
© IMPHOTOARTIST
STF
HOW OTHERS SEE YOU
IS NOT IMPORTANT,
HOW YOU SEE YOURSELF
MEANS EVERYTHING.
AMERICASBESTPICS.COM


HI
IT'S NICE TO
SEE YOU!

I welcome you all to the course of ELEMENTS OF MECHANICAL COMPONENTS

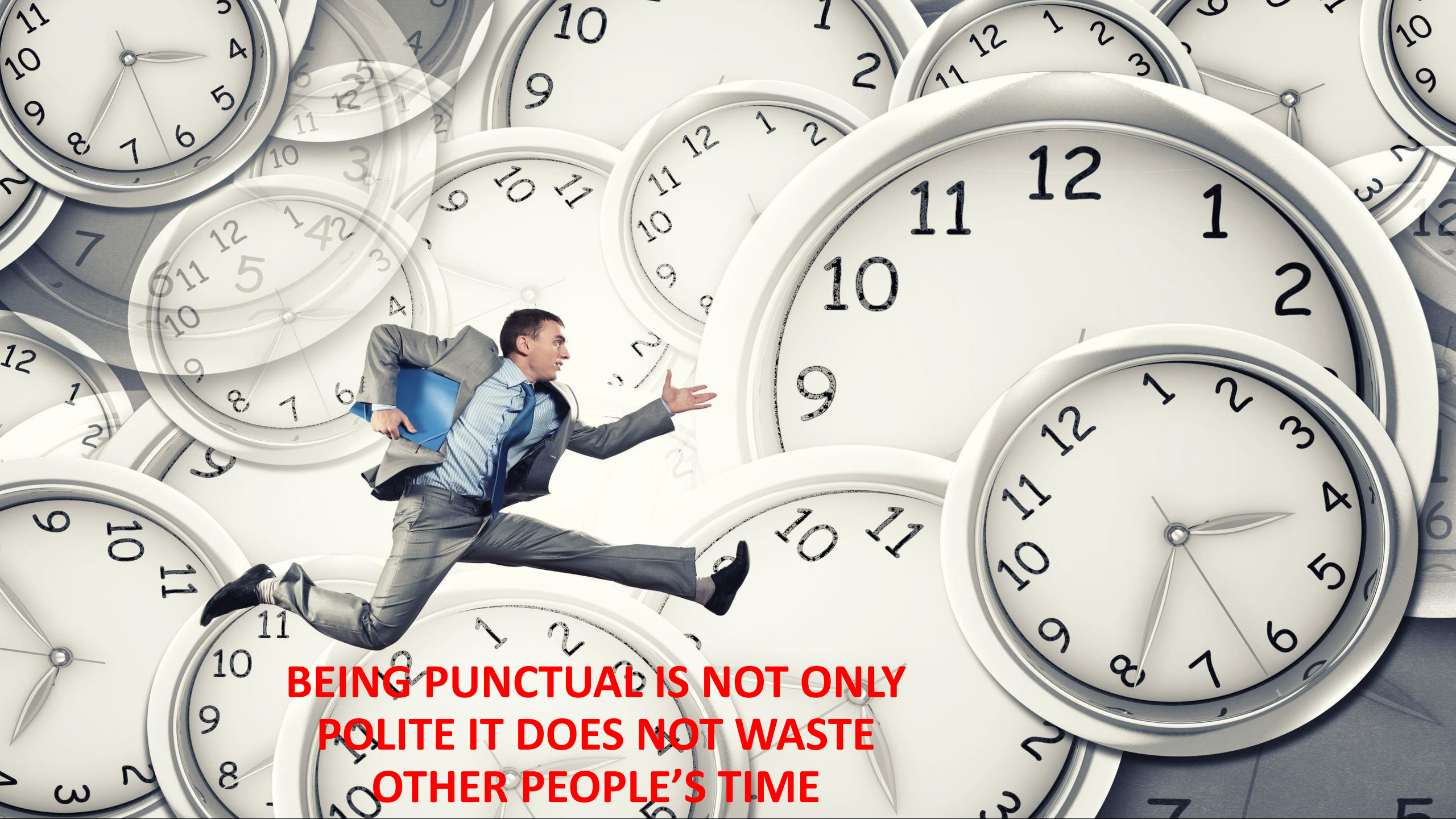

LET ME
INTRODUCE
Myself


MARTIN
Introduce yourself
phillipmartin.info

THE FOLLOWING PRINCIPLES ARE MY EXPECTATION FROM YOU

&

YOU TOO CAN EXPECT THE SAME FROM ME


BEING PUNCTUAL IS NOT ONLY
POLITE IT DOES NOT WASTE
OTHER PEOPLE'S TIME

“I'd rather be honest than impressive.”

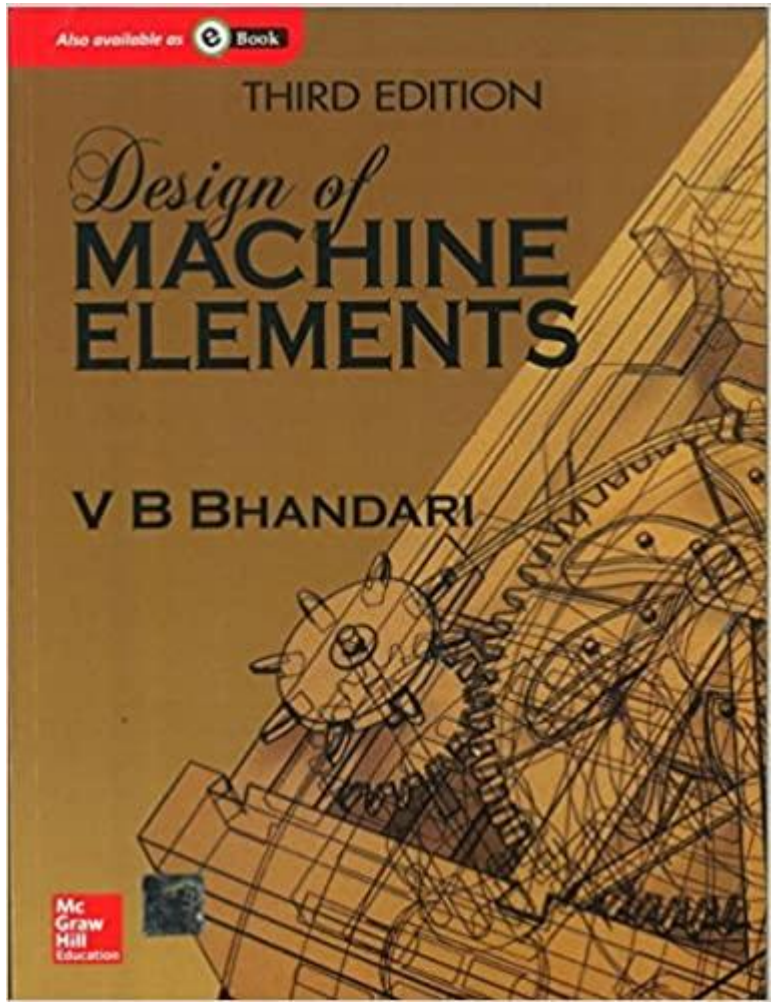
CO-OPERATION

We will discuss current Issues
We will share our stories & Experience
We will learn more than in a Textbook

POINTS TO REMEMBER

- The credit earned will be used to calculate GPA and CGPA.
- You could not replace the open electives using online courses.
- If a student fails in an open elective, he/she has to reappear the exam in the subsequent semester.
- However, if a student is prevented due to the lack of attendance, he/she has to redo the course when offered next or they can change the open elective to a new subject which is offered at that time, if his/her timetable permits.

BOOKS

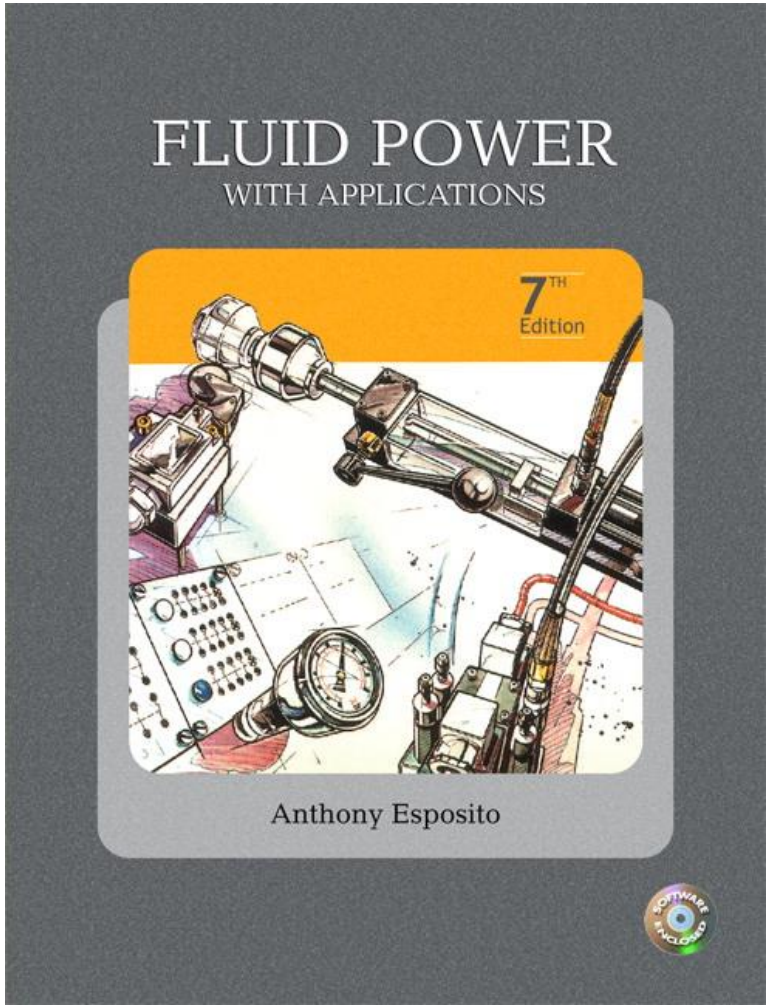


DESIGN OF MACHINE ELEMENTS

BY

V B BHANDARI

BOOKS

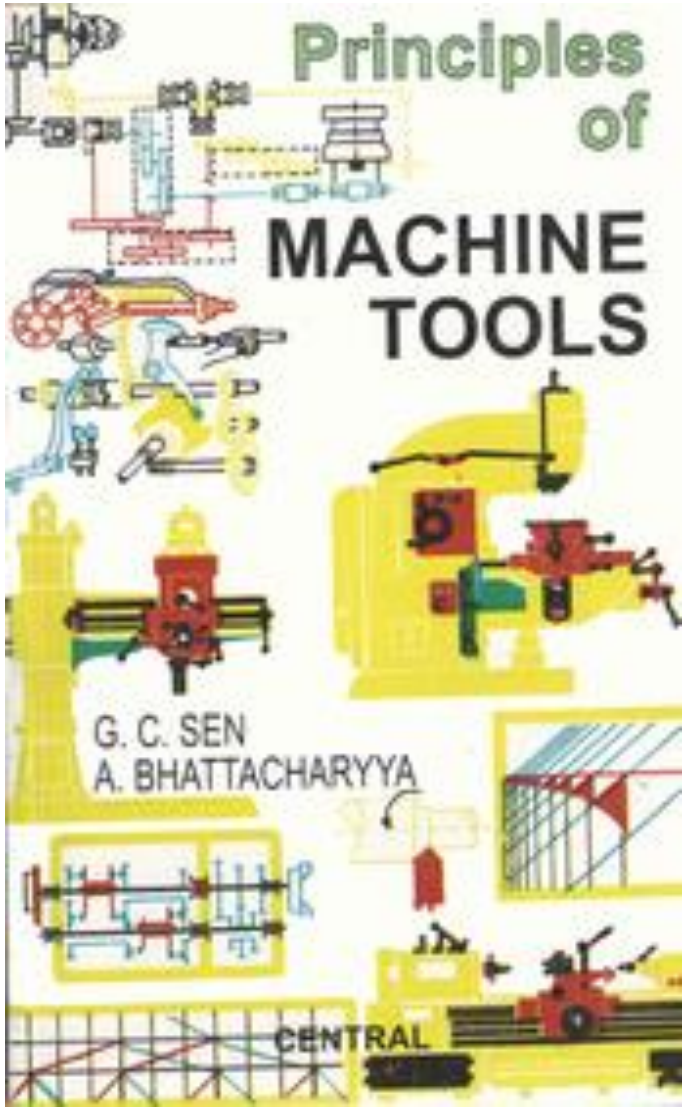


FLUID POWER WITH APPLICATIONS

BY

ANTHONY ESPOSITO

BOOKS



PRINCIPALS OF MACHINE TOOLS

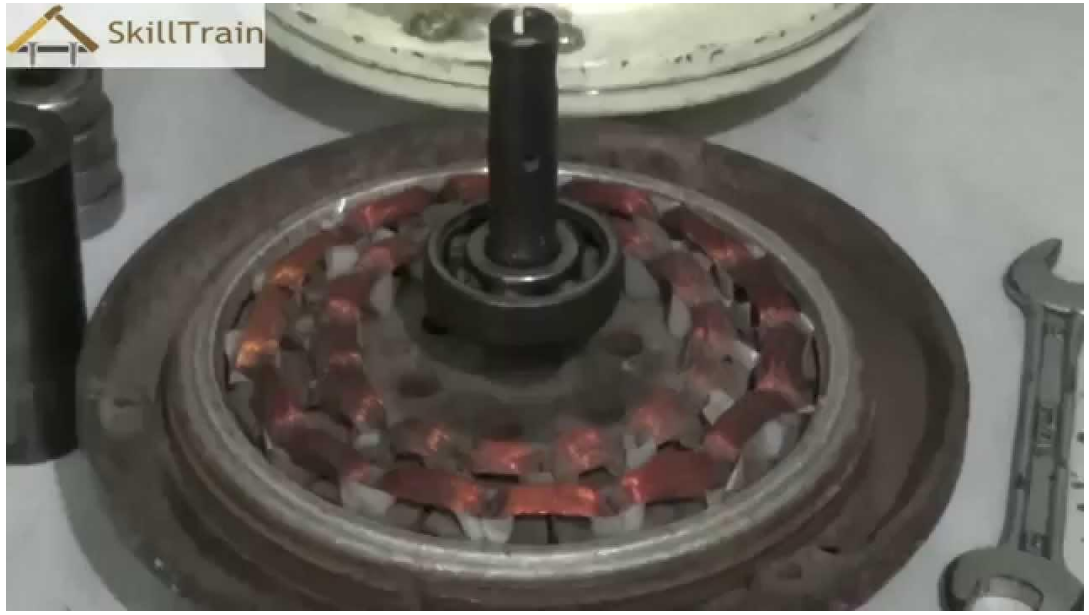
BY

G.C.SEN

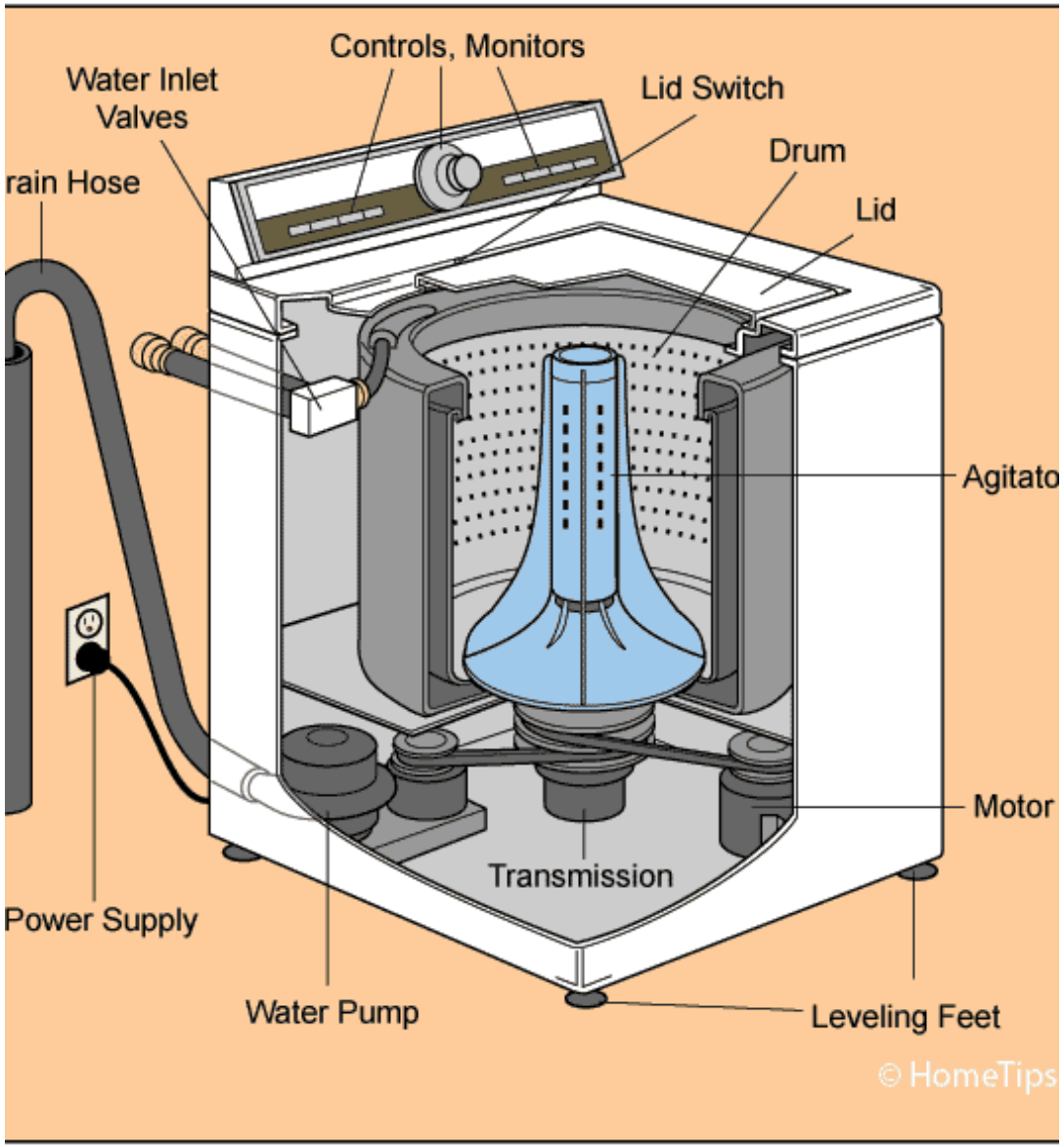
A.BHATTACHARYA

UNDERSTANDING HUMAN BODY


2-Understanding
Machine Components

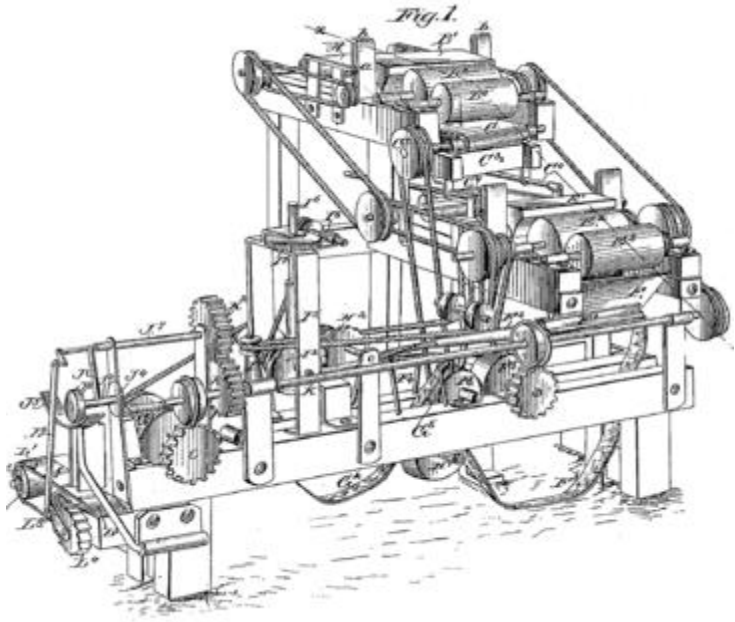

SkillTrain


candes


Controls, Monitors
Water Inlet Valves
Lid Switch
Drum
rain Hose
Lid
Agitato
Motor
Transmission
Power Supply
Water Pump
Leveling Feet
© HomeTips

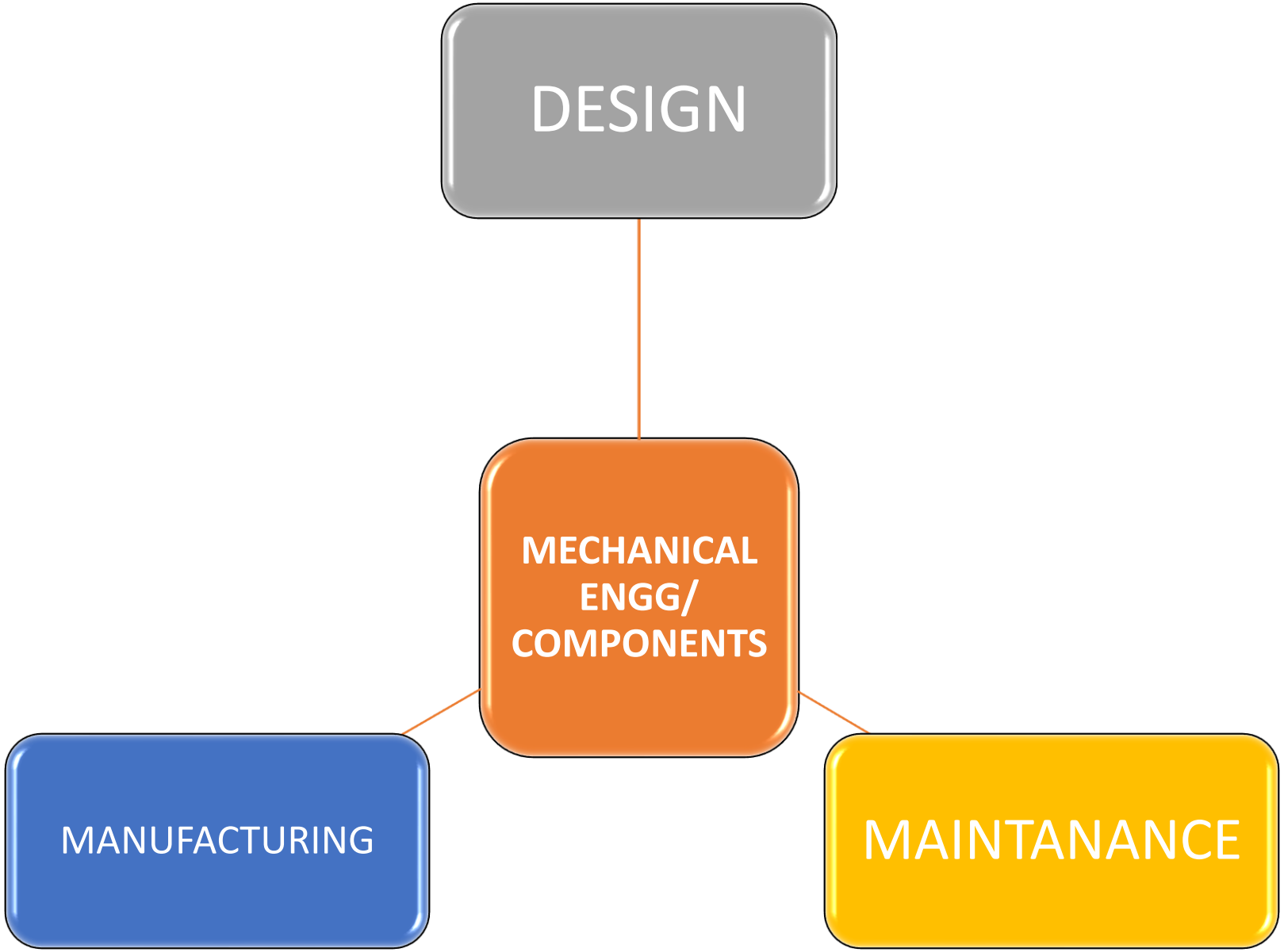
What is Machine???

- Machine is defined as a **combination of resisting bodies** with successfully **constrained relative motions** which is used **transform other forms of energy into mechanical energy** or transmit and modify available energy to do some useful work.



- An apparatus using mechanical power and having several parts, each with a definite function and together performing a particular task.

- Semi or fully automated device that magnifies human physical and/or mental capabilities in performing one or more operations.


DESIGN
MECHANICAL ENGG/ COMPONENTS
MANUFACTURING
MAINTANANCE

What is design????

- Design is to formulate a plan satisfy a particular need and to create something with physical reality.
- Realization of a concept or idea into a configuration.
- Convert Ideas in to Drawing or Digital Drawing

What is Manufacturing????

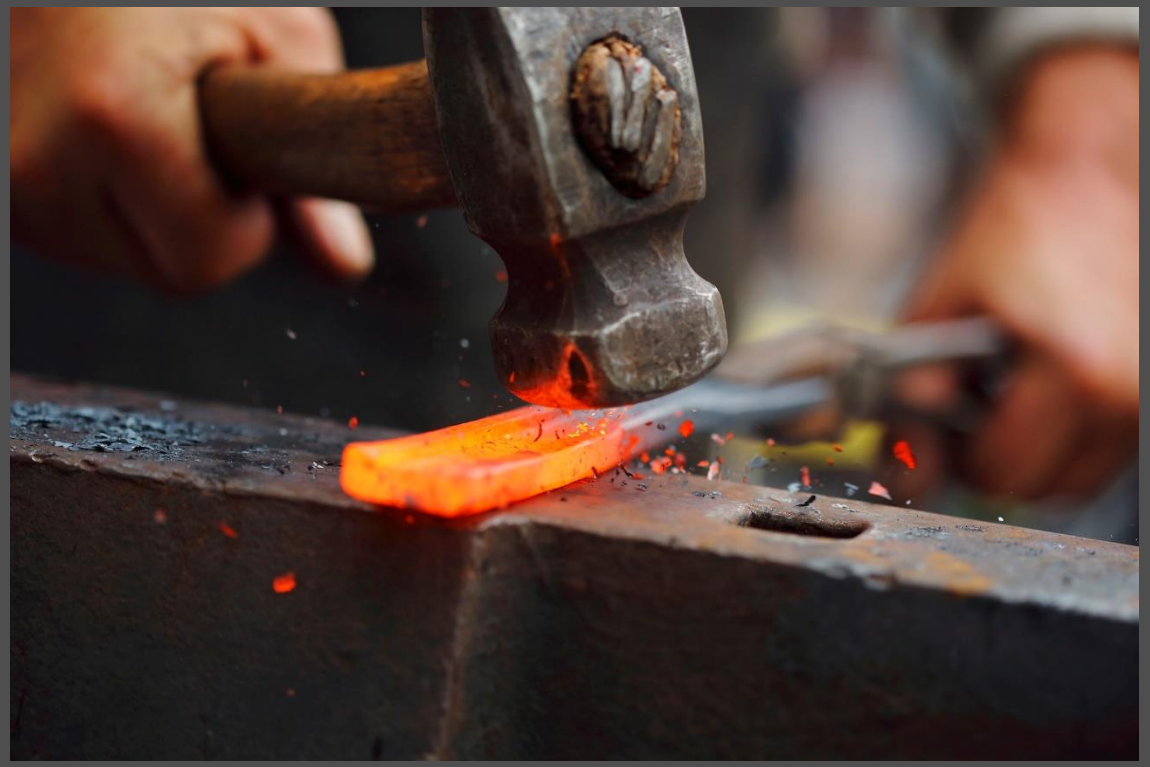
Manufacturing is the processing of raw materials or parts into finished goods through the use of tools, human labor, machinery, and chemical processing.

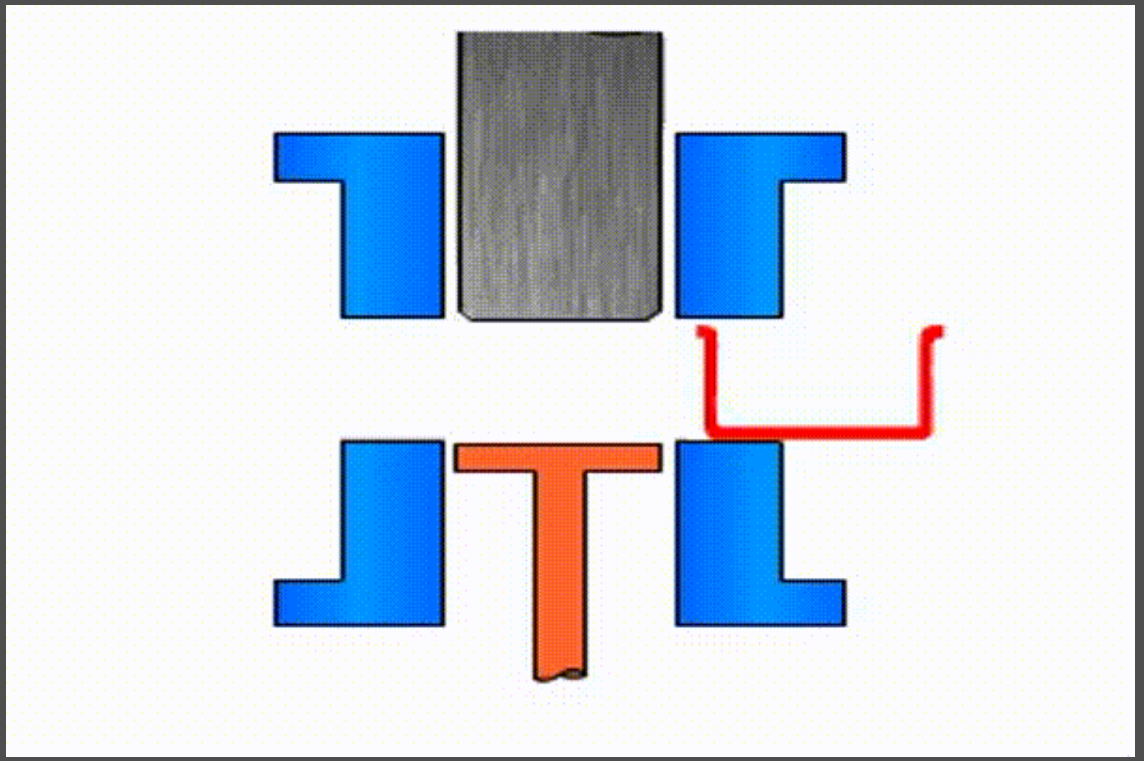
Based on the Current Trend Manufacturing Divided in to 2 category

- Traditional Manufacturing
- Additive Manufacturing

Traditional Manufacturing Processes

- Casting
- Forming
- **Sheet metal processing**
- Cutting
- Joining
- Surface treatment



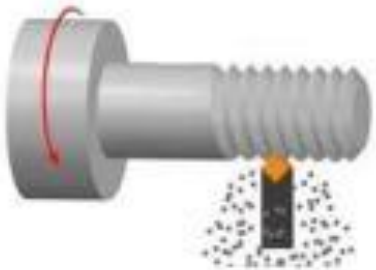


Additive vs. Subtractive

Subtractive Manufacturing

Start with a bloc of metal

Remove parts of the block



Until you have the desired product

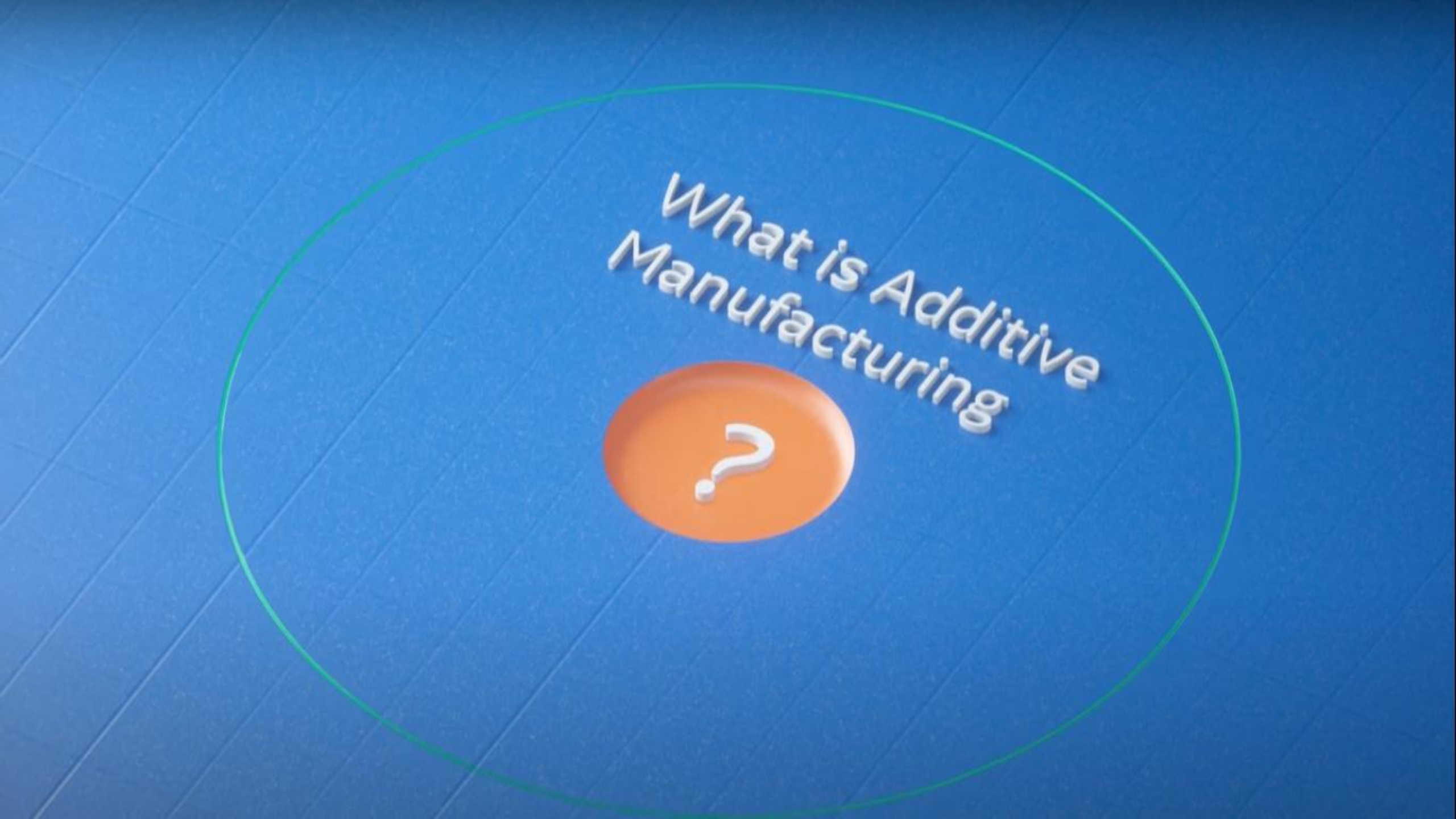
Additive Manufacturing

Start with nothing

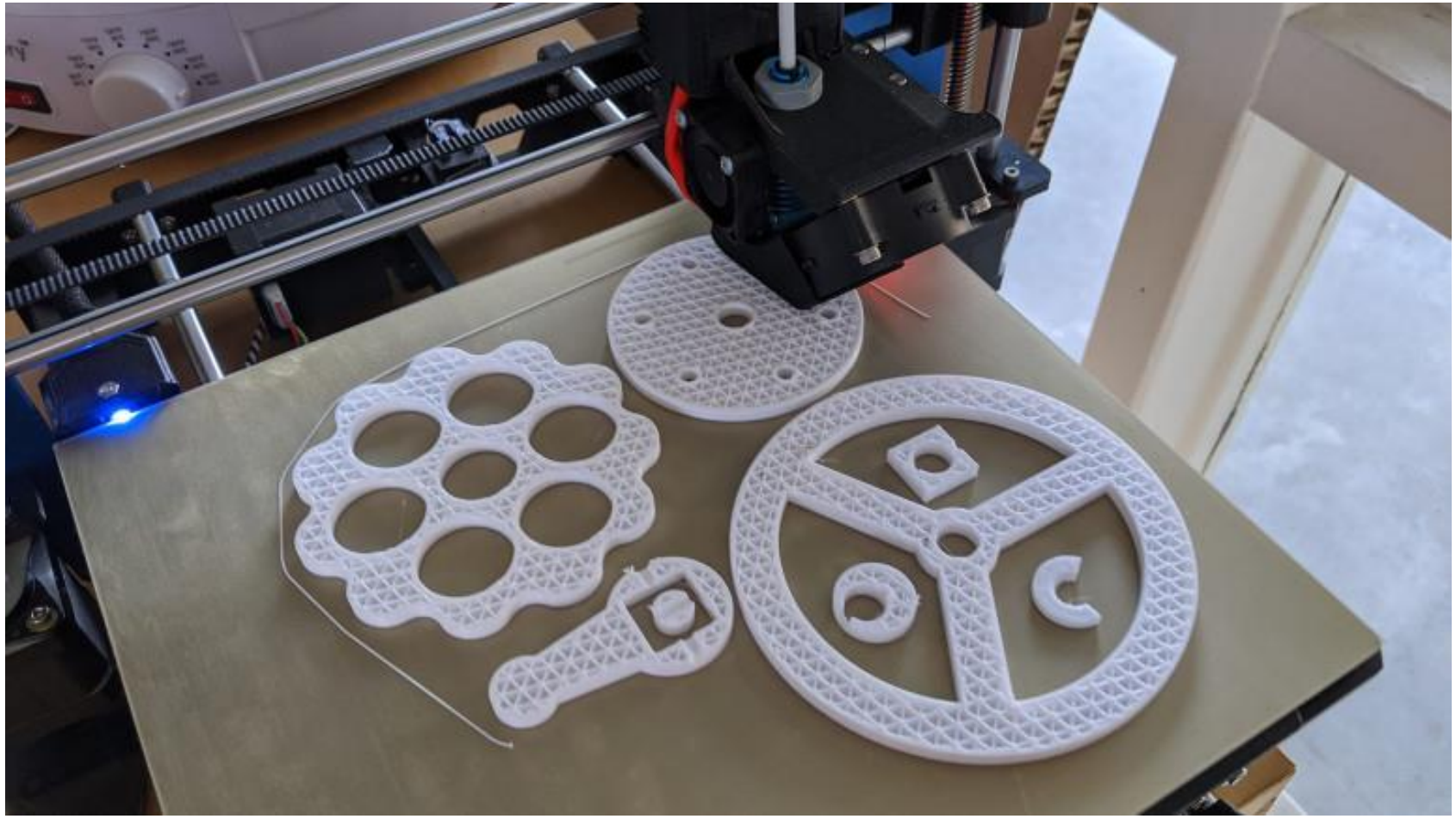
NOTHING

Gradually add layer after layer

Until you have the desired product


What is Additive Manufacturing
?

3D PRINTING DEMO



Learn 3D Printing from the Experts

https://www.makerbot.com/

https://ultimaker.com/

https://www.3ding.in/learn/

https://www.coursera.org/learn/3d-printing-revolution?

https://academy.autodesk.com/course/129096/fusion-360-integrated-cadcam-digital-manufacturing-overview

https://www.thingiverse.com/

Thingiverse - Digital Designs for | App: Customizer - Thingiverse

thingiverse.com

MakerBot Thingiverse

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Flying Sea Turtle

Collect Thing | 18140 | 337

Bottle Opener and Cap GUN!

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Ad to Support Thingiverse

Air Conditioning Systems

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See More

Why do we show ads on Thingiverse?

Baby Yoda

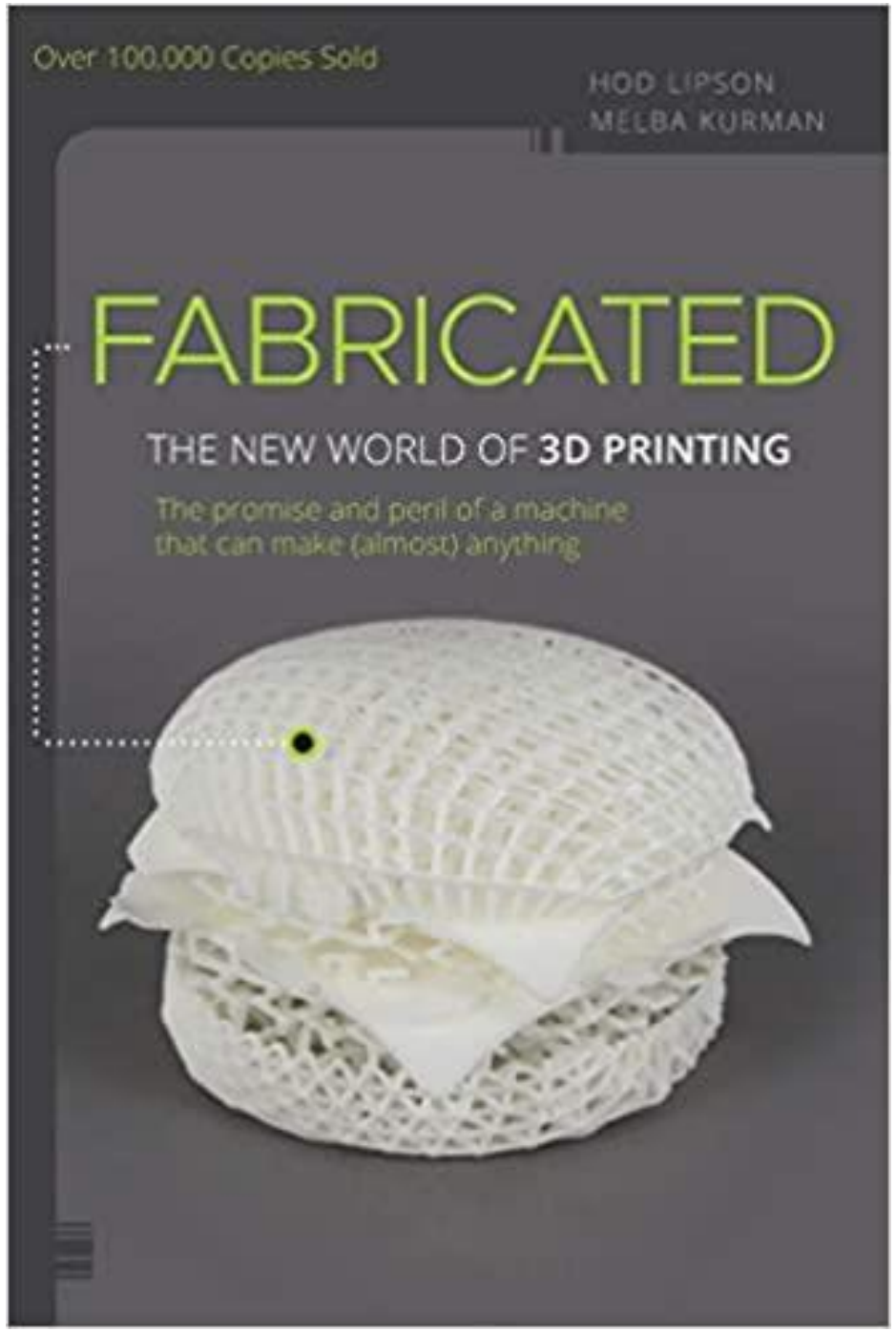
Collect Thing | 13392 | 197

Impossible Table

Polar Bear with Seal (automata)

Panther Origami

Hose Connector - Customizer



Fabricated: The New World of 3D Printing Book by

Hod Lipson and Melba Kurman

Managing your diabetes has gotten easier since the health insurance company upgraded your food printer to a high-grade medical model. New medical-grade food printers for diabetics read streams of wireless signals from a tiny skin implant that tracks your blood sugar. When you wake up in the morning, the FoodFabber receives the first reading of the morning and adapts the sugar content and nutritional balance of your digitally cooked breakfast accordingly.

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STAY APART...!!! Stay Home, Stay Safe & Learn 3D Printing. Attend our Free Online Webinar.

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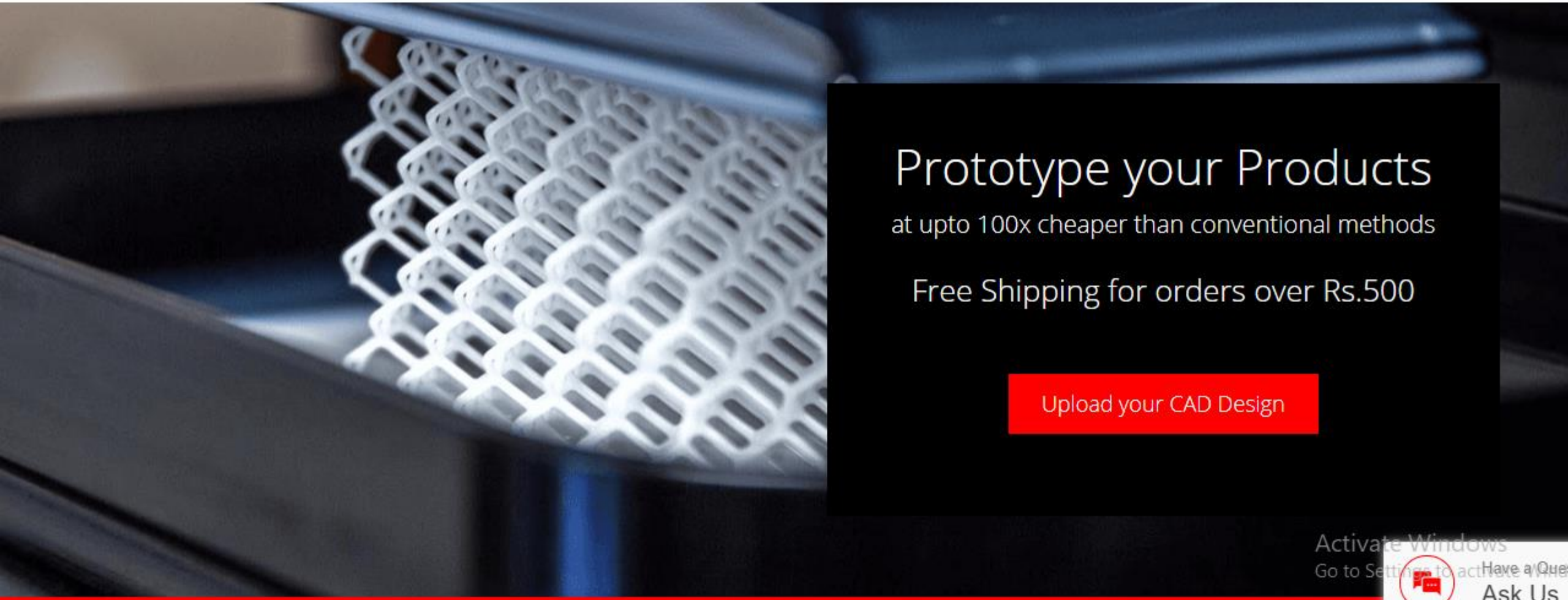


3ding - Google Search

3Ding - Instant Quote for 3D Prin

print.3ding.in/upload

Upload

Drop files here, paste or
browse

Order Summary

Order ID	1594193893692
# of Files	0
Lead Time	1 Day
Sub Total	₹ 0
GST 18%	₹ 0
Shipping Self Pickup ☐	₹ 0
Total	₹ 0

Manual Quote | Checkout

Export CAD designs in STL format, upload using the box above, select printing options from the table below to see instant prices, checkout & pay to confirm your order.
This platform is in limited beta. More Technology & Material Options would be added shortly.

NORMAL HEADPHONES

CUSTOM-FIT 3D PRINTED EARPHONES

New York City-based Normal is bringing customized, perfectly fitted earphones to the masses- and they're doing it with style. With a newly opened storefront showroom added to their Chelsea headquarters, this young company is creating and innovating in more ways than one. We sit down with founder Nikki Kaufman to talk how her Normal company is actually quite unique.

CM: Can you take us through what exactly your product is and how the idea was conceived?

N: Normal earphones are custom-fit, 3D printed earphones. They fit each customer exactly and will never fall out! The idea for Normal was born out of my frustration with the poor fit and quality of earphones on the market - they wouldn't stay in my ears! I looked into having a pair custom made, but found it to be a long, uncomfortable and expensive process. I knew there had to be a more accessible, affordable and fun way to create custom fitting earphones.

CM: We understand you worked with 3D printing at a prior company you founded, a technology that you believe helped pave the way for Normal. Can you tell us more about it?

N: As a founding team member at the consumer products company Quirky, I had been surrounded by 3D printing and advanced manufacturing processes. When I was there, we had several different 3D printers that we used for prototyping. After working these technologies, I knew there had to be a better way to create custom fitting earphones.

CM: With all of this personalization and high-tech manufacturing, one might think this product would be pretty pricey- but you guys have kept it relatively affordable.

N: Offering a pair of custom earphones at an approachable price point is at the core of our business, it's why I started Normal. Like most, I was so frustrated by my earphones, but could not fathom spending a few thousand dollars on a pair. At $199, our product falls perfectly in the zone of I like to refer to as "attainable luxury."

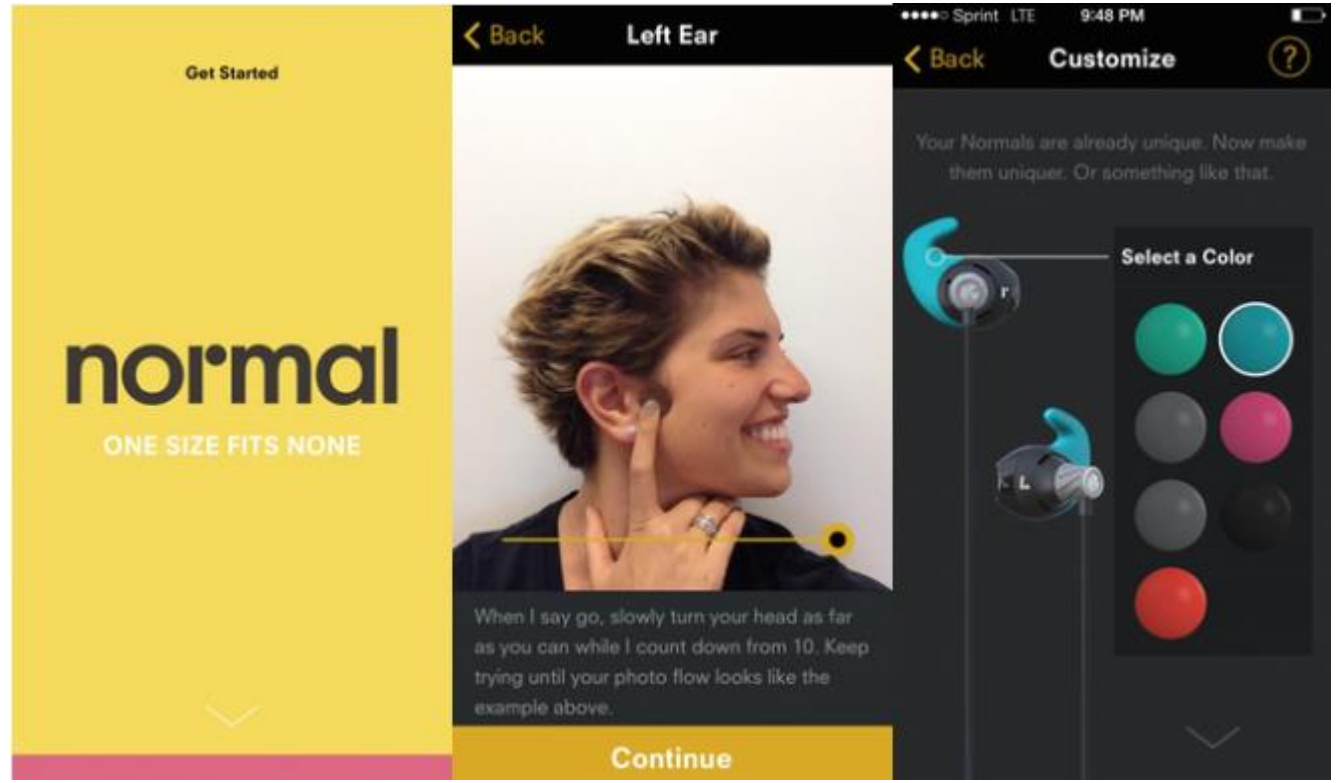
CM: This idea of having your retail store in the same location as your factory, office, and lab- such efficiency. How does this benefit the manufacturing process, the end product, and ultimately the consumer?

N: Every pair of Normal earphones is engineered, printed, assembled and shipped from Normal's factory, headquarters, and retail store in New York City. Because of this, we are able to create a highly integrated and efficient process (we can make Normal earphones in under 3 hours!) as well as a working environment where different ideas and perspectives can flourish. Additionally, because the retail store is in the same location as our factory, the store puts 3D printing on display, giving customers a deep look at the manufacturing process behind the product. We are combining retail and factory in a way that has never been done before.

CM: Where do you see Normal going from here? Is there space to move into different types of products? It's clear you guys are staying at the edge of innovation and technology. Any insight into what could come next?

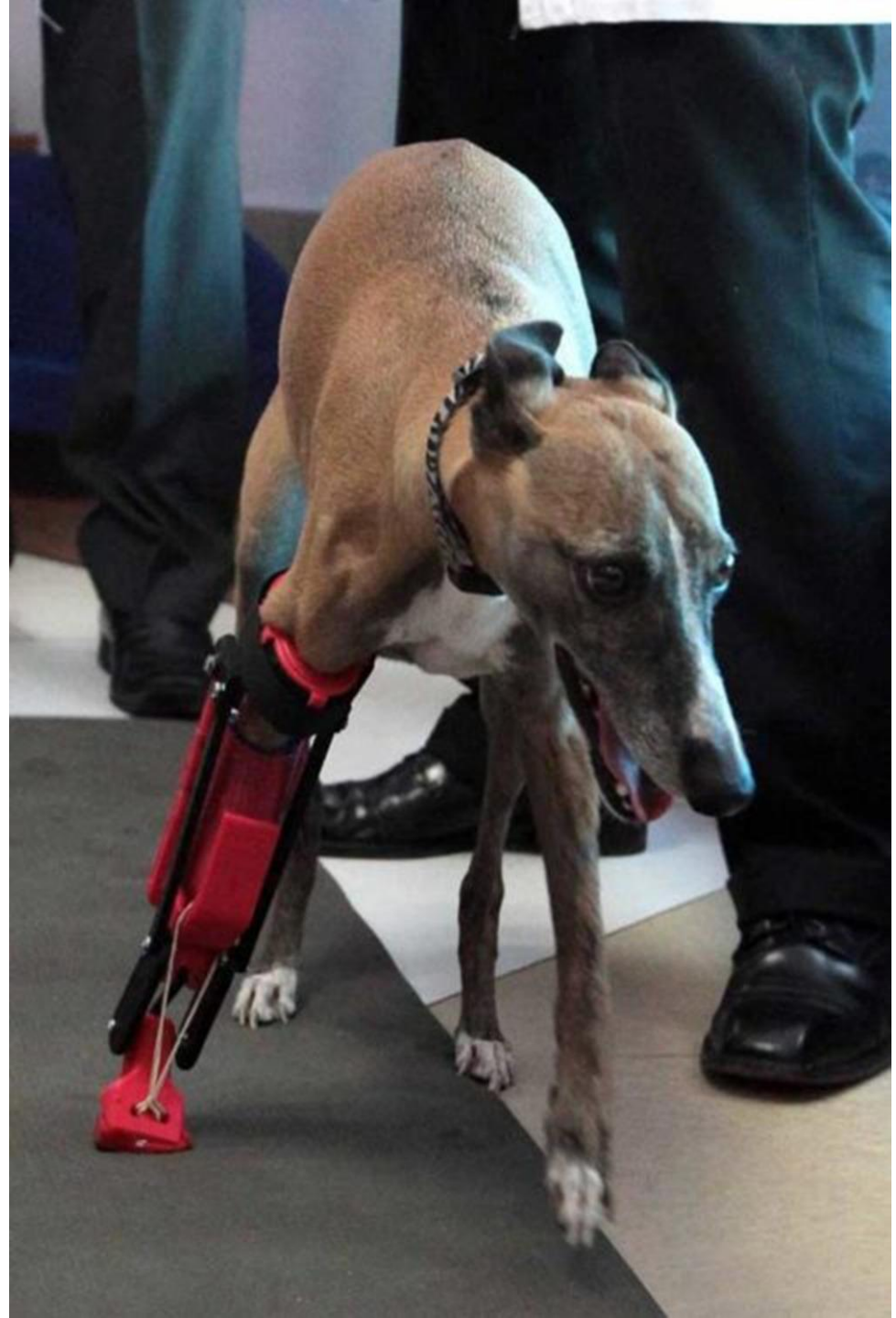
N: We see Normal as a platform to enable custom build products for your body. We are starting with earphones, but we envision a much larger product portfolio down the road.

Normal is located at 150 West 22nd Street, NYC




GOOD EVENING
What you habitually think largely
DETERMINES
what you will ultimately become
Bruce Lee via Gecko&Fly

3d printed animal prosthetics



- **India's first 3D printed house inaugurated at IIT-Madras**

Printing the future: 3D bio printers

Bio printing is an extension of traditional 3D printing.

Bio printing can produce living tissue, bone, blood vessels and, potentially, whole organs for use in medical procedures, training and testing.

Bio printing technology could provide the opportunity to generate **patient-specific tissue for the development of accurate,** targeted and completely personalized treatments.

There is still a long way to go before we can create fully functioning and viable organs for human transplant.