

**ALVA'S INSTITUTE OF ENGINEERING AND TECHNOLOGY**

Shobhavana Campus, Mijar – 574225, Moodbidri.

Dakshina Kannada Karnataka, India.



**Department of Mechanical Engineering**

**CERTIFICATION COURSE**

On

**“Additive Manufacturing & 3D printing”**

**FOR THE ACADEMIC YEAR**

**2018-19**



# ALVA'S INSTITUTE OF ENGINEERING AND TECHNOLOGY

Shobhavana Campus, Mijar, Moodbidri - 574 225

Phone: 08258-262725 Fax: 08258-262726

DEPARTMENT OF MECHANICAL ENGINEERING

Date:

## APPROVAL LETTER

To,

The Principal,  
AIET, Moodbidri

Respected Sir,

**Sub: - Approval for Organizing the Students Certification/Training Program on "Additive Manufacturing and 3D printing"-Reg.**

With reference to the subject cited above, I would like to bring to your kind notice that, the Department is planning to host a **Five day's** Student Training Program/ hands on workshop on "**Additive Manufacturing and 3D printing**" from **16<sup>th</sup> July 2018 to 20<sup>th</sup> July 2018**".


Kindly consider the above request and approve the same for further proceedings.

Thanking you Sir.



**Coordinator:**

**Mr. Hemanth S**



**Head of the Department:**  
H.O.D.

for **Prof. K.V. Suresh** Engineering  
Dept. of Mechanical Engineering  
Alva's Institute of Engg. & Technology  
Mijar, MOODBIDRI - 574 225



**Principal:**  
PRINCIPAL

Alva's Institute of Engg. & Technology  
Mijar, MOODBIDRI - 574 225, D.K.

Place: AIET, Moodbidri.



# ALVA'S INSTITUTE OF ENGINEERING AND TECHNOLOGY

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## DEPARTMENT OF MECHANICAL ENGINEERING

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Date:

### CIRCULAR

All the students are hereby informed that there is a certification course on about **Additive Manufacturing and 3D Printing** which is scheduled from 16.07.2018 to 20.07.2018, which is conducted by Mr. Sreekanth M P & Mr. Suresh P S, AIET, Dept of mechanical engineering, moodbidri. Interested students kindly register your names on or before 05.07.2018.

  
**Head of the Department:**

Dept. of Mechanical Engineering  
Alva's Institute of Engg. & Technology  
Mijar, MOODBIDRI - 574 225



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**DEPARTMENT OF MECHANICAL ENGINEERING****Additive Manufacturing & 3D printing-- ATTENDANCE REPORT-2018-19**

SLN	USN	NAME(Caps Only)	16-07		17-07		18-07		19-07		20-07	
			FN	AN	FN	AN	FN	AN	FN	AN	FN	AN
1.	4AL13ME134	ANOOP R B	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2.	4AL14ME030	GURUMURTY J L	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
3.	4AL14ME031	HARSHA RAJ	✓	✓	✓	✓	✓	✓	A	✓	✓	✓
4.	4AL14ME037	JYOTHISH KUMAR K P	✓	✓	A	✓	✓	✓	✓	✓	✓	✓
5.	4AL14ME109	AISHWARYA P B	✓	✓	✓	✓	✓	A	✓	✓	✓	✓
6.	4AL15ME005	ADITHYA K V	A	✓	✓	✓	✓	✓	✓	✓	✓	✓
7.	4AL15ME007	AKASH	✓	✓	✓	✓	✓	✓	✓	A	✓	✓
8.	4AL15ME008	AKASH B P	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
9.	4AL15ME013	ANAND MOHAN G	✓	✓	✓	A	✓	✓	✓	✓	✓	✓
10.	4AL15ME014	ANISH A AMIN	✓	✓	✓	✓	✓	✓	✓	✓	A	✓
11.	4AL15ME015	ANSON SUNIL HUNS	✓	A	✓	✓	✓	✓	✓	✓	✓	✓
12.	4AL15ME016	ARASIKERI D	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
13.	4AL15ME017	ARJUN A A	✓	✓	A	✓	✓	✓	✓	✓	✓	A
14.	4AL15ME018	ARVIN JASON CRASTA	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
15.	4AL15ME022	POOJARY AVINASH H	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
16.	4AL15ME023	BHARATHESH HEGDE	✓	✓	✓	✓	✓	A	✓	✓	✓	✓
17.	4AL15ME024	BHARATH KUMAR B U	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
18.	4AL15ME025	BHASKAR NAIK	✓	✓	✓	A	✓	✓	✓	✓	✓	✓
19.	4AL15ME026	C ABHILASH	A	✓	✓	✓	✓	✓	✓	✓	✓	✓
20.	4AL15ME028	CHRISTINA	✓	A	✓	✓	A	✓	✓	✓	✓	✓
21.	4AL15ME029	DARSHAN K S	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
22.	4AL15ME033	GIRISH	✓	✓	✓	✓	✓	✓	✓	✓	A	✓
23.	4AL15ME034	HAMZA MOHAMMED H	✓	✓	✓	✓	✓	✓	A	✓	✓	✓

Coordinator

HoD





# ALVA'S INSTITUTE OF ENGINEERING & TECHNOLOGY


Shobhavana Campus, Mijar, Moodbidri, D.K - 574225

Phone: 08258-262725, Fax: 08258-262726

## DEPARTMENT OF MECHANICAL ENGINEERING

24.	4AL15ME035	HARISH BALKUNDE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
25.	4AL15ME036	HARSHA R	✓	✓	A	✓	✓	✓	✓	✓	✓	✓	✓
26.	4AL15ME037	HEMANTH KUMAR D	✓	✓	✓	✓	✓	✓	✓	✓	A	✓	✓
27.	4AL15ME038	JAMESON KEISHAM	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
28.	4AL15ME040	K V ADITH	✓	✓	✓	✓	A	✓	✓	✓	✓	✓	✓
29.	4AL15ME041	KALYANKUMAR	A	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
30.	4AL15ME042	KARTHIK K	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
31.	4AL15ME044	KIRAN RAMANAGOWDA	✓	✓	✓	A	✓	A	✓	✓	✓	✓	✓
32.	4AL15ME045	KOUSHIK N	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
33.	4AL15ME046	LATHESH	✓	A	✓	✓	✓	✓	✓	✓	✓	✓	✓
34.	4AL15ME047	MAHALING SIDDAPPA	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
35.	4AL15ME049	MAHESH RAJU V	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
36.	4AL15ME050	MANISH	✓	✓	✓	✓	✓	✓	✓	✓	A	✓	✓
37.	4AL15ME051	MANOJ	✓	✓	✓	✓	A	✓	✓	✓	✓	✓	✓
38.	4AL15ME052	MANOJ KUMAR N S	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
39.	4AL15ME103	SUDARSHAN	✓	✓	✓	✓	✓	✓	✓	✓	A	✓	✓
40.	4AL15ME054	MAYYADDIN NAVEED	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
41.	4AL15ME055	MOHAMMED ILIYAZ	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
42.	4AL15ME056	MOINODIN SHA	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
43.	4AL15ME058	MUTTAPPA B KAMATI	✓	✓	✓	✓	✓	✓	✓	✓	✓	A	✓
44.	4AL15ME060	NANDISH KUMAR J N	✓	✓	✓	A	✓	✓	✓	✓	✓	✓	✓
45.	4AL15ME061	NAVEEN KUMAR S	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
46.	4AL15ME062	NIKHIL Y J	A	✓	✓	✓	✓	A	A	✓	✓	✓	✓
47.	4AL15ME063	NITHIN KUMAR N G	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

  
Coordinator

  
HOD



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## DEPARTMENT OF MECHANICAL ENGINEERING

48.	4AL15ME064	PAVAN KUMAR B C	✓	✓	✓	A	✓	✓	✓	✓	✓	✓
49.	4AL15ME065	PRANAVATHEERTHA K G	✓	✓	A	✓	✓	A	✓	✓	✓	✓
50.	4AL15ME066	PRASANNA S	✓	✓	✓	✓	A	✓	✓	✓	✓	A
51.	4AL15ME067	PRASHANT	✓	✓	✓	✓	✓	✓	A	✓	✓	✓
52.	4AL15ME068	ANIKET H	✓	A	✓	✓	✓	✓	✓	A	✓	✓
53.	4AL15ME069	RAJATH	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
54.	4AL15ME070	RAMYASHREE	✓	✓	✓	✓	✓	✓	A	✓	✓	✓
55.	4AL15ME071	RAVI SHIROSHI	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
56.	4AL15ME072	ROHAN N	✓	✓	✓	✓	✓	✓	✓	A	✓	✓
57.	4AL15ME073	ROSHAN MANOJ A K	✓	✓	✓	✓	✓	A	✓	✓	A	✓
58.	4AL15ME075	SANJAY	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
59.	4AL15ME076	SHETTY SIDDHARTH	✓	✓	A	✓	✓	✓	✓	✓	✓	✓
60.	4AL15ME078	SHREEDHAR	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
61.	4AL15ME079	SHRIDHAR G C	✓	✓	✓	✓	A	✓	✓	✓	✓	✓
62.	4AL15ME080	SHRIDHAR PREMSING	A	✓	✓	✓	✓	✓	✓	✓	✓	✓
63.	4AL15ME081	SUNIL D R	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
64.	4AL15ME082	THIPPESHA B N	✓	A	✓	✓	✓	✓	✓	✓	✓	✓
65.	4AL15ME083	UDIT PRAVEEN M	✓	✓	✓	✓	✓	✓	✓	✓	✓	A
66.	4AL15ME085	VEERENDRA S	✓	✓	✓	✓	✓	A	✓	✓	✓	✓
67.	4AL15ME087	VIDISH SHETTY	✓	✓	✓	✓	✓	✓	A	✓	✓	✓
68.	4AL15ME089	VINAY S N	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
69.	4AL15ME091	VIRAL B	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
70.	4AL15ME092	VIRUPAKSHI S	✓	✓	✓	✓	A	✓	✓	✓	✓	✓
71.	4AL15ME093	VISHAL G K	✓	✓	✓	✓	✓	A	✓	✓	✓	✓

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## DEPARTMENT OF MECHANICAL ENGINEERING



72.	4AL15ME094	VISHAL NAGENDRA C	✓	✓	✓	A	A	✓	✓	✓	✓	✓
73.	4AL15ME095	VISHAL R KALGUTKAR	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
74.	4AL15ME096	YANKAPPA KUMBAR	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
75.	4AL16ME400	ADARSH J	✓	✓	✓	✓	✓	✓	✓	✓	A	✓
76.	4AL16ME403	ARUNKUMAR S	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
77.	4AL16ME404	BHUSHAN	✓	✓	✓	✓	✓	✓	A	✓	✓	✓
78.	4AL16ME406	DEEPAK H A	✓	✓	✓	✓	✓	✓	✓	A	✓	✓
79.	4AL16ME407	DEEPAK	A	✓	✓	✓	✓	✓	✓	✓	✓	✓
80.	4AL16ME408	DHARMAVEERA B M	✓	✓	✓	✓	✓	✓	✓	✓	✓	A
81.	4AL16ME001	ABDUL RAHIM	✓	✓	A	✓	✓	✓	✓	✓	✓	✓
82.	4AL16ME005	AKASH PANKAJ	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
83.	4AL16ME026	MANISH HEGDE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
84.	4AL16ME034	MOUNESH	✓	✓	A	A	✓	✓	✓	✓	✓	✓
85.	4AL16ME039	NIHAL RAJEEV N	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
86.	4AL16ME106	PAVAN KUMAR R	✓	✓	✓	✓	✓	✓	✓	✓	✓	A
87.	4AL16ME055	RAKESH SHETTY	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
88.	4AL16ME101	MANOJ B	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
89.	4AL16ME706	CHANDRASHEKHAR	✓	✓	✓	✓	A	A	✓	✓	✓	✓
90.	4AL16ME707	FAKKIRESH	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
91.	4AL16ME715	MOHAMMED SOHAIL	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
92.	4AL17ME001	ABDUL RAHIMAN	✓	✓	✓	✓	✓	A	✓	A	✓	✓
93.	4AL17ME002	ABHIJITH	A	✓	✓	✓	✓	✓	✓	✓	✓	✓
94.	4AL17ME003	ADITHYA NAYAK	✓	✓	✓	✓	✓	✓	✓	✓	A	✓
95.	4AL17ME005	ADITHYA RATHORE	✓	✓	A	A	✓	✓	✓	✓	✓	✓
96.	4AL17ME007	AKSHAY KULAL	✓	A	✓	✓	✓	✓	A	✓	✓	✓

Coordinator

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**Phone: 08258-262725, Fax: 08258-262726**

## DEPARTMENT OF MECHANICAL ENGINEERING

97.	4AL17ME008	AKSHAY KUMAR S	V	L	V	L	V	L	V	L	V	L	V
98.	4AL17ME009	ALISAB MAHAMADSAB	V	V	V	A	V	L	V	L	V	L	V
99.	4AL17ME010	ANSON DMELLO	A	V	L	L	V	V	L	V	L	V	V
100.	4AL17ME012	ARJUN R	L	A	V	V	L	V	L	V	V	V	V
101.	4AL17ME013	ASHUTOSH R S	L	V	A	V	V	V	V	V	V	V	V
102.	4AL17ME014	ASWIN THANKACHAN	V	L	L	L	L	L	L	L	L	L	L
103.	4AL17ME017	CHANDANA G S	V	L	A	L	V	L	L	L	L	L	L
104.	4AL17ME018	CHARAN M S	V	V	L	V	L	L	V	V	V	V	V
105.	4AL17ME019	CHINMAY GANESH K	V	L	L	L	L	L	L	A	L	L	V
106.	4AL17ME020	CHIRAG K R	V	L	L	L	L	L	L	V	L	V	A
107.	4AL17ME021	DEVARAJ P	V	L	L	L	L	L	L	L	L	L	V
108.	4AL17ME022	GIRISH L	L	L	L	V	A	L	L	L	V	L	V
109.	4AL17ME023	GURURAJ	V	L	L	L	L	L	L	L	L	L	V
110.	4AL17ME024	HARSHAVARDHANA A	V	L	L	L	L	L	L	V	L	L	A
111.	4AL17ME025	HARSHITH G B	V	L	L	L	L	L	A	L	L	L	V
112.	4AL17ME026	HEMANTH P	V	L	L	L	L	L	L	L	V	A	V
113.	4AL17ME027	HUSENBASHA	A	V	L	L	L	L	L	L	V	V	V
114.	4AL17ME028	INAMDAR PAVAN R	V	L	L	L	L	L	L	V	L	L	L
115.	4AL17ME030	KARAN H S	V	L	L	L	L	A	L	L	L	L	V
116.	4AL17ME031	KARTHIK PRABHU	V	L	L	L	L	L	L	L	L	L	V
117.	4AL17ME032	KISHOR H H	V	L	L	A	L	L	L	L	L	L	V
118.	4AL17ME033	KUNDER VIKRANT V	V	L	V	V	V	V	V	V	V	V	V
119.	4AL17ME034	LAXAMANNAB HEBBAL	V	L	L	L	L	L	L	A	L	V	V
120.	4AL17ME036	MITHESH GOWDA J R	V	A	V	V	L	V	V	V	V	V	V

**Coordinator**

HoD





# ALVA'S INSTITUTE OF ENGINEERING AND TECHNOLOGY

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## DEPARTMENT OF MECHANICAL ENGINEERING

### Quiz on Additive manufacturing & 3D printing work Course

1. Which one is NOT related to rapid prototyping definition?
  - a. layer by layer
  - b. physical model
  - c. from 3D CAD data
  - d. production line
2. Which one of the process is NOT using laser?
  - a. LOM
  - b. SLA
  - c. SLS
  - d. FDM
3. Which of the following are the process in RP cycle?
  - a. Post-processing
  - b. Transfer to machine
  - c. Pre-processing
  - d. All of the answers
4. Which of the process is available in colours?
  - a. SLA
  - b. FDM
  - c. MJM
  - d. 3D Printer
5. What is the full name of SLS?
  - a. Selective Laser Simulator
  - b. Sintering Laser Simulator
  - c. Selective Laser Sintering
  - d. Stereolithography Laser Sintering
6. What are the other name of Multi Jet Modeling?
  - a. FDM
  - b. Poly Jet
  - c. 3D Printer
  - d. Extrusion
7. Which one is the design process?
  - a. Build
  - b. Concept
  - c. Pre-processing
  - d. Transfer to machine
8. What is the format for prototyping machine file?
  - a. .prt
  - b. .slt
  - c. .stl
  - d. .iges
9. Which CAD software can not be used to create data for prototyping machine?
  - a. CREO
  - b. CATIA
  - c. NX UniGraphics
  - d. Adobe Illustrator
10. Which one of the process is subtractive prototyping?
  - a. 5 axis CNC Milling
  - b. Fused Deposition Modeling
  - c. Multi Jet Modeling
  - d. Stereolithography Apparatus
11. Which of the process, the input material are in solid form?
  - a. SLA
  - b. SLS
  - c. FDM
  - d. MJM
12. Which of the process, the input material are in liquid form?
  - a. LOM
  - b. SLS
  - c. FDM
  - d. MJM
13. Which material is NOT available for LOM process?
  - a. Paper
  - b. Plastic
  - c. Metal
  - d. Glass



**Quiz on Additive manufacturing & 3D printing work Course**

14. Which of the following is NOT the colour binder of 3D Printer?

- a. Cyan
- b. Black
- c. Magenta
- d. Yellow

15. Which of the following is the process of pre-processing stage?

- a. Remove support
- b. Checking 3D CAD data
- c. De-powdering loose material
- d. Dip in binder to strengthen the part





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## DEPARTMENT OF MECHANICAL ENGINEERING

### FEEDBACK FORM

Five days Students Training Program

On

### "Additive Manufacturing & 3D printing"

For the following areas, please indicate your rating from 1 to 5:

1=strongly Disagree 2=Disagree 3=neither agree nor disagree 4=Agree 5=strongly Agree

SN	Topics	1	2	3	4	5
<b>A.</b>	<b>Content</b>					
1	Understood the basics fabrication work					✓
2	Understood the fundamental of different application					✓
3	Able to apply the techniques for the problems at the hand.					✓
4	Understood the fundamentals of different materials				✓	
5	Able to do practical work					✓
<b>B.</b>	<b>Presentation</b>					
6	Instructor's knowledge					✓
7	Instructor's presentation style					✓
8	Instructor covered material clearly					✓
9	Instructor responded well to questions					✓
10	Instructor facilitated interactions among participants well					✓
<b>C. How could this workshop be improved?</b> <div>— M —</div>						
<b>D. Any other comments or suggestions?</b> <div>— M —</div>						
<b>E. Overall, how would you rate this workshop?</b>						
<input type="checkbox"/>	Poor			Good		
<input type="checkbox"/>	Neither Good Nor Poor			✓ Excellent		



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## DEPARTMENT OF MECHANICAL ENGINEERING

### Report on Additive manufacturing and 3D printing

The department of ME conducted a Five Days hands on students training program for the students of ME from 16-07-2018 to 20-07-2018 on "Additive manufacturing and 3D printing" at AIET Moodbidri.

Mr. Sreekanth M P & Mr.Suresh P S, Department of Mechanical Engineering AIET, Moodbidri delivered a comprehensive and in depth information about the Fundamentals Additive manufacturing and 3D printing, Techniques, Applications. Participants have enthusiastically participated and learnt the application building.

Photo







# INSTITUTE OF ENGINEERING & TECHNOLOGY MOODBIDRI

A Unit of Alva's Education Foundation®  
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Shobhavana Campus, Mijar, Moodbidri DK Karnataka-574225

**DEPARTMENT MECHANICAL ENGINEERING**

## *Certificate*

*This is to certify that Mr./Ms.....bearing the  
USN ..... from ..... has attended  
the Students Workshop Program on “ADDITIVE  
MANUFACTURING AND 3D PRINTING” from 16 JULY  
2018 to 20 JULY 2018*

**Mr. Hemanth S**  
Coordinator

Head of the Department  
Mechanical Engineering

**Dr. Peter Fernandes**  
Principal  
AIET Moodbidri