

## Open source 3d printer fabrication course syllabus

### introduction:

3d printing is here to stay. This course is aimed to get its student up and running in researching the vast and exciting field by handing them the startup knowledge needed to get going on their research.

### In this course student will:

- build their own open source 3d printer from scratch
- learn the necessary skills to calibrate, maintain and operate it
- learn how to create computerized 3d models and print them to the real world

### course is consisted of 36 meeting (usually once a week):

- session #1 – shop safety brief, shop orientation, getting to know your teammates, building the Y-carriage.
- session #2 – building the XZ axis frame. Materials review
- session #3 – installing heated bed and end stops. Software review (CAD/CAM and controller)
- session #4 – electronics and wiring. Basic calibrations for those who finish first.
- session #5 – finishing electronics. computer Connect and configuration. Fine calibration. Printing the very first model calibration model.
- session #6 – continue printing small stuff for practice. picking up leftover tasks. Q&A session. Possible future upgrades options review. End of class sushi/pizza fest.

### Prerequisites :

This is a hands-on course so students need a basic technical ability. No prior knowledge assumed.

### Books and study materials :

on-line learning material will be given over the course site.

### Grading and certificates:

The course does not provide formal diploma or professional certificate of any kind. Participation verification could be produced upon request.