



St. Xavier's College Jaipur

(Affiliated to the University of Rajasthan, Jaipur)
Accredited with A Grade by NAAC (First Cycle, 2025)
An ISO 14001:2015 Certified Institution



Report on IT Bridge Course for BCA I Semester Students

Department of Computer Science, St. Xavier's College Jaipur

Date: July 28 – August 8, 2025

Target Metric Number and Name : 1.1.1 Curriculum Planning & Implementation

Traget Audience : BCA I Semester

The **Department of Computer Science, St. Xavier's College Jaipur**, successfully organized and conducted an **IT Bridge Course** for the newly admitted **BCA I Semester students** from **July 28 to August 8, 2025 for the duration of 2 hours daily**. This specially curated program was aimed at helping freshers make a smooth academic and intellectual transition from school-level learning to the more advanced and structured undergraduate-level Computer Science education.

The bridge course acted as a foundation-laying exercise, preparing students not only for their forthcoming coursework but also for adapting to the college's digital and academic ecosystem. It was carefully designed to combine theoretical knowledge, practical demonstrations, and interactive learning experiences, ensuring that students gained confidence while stepping into their higher education journey.

Structure of the Program

The course was systematically divided into **two phases** – an **online phase** and an **offline phase** – in order to maximize accessibility and learning effectiveness.

- **Online Phase (July 28 – August 2, 2025):** Conducted via **Google Meet**, the online sessions provided students with flexibility and an early opportunity to engage with faculty members and course material from the comfort of their homes.
- **Offline Phase (August 4 – August 8, 2025):** Held at **Sundar Pichai Lab-4** from **9:00 AM to 11:00 AM daily**, the offline sessions offered a hands-on experience in a structured laboratory environment, allowing students to apply their theoretical understanding through live interaction and practical exercises.

Objectives of the Bridge Course

The program was guided by clear and well-defined objectives:

- To orient students toward **academic expectations** at the undergraduate level and to familiarize them with the **digital infrastructure** of the college.



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- To provide **foundational knowledge** in computing, internet services, system architecture, and essential software tools.
- To enable students to develop an understanding of **basic system structures, memory hierarchy, and logical organization** of computer systems.
- To boost students' **confidence, digital literacy, and adaptability** as they begin their academic journey in the field of Computer Science.

Course Content & Sessions

The course commenced with a **formal orientation session** and a **department introduction** delivered by **Dr. Arpita Banerjee, Head of the Department**, who warmly welcomed the students and outlined the vision, mission, and academic culture of the department.

Online Phase Highlights (July 28 – August 2)

During the online phase, students were introduced to several fundamental topics designed to build a strong conceptual base:

- **Generations and characteristics of computers** – exploring the historical evolution of computing.
- **Basics of the Internet** – services, concepts of logical and physical addressing, and their relevance.
- **Computer block diagrams and classifications** – understanding the structure and components of computer systems.
- **Web basics** – browsers, working of HTTP/HTTPS protocols, and correct structuring of URLs.
- **Input/Output devices, memory concepts, and operating system fundamentals** – with real-world examples and demonstrations.

These sessions were conducted in an interactive manner by **Dr. Vaishali Singh, Ms. Ritu Sisodia, Dr. Dharmveer Yadav, and Ms. Pushpanjali Saini**, who integrated **practical demonstrations, live case studies, and relatable examples** to ensure that students grasped the concepts effectively.

Offline Phase Highlights (August 4 – 8)

The offline segment of the course offered deeper insights into system-level concepts and practical applications. Some of the key topics included:

- **Memory hierarchy** – covering RAM, ROM, cache memory, and secondary storage devices in detail.
- **Software categories** – system software, application software, and utility tools, with examples from daily use.
- **Detailed Operating System concepts** – role, functions, and types of operating systems in managing computing resources.



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This phase also involved **practical demonstrations** in the laboratory, enabling students to directly interact with computing environments and observe how the theoretical concepts function in real-time.

The course concluded with a **comprehensive revision session** followed by an **exit test**, which was designed to assess the learning outcomes and conceptual clarity achieved by the students.

Outcomes of the Program

The IT Bridge Course yielded highly encouraging outcomes:

- Students gained a **solid grounding in fundamental IT concepts**, technical terms, and system architecture.
- Their **familiarity with internet tools, web navigation, and digital communication platforms** improved significantly.
- They developed **academic readiness** for future coursework in programming, data structures, operating systems, and networking.
- Through active participation, assessments, and interactive discussions, students demonstrated **greater self-confidence and enthusiasm** in handling IT-related tasks.

Conclusion

The IT Bridge Course, under the **visionary leadership of Rev Dr (Fr) Arokya Swamy SJ (Principal)**, proved to be a **transformative initiative** for the new batch of BCA students. The collaborative efforts of the **coordinators – Dr. Vaishali Singh, Ms. Ritu Sisodia, and Dr. Arpita Banerjee** – along with the active contributions of all faculty members, ensured the success of this program.