



V.V.VANNIAPERUMAL COLLEGE FOR WOMEN

(Belonging to Virudhunagar Hindu Nadars)

An Autonomous Institution Affiliated to Madurai Kamaraj University, Madurai
Re-accredited with 'A' Grade (3rd Cycle) by NAAC

VIRUDHUNAGAR - 626 001

PEOs, POs, PSOs and COs

B.C.A. Graphic Design

Programme Educational Objectives (PEOs)

PEOs are broad statements that describe the career and professional achievements, that the Programme is preparing the graduates to achieve within the first few years after graduation. PEOs are framed for each Programme and should be consistent with the Mission of the Institution.

Programme Outcomes (POs)

POs shall be based on Graduate Attributes (GAs) of the Programme. The GAs are the attributes expected of a graduate from a Programme in terms of knowledge, skills, attitude and values. The Graduate Attributes include Disciplinary Knowledge, Communication Skills, Critical Thinking, Problem Solving, Analytical Reasoning, Research Related Skills, Co-operation/Team Work, Scientific Reasoning, Reflective Thinking, Information/Digital Literacy, Multicultural Competence, Moral and Ethical Awareness/Reasoning, Leadership Qualities and Lifelong Learning.

On successful completion of the Programme, the students will be able to

- 1 Apply effectively the acquired knowledge and skill in the field of Arts, Physical Science, Life Science, Computer Science, Commerce and Management for higher studies and employment. (*Disciplinary Knowledge*)
- 2 Communicate proficiently and confidently with the ability to express original/complex ideas effectively in different situations. (*Communication Skills*)
- 3 Identify, formulate and solve problems in real life situations scientifically/systematically by adapting updated skills in using modern tools and techniques. (*Scientific Reasoning and Problem Solving*)

- 4 Critically analyse, synthesise and evaluate data, theories and ideas to provide valid suggestions for the betterment of the society. (*Critical Thinking and Analytical Reasoning*)
- 5 Use ICT in a variety of self-directed lifelong learning activities to face career challenges in the changing environment. (*Digital Literacy, Self - directed and Lifelong Learning*)
- 6 Self-manage and function efficiently as a member or a leader in diverse teams in a multicultural society for nation building. (*Co-operation/Team Work and Multicultural Competence*)
- 7 Uphold the imbibed ethical and moral values in personal, professional and social life for sustainable environment. (*Moral and Ethical Awareness*)

Programme Educational Objectives (PEOs) of B.C.A- Graphic Design Programme

The students will be able to

PEO1: employ standard design process in creating effective design solutions to meet the project objective, client and/or user requirements and other constraints.

PEO2 adopt creative and innovative practices to solve real-life complex problems.

PEO3: shine as socially committed computer professionals having mutual respect, efficient programming skills and cater to the needs of society.

Key Components of Mission Statement	Programme Educational Objectives		
	PEO1	PEO2	PEO3
continues development of technical competency	√	√	
train students for careers as IT professionals	√	√	
empower the student in rural communities	√		√

B.1.2 Programme Specific Outcomes (PSOs)

Based on the Programme Outcomes, Programme Specific Outcomes are framed for each UG Programme. Programme Specific Outcomes denote what the students would be able to do at the time of graduation. They are Programme specific. It is mandatory that each PO should be mapped to the respective PSO.

On completion of B.C.A. – Graphics Design Programme, the students will be able to

PO1- *Disciplinary Knowledge*

PSO 1.a: Apply the acquired knowledge of Computer Science and other Disciplines in pursuit of higher studies and career.

PSO1.b: Conceptualize and develop design solutions using principles of design to create visual communications that meet the needs of the project.

PO2– *Communication Skills*

PSO2: Communicate clearly in visual, verbal, and written forms using techniques appropriate for the intended audience.

PO3–*Scientific Reasoning and Problem Solving*

PSO3.a: Apply theoretical foundations of computer applications with emphasis on strong practical training that enable them to solve real world problems related to sustainable environment.

PSO3.b: Analyze required information and /or eliminate extraneous information towards solving contextual problems.

PO4–*Critical Thinking and Analytical Reasoning*

PSO4.a: Analyze complex computing problems through design of experiments and interpretation of data to arrive at valid conclusions.

PSO4.b: Critically evaluate the software systems and find the optimum solution for the betterment of society.

PO5–*Digital Literacy, Self-Directed and Lifelong Learning*

PSO5: Utilize modern computing tools, skills and techniques to confront the challenges in finding software solutions.

PO6–*Co-operation/Team Work and Multi-Cultural Competence*

PSO6: Participate as a team member to make collaborative decisions toward shared objectives with civility, interpersonal skills, and professionalism.

PO7–*Moral and Ethical Awareness*

PSO7: Complete all work in a professional and ethical manner, and in accordance with all applicable legislation and regulations.



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Semester I	Python Programming	Hours/Week: 5	
Core Course -1		Credits: 5	
Course Code 23UGDC11		Internal 25	External 75

COURSE OUTCOMES

On successful completion of the course, the learners will be able to

- CO1 : outline the basics of Python, control statements, functions, strings, Python Data structures and files. [K1]
- CO2 : paraphrase about Python basics, conditional, looping statements and functions. [K2]
- CO3 : relate the concepts of strings, modules, List, tuples and dictionary, reading, writing and other file handling operations. [K2]
- CO4 : apply Python basics, selection, looping statements, functions and Modules. [K3]
- CO5 : make use of Python data structures like List, Tuple, Set, Dictionary and files concepts. [K3]

Course Code 23UGDC11	PO1		PO2	PO3		PO4		PO5	PO6	PO7
	PSO 1.a	PSO 1.b	PSO 2	PSO 3.a	PSO 3.b	PSO 4.a	PSO 4.b	PSO 5	PSO 6	PSO 7
CO1	3	3	3	2	2	-	-	1	1	-
CO2	3	3	3	3	3	1	1	2	1	-
CO3	3	3	3	2	2	2	2	2	1	-
CO4	3	3	3	3	3	2	2	2	1	1
CO5	3	3	3	3	3	2	2	3	1	1



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Semester I	Python Programming Practical	Hours/Week: 5	
Core Course – 2 Practical I		Credits: 5	
Course Code 23UGDC11P		Internal 40	External 60

COURSE OUTCOMES

On successful completion of the course, the learners will be able to

- CO1 : outline the basic concepts of needed for the given problem. [K2]
- CO2 : write programs using selection/looping statements, functions, strings, files and Python Data Structures. [K2]
- CO3 : key-in the programs and test the programs with required input and get expected outputs with neat formatting and prepare the record work. [K3]
- CO4 : explain the programs implemented using Python and deduce the answers for any queries raised. [K3]
- CO5 : apply the necessary modifications and justify the desired result. [K3]

Course Code 23UGDC11P	PO1		PO2	PO3		PO4		PO5	PO6	PO7
	PSO 1.a	PSO 1.b	PSO 2	PSO 3.a	PSO 3.b	PSO 4.a	PSO 4.b	PSO 5	PSO 6	PSO 7
CO1	3	3	3	2	2	-	-	1	2	-
CO2	3	3	3	3	3	1	1	2	2	-
CO3	3	3	3	2	2	2	2	2	2	2
CO4	3	3	3	3	3	2	2	2	2	2
CO5	3	3	3	3	3	2	2	3	2	2



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Semester I	DISCRETE MATHEMATICS - I	Hours/Week: 4	
Allied Course		Credits: 3	
Course Code 23UGDA11		Internal 25	External 75

Course Outcomes

On completion of the course the students will be able to

- CO1 : define the basic concepts in propositional logic, relations, counting, graph theory and matrices [K1]
- CO2 : understand the mathematical concepts in logic, relations, permutation and combinations, graphs and matrices.[K2]
- CO3 : explain the concepts in predicates and quantifiers, partial orderings, recurrence relations, graphs and matrices. [K2]
- CO4 : solve problems in discrete mathematics. [K3]
- CO5 : apply the knowledge gained in discrete mathematics to other fields. [K3]

Course Code	PO1	PO2	PO3	PO4	PO5	PO6	PO7
23UGDA11							
CO1	3	2	3	1	-	1	-
CO2	3	1	3	3	3	1	-
CO3	3	3	3	3	2	1	-
CO4	3	1	3	3	2	3	1
CO5	3	3	3	3	3	3	1



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Semester I	Introduction to HTML	Hours/Week: 2	
NME- 1		Credits: 2	
Course Code 23UGDN11		Internal 25	External 75

COURSE OUTCOMES

On successful completion of the course, the learners will be able to

- CO1 : know the basics of internet and web browsers.[K1]
- CO2 : know the basic concept in HTML and concept of resources in HTML. .[K1]
- CO3 : recognize the concept of list and its types. .[K2]
- CO4 : create tables and to understand the attributes of table. .[K2]
- CO5 : design frames and forms with its attributes. .[K3]

Course Code	PO1	PO2	PO3	PO4	PO5	PO6	PO7
23UGDN11							
CO1	1	1	-	-	-	-	-
CO2	1	1	-	-	-	-	-
CO3	2	2	-	-	-	-	-
CO4	1	1	-	-	-	-	-
CO5	1	1	-	-	-	-	-



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Semester I	Graphic Design Practical	Hours/Week: 2	
SEC- 1 Foundation Course		Credits: 2	
Course Code 23UGDF11P		Internal 40	External 60

COURSE OUTCOMES

On successful completion of the course, the learners will be able to

- CO1 : examine the given design problem, identify the basic tools and features in Photoshop. [K2]
- CO2 : design Photoshop document implementing the required tools and elements to get a good photo effect.. [K2]
- CO3 : execute the steps to produce required output. [K3]
- CO4 : present output effectively and prepare the record. [K3]
- CO5 : explain the necessity of tools used, deduce the changes to be incorporated over the developed application using the acquired knowledge. [K3]

Course Code 23UGDF11P	PO1		PO2	PO3		PO4		PO5	PO6	PO7
	PSO 1.a	PSO 1.b	PSO 2	PSO 3.a	PSO 3.b	PSO 4.a	PSO 4.b	PSO 5	PSO 6	PSO 7
CO1	2	3	1	-	-	-	-	-	-	-
CO2	3	2	2	2	2	-	-	-	1	1
CO3	-	3	-	2	3	-	1	2	-	1
CO4	3	3	1	2	-	1	1	2	-	-
CO5	2	2	1	-	-	-	-	3	-	-



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Semester II	Programming in C++	Hours/Week: 5	
Core Course - 3		Credits: 5	
Course Code 23UGDC21		Internal 25	External 75

COURSE OUTCOMES

On successful completion of the course, the learners should be able to

CO1: outline the procedural and object oriented paradigm with concepts of classes, token, data types, functions, control statement, overloading and objects. [K1]

CO2: Describe about classes and object, expressions and controls structures, functions, friend functions, constructor and destructor, operator overloading and inheritance. [K2]

CO3: paraphrase about pointer, pointer class, this pointer, polymorphism, virtual functions and files stream classes.[K2]

CO4: apply the concepts of object-oriented programming, types of inheritance, pointer concepts and operator overloading [K3]

CO5: Illustrating about the pointers, managing console I/O operators, manipulating strings and strings function and they attributes.[K3]

Course Code 23UGDC21	PO1		PO2	PO3		PO4		PO5	PO6	PO7
	PSO 1.a	PSO 1.b	PSO 2	PSO 3.a	PSO 3.b	PSO 4.a	PSO 4.b	PSO 5	PSO 6	PSO 7
CO1	3	3	3	3	1	2	-	-	1	
CO2	2	3	2	3	2	2	1	-	-	
CO3	3	3	2	3	1	1	-	1	-	
CO4	2	3	2	3	1	1	2	2	1	
CO5	2	2	2	1	1	1	2	3	2	



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Semester II	Programming in C++ Practical	Hours/Week: 5	
Core Course 4		Credits: 5	
Course Code 23UGDC21P		Internal 40	External 60

COURSE OUTCOMES

On successful completion of the course, the learners should be able to

- CO1 : Outline the basic concepts of object oriented, classes, functions and objects.[K2]
- CO2 : write the program output for the function with pointer, modes of files and string attributes.[K2]
- CO3 : explain the programming concepts in type casting, inheritance, operator overloading and polymorphism.[K3]
- CO4 : Present output effectively and prepare the record with the neat output.[K3]
- CO5 : Apply the programming concepts in type casting, inheritance, operator overloading and polymorphism.[K3]

Course Code 23UGDC21P	PO1	PO2		PO3		PO4		PO5	PO6	PO7
	PSO 1.a	PSO 1.b	PSO 2.a	PSO 3.a	PSO 3.b	PSO 4.a	PSO 4.b	PSO 5	PSO 6	PSO 7
CO1	3	3	3	3	1	2	-	-	1	
CO2	2	3	2	3	2	2	1	-	-	
CO3	3	3	2	3	1	1	-	1	-	
CO4	2	3	2	3	1	1	2	2	1	
CO5	2	2	2	1	1	1	2	3	2	



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Semester II	Resource Management Techniques	Hours/Week:4	
Allied Course		Credits: 3	
Course Code 23UGDA21		Internal 25	External 75

COURSE OUTCOMES

On completion of the course the students will be able to

CO1: define the basic concepts of operations research, linear programming problem, assignment problem and transportation problem.[K1]

CO2: discuss models, phases, characteristics of operations research, and mathematical formulation in linear programming problem, dual, assignment problem and transportation problem.[K2]

CO3: explain various methods of linear programming problem, assignment problem and transportation problem. [K2]

CO4: solve the problems in linear programming problem, assignment problem and transportation problem. [K3]

CO5: apply the algorithms for problems in linear programming problem, assignment problem and transportation problem. [K3]

Course Code 23UGDA21	PO1	PO2	PO3	PO4	PO5	PO6	PO7
CO1	3	2	3	1	1	1	2
CO2	3	1	3	3	3	1	2
CO3	3	3	3	3	2	1	1
CO4	3	1	3	3	2	3	1
CO5	3	3	3	3	3	3	1



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Semester II	Fundamentals of Computers	Hours/Week: 2	
NME - 2		Credits: 2	
Course Code 23UGDN21		Internal 25	External 75

COURSE OUTCOMES

On successful completion of the course, the learners will be able to

- CO1 : outline the basics of computer, purpose of input/output devices, various input technologies and progress of computer languages from machine level to high level. [K1]
- CO2 : recognize the evaluation of arithmetic operations by the processor, the registers involved in arithmetic operations and about the evolution and classification of computers. [K1]
- CO3 : classify different kinds of input/output technologies, machine, assembly, high level languages and computers. [K2]
- CO4 : interpret problem solving using computers through the concepts of algorithms, computer model, its characteristics and computer generation & classification. [K2]
- CO5 : acquire the knowledge of computer basics, input/output devices, calculating arithmetic operations using computers, programming languages, generation and classification of computers. [K3]

Course Code 23UGDN21	PO1	PO2	PO3	PO4	PO5	PO6	PO7
CO1	1	1	-	-	-	-	-
CO2	1	1	-	-	-	-	-
CO3	2	2	-	-	-	-	-
CO4	1	1	-	-	-	-	-
CO5	1	1	-	-	-	-	-



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Semester II	2D Animation Practical	Hours/Week: 2	
SEC - 2		Credits: 2	
Course Code 23UGDS21P		Internal 40	External 60

COURSE OUTCOMES

On successful completion of the course, the learners will be able to

CO1: demonstrate the various effects of text in flash. [K2]

CO2: apply effect to various objects and give effects. [K2]

CO3: make use of basic tools of action scripts, develop applications in Flash. [K3]

CO4: write programs for designing CD, Filmstrip. [K3]

CO5: select the required tools to create animated graphics with sound effects. [K3]

Course Code 23UGDS21P	PO1		PO2	PO3		PO4		PO5	PO6	PO7
	PSO	PSO	PSO	PSO	PSO	PSO	PSO	PSO	PSO	PSO
	1.a	1.b	2	3.a	3.b	4.a	4.b	5	6	7
CO1	2	3	1	-	-	-	-	-	-	-
CO2	3	2	2	2	2	-	-	-	1	1
CO3	-	3	-	2	3	-	1	2	-	1
CO4	3	3	1	2	-	1	1	2	-	-
CO5	2	2	1	-	-	-	-	3	-	-