The Business Case for Additive Manufacturing
Wednesday 4/18/2018 9:00am-4:30pm
($650/participant) – Limited to 20 participants
What does it cost to get into the field of additive manufacturing? This course will provide insight into the costs of operating different types of 3D printers and compare them with outsourced options and conventional manufacturing methods. This will include an in-depth exploration of the operational details of the processes, based on our actual experience at UMass, and a tour of the five different types of 3D printers in our lab.

Engineering Design for Additive Manufacturing
Wednesday 5/23/2018 9:00am-4:30pm
($650/participant) – Limited to 20 participants
This course will provide an introduction to help engineers and designers unlock the design freedoms that come with 3D printing while understanding the limitations of each printing process. We will discuss the pros and cons of the most popular additive manufacturing technologies, then examine how to design (or redesign) parts to harness the advantages while avoiding the pitfalls of each technology.

Hands On: 3D Printing with a Selective Laser Sintering (SLS) Printer
Wednesday 5/2/2018 9:00am-4:30pm
($850/participant) – Limited to 4 participants
This is a hands-on course where each student will be able to take a part from 3D CAD design on the computer, through the printing process, to produce a final 3D printed part. This is a very focused course with a 2:1 student teacher ratio and the majority of the time will be spent using the actual printer software and hardware to experience and learn the printing process for a selective laser sintering printer (EOS Formiga P110).

CHOOSE ONE OR MORE!

Sign up at bit.ly/addfab-spring2018
(Course agenda and additional details on next page)

QUESTIONS? CONTACT:
Dave Follette, Core Facility Director
follette@umass.edu
www.umass.edu/ials/addfab
The Business Case for Additive Manufacturing

**Brief Agenda**
- Additive manufacturing technologies and costs
- Review actual printed parts
- Additive manufacturing processes and workflow
- Tour of ADDFab core facility
- Market forces in manufacturing
- Discussion: Specific part case studies, questions
- Breakfast, lunch, and snacks provided

**Special Instructions to Attendees**
Any personal protective equipment will be provided by ADDFab, if required. Participants are expected to have a general understanding of the principles of additive manufacturing prior to taking the course. Previous experience with a 3D printer, or our one-day “Introduction to Additive Manufacturing” is sufficient preparation.

**Administrative Notes**
Participants will not be operating any machines during this course, but will have the opportunity to watch printing in action and see the tools required for the manufacturing process.

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Engineering Design for Additive Manufacturing

**Brief Agenda**
- Additive Manufacturing Technologies – Pros and Cons
- Review actual printed parts
- Basic design freedoms and challenges
- Tour of ADDFab core facility
- Advanced design challenges around additive manufacturing
- Discussion: Specific part case studies, questions
- Breakfast, lunch, and snacks provided

**Special Instructions to Attendees**
Any personal protective equipment will be provided by ADDFab, if required. Participants are expected to have experience designing parts with CAD software and having them fabricated. Previous experience using a 3D printer is not required but recommended.

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Hands On: 3D Printing with a Selective Laser Sintering (SLS) Printer

**Brief Agenda**
- Overview of the technology and printing process
- Lab Session 1 - Part Design & Preparation
- Lab Session 2 - Part Printing and Post-Processing
- Discussion: Specific part case studies, questions
- Breakfast, lunch, and snacks provided

**Special Instructions to Attendees**
Dust masks, gloves, and lab coats will be provided by ADDFab. Participants will need to wear closed-toed shoes and clothing that covers their legs. Previous experience with CAD software and 3D printing is recommended, but not required.

**Administrative Notes**
Participants should reach out to the instructor (follette@umass.edu) with questions prior to the class, and with part files (STL file format) that they would like to set up and print during the class.

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