Essential Standard Operating Procedure (SOP) Required for Affiliation with CBSE
Computer Science Laboratory

CENTRAL BOARD OF SECONDARY EDUCATION

A computer laboratory is an expected infrastructure in all private and government schools. A computer laboratory is not just a cultivator of knowledge; it also promotes enthusiasm for technology, science, and research. It also allows children to not only learn emerging skills like coding and automation but will also allow them to see and explore careers in this upcoming field.

1. Pedagogy of the computer science education as recommended by the National Education Policy (2020)

☐ **Para 4.4 of the National Education Policy 2020-** The aim of education will not only be cognitive development, but also building character and creating holistic and well-rounded individuals equipped with the key 21st century skills

☐ **Para 4.41 of the NEP** focuses on teaching learning to be conducted in a more interactive manner where technological tools play an important role. Subjects such as artificial intelligence, Digital Citizenship, data science, computer science, and Information practices are incorporated throughout the CBSE curriculum which involves a lot of hands-on and online exploration.

☐ **Inclusive Education:**

Assistive technologies, audio books, digital books, and other assistive tech-based solution should be provided to students with special needs.

☐ **Teachers Training:**

Keeping in view the current trends in technology and its usage, it is imperative that the teachers are regularly trained. In service sessions, workshops, refresher trainings are done from time to time for all staff members.

Subject training on how to implement tech tools as an aid should also be organized.

2. Computer Lab Essential Infrastructure:

S. No	Category	Requirement
01	Physical Infrastructure	- Minimum Lab. Room size is 600 Sq.ft. - Minimum 40 computer nods. - Minimum 01 computer for 20 students (above 800 students) - Air Conditioner Facility
02	Hardware Configuration for 20Computers	- Minimum i3 or above processor, 8GB Ram, 500GB Hard Drive, 15.6'' Screen - UPS backup

S. No	Category	Requirement
03	Equipment	- Printer with Scanner (ADF) - Firewall security - Smart board with Projector - Speakers - Web-Cam - LAN
04	Software Installation as per the requirement of the syllabus	- Operating system - Office - Paint - Pivot Stick animator - Python 2.7 or above - Publisher
05		- Visual Basic 2015 or above - Adobe Flash - Net Beans - My SQL - Photo Scape - Online meeting software(s) - Antivirus - Open office software suite and google docs/sheets - Programming: Scratch tool. - Flow chart: Google drawing - Virtual reality: Google art and culture - Augmented reality: NCERT ePathshaala AR - Use of inbuilt accessibility tools for CWSN - Drag and drop: Weebly, MIT App inventor - Blog writing: Word press
06	Internet	Lease line minimum 20mbps 1:1
07	Server	- Minimum Core i5 CPU, 16 GB RAM, 2TB x 4storage - Server 2016/19
08	Teaching Facility	- Interactive White Board with projector - LMS (Learning Management System) - Speakers

3. Rules for Computer laboratory:

- Participating in behavior or activities that disturb other users or disrupt the operations of the lab is not permitted. Violations of the Computer laboratory ruleswill result in loss of computer privileges or other disciplinary action.
- Use the CD-ROM / Internet and other multimedia equipment for academic work only.
- Remember to "Log Off" at the end of each session.
- Antivirus scanning to be done on weekly basis

a) Do's:

- There should be a Software license compliance policy.

- Regular updates on machines to be checked and done by the Hardware Engineers.

- All the computers are connected to Centralized Data Center/Server.
- Annual stock verification is done by the laboratory attended.

- All the students are given laboratory facilities per the practical subjects allotted. Thecomputers are available in a ratio of 1:2 (Students).

- The use of the computer lab regularly for their practical and assignments as part of theircurriculum. Class and course-wise timetables and batches are prepared by the subject In-charge and the same is made available to all concerned staff such as course coordinators, andlab assistants.

b) Don'ts :

- Don't overburden the machines by storing the files or downloading them on local hard copiesand the desktop.
- Don't surf the internet or e-mail without the supervision of a teacher/Lab attendant.
- Don't disturb others working in the Lab
- Don't install any software or modify or delete any system files on any lab computers.