportunities of employability and excelince the professional environment.
11	**Nameof thesubject**	**ProjectBasedLearning**
	CourseObjectives 1	Toemphasize project based learning activities that are long-term, Interdisciplinary and student-centric.
	CourseObjectives2	Toinculcateindependentandgroupleearningbysolvingrealworldproblem withthehelpof available resources.
	CourseObjectives3	Tobeabletodevelopapplicationbasedonthefundamentalsofelectronicsandcommunicationengineeringbypossiblytheintegrationofpreviously Acquired knowledge.
	CourseObjectives4	Togetpracticalexperienceinallstepsinthelifecycleofthedevelopmentof Electronic systems : specification, design, implementation, and testing.
	CourseObjectives5	Tobeabletoselectandutilizeappropriatehardwareandsoftwaretoolsto Designandanalyze the proposed system.
	CourseObjectives6	Toprovideeverystudenttheopportunitytogetinvolvedeitherindividually Or as a group so as to develop team skills and learn professionalism.
	CourseOutcomes1	Identifythereal-worldproblem(possiblyofinterdisciplinarynature)throughrigorousliteraturesurveyand formulate/setrelevant aim andobjectives.
	CourseOutcomes2	Contributetosocietythroughproposedsolutionbystrictlyfollowing Professional ethics and safety measures.
	CourseOutcomes3	Proposeasuitablesolutionbasedonthefundamentalsofelectronicsand

		Communication engineering by possibly the integration of previously acquired knowledge.
	Course Outcomes4	Analyze the results and arrive at valid conclusion.
	Course Outcomes5	Use of technology in proposed work and demonstrate learning in or a land Written form.
	Course Outcomes6	Developability to work as an individual and as a team member.

Head of the Department
Electronics & Telecommunication Engineering
APCOER, PUNE

Principal

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