

PLANNED SYLLABUS COVERAGE (Theory)

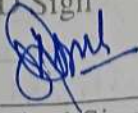
G P Kangra		Department: <u>Computer Engg</u> Subject <u>OOP Using Java</u>		Course <u>PE-III</u> Duration <u>6 month</u>	
SYLLABUS COVERAGE		Total Periods <u>42</u> Theory <u>42</u>			
Sr. No.	Period Nos.	Topic	Details	Instruction Reference	Additional Study Recommended
1	1-8	OOP Concepts & Java Prog. Overview	→ Procedure vs object oriented Prog. advantages of OOP, concept of OOP object, class. Characteristics of OOP, history of Java Features, Java Prog. Terminology - JVM, JRE, JDK, JNL, WORA Java Compiler, Java Interpreter, Same code, by code, coding Conventions.		
2	9-16	Fundamentals of Java Prog.	→ structure of Java Program Comments, main(), Java tokens statements, variables, scope & lifetime, Data types, literals, console based I/O using sys.in & sys.out Operators, Precedence & associativity.		
3	17-24	Control Statements	→ if, else-if, if...else if ladder switch case, while, do-while for loop, for each loop, jump statements.		
4	25-32	Object Oriented Programming in Java	→ Class, Instance, methods, object, Constructor, static member, final variable, final methods, final classes, garbage collection, finalize method, Packages, Access modifier, Wrapper class, Compile vs runtime Polymorphism, method overloading, Inheritance, method overriding, abstract method & class, multiple Inheritance using Interface.		

Approved from concerned HOD within seven days from beginning of semester & will be kept with the concerned file.

Sr. No.	Period Nos.	Topic	Details	Instruction Reference	Additional Study Recommended	Remarks
5.	33-42	Array, String & Exception Handling.	→ Array definition, One-dimensional Array, multi-dim Array, string, literals, escape sequences, string methods, concepts of exceptions, checked/unchecked exceptions. Exception handling, try & catch blocks, multiple catch statements, User-defined exceptions, Throw & throws.			

Extra Topics to be covered beyond the scope of the syllabus (as required by industry/ as recommended by Teacher which he/ she finds necessary)

Sr. No.	Period No.	Topic Covered	Instruction Reference	Additional Study recommended	Remarks

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Date 01/08/2020	HOD Sign 
Date	Principal Sign 

PLANNED SYLLABUS COVERAGE(Theory)

G P Kangra		Department: <u>Computer Engg</u> Subject <u>Software Engg.</u>			
SYLLABUS COVERAGE		Course <u>Program Core</u>	Duration <u>6 months</u>		
		Total Periods <u>04/Week</u>	Theory <u>56</u>		
Sr. No.	Period Nos.	Topic	Details	Instruction Reference	Additional Study Recommended
1	1-9	Unit-1 (Intro to s/w engg.)	s/w def ⁿ , s/w characteristics, s/w crisis, Attributes of Good s/w, Prog. vs Product, Exploratory style of s/w dev, Shortcomings, s/w Engg, SDLC, s/w process framework, Framework activities - comm ⁿ , planning Modeling, Construction & Deployment, s/w Appl ⁿ domains - Sys s/w, Appl ⁿ s/w, Scientific/ Engg. s/w, Embedded s/w, web Applications.	s/w Engg. by Pankaj Jalote, Narosa Publication	
2	10-20	Unit-2 (s/w life Cycle models)	Classical Models- Waterfall model, Iterative Waterfall model, V-model, Prototyping model, Incremental model, Evolutionary Model, Rapid Appl ⁿ Dev (RAD), Agile Dev. Models- Extreme prog, Scrum, Lean, Spiral Model.	— do —	
3	21-31	Unit-3 (s/w Project Mgmt.)	s/w project manager - skills & responsibilities, project planning Sliding window planning, SPM project planning, project size estimation - LOC, Fm point,	— do —	

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Sr. No.	Period Nos.	Topic	Details	Instruction Reference	Additional Study Recommended	Remarks
4	32-40	Unit-04 (Req ⁿ analysis & specifications)	Project Estimation Tech - Empirical, Heuristic & Analytical Estimation Tech, Expert Judgement, Cocomo, Cocomo-II, Project Scheduling - PERT & Gantt Charts, Staffing, Risk Mgmt, S/W Configuration Mgmt. Req ⁿ gathering, Req ⁿ elicitation Tech, Interviews, Surveys, Rules, Brainstorming, Req ⁿ analysis, SRS, Role of SRS, Char, Formal & non formal req ⁿ , Traceability		do	
5	41-48	Unit-05 (S/W design)	overview of the design process, outcome of the design process, abstraction, design pattern, Refactoring, classification of design methodologies, Cohesion & Coupling, S/W design Approaches - Fxn oriented, object oriented, User Interface design, User Experience		do	

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Use additional sheets (if required).

PLANNED SYLLABUS COVERAGE(Theory)

G P Kangra		Department: <u>Computer Engg</u> Subject <u>S/w Engg</u>				
		Course <u>Program Code</u>	Duration <u>6 months</u>			
		SYLLABUS COVERAGE				
		Total Periods <u>04/week</u>	Theory <u>56</u>			
Sr. No.	Period Nos.	Topic	Details	Instruction Reference	Additional Study Recommended	Remarks
6	49-56	Unit - 06 (Coding & Testing)	S/w coding, Coding Standards, Code review - Code walkthrough, Code inspection, s/w documentation, Internal & External documentation, s/w Testing, Testing activities, Unit, Integration, system & acceptance testing, Black box & white box testing.		S/w Engg by Pankaj Jalote, Narosa Publications Fundamentals of S/w Engg By Rajib Mall, PH,	

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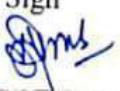
G P Kangra		Department: <u>Computer Engg</u> Subject <u>OE-I (Cyber laws & Ethics)</u>				
SYLLABUS COVERAGE		Course <u>Open Elective-I</u> Duration <u>6 months</u>				
		Total Periods <u>56</u> Theory <u>56 (T)</u>				
Sl. No.	Period Nos.	Topic	Details	Instruction Reference	Additional Study Recommended	Remarks
1	1-14	Unit-1: Cyber laws & Ethics & Etiquettes	History of Internet major Applications of the Internet - Email, www, social Media, Online Payment, Online Gaming, Digital foot-prints, Cyber World, Digital society & Netizen, Net Etiquettes, Cyber Ethics, Impact of the Internet on society, Impact of Digital Technologies on Health & Digital Media Ethics Code.			
2.	15-28	Unit-2: Basics of Cybersecurity	Need for Cyber-security, Challenges in Cybersecurity, Cyber security, frame work. Cyber-crime- Hacking, Phishing fraud Emails, Identity Theft, Ransomware, Cyber stalking/Harass	Cyber laws & Ethics by Mark Grabowski	https://www.w3schools.com	

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Sr. No.	Period Nos.	Topic	Details	Instruction Reference	Additional Study Recommended	Remarks
3.	29-42	Unit-3: IPR	ment, Cyberbullying, Pornography, Cyber Terrorism, Cyber Defamation, Combating & Prevention from Cybercrime using self-regulation, National Cyber-security strategy. Data Protection, Right to Privacy & Data Protection, Intellectual Property Rights (IPR), Copy right, Patent Trade mark, Violation		https://www.w3schools.com	

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Sr. No.	Period No.	Topic Covered	Instruction Reference	Additional Study recommended	Remarks

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Date 03/08/24	HOD Sign 
Date 03/08/26	Principal Sign 

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PLANNED SYLLABUS COVERAGE (Theory)

G P Kangra SYLLABUS COVERAGE	Department:	Computer Engg	Subject:	Open Elective - I Cyber Laws & Ethics		
	Course	Open Elective - I	Duration	6 months		
	Total Periods	56	Theory	56(T)		
Sr	Period Nos	Topic	Details	Instruction Reference	Additional Study Recommended	Remarks
4	43-56	Unit-4: Major Provisions for Cybercrime under Indian Penal Code (IPC) Indian Act - 2008. (Sections 65, 66, 67, 69); Digital Personal, Data Protection Act 2023, Intellectual Property rights, Patent law, Copyright law, Digital signatures.	of IPR, Plagiarism, Copyright Infringement Trademark Infringement Cyber laws in India Major Provisions for Cybercrime under Indian Penal Code (IPC) Indian Act - 2008. (Sections 65, 66, 67, 69); Digital Personal, Data Protection Act 2023, Intellectual Property rights, Patent law, Copyright law, Digital signatures.	Cyber Laws & Ethics by Mark Grabow-ski	https://www.uschools.com	

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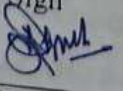
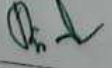
G P Kangra		Department: <u>Computer Engineering</u> Subject <u>Introduction to E-Governance</u>				
		Course <u>Program Core</u>		Duration <u>6 months</u>		
SYLLABUS COVERAGE		Total Periods <u>56</u> Theory <u>56</u>				
Sr. No.	Period Nos.	Topic	Details	Instruction Reference	Additional Study Recommended	Remarks
1.	1-10	UNIT-1	Exposure to emerging trends in ICT for development, understanding design & implementation of E-Governance projects, e-governance life-cycle.	Managing transformation - objective to outcomes by J. Satyanarayanan, Prentice Hall, India	The State, IT & development By - RK Bagga, Kenneth Kenniston Rohit Raj Mathew & Sage publications India Pvt. Ltd.	
2.	11-20	UNIT-2	Need of Government process Re-engineering, National E-Governance plan (NeGP) for India, SMART government & thumb rules.			
3.	21-33	UNIT-3	Architecture & models of E-Governance, including public private partnership (PPP) Need for innovation & change management in eGovernance, critical success factors, major issues including corruption, resistance for change, e-security & cyber laws.			
4.	34-46	UNIT-4	Focusing of Indian Initiatives & their impact on citizens, sharing of case studies to highlight best practices in managing e-Governance projects in Indian Context. Visits to local e-governance sites			

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5.	47-56	Unit-5.	CSC, eSeva, Post Office, Passport Seva Kendra etc as part of Tutorials. Mini projects by students in groups - primarily evaluation of various e-Governance projects.			

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