

FAB LAB

What is Fab Lab?

Fablab is a Digital Fabrication facility with set of machines and software for directly converting CAD designs to physical parts. The idea of Fablab was conceptualized in the Centre for Bits and Atoms (CBA) group at MIT. MIT is recommending every Engineering Institution to have a FabLab facility as this will be great tool to foster innovation. More details about fablabs and fablab foundation can be found at these websites:

<http://fab.cba.mit.edu/>

http://en.wikipedia.org/wiki/Fab_lab

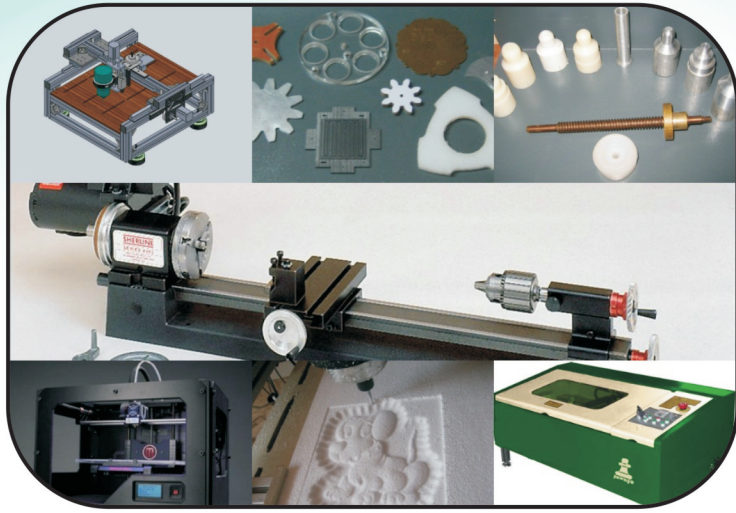


Advantages of FAB Lab to College & Students:

- ❖ Complete digital fabrication facility (convert designs into physical prototypes & models)
- ❖ Useful for fabricating prototypes for student, academic & research projects.
- ❖ Useful for all Engineering departments in the college.
- ❖ Can be used for curriculum training of various courses like CAD/CAM lab, mechatronics lab, metrology lab etc.
- ❖ Get recognised by MIT in their website and become part of a global network of recognised fab labs.
- ❖ Offer vocational and manufacturing skill development training programmes to students & professionals.
- ❖ Offer consultancy services on digital fabrication to Industries.

Equipments in Fab Lab: Basic: Laser, router, Lathe, 3D printer, PLC controller kit for automation.

- ❖ A computer-controlled laser cutter, for press-fit assembly of 3D structures from 2D parts
- ❖ A larger numerically-controlled milling machine, for making furniture- (and house-) sized parts
- ❖ Rapid prototyper: typically a 3D printer of plastic or plaster parts
- ❖ A precision (micron resolution) milling machine to make three-dimensional molds and surface-mount circuit boards
- ❖ A sign cutter, to produce printing masks, flexible circuits, and antennas
- ❖ Programming tools for low-cost high-speed embedded processors



Advanced set of equipments:

CNC gas & plasma cutting machine, CNC milling machine, CNC Lathe, CMM, Vision guided robotics etc.

How it is useful for various engineering departments:

Students and researchers and faculties of all engineering departments can benefit from this fablab facility. See picture gallery below:

Mechanical department: Fabricate various mechanical components like gears, CAM profiles, sprockets, robot chassis, mechanisms etc.

Electrical/Electronic department: Make PCBs, Enclosure for circuits, motor mount plates etc.

Civil Engg department: Make architectural models like bridges, TajMahals, Eiffel tower etc. in wood, thermocol etc. materials, and Make patterns for concrete structure moulding in wood or thermocol.



Aerospace department: Make aero-modelling parts in Balsa wood, FRP material, Foam, thermocol etc. for model air-plane building, UAV quad rotor building etc.

Metallurgy department: Make casting patterns in wood, thermocol, machinable wax or in ABS plastic. (For jewellery designs, casting, moulding etc.).

ABOUT SVP LASER

- ✿ Founded by IIT alumni
- ✿ Has indigenously developed set of CNC machines. Can setup fablab at very competitive cost.
- ✿ Can provide complete training to the trainers and provide set of training material to college for training the students.
- ✿ Complete maintenance support for the lab for smooth operation of the lab.

CONTACT US TO SET UP FAB LAB:

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