



DPG DEGREE COLLEGE

(Affiliated to MDU Rohtak)

Sector-34, Near Marble Market, Gurugram 122001

B.Sc.- Computer Sci.

Program outcomes listed as follows:

1. Understanding of basic concepts, fundamental principles related to various scientific phenomena and their relevance in day to day life.
2. Development of Research Aptitude.
3. Development of Scientific Temper.
4. Critical thinking and creative ability.

COURSE OBJECTIVES & COURSE OUTCOMES

S.No.	COURSE OBJECTIVES	COURSE OUTCOMES
1.	COMPUTER SCIENCE : B.SC IST SEMESTER	
	Paper: Computer Fundamentals & MS-Office	
	<ol style="list-style-type: none">1. Give students an in-depth understanding of why computers are essential components in business, education and society.2. Introduce the fundamentals of computing devices and reinforce computer vocabulary, particularly with respect to personal use of computer hardware and software, the Internet, networking and mobile computing.3. Provide hands-on use of Microsoft Office 2013 applications Word, Excel, Access and PowerPoint. Completion of the assignments will result in MS Office applications knowledge and skills.	<ol style="list-style-type: none">1. Describe the usage of computers and why computers are essential components in business and society.2. Solve common business problems using appropriate Information Technology applications and systems.3. Describe various types of networks network standards and communication software.4. Identify categories of programs, system software and applications. Organize and work with files and folders.

	Paper : Computer Architecture	
	<ol style="list-style-type: none"> 1. To understand the structure, function and characteristics of computer systems. 2. To understand the design of the various functional units and components of computers. 3. To identify the elements of modern instructions sets and their impact on processor design. 4. To explain the function of each element of a memory hierarchy. 	<ol style="list-style-type: none"> 1. Demonstrate computer architecture concepts related to design of modern processors, memories and I/Os. 2. Analyze the performance of commercially available computers. 3. To develop logic for assembly language programming.

1.	COMPUTER SCIENCE : B.SC IInd SEMESTER	
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	Paper: Programming in C	
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	<ul style="list-style-type: none"> ➤ Students will be able to develop logics which will help them to create programs, applications in C. ➤ student will gain a thorough understanding of the fundamentals of C programming. ➤ student will be able to code, compile and test C programs. 	<ul style="list-style-type: none"> ➤ Write the C code for a given algorithm. ➤ Implement Programs with pointers and arrays, perform pointer arithmetic, and use the pre-processor. ➤ Write programs that perform operations using derived data types. ➤ After the completion of this course, the students will be able to develop applications.
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	Paper : STRUCTURED SYSTEM ANALYSIS AND DESIGN	
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	<ul style="list-style-type: none"> ➤ The principles of the phased approach to software development. ➤ How to Apply modeling tools and techniques to the design and analysis of the business problem ➤ The various approaches to structured analysis and design ➤ How to apply structured analysis and design techniques 	<ul style="list-style-type: none"> ➤ Describe the systems analysis and systems development life cycle. ➤ Describe and develop the requirements determination. ➤ Describe how to transition from the requirements phase to the design phase ➤ Identify the techniques of moving to the implementation phase.
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1.	COMPUTER SCIENCE : B.SC IIIrd SEMESTER	
	Paper: Data Communication & Networking	
	<ul style="list-style-type: none"> ➤ Aim of this course is to discuss and explain about basics of data communication and networking concepts. Some of the major topics which are included in this course are the OSI reference model for networking protocols. ➤ Students will learn about transmission media & modulation techniques. ➤ Some of the major topics which are included in this course are CSMA/CD, LANs/WANs, internetworking technologies, Routing. ➤ Some of transport layer functionality & protocol are also discussed. 	<ul style="list-style-type: none"> ➤ Students will be able to understand the networking concept. ➤ Students learn about transmission Media & Modulation Techniques. ➤ Students know about Internetworking Technologies. ➤ Students will be able to understand the Protocols used on different Layers.
	Paper: Object Oriented Design & C++	
	<ul style="list-style-type: none"> ➤ Introduces Object Oriented Programming concepts using the C++ language. ➤ Introduces the principles of data abstraction, inheritance and polymorphism ➤ Introduces the principles of virtual functions and polymorphism. ➤ Introduces handling formatted I/O and unformatted I/O .Introduces exception Handling. 	<ul style="list-style-type: none"> ➤ Able to develop programs with reusability. ➤ Develop programs for file handling. ➤ Handle exceptions in programming. ➤ Develop applications for a range of problems using object-oriented programming techniques.

2.	COMPUTER SCIENCE : B.SC IVth SEMESTER	
	Paper: Data Structure With C/C++	

	<ul style="list-style-type: none"> ➤ Students will learn the complexities of different algorithms. ➤ Students will be able to understand the concept of Uses of Stack and also linear data structure. ➤ Students will be familiar to data structure operations like searching, sorting etc ➤ Students will be familiar to the concept of Non-Linear data structures (Trees & Graphs). 	<ul style="list-style-type: none"> ➤ Analyze the complexities of recursive and Non recursive algorithms. ➤ Apply ADT concepts such as arrays, stacks and queues for solving infix to post fix, postfix evaluation, priority queues. ➤ Implement linear, binary, interpolation, hashing searching techniques and sorting techniques namely bubble, insertion, selection, quick, merge sort. ➤ Design and implement the Non linear data structures (trees and graphs) to optimize the solution.
Paper: Operating System		
	<ul style="list-style-type: none"> ➤ To understand the services provided by and the design of an operating system. ➤ To understand the structure and organization of the file system. ➤ To understand what a process is and how processes are synchronized and scheduled. ➤ To understand different approaches to memory management. ➤ Students should be able to use system calls for managing processes, memory and the file system. 	<ul style="list-style-type: none"> ➤ Understand what is an operating system and the role it plays. ➤ A high-level understanding of the structure of operating systems, applications, and the relationship between them. ➤ Some knowledge of the services provided by operating systems. <p style="text-align: center;">Exposure to some details of major OS concepts.</p>

COMPUTER SCIENCE : B.SC VTH SEMESTER

Paper: Database Management System

<ul style="list-style-type: none"> ➤ To introduce to the students data, information, components of DBMS environment. ➤ To let the students know about the different data models. ➤ To make the students understand about the database system architecture. ➤ To study conceptual design using ER diagram. 	<ul style="list-style-type: none"> ➤ Understand the fundamental elements of relational database management systems. ➤ Determine the basic concepts of relational data model, entity-relationship model, relational database design, relational algebra and SQL. ➤ Design ER-models to represent simple database application scenarios ➤ Convert the ER-model to relational tables, populate relational database and formulate SQL queries on data. ➤ Improve the database design by normalization.
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Paper : Introduction to internet and web technology

<ul style="list-style-type: none"> ➤ To study basic knowledge intranet, internet and protocols. ➤ To study the applications of internet. ➤ To let the students know about the different internet service provider. ➤ To make the students understand about the HTML forms. 	<ul style="list-style-type: none"> ➤ Understand the benefits of Internet, and also discuss the hardware and software requirement for internet. ➤ Understand the basic attributes and tags of HTML. ➤ Design the web page layout using style sheet and advanced layout with tables. ➤ Understand the web browser, search engine and categories of search engine. ➤ Learn the internet security problems and solutions.
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