

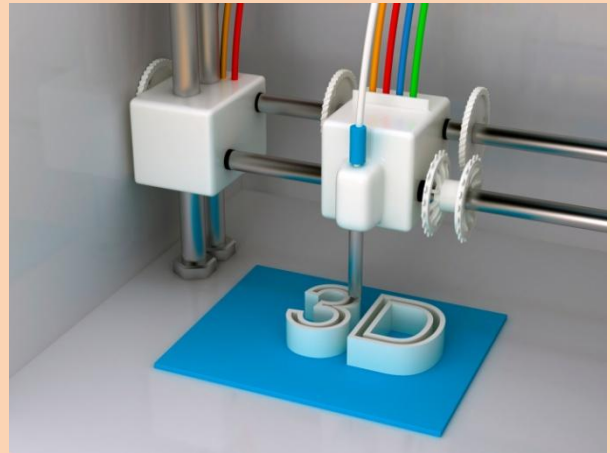
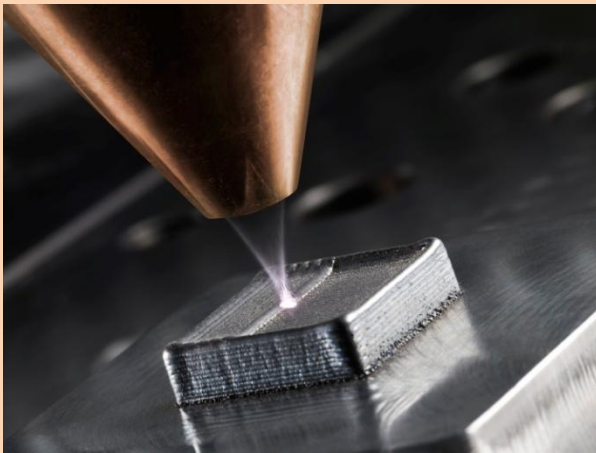
Value Added Course

3D PRINTING

COURSE OBJECTIVES & SCOPE

3D Printing is a method of creation that requires computer skills. This course will allow students to discover the potential of 3D printing. This course is an excellent option for anyone who ever wanted to prototype an invention, create a work of art, customize a product. Students may enroll for the course which will spread over minimum 30 hrs in a semester.

Industries and institutions are fast adopting 3D Printing. They employ engineers and designers with 3D printing training as prototype and product engineers. 3D Printing experts are employed in design houses that provide 3D design, 3D computer-aided design (CAD) modeling, biological and scientific modeling.



COURSE OUTCOMES

Upon completion of this course, students will be able to:

- Demonstrate knowledge of key historical factors that have shaped manufacturing over the centuries Explain current and emerging 3D printing applications in a variety of industries
- Describe the advantages and limitations of each 3D printing technology
- Evaluate real-life scenarios and recommend the appropriate use of 3D printing technology
- Identify opportunities to apply 3D printing technology for time and cost savings
- Discuss the economic implications of 3D printing including its impact on startup businesses and supply chains
- Design and print objects containing moving parts without assembly



J. C. Bose University of Science and Technology, YMCA, Faridabad
(formerly YMCA University of Science and Technology)

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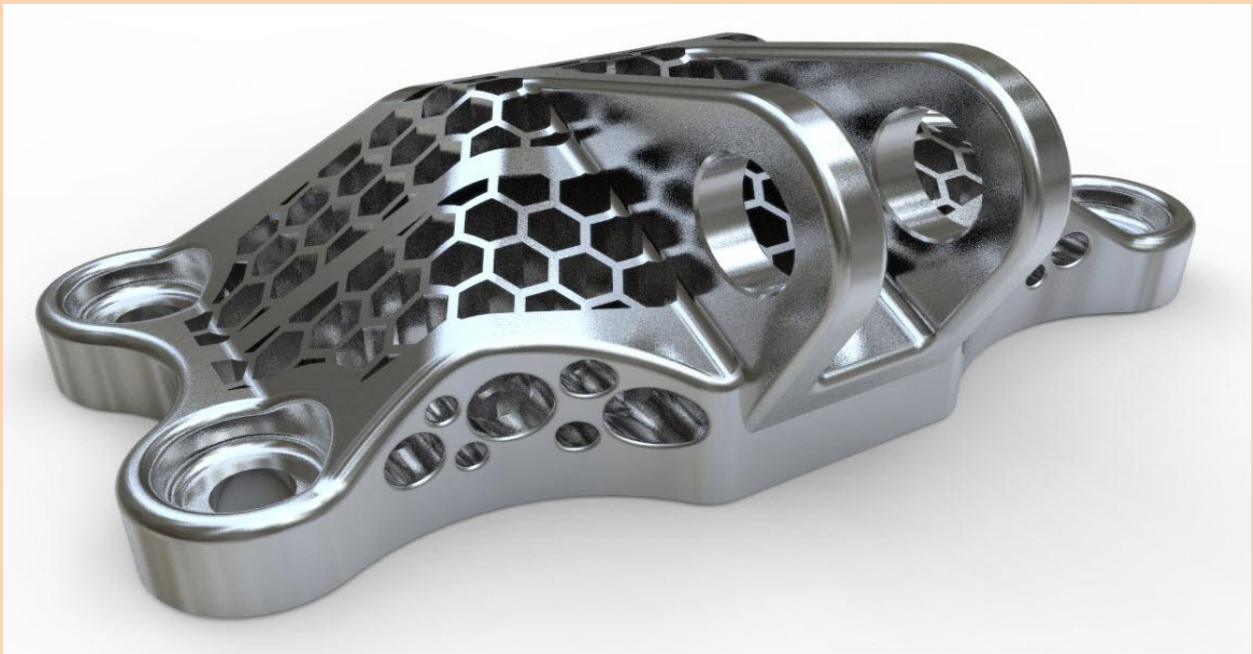
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3D PRINTING

COURSE CONTENT

Introduction of 3D Printing, Evolution of 3D Printing, Additive manufacturing, General procedure of 3D Printing, 3D CAD file formats, Stereo lithography (stl) files, Various Printing technologies (SLA, SLS, FDM, Poly jet printing, Color jet Printing, SHS, SLM, LOM, Multi jet Printing, DLP), FDM in detail, Operating Plasto 200 - Live demonstration, STL principles, Object placement, Object analysis, Slicing and printing, Print settings



Faculty

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