

DYAL SINGH COLLEGE, KARNAL

NAME OF THE PROGRAMME : BACHELOR OF COMPUTER APPLICATIONS (BCA)
DURATION : THREE YEARS

PROGRAMME OUTCOMES (POs)		
PO1	Knowledge	Capable of demonstrating comprehensive disciplinary knowledge gained during course of study.
PO2	Communication	Ability to communicate effectively on general and scientific topics with the scientific community and with society at large.
PO3	Problem Solving	Capability of applying knowledge to solve scientific and other problems.
PO4	Individual and Team Work	Capable to learn and work effectively as an individual, and as a member or leader in diverse teams, in multidisciplinary settings.
PO5	Investigation of Problems	Ability of critical thinking, analytical reasoning and research based knowledge including design of experiments, analysis and interpretation of data to provide conclusions.
PO6	Modern Tool Usage	Ability to use and learn techniques, skills and modern tools for scientific practise.
PO7	Science and Society	Ability to apply reasoning to access the different issues related to society and the consequent responsibilities relevant to the professional scientific practices.
PO8	Life-Long Learning	Aptitude to apply knowledge and skills that are necessary for participating in learning activities throughout the life.
PO9	Environment and Sustainability	Ability to design and develop modern systems which are environmentally sensitive and to understand the importance of sustainable development.
PO10	Ethics	Apply ethical principles and professional responsibilities in scientific practices.
PO11	Project Management	Ability to demonstrate knowledge and understanding of the scientific principles and apply these to manage projects.

PROGRAMME SPECIFIC OUTCOMES (PSOs)

The objective of the curriculum designed for BCA course is to nurture the technical aptitude of students for professional competency in the IT industry.

PSO1	Develop proficiency for solving real world problems with the application of programming and supplementary computing skills.
PSO2	Promote exposure to hardware as well as software knowledge with the inclusion of course content targeted to administer technical expertise for employment in the IT industry.
PSO3	Explicit course content is targeted to inculcate programming skills using both conventional and contemporary programming languages as well as to develop potential for realizing web oriented and other commercial/non-commercial applications.
PSO4	Judicious structuring of the course curriculum has been aimed in order to strengthen competitive ability as per the trending industry requirements.
PSO5	Encourage skillful expertise for employment in Commercial/ Government sectors or pursuance of higher studies aimed towards innovational research leading to the progressive growth of the society and the nation.

BCA-111: COMPUTER AND PROGRAMMING FUNDAMENTALS

Course Objectives: The aim of this course is to introduce the basic terminology of a computer system and fundamentals of problem solving on a computer.

Course Outcomes: At the end of this course, the student will be able to:

BCA-111.1 learn the basic terminology of hardware and software components of a computer system.

BCA-111.2. understand basics of memory system and working of storage devices.

BCA-111.3. understand the working of input/output devices commonly used in a computer system.

BCA-111.4. understand the concept of operating system and use Windows OS.

CO-PO Mapping Matrix for Course Code: BCA-111											
COs#	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
BCA-111.1	3	3	2	3	3	2	2	2	2	3	2
BCA-111.2	3	3	3	3	2	3	2	2	2	2	2
BCA-111.3	2	3	3	3	2	2	2	2	1	1	1
BCA-111.4	3	3	2	2	3	3	3	3	3	2	2
Average	2.75	3	2.5	2.75	2.5	2.5	2.25	2.25	2	2	1.75

CO-PSO Mapping Matrix for Course Code: BCA-111					
COs#	PSO1	PSO2	PSO3	PSO4	PSO5
BCA-111.1	3	3	2	3	3
BCA-111.2	3	2	3	3	3
BCA-111.3	2	3	3	3	2
BCA-111.4	3	2	2	2	3
Average	2.75	2.5	2.5	2.75	2.75

BCA-112: WINDOWS AND PC SOFTWARE

Course Objectives: The aim of this course is help students to enhance their concept of computer hardware, software, memory and operating environments along with the concepts of problem solving using programming languages which will lead to code generation in future for computer science job aspirants.

Course Outcomes: At the end of this course, the student will be able to:

BCA-112.1 develop program logic using algorithms, flowchart, decision tables, DFDs, etc.

BCA-112.2.develop sorting, searching, merging and other basic algorithms to solve problems.

BCA-112.3 learn basics of Internet and its services specifically e-mail services.

BCA-112.4 check threats to a computer system and find suitable software to resolve them.

CO-PO Mapping Matrix for Course Code: BCA-112											
COs#	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
BCA-112.1	3	3	2	3	3	2	2	2	2	2	2
BCA-112.2	3	2	3	3	3	2	2	2	2	2	2
BCA-112.3	2	3	3	3	2	2	2	2	1	1	1
BCA-112.4	3	2	2	2	3	3	3	3	3	2	2
Average	2.75	2.5	2.5	2.75	2.75	2.25	2.25	2.25	2	2	1.75

CO-PSO Mapping Matrix for Course Code: BCA-112					
COs#	PSO1	PSO2	PSO3	PSO4	PSO5
BCA-112.1	3	3	2	3	3
BCA-112.2	3	2	3	3	3
BCA-112.3	2	3	3	3	2
BCA-112.4	3	2	2	2	3
Average	2.75	2.5	2.5	2.75	2.75

BCA 113: MATHEMATICAL FOUNDATIONS – I

Course Objectives: The aim of this course is to study the concepts of sets, limits, continuity and differential equations.

Course Outcomes: At the end of this course, the student will be able to:

- BCA-113.1. Learn Set, subsets and operations on sets, Venn diagram of sets, Power set of a set, Permutation and combinations, Lattices, Boolean algebra.
- BCA-113.2. Understand Basic properties of limits, Continuous functions and classifications of discontinuities, Derivative of a different function.
- BCA-113.3. Know about the Formation of differential equations order and degree, Geometrical approach to the existence of the solution, BCA-113.4. Study linear differential equation of higher order with constant coefficients and linear differential

CO-PO Mapping Matrix for Course Code: BCA-113											
COs#	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
BCA-113.1	3	3	3	2	2	2	2	3	2	2	2
BCA-113.2	3	3	3	3	3	3	3	3	3	2	3
BCA-113.3	3	3	3	3	3	3	3	3	3	2	2
BCA-113.4	3	3	3	3	3	3	2	3	3	2	3
Average	3	3	3	2.75	2.75	2.75	2.5	3	2.75	2	2.5

CO-PSO Mapping Matrix for Course Code: BCA-113				
COs#	PSO1	PSO2	PSO3	PSO4
BCA 113 .1	3	3	3	3
BCA 113.2	3	3	3	3
BCA 113.3	3	3	3	3
BCA 113.4	3	3	3	3
Average	3	3	3	3