Bambu Lab X1E – Student User Guide

1. Introduction

The Bambu Lab X1E is a high-speed FDM 3D printer designed for PLA and other thermoplastics. It uses a heated bed, direct-drive extruder, and closed chamber to create precise and strong parts.

2. Safety

- Do not touch the nozzle or heated bed during or immediately after printing (they can exceed 200°C).
- Only use approved PLA filament provided by the lab.
- Keep the build area clear of tools, tape, or scraps before printing.
- Never leave the printer running unattended overnight without prior authorization.

3. Setting Up Your Print

Prepare File – Export your model from CAD as an .STL, .OBJ, or .3MF and import it into Bambu Studio.

1. Select a printer for your use. Pay attention to the devices loaded filaments. Notify a tech if you need a filament swapped out.
2. Choose correct material profile (PLA, ABS, PETG, etc.). Check orientation, scale, and supports.
3. Slice the plate. Verify no errors.
4. Send over the network OR Save/export G-code to an SD card.
5. Check Build Plate – Ensure bed is clean and free of debris; apply glue stick if needed for adhesion.
6. The machine should auto load the appropriate filament – Notify a Lab Employee in the event that you need to load/unload filament.
7. Preheat & Leveling – Printer automatically preheats and self-levels. Confirm nozzle and bed temperatures match PLA settings.
8. Start the Print

4. Running the Printer

1. Start job from touchscreen or Bambu Studio.
2. Watch first 2–3 layers to ensure adhesion.
3. Monitor for filament binding. Notify a technician if a bind is found.
4. Request assistance when faced with any error.

5. Follow onscreen guidance as to ventilation as some filaments require more ventilation and others less; Proper ventilation will affect temperature and print quality.
6. If the print fails (detaches, spaghetti mess), pause and cancel immediately.

5. After Printing

1. Wait until bed and nozzle cool before removing part.
2. Use provided scraper carefully to avoid damaging bed surface.
3. Remove supports if necessary.
4. Dispose of failed prints in mixed use recycling bin in hallway.

6. Helpful Tips

- Orient flat surfaces down for best adhesion.
- Use rafts/supports for small parts to prevent warping.
- Keep files <100 MB to avoid slicing/transfer delays.
- If in doubt, ask staff before printing large or complex jobs.