

# Joint Online Two Week Certificate Program MATLAB Programming for Additive Manufacturing and 3D Printing (MPAM)

September 20 – October 1, 2021

Joint Principal Coordinator: NIT Patna



Jointly Organized by:  
IIT Guwahati  
MNIT Jaipur  
PDPM IIITDM Jabalpur  
NIT Patna

## Objective & Scope

The course has been designed to impart programming knowledge and skills required for additive manufacturing and 3D printing using MATLAB. It provides complete programming projects for sequential implementation of data preparation for additive manufacturing and 3D Printing such as STL file reading, repairing, slicing, contour generation, path planning etc. It also focuses on recent research trends in RP/AM/3DP, interdisciplinary aspects in RP/AM/3DP, Bio Medical applications.

## Speakers (tentative)

[Dr. Pulak Mohan Pandey](#), Professor, IIT Delhi  
[Dr. Prashant K. Jain](#), Associate Professor, IIITDM Jabalpur  
[Dr. Pavan K. Kankar](#), Associate Professor, IIT Indore  
[Dr. Manu Srivastava](#), Assistant Professor, IIITDM Jabalpur  
[Dr. Amit Singh](#), Assistant Professor, MNIT Jaipur  
[Dr. Mohammad Taufik](#), Assistant Professor, MANIT Bhopal  
[Dr. Narendra Kumar](#), Assistant Professor, NIT Jalandhar

**Last Date for registration:**  
**September 15, 2021**

## Joint Principal Coordinators

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## Course Contents

MATLAB basics, algorithms design, visualization, file handling, debugging, Building GUI and display information, App development and Generating Executable files and Standalone apps, Overview and basics of Rapid Prototyping/Additive Manufacturing/3D printing, Need, Basic Principles and Steps in RP/AM/3DP, Process chain, Classification of Additive manufacturing processes, FDM and SLS Process, Applications and case studies, Data preparation, STL File Problems, STL File Manipulation and Repair Algorithms, STL file reading, repairing, slicing, contour generation, path planning, G&M code generation, open source software for 3D printing, Machine Demonstration, Part printing, Recent research trends in RP/AM/3DP, interdisciplinary aspects in RP/AM/3DP, Bio Medical applications, and etc.

## Course Fee Details

**Academic (student/faculty): 500 INR**

**Industry People/Other : 1000 INR**

**Foreign Participants: 4000 INR**

## Online payment details:

**Bank Name: Indian Bank**

**Account Name: NIT Patna**

**Account No.: 50380476798**

**IFSC Code: IDIB000B810**

**Link for registration: <https://forms.gle/mi2abeMU5bkhdJCv5>**

For more details and application form visit:

<http://www.nitp.ac.in/ict/index.php>

Email: [eictapatna@nitp.ac.in](mailto:eictapatna@nitp.ac.in)

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