KOLHAN UNIVERSITY
Chaibasa, Jharkhand, India

Syllabus for
Four Year Undergraduate Programme (FYUGP)
of

Bachelor of Computer Application (BCA)

Multi-Disciplinary Courses (MDC)-1/2/3

With Effect From
Academic Year 2022 - 2023

As Per Revised Curriculum and Credit Framework for the
FYUGP under the provisions of NEP - 2020

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Course Structure for
Four Year Undergraduate Programme (FYUGP)
of
Multi-Disciplinary Courses (MDC)

Sem	Paper Code	Paper Title	L–T–P	Credits	Contact Hours
I/II/III	MDC–1/ 2/ 3	Fundamentals of Computer Science	2–1–0	3	45
			Total Credits	**3**	

Abbreviations:
L–T–P (Lecture–Tutorial–Practical), **MDC** (Multi-Disciplinary Courses).

Prepared and Proposed by:

Mr. Riki Sutradhar

Assistant Professor (Computer Application)
Jamshedpur Co-operative College, Jamshedpur

Mr. Subodh Kumar

Assistant Professor (Computer Application)
Jamshedpur Co-operative College, Jamshedpur

MDC–1 / 2 / 3: Fundamentals of Computer Science

3 Credits | 45 Minimum Class Hours | Semester I / II / III

Objectives:

The objective of the course is to–

- Describe the organization and operation of computer, processor, primary and secondary memory, peripheral devices.
- Define internet.
- Explain various terminology used in internet.
- Explain the application of internet.
- Explain various threats, cybercrimes.

Learning Outcomes:

After completion of this course, a student will have an understanding of–

- The fundamental concepts of computers with the present level of knowledge of the students.
- What the internet is, its purpose, function for users, and various cyber threats.
- Protection of information and computers from basic abuses/attacks.

Outline of the Course

Minimum Class Hours		Exam Time (Hours)		Credits		Marks									
						Semester Internal		End Semester		Full Mark		Pass Marks		Total Marks	
Th	Pr	Th	Pr	Th	Pr	Th	Pr	Th	Pr	Th	Pr	Th	Pr	Th + Pr	
45	N/A	3	N/A	3	N/A	N/A	N/A	75	N/A	75	N/A	30	N/A	75+N/A=75	

Unit	Topic	Minimum Class Hours
I	Introduction to Computers	20
II	Computer Software	08
III	Introduction to Internet	17
	Total	**45**

Detailed Syllabus

Unit I: Introduction to Computers

Introduction: Characteristics of Computers, Evolution of Computers, Generation of Computers, Classification of Computers, Advantages and Applications of Computers.

*Structure and Working of Computer***:** Functional Block Diagram of Computer {Central Processing Unit (Control Unit and Arithmetic Logic Unit), Input Unit, Output Unit, Memory Unit (Primary Storage Unit and Secondary Storage Unit), Bus Structure}.

*Input/Output Devices***:** Input Devices (Keyboard, Mouse, Scanner, MICR, OMR), Output Devices (VDU, Printers, Plotter, Projector, Speakers).

*Computer Memory***:** Primary Memory (RAM, ROM, Register, Cache Memory, Virtual Memory, etc.), Secondary Memory (Magnetic Tape, Magnetic Disk, Optical Disk, Floppy Disk, External Hard Drive, Solid State Drive, USB Flash Drive, etc.).

Unit II: Computer Software

Introduction, Categories of Computer Software (System Software and Application Software).

Unit III: Introduction to Internet

Introduction to Internet, History of Internet, Advantages and Applications of Internet, ISP, URL, IP Address, Web Page, Web Site, Web Browser, and Web Server, Internet Services (WWW and Electronic Mail), Network and Its Types, Communication Protocols, Network Devices.

Internet Threats: Introduction to Computer Security, Threats to Computer Security {Viruses (Worms and Trojans), Spyware, Adware, Spamming, PC Intrusion, Phishing, Eavesdropping}, Solutions to Computer Security Threats (Antivirus and Firewall), Common Forms of Cybercrime.

Recommended Books:
- Anita Goel; **Computer Fundamentals**; Pearson
- ITL Education Solution Limited, R&D Wing; **Introduction to Computer Science**; Pearson Education

Further readings:
- CI Stens School of Computing, **Internet and Introduction**, TMH
- Rajaraman V., **Fundamental of Computers**, Prentice Hall of India Pvt. Ltd., New Delhi
- Peter Nortorns, **Introduction to Computer**, TMH