

Advanced material processes and  
die design  
DSL 732

Topic 2  
Project Proposal  
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1<sup>st</sup> August 2019

# Announcements

- Set up your website?
- Deadline of 11<sup>th</sup> August for Assignment 1?
- CRF registration and slot booking for basic orientation, 3d printing, laser cutting – document.

# Project Proposal

- Sketch your final project idea(s)
- Describe what it will do and who will use it
- In this course, design phase would be short of a week. Focus on prototyping.
- Challenges foreseen, Components required, Skills used, Timeline
- Your project should use both your CAD+ additive/subtractive fabrication, electronics + uC + embedded programming skills.
- Individual projects vs groups of two projects (individual mastery of skills and independently operable). Complete project – it should do something, Rigor.

# Project Management tips

- Fab Academy [Notes Video](#) (29:40-39:40)
- Gantt Chart (Timeline)
- [Critical Path Method](#) (CPM), PERT

# Project examples

- Electric bike conversion kit [Project Proposal](#) [Final Project](#)
- [Medical Device](#) – CAD, Mechanical, Electronics, Integration
- Design and Fabrication of xy plotter [Mechanical Design](#)  
[Machine Automation](#) Demo
- [Fab Academy projects](#) [Karan Tanna](#)
- [Fab Final Projects 1](#) [Fab Final Projects 5](#)
- Projects on [Instructables](#) [LED cube](#) [Fingerprint](#) [Door opener](#)  
[Air Guitar](#) [Smart Garbage Monitoring](#) [Air quality detector](#)
- Projects from architects, engineers
- Projects from young and old.

# Searching for projects

- Fab academy navigation

[Fab house](#), [Boat](#), [Weather station](#), E-bike, other keywords?

- [Press fit furniture](#)
- David Mellis ([cell phone](#))
- [Open source laser cutter](#)
- Instructables (Arduino based projects)
- <http://techpedia.in/> (Search projects)
- Other DIY sites

# Lab Session

- Please work on the project proposal
- Review your progress for website development
- Let us know for questions