

<b>Discipline: Mechanical Engineering</b>	<b>Semester : 6<sup>th</sup> Semeste</b>	<b>Name of the Teaching Faculty: Shri. SHEKHAR KUMAR SAHU</b>
<b>Subject: Project phase II</b>	<b>No. of Days/week Class Allotted: 60</b>	<b>No of weeks: 18</b>
<b>week</b>	<b>Class Day</b>	<b>Practical Topics</b>
1 <sup>st</sup>	1 <sup>st</sup>	Building of structures of 3d printer
	2 <sup>nd</sup>	Base making
2 <sup>nd</sup>	1 <sup>st</sup>	Base making
	2 <sup>nd</sup>	Making Vertical column 1 &2
3 <sup>rd</sup>	1 <sup>st</sup>	Making Vertical column 3 & 4
	2 <sup>nd</sup>	Making horizontal beam 1 , 2 ,3 & 4
4 <sup>th</sup>	1 <sup>st</sup>	Making horizontal beam 5 ,6 , 7 & 8
	2 <sup>nd</sup>	Lead screw making
5 <sup>th</sup>	1 <sup>st</sup>	Lead screw making
	2 <sup>nd</sup>	Brass nut making
6 <sup>th</sup>	1 <sup>st</sup>	Brass nut making
	2 <sup>nd</sup>	Arduino coding to convert stl or obj file to 3d printer g-code
7 <sup>th</sup>	1 <sup>st</sup>	Arduino coding to convert stl or obj file to 3d printer g-code
	2 <sup>nd</sup>	Arduino coding to convert stl or obj file to 3d printer g-code
8 <sup>th</sup>	1 <sup>st</sup>	Arduino coding to convert stl or obj file to 3d printer g-code
	2 <sup>nd</sup>	Assembly of base , columns and beams
9 <sup>th</sup>	1 <sup>st</sup>	Extruder installation
	2 <sup>nd</sup>	Installation of stepper motor for x axis
10 <sup>th</sup>	1 <sup>st</sup>	Installation of stepper motor for y axis
	2 <sup>nd</sup>	Installation of stepper motor for z axis
11 <sup>th</sup>	1 <sup>st</sup>	Installation of feeder with stepper motor
	2 <sup>nd</sup>	Installation of Timing belt and pulley for x axis
12 <sup>th</sup>	1 <sup>st</sup>	Connect the z axis stepper motor with the bed
	2 <sup>nd</sup>	Bed heating element fitting with sensors
13 <sup>th</sup>	1 <sup>st</sup>	Making electrical connection between arduino , smps , all stepper motors and drivers , and heat sensors
	2 <sup>nd</sup>	Ardiono coding to control temperature of bed and extruder
14 <sup>th</sup>	1 <sup>st</sup>	Running the first stl file for smooth functioning and error finding
	2 <sup>nd</sup>	Checking of x , y and z axis movement and feeder feeding rate
15 <sup>th</sup>	1 <sup>st</sup>	Finding and Rectifying the error in feeder feeding rate
	2 <sup>nd</sup>	Running first stl code for a double threaded bolt and nut
16 <sup>th</sup>	1 <sup>st</sup>	Making a spur gear

	2 <sup>nd</sup>	Making a helical gear
17 <sup>th</sup>	1 <sup>st</sup>	Report writing
	2 <sup>nd</sup>	Report writing
18 <sup>th</sup>	1 <sup>st</sup>	Report writing
	2 <sup>nd</sup>	Viva