

Jagannath International Management School

Vasant Kunj, New Delhi-110070

(Affiliated to Guru Gobind Singh Indraprastha University, New Delhi)

Recognized u/s 2(f) by UGC & Accredited with 'A' Grade by NAAC

Participant of United Nations Global Compact, New York

ISO 9001:2015 Quality Certified

Programme Objectives of BCA

Students in the BCA degree program gain the knowledge and skills necessary for success in this competitive, rapidly changing field by achieving the following objectives:

1. Understand the fundamental concepts of Computers, Business environment and Information Technology and its Applications in different domains.
2. Demonstrate the ability to adapt to technological changes and innovations in the discipline.
3. Analyze, design, implement and evaluate computerized solutions to real life problems, using appropriate computing methods.
4. Differentiate among essential data structures used in computer programming, and explain how they work.
5. Gain knowledge of algorithms and their role in computer science.
6. Identify, explain and apply fundamental structured programming techniques.
7. Develop computer programs using functional programming and object-oriented programming paradigms.
8. Apply techniques of software validation and reliability analysis to the development of computer programs.
9. Successfully understand & analyze technical data to reach actionable conclusions, including technological solutions to the business.
10. Develop competent technical writing skills to enable them to communicate business ideas to senior management and the clients.
11. To produce employable IT workforce, that will have sound knowledge of IT and business fundamentals that can be applied to develop and customize solutions for Small and Medium Enterprises (SME).

Learning Outcomes

After completing the BCA programme the students will have

1. The necessary technical, scientific as well as basic managerial and financial procedures to analyze and solve real world problems within their work domain.
2. Clarity on both conceptual and application oriented skills in commerce, Finance & Accounting and it Applications in Business context.
3. Improved communication and business management skills, especially in providing tech support.
4. Awareness on ethics, values, sustainability and creativity aspects.
5. The ability and the mindset to continuously update and innovate.

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Programme: BCA	Subject: Mathematics-I	Semester: I	Code: BCA-101
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Course Objective

1. To understand the concepts of matrix and its applications.
2. To understand the concepts of various type of functions and their differentiability and continuity, and their applications.
3. To understand the concepts of differentiations and their applications to daily life problems.
4. To understand the concepts of integrations and its applications with reduction formulae and Beta Gamma functions.

Course Outcomes:

1. Students learned the concepts of matrices and can apply these techniques to solve various problems related to these concepts.
2. Students learned the concepts of various type of functions and their differentiability and continuity and can apply to solve the problems.
3. Students learned the concepts of differentiations and can apply to solve the related problems of daily life.
4. Students learned the concepts of integrations and its applications with reduction formulae

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Programme: BCA Subject: Technical Communication Semester: I Code: BCA-103
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Course Objectives

1. To tell basic understanding of the correct use of English language
2. To improve oral as well as written communication skills
3. The course aims at providing fundamental knowledge and exposure to the concepts, theories and practices in the field of technical communication.
4. To understand the function of communication and their application in the corporate world.
5. To make students understand and know about the common business errors.

Course Outcomes

On completion of this course, the students:

1. Are able to define the concept of Technical Communication and its importance.
2. Better know about the private enterprise system and better understand how organizations communicate within that environment.
3. Have the knowledge of practical aspects of all the techniques of setting up a technical communication within the organization.

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Programme: BCA Subject: Intro. to Prog. Lang. using 'C' Semester: I Code: BCA-105

Course Objectives

1. To introduce students with basic concepts of logic building, algorithms and programming.
2. To develop programming skills using the computer fundamentals and basics of C programming Language.
3. To make students understand the concepts of arrays, structures, functions, pointers and to implement the memory management concepts.
4. To learn handling the issues in file organization and effective usage of file systems.

Course Outcomes

After completing this course, the student shall

1. Develop programs using the basic elements like control statements, Arrays and Strings.
2. Be able to solve the memory access problems by using pointers.
3. Understand the code reusability with the help of user defined functions.
4. Be able to develop advanced applications using enumerated data types, function pointers and nested structures.
5. Understand the basics of file handling mechanism that is essential for understanding the concepts in database management systems.

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Programme: BCA Subject: Intro. to Computer & IT Semester: I Code: BCA-107
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Course Objective:

1. To introduce the students the fundamentals of Computers and IT and help the students to identify the different components of the computer.
2. Students will also learn about the evolution of computers and various generations of computers.
3. This course outlines the operating system concepts and a brief introduction to MS Office.
4. To provide the outline of number system and various operations, like conversions, addition, and subtraction of binary numbers and importance of compliments.
5. This course describes the details of networking concepts, network types and various services of Internet.

Course Outcomes:

1. Summarise the concepts of computers, evolution of computers and generation of computers.
2. Understand the fundamental hardware components that make up a computer's hardware and the role of each of these components.
3. Will be able to apply MS Office application software.
4. Identify the concepts of number system and able to perform the number system conversions.
5. To understand the concept of computer networks, network topologies and various services provided by the Internet.

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Programme: BCA	Subject: Physics	Semester: I	Code: BCA-109
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Course Objectives

1. To introduce students with the basic laws of nature such as motion, work, power and energy.
2. To understand electrostatics, semiconductors and devices.
3. To understand the applications of Ohms law and Krichoff's rule.
4. To learn about the structure of an atom along Thomson's atomic model, Rutherford's alpha scattering experiment.

Course Outcomes

1. Analyzing the different laws of motion, work, power and energy.
2. Using the concept of electrostatics, semiconductors and devices for better analyzing of the working model.
3. Using ohms law and applying its functionality in many domains.
4. Able to understand Rutherford alpha scattering experiment and the atomic model.

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Programme: BCA Subject: Mathematics-III Semester: III Code: BCA-201

Course Objectives

1. To understand the basics concepts of statistics and their applications to solve the problems of mean, mode, median, standard deviation etc.
2. To understand the various concepts of correlation and regression analysis, to solve the problems using IT tools.
3. To understand the concepts of linear programming problem with the graphical and analytical solution.
4. To understand the various techniques of operations research like Assignment problems, transportation problems, decision making problems and queuing models.

Course Outcomes

1. Students learned the basics concepts of statistics and their applications to solve the problems of mean, mode, median, standard deviation etc., can apply to solve the problems.
2. Students learned the various concepts of correlation and regression analysis, to solve the problems using IT tools.
3. Students learned the concepts of linear programming problem with the graphical and analytical solution.
4. Students learned the various techniques of operations research like Assignment problems, transportation problems, decision making problems and queuing models .

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Programme: BCA Subject: Computer Architecture Semester: III Code: BCA-203
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Course Objectives

1. To conceptualize the basics of organizational and architectural issues of a digital computer.
2. To understand various data transfer techniques in digital computer.
3. To explain the function of each element of a memory hierarchy,
4. To identify and compare different methods for computer I/O.
5. To understand the concepts of register transfer logic and arithmetic operations.
6. To explain different types of addressing modes and memory organization.
7. To learn the different types of serial communication techniques.

Course Outcomes

1. Ability to understand basic structure of computer.
2. Ability to perform computer arithmetic operations.
3. Ability to understand control unit operations.
4. Ability to design memory organization that uses banks for different word size operations.
5. Ability to understand the concept of cache mapping techniques.
6. Ability to understand the concept of I/O organization.
7. Learn the concepts of parallel processing, pipelining and interprocessor communication.

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Programme: BCA	Subject: FEDT.NET	Semester: III	Code: BCA-205
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Course objectives:-

1. The aim of this course is to teach a full object oriented programming overviews and specially getting expertise in vb.net applications programming.
2. In this course students will learn about vb.net GUI Environment of the vb.net and built in classes.
3. This course also covers the ADO.NET Database connectivity with the help of Vb.net Environment.
4. After completion of this course students will be able to accomplish their final projects easily.

Course Outcomes:-

1. Understand .NET Framework and describe some of the major enhancements to the new version of Visual Basic.
2. Describe the basic structure of a Visual Basic.NET project and use main Features of the integrated development environment (IDE)
3. Create applications using Microsoft Windows® Forms
4. Create applications that use ADO. NET
5. Using Crystal Reports.

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Programme: BCA Subject: Principles of Accounting Semester: III Code: BCA-207

Course Objectives

1. This course aims to convey sufficient knowledge for an adequate interpretation, analysis and use the information provided by financial accounting.
2. The course will deepen knowledge on all components of the balance sheet, using a double entry bookkeeping perspective.

Course Outcomes

1. The course will enable the students to analyze a company's financial statements and come to a reasoned conclusion about the financial situation of the company.
2. The course will provide the understanding about the depreciation policies and can determine which method is best suited to an organization.
3. The course will help the student to develop an understanding of how the stock exchanges function.

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Programme: BCA Subject: Object Oriented Prog. Using C++ Semester: III Code: BCA-209
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Course Objectives

1. To introduce students with basic concepts of Object Oriented Programming and its features.
2. To understand the applications of C++.
3. To gain knowledge of objects, Class, Data Abstraction, Encapsulation, Inheritance, Polymorphism and Dynamic Binding.
4. Understanding the construction of programs using Bottom-up design approach.
5. To gain knowledge on File handling and Exception Handling.
6. To learn about constructors and destructors.
7. To provide the knowledge of basic concepts of various paradigms available in OOP.

Course Outcomes

1. Analyze the structure of OOP and basic components involved in OOP design
2. Analyze and design the applications based on Data Abstraction, Encapsulation, Inheritance, Polymorphism and Dynamic Binding.
3. Using Bottom-up mechanism to develop programs in C++.
4. Able to handle exceptions and successful error handling during file operations.
5. Compare the various paradigms and analyze performance of various algorithms for constructive program development.
6. Analyze the various GUI and C++ compilers for better programming.

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Programme: BCA	Subject: Operating System	Semester: V	Code: BCA-301
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Course Objectives

1. To introduce students with basic concepts of Operating System, its functions and services.
2. To understand the services provided by the Operating system
3. To familiarize the students with various views and management policies adopted by O.S. as pertaining with processes , Deadlock , memory , File and I/O operations.
4. Understanding the mechanisms involved in memory management in contemporary OS.
5. To gain knowledge on distributed operating system concepts that includes architecture, Mutual exclusion algorithms, deadlock detection algorithms and agreement protocols
6. To learn programmatically to implement simple OS mechanisms.
7. To provide the knowledge of basic concepts towards process synchronization and related issues.

Course Outcomes

1. Analyze the structure of OS and basic architectural components involved in OS design
2. Analyze and design the applications to run in parallel either using process or thread models of different OS
3. Interpret the mechanisms adopted for file sharing in distributed Applications
4. Conceptualize the components involved in designing a contemporary OS
5. Compare the various algorithms and analyze performance of various algorithms used for management of memory, CPU scheduling, File handling and I/O operations.
6. Apply various concept related with Deadlock to solve problems related with Resources allocation, after checking system in Safe state or not.
7. Analyze the various device and resource management techniques for timesharing and distributed systems

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Programme: BCA Subject: Computer Graphics Semester: V Code: BCA-303

Course Objectives

1. To introduce the use of the components of a graphics system and become familiar with building approach of graphics system components and algorithms related with them.
2. To learn the basic principles of 3- dimensional computer graphics.
3. Provide an understanding of how to scan convert the basic geometrical primitives, how to transform the shapes to fit them as per the picture definition.
4. Provide an understanding of mapping from a world coordinates to device coordinates, clipping, and projections. To be able to discuss the application of computer graphics concepts in the development of computer games, information visualization, and business applications

Course Outcomes

After completing this course, the student shall

1. To list the basic concepts used in computer graphics.
2. To implement various algorithms to scan, convert the basic geometrical primitives, transformations, Area filling, clipping.
3. To describe the importance of viewing and projections.
4. To understand a typical graphics pipeline

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Programme: BCA Subject: E-Commerce Semester: V Code: BCA-305
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Course Objectives

1. To acquaint students with concept of Electronic commerce.
2. To make students recognize the fundamental principles of e-Business and e-Commerce.
3. To provide an understanding of the different types of business models and the key components of E-Commerce.
4. To make the students aware of the traditional and new business strategies that create competitive advantage in the New Economy.
5. To understand the various issues, challenges and opportunities in the adoption of e-Business and e-Commerce.
6. To provide an overview of the tools and technologies being used in e-commerce.
7. To explain various electronic payment systems and the security protocols for conducting safe electronic transactions.
8. To make the students aware of online marketing techniques and the optimization of the e-commerce web site for maximum outreach on web.
9. To make students understand various laws, agreements and other electronic data interchange among the businesses.

Course Outcomes

At the end of the course, the students is expected to

1. Explain the components and roles of the Electronic Commerce.
2. Explain how businesses sell products and services on the Web.
3. Describe the qualities of an effective Web business presence.
4. Describe E-Commerce payment systems.
5. Explain how to meet the needs of Web site visitors.
6. Identify and reach customers on the Web.
7. Understand Web marketing approaches and elements of branding.
8. Explain the client/server infrastructure that supports electronic commerce.
9. Explain basic electronic commerce functions.
10. Understand legal and ethical issues related to E-Commerce.

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Programme: BCA	Subject: Software Testing	Semester: V	Code: BCA-307
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Course Objective:

1. To study and memorize fundamental concepts in software testing, including software testing objectives, process, entry-exit criteria, various strategies, and methods in detail.
2. To learn discuss and relate with various software testing issues and solutions in software unit test, integration, regression, and system testing.
3. To learn and demonstrate how to plan a test project, design test cases and gather test data, conduct testing operations, manage software problems and defects, generate a testing report.
4. To recognize, differentiate and understand the advanced software testing topics, such as object-oriented software testing methods, Internet and mobile applications testing and component-based software testing issues, challenges, and solutions.
5. To learn how to write software testing documents, and communicate with engineers in various forms.

Course Outcome:

1. Have an ability to apply software testing knowledge and engineering methods.
2. Have an ability to design and conduct a software test process for a software testing project.
3. Have an ability understand and identify various software testing problems, and solve these problems by designing and selecting software test models, criteria, strategies, and methods.
4. Have an ability to use various communication methods and skills to communicate with their teammates to conduct their practice-oriented software testing projects.
5. Have basic understanding and knowledge of contemporary issues in software testing, such as OO, GUI, Internet and Mobile Application testing problems.

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Programme: BCA Subject: Web Based Programming Semester: V Code: BCA-313

Course Objective:

1. Understand the concept of designing web related projects.
2. Develop the ability to create a well-organized static as well as dynamic website.
3. Learn the web language i.e. HTML, PHP.
4. Be able to embed image, video, audio, animations, social media content into web pages,
5. Be able to connect PHP with MYSQL Database.
6. Understand responsive web design techniques.
7. Become familiar with web related graphics design.
8. Learn how implement all theory related concepts into practice.

Course Outcomes:

1. Student will demonstrate the web application concept.
2. Students will learn the languages of web i.e. HTML, PHP.
3. Students will develop the skills to embed the content into web page.
4. Students will design responsive web pages.
5. Students will learn the techniques of graphics and information design and apply them to real world projects.
6. Students will learn to implement dynamic content to the website.
7. Students will understand the concepts of designing web pages.
8. Students will apply the PHP connectivity to the MYSQL database.