

Group of Institutions

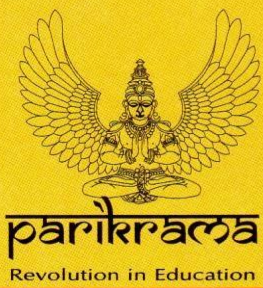
Kashti, Tal - Shrigonda, Dist-Ahmednagar, Maharashtra - 414 701

Faculty of Engineering

Approved by AICTE, MS (New-Int)-Engg./2009/09, Dt. 15/06/09, Affiliated to Savitribai Phule Pune University

Savitribai Phule Pune University		
Second Year of Computer Engineering (2019 Course)		
210241: Discrete Mathematics		
Teaching Scheme:	Credit	Examination Scheme:
TH: 03 Hours/Week TUT: 01 Hours/Week	04	Mid_Semester(TH): 30 Marks End_Semester(TH): 70 Marks
Prerequisite Courses, if any: Basic Mathematics		
<p>Course Outcomes:</p> <p>On completion of the course, learner will be able to–</p> <p>CO1: Design and analyze real world engineering problems by applying set theory, propositional logic and mathematical induction</p> <p>CO2: Develop skill in expressing mathematical properties of relation and function</p> <p>CO3: Identify number of logical possibilities of events to design professional engineering Solutions</p> <p>CO4: Model and solve computing problem using tree and graph Analyze the properties of binary operations and evaluate the algebraic structure</p> <p>CO5: Apply abstract algebra in combinatorics, coding theory and questions regarding geometric constructions</p>		

Savitribai Phule Pune University		
Second Year of Computer Engineering (2019 Course)		
210242: Fundamentals of Data Structures		
Teaching Scheme:	Credit	Examination Scheme:
TH: 03 Hours/Week	03	Mid_Semester(TH): 30 Marks End_Semester(TH): 70 Marks
Prerequisite Courses, if any: 110005: Programming and Problem Solving		
Companion Course, if any: 210247: Data Structures Laboratory		
<p>Course Outcomes:</p> <p>CO1: To demonstrate a detailed understanding of behaviour of data structures like array, linkedlist, stack, and queue by developing programs.</p> <p>CO2: To use appropriate algorithmic strategy for better efficiency</p> <p>CO3: To summarize data searching and sorting techniques.</p> <p>CO4: To discriminate the usage of various structures in approaching the problem solution.</p> <p>CO5: To analyze and use effective and efficient data structures in solving various Computer Engineering domain problems.</p> <p>CO6: To design the algorithms to solve the programming problems.</p>		



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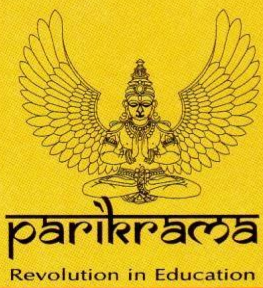
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Savitribai Phule Pune University Second Year of Computer Engineering (2019 Course) 210243: Object Oriented Programming		
Teaching Scheme:	Credit	Examination Scheme:
TH: 03 Hours/Week	03	Mid_Semester(TH): 30 Marks End_Semester(TH): 70 Marks
Prerequisite Courses, if any: Good understanding of Programming and Problem Solving concepts		
Companion Course, if any:		
Course Outcomes: On completion of the course, learner will be able to– CO1: Analyze the strengths of object oriented programming CO2: Design and apply OOP principles for effective programming CO3: Develop the application using object oriented programming language(C++) CO4: Apply object-oriented concepts for advanced programming.		

Savitribai Phule Pune University Second Year of Computer Engineering (2019 Course) 210244: Computer Graphics		
Teaching Scheme:	Credit	Examination Scheme:
TH: 03 Hours/Week	03	Mid_Semester(TH): 30 Marks End_Semester(TH): 70 Marks
Prerequisite Courses, if any: -		
Companion Course, if any: OOP		
Course Outcomes: On completion of the course, learner will be able to– CO1: Define basic terminologies of Computer Graphics, interpret the mathematical foundation of the concepts of computer graphics and apply mathematics to develop Computer programs for elementary graphic operations. CO2: Define the concept of windowing and clipping and apply various algorithms to fill and clip polygons. CO3: Explain the core concepts of computer graphics, including transformation in two and three dimensions, viewing and projection. CO4: Explain the concepts of color models, lighting, shading models and hidden surface elimination. CO5: Describe the fundamentals of curves, fractals, animation and gaming.		



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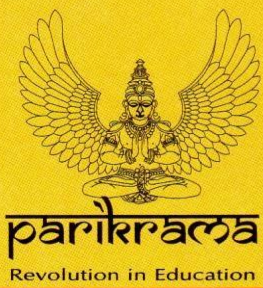
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Savitribai Phule Pune University Second Year of Computer Engineering (2019 Course) 210245: Digital Electronics and Logic Design		
Teaching Scheme:	Credit	Examination Scheme:
TH: 03 Hours/Week	03	Mid_Semester(TH): 30 Marks End_Semester(TH): 70 Marks
Prerequisite Courses, if any: 104010 Basic Electronics Engineering		
Companion Course, if any: 210249 Digital Electronics Lab		
Course Outcomes: On completion of the course, learner will be able to– CO1: Simplify Boolean Expressions using K Map. CO2: Design and implement combinational circuits. CO3: Design and implement sequential circuits. CO4: Develop simple real-world application using ASM and PLD. CO5: Choose appropriate logic families IC packages as per the given design specifications. CO6: Explain organization and architecture of computer system		

Savitribai Phule Pune University Second Year of Engineering (2019 Course) 210253: Data Structures & Algorithms		
Teaching Scheme:	Credit	Examination Scheme:
TH: 03 Hours/Week	03	Mid_Semester(TH): 30 Marks End_Semester(TH): 70 Marks
Prerequisite Courses, if any: <ul style="list-style-type: none"> Fundamentals of Data Structure Basic Mathematics, Geometry, linear algebra, vectors and matrices 		
Companion Course, if any:		
Course Outcomes: On completion of the course, learner will be able to– CO1: To identify & articulate the complexity goals and benefits of a good hashing scheme for real-world applications. CO2: To apply non-linear data structures for solving problems of various domain. CO3: To design and specify the operations of a nonlinear-based abstract data type and implement them in a high-level programming language. CO4: To analyze the algorithmic solutions for resource requirements and optimization CO5: To use efficient indexing methods and multiway search techniques to store and maintain data. CO6: To use appropriate modern tools to understand and analyze the functionalities confined to the secondary storage.		



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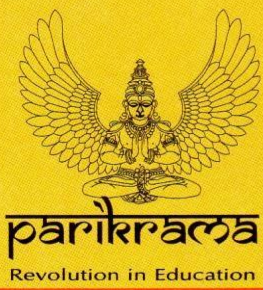
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Savitribai Phule Pune University Second Year of Engineering (2019 Course) 210254: Software Engineering		
Teaching Scheme:	Credit	Examination Scheme:
TH: 03 Hours/Week	03	Mid_Semester(TH): 30 Marks End_Semester(TH): 70 Marks
Prerequisite Courses, if any: Fundamentals of Programming Languages		
Course Outcomes:		
<p>CO1: Apply software engineering principles to develop software.</p> <p>CO2: Analyze software requirements and formulate design solution for a software.</p> <p>CO3: Explain concepts of project estimation, planning and scheduling.</p> <p>CO4: Explain risk management and software configuration management.</p> <p>CO5: Explain various types of software testing.</p>		

Savitribai Phule Pune University Second Year of Engineering (2019 Course) 210255: Microprocessor		
Teaching Scheme:	Credit	Examination Scheme:
TH: 03 Hours/Week	03	Mid_Semester(TH): 30 Marks End_Semester(TH): 70 Marks
Prerequisite Courses, if any: Digital Electronics and Logic Design		
Companion Course, if any:		
Course Outcomes:		
On completion of the course, student will be able to–		
<p>CO1: To apply the assembly language programming to develop small real life embedded application.</p> <p>CO2: To understand the architecture of the advanced processor thoroughly to use the resources for programming</p> <p>CO3: To understand the higher processor architectures descended from 80386 architecture</p>		



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Savitribai Phule Pune University Second Year of Engineering (2019 Course) 210256: Principles of Programming Languages		
Teaching Scheme:	Credit	Examination Scheme:
TH: 03 Hours/Week	03	Mid_Semester(TH): 30 Marks End_Semester(TH): 70 Marks
Prerequisite Courses, if any: Fundamentals of Data Structures, Object Oriented Programming, Fundamentals of programming language.		
Companion Course, if any: Software Engineering, Data Structures and Algorithms, Project based learning		
Course Outcomes: On completion of the course, student will be able to– CO1: Make use of basic principles of programming languages CO2: Able to develop a program with Data representation and Computations CO3: Able to develop programs using Object Oriented Programming language : Java CO4: Develop application using inheritance, encapsulation, and polymorphism CO5: Able to demonstrate Applet and Multithreading for robust application development CO6: Able to develop a simple program using basic concepts of Functional and Logical programming paradigm		