

Program Outcomes (POs) and Course Outcomes (COs) for a Bachelor of Business Administration (BBA) program:

Program Outcomes

Upon completion of the BBA program, graduates will be able to:

1. Demonstrate knowledge of business principles, concepts, and practices.
2. Analyze business problems and develop effective solutions.
3. Communicate effectively in written, oral, and visual formats.
4. Apply critical thinking and problem-solving skills in business contexts.
5. Demonstrate leadership, teamwork, and collaboration skills.
6. Apply ethical principles in business decision-making.
7. Understand global business perspectives and cultural diversity.
8. Demonstrate proficiency in using technology for business applications.
9. Develop entrepreneurial skills and innovative thinking.
10. Prepare for graduate studies or professional certifications.

\*Course Outcomes (COs) - Example for a few core courses:\*

Management

COs:

1. Define and explain key management concepts and theories.
2. Identify and analyze business problems using management principles.
3. Develop effective management strategies and solutions.

## Marketing Management

COs:

1. Understand marketing concepts, segmentation, targeting, and positioning.
2. Analyze market research and develop marketing strategies.
3. Create effective marketing campaigns and plans.

## Financial Management

COs:

1. Understand financial concepts, statements, and analysis.
2. Calculate and interpret financial ratios and metrics.
3. Develop financial plans and make investment decisions.

## Human Resource Management

COs:

1. Understand HRM concepts, functions, and strategies.
2. Analyze recruitment, selection, and training processes.
3. Develop effective employee relations and retention strategies.

## Strategic Management

COs:

1. Analyze business environments and develop strategic plans.
2. Evaluate organizational performance using strategic metrics.
3. Develop sustainable competitive advantages.

\*Other core courses:\*

- Accounting and Finance
- Operations Management
- Business Ethics
- International Business
- Entrepreneurship

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**Department: BCA**

**PROGRAM OUTCOME**

1. Software developer
2. Database Programmer
3. Computer operator
4. Web developer
5. Network Engineer
6. Database Administrator
7. Data Scientist

**PROGRAM SPECIFIC OUTCOME**

1. C, C++ & JAVA languages (Students are able to write programs in these languages)
2. Operating system (Students can know about the operating system & can use various applications of it).
3. Software Engineering (students can develop the skills necessary to handle software projects).
4. Relational Database Management (To create and manage the database)
5. Fundamental of computer science & Digital Electronics (Students awareness about hardware and software)
6. Web Technology (Students will be able to write the programs for web site)

**COURSE OUTCOME**

**• MJ-1 (Th): Problem Solving and Programming with C**

The students will be able to write programs for different applications using C language.

**MN-1A: Fundamentals of Computer Science**

The students will be able to know about the various devices, their workings of computers.

*P. Pruthi*

**MJ-2 (Th): Object Oriented Programming with C ++**

The students will be able to learn basic concepts of OOPS & creation of basic & oops related C++ programs.

**MJ-3 (Th): Data Structures using C++**

The students will be able to know details about the Data Structure, their applications, advantages and limitations of various data structures, real life use and implementation of various data structures.

**MN-2A: ENTREPRENEURSHIP DEVELOPMENT**

Students will be able to learn the entrepreneurial cultural and industrial growth so as to prepare themselves to set up and manage their own small units.

**MJ-4 (Th): Relational Data Base Management System**

The students will be able to know models of RDBMS and also will be able to learn to create, update, administer and interact with a relational database.

**MJ-5(Th): Java Programming Language-I**

The students will be able to learn basic concepts of OOPS & creation of basic oops related Java programs.

**MJ-6 (Th): Java Programming Language-II**

The students will be able to improve their OOPS programming skills in core Java, use of packages, applets for software development.

**MJ-7 (Th): Operating System Concepts**

The students are able to know about the functionality of operating system and principle behind the operation of system & their uses.

**MJ-8 (Th): Software Engineering**

Students will be able to design software by applying the software engineering principles.

**MN-2B: Web Technology**

Students will be able to learn about basics of web programming using HTML, Java Script, XML for scripting & Making static and dynamic websites.

*P. V. Rishu*

## **Student Programme outcome and course Outcomes B.Com (Hons) - Kolhan University**

### **2.6.1 Program Outcomes (POs) for B.Com (Hons) - Kolhan University**

The B.Com (Hons.) program at Kolhan University aims to provide students with a comprehensive understanding of core commerce and business concepts, including accounting, economics, management, taxation, and finance. It equips students with analytical and decision-making skills to address business challenges effectively. The program prepares graduates for careers in commerce, industry, and management or for pursuing higher education and professional certifications such as CA, CMA, and MBA. It instills a strong sense of ethical practices, corporate responsibility, and sustainability, ensuring students can make informed and socially responsible business decisions. Additionally, the program develops technological adaptability by enhancing proficiency in modern business tools and software, enabling students to navigate dynamic business environments.

### **Course Outcomes (COs) for B.Com (Hons.)**

The curriculum comprises a diverse range of subjects spread across six semesters. In the first semester, students learn the fundamentals of **Financial Accounting**, enabling them to prepare and analyze financial statements, and **Business Organisation and Management**, which introduces business structures and management principles. They also study **Business Economics**, exploring economic theories and their application to business scenarios. The second semester covers **Corporate Law**, focusing on company regulations and governance, **Cost Accounting**, teaching cost control and decision-making techniques, and **Environmental Studies**, highlighting sustainable business practices.

In the third semester, students delve into **Income Tax Law and Practice**, gaining expertise in tax planning and compliance, **Human Resource Management**, focusing on workforce management strategies, and **Indian Economy**, which examines economic policies and their business impacts. The fourth semester includes **Management Accounting**, which enhances strategic decision-making skills, **Auditing and Assurance**, offering insights into financial transparency, and **E-Commerce**, exploring online business models and digital marketing strategies.

The fifth semester emphasizes advanced topics like **Financial Management**, focusing on financial planning and investment strategies, **Entrepreneurship Development**, fostering entrepreneurial skills and innovation, and **Indirect Taxation (GST)**, which covers compliance and its impact on businesses. The final semester includes **Strategic Management**, teaching students to develop and implement business strategies, **Project Work**, which applies theoretical knowledge to real-world problems, and **Financial Markets and Institutions**, providing insights into the structure and operations of financial systems.

Elective courses, such as **Advanced Accounting**, **Banking and Insurance**, and **Marketing Management**, offer students opportunities to specialize in their areas of interest. Overall, the program ensures a well-rounded education, preparing students for professional and academic pursuits in commerce and business management.

## **Program Outcomes (POs) for B.Com (Hons.)**

- 1. Comprehensive Business Knowledge:** Provide students with a deep understanding of commerce and business concepts, including accounting, economics, management, taxation, and finance.
- 2. Analytical and Decision-Making Skills:** Equip students with the ability to analyze business problems, evaluate financial scenarios, and make strategic decisions using quantitative and qualitative approaches.
- 3. Professional Readiness:** Prepare students for careers in commerce, industry, and management or to pursue higher education and professional certifications like CA, CMA, and MBA.
- 4. Ethics and Corporate Responsibility:** Instil a strong sense of ethical practices, corporate responsibility, and sustainability in business decision-making processes.
- 5. Technological Adaptability:** Develop proficiency in modern business tools and software to handle dynamic business environments effectively.

## **Course Outcomes (COs) for Key Papers:**

### **Semester I**

#### **1. Financial Accounting:**

Develop the ability to record, classify, and summarize financial transactions.

Prepare and interpret financial statements for individuals and organizations.

#### **2. Business Organisation and Management:**

Understand business objectives, structures, and functions.

Analyze management principles and their application in business decision-making.

#### **3. Business Economics:**

Study microeconomic and macroeconomic principles relevant to business operations.

Apply economic theories to analyse business scenarios and market conditions.

### **Semester II**

#### **4. Corporate Law:**

Gain knowledge of company law, regulatory frameworks, and governance practices.

Understand the legal aspects of forming and managing a corporate entity.

#### **5. Cost Accounting:**

Learn cost determination methods and cost control techniques.

Analyze costing systems for managerial decision-making.

**6. Environmental Studies:**

Understand the environmental challenges impacting businesses.

Explore sustainable practices and corporate responsibility towards the environment.

**Semester III**

**7. Income Tax Law and Practice:**

1. Learn the concepts of income tax, tax planning, and compliance.

2. Understand the application of tax laws for individuals and businesses.

**8. Human Resource Management:**

1. Develop an understanding of HR functions such as recruitment, training, and performance management.

2. Explore strategies for effective workforce management.

**9. Indian Economy:**

1. Study the structure and functioning of the Indian economy.

2. Analyze economic policies and their impact on businesses.

**Semester IV**

**10. Management Accounting:**

Use accounting data to make strategic business decisions.

2. Learn budgeting, variance analysis, and financial statement analysis techniques.

**10. Auditing and Assurance:**

1. Understand auditing principles, standards, and techniques.

2. Analyze the role of auditors in ensuring financial transparency and accountability.

**11. E-Commerce:**

Learn the fundamentals of online business models and digital transactions.

Explore the use of e-commerce platforms for business growth.

**Semester V**

**12. Financial Management:**

Study financial planning, capital budgeting, and investment decisions.

Analyze financial risks and returns for effective fund management.

**13. Entrepreneurship Development:**

Develop entrepreneurial skills and the ability to create business plans.

Understand the role of start-ups and innovation in economic development.

**14. Indirect Taxation (GST):**

Learn the framework and compliance procedures for Goods and Services Tax (GST).

Understand the impact of GST on business operations.

**Semester VI:**

**15. Strategic Management:**

Understand the process of strategy formulation and implementation.

Analyze competitive business environments and develop strategic solutions.

**16. Project Work:**

Apply theoretical concepts to practical business scenarios through research and analysis.

Develop critical thinking and problem-solving skills by working on a real-world business project.

**17. Financial Markets and Institutions:**

Study the structure and functioning of financial markets and institutions.

Explore the role of capital and money markets in the economy.

**Electives/Optional Papers (offered across semesters):**

**Advanced Accounting:** Develop expertise in handling complex accounting scenarios such as amalgamation, reconstruction, and consolidated financial statements.

**Banking and Insurance:** Understand the principles of banking operations and the role of insurance in risk management.

**Marketing Management:** Learn about consumer behavior, market segmentation, and the development of effective marketing strategies.

This curriculum is designed to ensure a holistic understanding of commerce and business management, preparing students for professional careers and higher education opportunities.

@chakraborty  
Dr Utpal chakraborty (@ComHons)

## **B.Sc. ENVIRONMENT & WATER MANAGEMENT**

### **PROGRAM OUTCOMES**

#### **After completion of Program the students will :**

- Have deep Knowledge on Air ,water, Noise, Solid waste ,other wastes pollution with their control and management solutions.
- Develop deeper understanding in environmental laws and environment Impact assessment and Environment Audit .
- Understand the concept and increase the consciousness about Green Marketing and Green Products
- Acquire knowledge on environment society ,sustainable development , disaster management and Industrial safety
- Acquire deep knowledge on Environmental statistics
- Have the ability to choose methods appropriate to research aims and objectives .
- develop the ability to identify and differentiate between renewable and non-renewable resources.
- Acquire awareness of Environmental organization , climate change , pollution control technologies.
- Understand the principles and the practical approaches and techniques required to effectively monitor the chemical elements of water quality.
- Acquire awareness on tourism within broader cultural, environmental, political and economic dimensions of society.
- Develop the basic understanding of the ecosystem and its structural and functional aspects.

### **PROGRAM SPECIFIC OUTCOMES**

#### **After completion of each program the student will:**

- Develop technical skills to use statistical tools and software in environmental data analysis
- Develop technical skills to use statistical tools and software in environmental data analysis
- Be able to determine pollution using environmental analytical techniques in laboratory.
- Understand solid waste and hazardous waste management, beginning from source generation to waste disposal in a system of municipality organizational structure.
- concepts in Hydraulics , Hydrology waste wastewater and aw waste treatment methods.
- Will develop basic concepts of solid waste and hazardous waste management, beginning from source generation to waste disposal in a system of municipality organizational structure.
- recognize and advocate for civic engagement and inclusive practices for applying sustainability principles to local issues
- Develop the means to indicate how sustainability issues are impacting their immediate social, economic, and political environment.
- Analyze the effects on a global scale, such as ozone hole & global warming.
- Understand major geological processes occurring in the near surface of the Earth.

- Develop a sense to serve the environment as a resource, through service, outreach and engagement.
- To understand the fundamentals and basic concepts of Climate change science.
- Be able to demonstrate the ability to apply the scientific method and critical thinking in measuring and analysing the losses and know the water abstraction from the rainfall
- Acquire knowledge to select the most appropriate types of membrane processes for tertiary treatment of wastewater.

## **COURSE OUTCOMES**

### **After completion of the course the student will:**

- Develop scientific attitude to abate environmental Pollution.
- Gain a preliminary understanding of approaches to Disaster Risk Reduction (DRR).
- Acquire awareness of institutional processes in the country for Disaster Management.
- Explore the interconnectedness among all the biotic and abiotic components of the environment and the dynamic nature of the ecological processes in maintaining equilibrium in nature.
- Be able to examine the relationship between the environment and society and enabling them to understand and appreciate the role played by environment, society, and, their interface in shaping environmental decisions
- Be able to contextualize tourism within broader cultural, environmental, political and economic dimensions of society.
- Gain working knowledge of laboratory Procedures and sampling strategies required to ensure adequate water quality to ensure public health.
- Understand the principles and the practical approaches and techniques required to effectively monitor the chemical elements of water quality.
- Understand measurement of discharge in open & closed channels
- Know about the environmental impacts of different waste, and learn different measures proposed for their disposal and management.
- Have a grounded understanding of sustainability and how systems are interrelated
- Understand the fundamentals of hydrology, hydrological cycle and water runoff
- Gain knowledge of transfer & dispersion of air pollutants.
- Be able to introduce themselves to the concept of green technology, its goals and advantages
- Be able to witness the actual water treatment process in a water treatment plant to gain practical understanding of the course.
- Be able to equip them with the concepts of Groundwater which would help them to make better decisions in groundwater uses and management.
- Develop knowledge on how environmental geological processes impact humans and society
- Develop knowledge on environmental conventions and ethical reflection regarding environmental problems in local, regional, national, and global communities

- Know the role of the environment in the current practice of agriculture and concerns of sustainability, especially in the context of climate change and emerging global issues.
- Develop understanding regarding various legislation on environmental law
- Be able to illustrate and examine economic principles concerning the choice of instruments for controlling pollution and the relative strength and weaknesses of environmental policies based on command-and-control vis-à-vis market-based instruments.
- know the advanced technologies in Wastewater treatment
- Be able to assess or identify their readiness/ability/aptitude for entrepreneurship
- Examine the positive and negative tree-crops-soil interactions (for light, water and nutrients)
- Develop technical skills to use statistical tools and software in environmental data analysis.

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Here are some Program Outcomes (POs) and Course Outcomes (COs) for a Bachelor of Science in Mathematics (BSc Mathematics) program:

\*Program Outcomes (POs):\*

Upon completion of the BSc Mathematics program, graduates will be able to:

1. Demonstrate a deep understanding of mathematical concepts, theories, and models.
2. Apply mathematical techniques to solve problems in various fields.
3. Analyze and interpret data using statistical and mathematical methods.
4. Communicate mathematical ideas and results effectively.
5. Develop problem-solving skills using logical and analytical thinking
6. Develop critical thinking and research skills.
7. Prepare for graduate studies or careers in mathematics-related fields.
8. Demonstrate an appreciation for the beauty and importance of mathematics.

\*Course Outcomes (COs) - Example for a few core courses:\*

\*Calculus (MJ 1)\*

COs:

1. Define and apply limits, derivatives, and integrals.
2. Solve optimization problems using calculus.
3. Analyze functions using calculus.

*Matrices*

\*~~MATRIX~~ (MJ2)\*

1. Understand vector spaces, linear transformations, and matrices.
2. Apply linear algebra to solve systems of equations.
3. Analyze eigenvalues and eigenvectors.

\*Differential Equations (MJ 6)\*

1. Solve ordinary and partial differential equations.
2. Apply differential equations to model real-world phenomena.

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## **Department: B.Sc.-IT**

### **PROGRAM OUTCOME**

1. Software developer
2. Database Programmer
3. Computer operator
4. Web developer
5. Network Engineer
6. Database Administrator
7. Data Analyst
8. IT Teachers

### **PROGRAM SPECIFIC OUTCOME**

1. C, C++ & JAVA languages (Students are able to write programs in these languages)
2. Operating system (Students can know about the operating system & can use various applications of it).
3. Numerical Techniques (Students can solve the problems of mathematics related programming)
4. Relational Database Management (To create and manage the database)
5. Fundamental of IT & Digital Electronics (Students awareness about IT hardware and software)
6. Web Technology ( Students will be able to write the programs for web site)

### **COURSE OUTCOME**

#### **• MJ-1 (Th): Problem Solving and Programming with C**

The students will be able to write programs for different applications using C language.

#### **MN-1A: Fundamentals of Information Technology**

The students will be able to know about the various devices, their workings of computers.

**MJ-2 (Th): Data Structures using C**

The students will be able to know details about the Data Structure, their applications, advantages and limitations of various data structures, real life use and implementation of various data structures.

**MJ-3 (Th): Digital Electronics**

Students will be able to know about circuit design & architecture of computers.

**MN-2A: ENTREPRENEURSHIP DEVELOPMENT**

Students will be able to learn the entrepreneurial cultural and industrial growth so as to prepare themselves to set up and manage their own small units.

**MJ-4 (Th): Data Base Management System**

The students will be able to know models of RDBMS and also will be able to learn to create, update, administer and interact with a relational database.

**MJ-5(Th): Object Oriented Programming through C++**

The students will be able to learn basic concepts of OOPS & creation of basic & oops related C++ programs.

**MJ-6 (Th): Java Programming**

The students will be able to improve their OOPS programming skills in core Java, use of packages, applets for software development.

**MJ-7 (Th): Operating System Concepts**

The students are able to know about the functionality of operating system and principle behind the operation of system & their uses.

**MJ-8 (Th): Numerical Methods**

Students will be able to deal with all aspects of the numerical solutions of the problems.

**MN-2A: Web Technology**

Students will be able to learn about basics of web programming using HTML, Java Script, XML for scripting & Making static and dynamic websites.

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