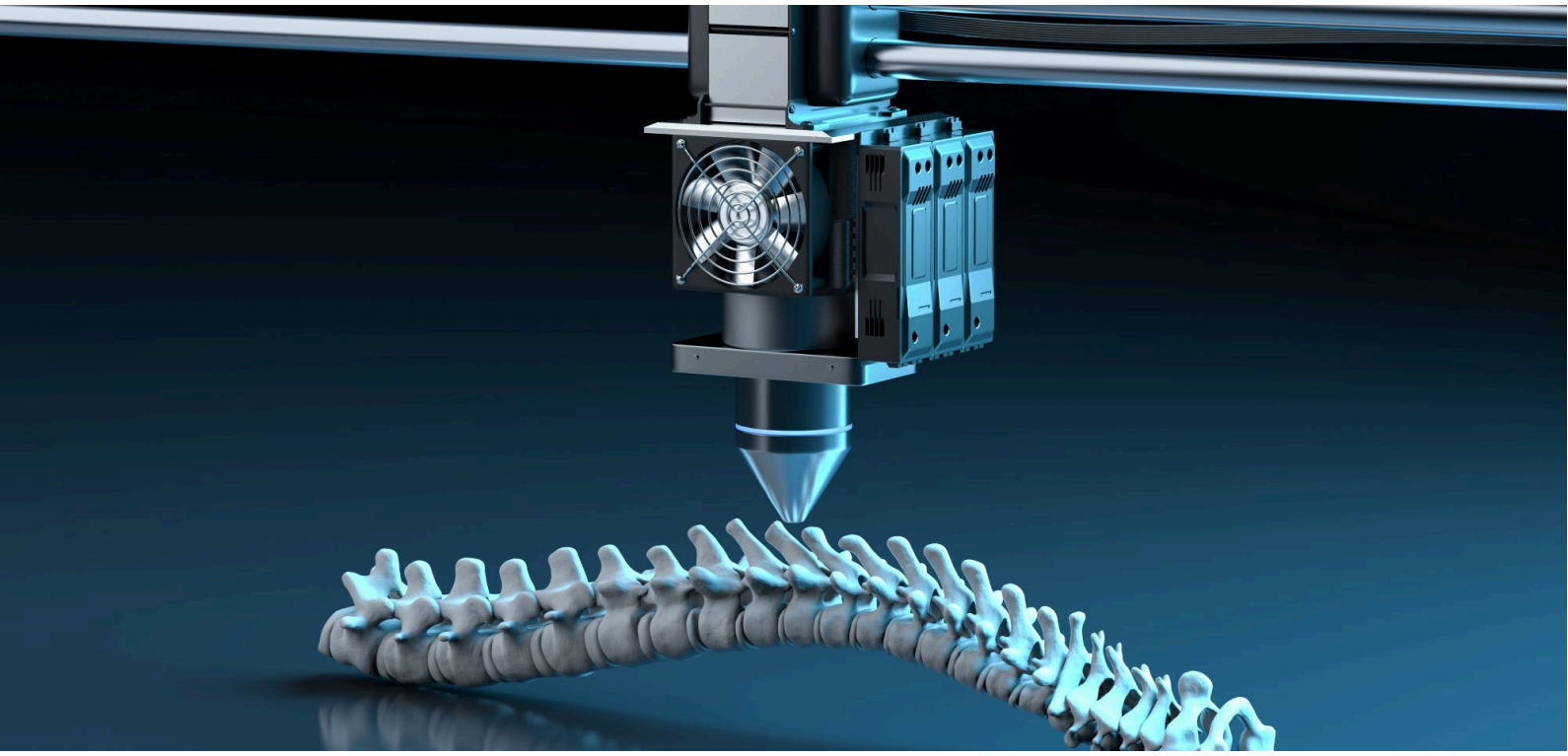
IPI Academy

MANAGEMENT forum



Presented by
Management Forum

The Future of Manufacturing: 3D Printing for Medical Devices

16 June 27
+ 8 December 27

This course will help you understand future manufacturing of medical devices using 3D printing technology. Anyone from the medical device, additive manufacturing and pharmaceutical industries will benefit.

Format:
Live online

CPD:
6 hours for your records

Certificate of completion

Course overview

The global market for medical devices and equipment is estimated to have been worth $739.6 billion in 2023. It is a thriving industry which is expected to grow at compound annual growth rate (CAGR) of 9.8% from 2024 through 2029 from $810.4 billion in 2024 to $1.3 trillion. With the advent of the fourth industrial revolution, Additive manufacturing is now an integral part of medical device development globally for an efficient manufacturing process.

Medical device development is a process which needs understanding of both engineering and manufacturing, along with clinical expertise for taking research to the bedside. It is one of the most expensive, regulated and time-consuming areas, with strict guidelines in terms of quality management systems for quality and safe patient care, which leads to further delays in the commercialisation of a product. Additive manufacturing is one of the key processes in the lifecycle of development of medical devices. It can substantially reduce the completion time and cost along with addition of intricate design parameters to a device development.

This course covers the background of additive manufacturing, its processes and technologies, and its importance in the life cycle of a medical device. This course will also include the additively manufactured devices, and other areas where the innovative application of additive manufacturing will help in quicker and cost-effective development of a device for commercialisation.

Benefits of attending

- **Understand** a comprehensive overview of medical device development
- **Learn** different additive manufacturing processes
- **Identify** the application of additive manufacturing in a medical device development cycle
- **Explore** components of smart manufacturing
- **Integrate** additive manufacturing in device development cycle
- **Discover** innovation in medical device development cycle
- **Gain** the essence of sustainability

Who should attend?

This course is designed for the medical device industry, additive manufacturing industry, pharmaceutical industry and even academic organisations who work in innovation for medical device development. Examples of job titles include:

- Corporate project managers
- Individual innovators
- Corporate product development team
- Academic innovation groups
- Researchers

Programme

Medical devices: an introduction

- Medical devices and classification
- Types of medical devices
- Regulatory aspects of medical device
- Certifications for medical devices

Development of medical devices

- Need assessment
- Opportunities and market
- Development cycle of a medical device
- Development challenges

Additive manufacturing: an introduction

- History of additive manufacturing
- Processes and technologies in additive manufacturing
- Role of additive manufacturing in medical device development
- Additive manufactured devices
- Point of care devices

Innovation with additive manufacturing

- Design freedom
- Customisation
- Waste management and material development
- smart manufacturing ecosystem

Development of innovative workflow

- Device prototyping
- Decentralised production
- Enhanced sustainability

Case studies

- Case study 1
- Case study 2
- Case study 3

Presenter



Ruchi Pathak

Dr Ruchi Pathak Kaul is a TEDx Speaker and consultant to the Surgical Innovation Lab at All India Institute of Medical Sciences, New Delhi, where she runs the 3D printing lab and conducts research on medical devices developed using 3D printing technology. She bridges the gap between technology and medicine, bringing clinicians closer to technology and helping them incorporate 3D printing in their surgical practices. She is actively involved in the development of various medical devices at the premiere institute of India. Ruchi is also an honorary lecturer at University College London, where she is involved in global research on rehabilitation care using emerging technologies.

Ruchi has clinical and research experience of more than 15+ years, with her research in mid-face reconstruction using 3D printed patient-specific Implants. She has also worked on optimisation of spinal guides for cadaveric surgeries at University College London, UK. She has been actively involved in conducting a patient-public engagement for the development of spinal guides for patients of scoliosis. Ruchi is a qualified maxillofacial surgeon and has authored several scientific articles, chapters and books in scientific literature. Her passion lies in conducting translational research by bridging the gap between technology and its benefits for common man.

Connect on LinkedIn at www.linkedin.com/in/dr-ruchi-pathak-kaul

Find her authored book on 3D Printing on Amazon at MY BOOK

Course dates

16 June 27	**Live online** 09:00-16:30 **UK (London)** (UTC+01) *Course code 17242*	GBP **649** ~~749~~ EUR **909** ~~1,049~~ USD **1,043** ~~1,199~~ **Until 21 Apr**
8 December 27	**Live online** 09:00-16:30 **UK (London)** (UTC+00) *Course code 17571*	GBP **649** ~~749~~ EUR **909** ~~1,049~~ USD **1,043** ~~1,199~~ **Until 13 Oct**

How to book

Online:
ipi.academy/2744

Alternatively contact us to book, or if you have any queries:

Email:
info@ipiacademy.com

Phone:
+44 (0)20 7749 4749

Discounts

- Booking more than one delegate on any one date qualifies for a **30% discount** on the second and subsequent places.
- Most events qualify for an **early booking discount** prior to 6 weeks before the course date. Be sure to check on our website, where the latest discounts will be shown.

Further information

Fee
The fee includes all meals and refreshments for the duration of the course (for venue-based courses) and a complete set of course materials (provided electronically). If you have any particular requirements, please advise customer services when booking.

Please note
IPI Academy (and our training partners) reserve the right to change the content and timing of the programme, the speakers, the date and venue due to reasons beyond their control. In the unlikely event that the course is cancelled, we will refund the registration fee and disclaim any further liability.

Terms and conditions
The rest of the our terms, the event cancellation policy and the terms and conditions are on our website, please visit ipi.academy/content/terms-and-conditions

Run this programme in-house for your whole team

Coming to IPI Academy for your in-house training provides an all-inclusive service which gives you access to a wide variety of content, learning platforms and delivery mechanisms as well as your own personal training adviser who will work with you from the initial enquiry through to feedback and follow-up after the programme.

With over 600 trainers, all practitioners and experts across a huge range of fields, we can provide the training you need, where you need it, when you need it, and at a price which suits your budget. Our approach to tailored learning and development consists of designing and delivering the appropriate solution for each client.

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ALEKSANDRA BEER
Tel: +44 (0)20 7749 4749
Email:
inhouse@ipiacademy.com



YESIM NURKO
Tel: +44 (0)20 7749 4749
Email:
inhouse@ipiacademy.com



Harry ALTAMONT
Tel: +44 (0)20 7749 4749
Email:
inhouse@ipiacademy.com

IPI Academy

IPI Academy is a training initiative of Falconbury and Management Forum; leading providers of industry training for over 30 years, based in the UK.

10-12 Rivington Street
London EC2A 3DU

ipi.academy
Tel: +44 (0)20 7749 4749
Email: info@ipiacademy.com