

<b>Discipline : Mechanical Engineering</b>	<b>Semester : 5<sup>th</sup> Semester</b>	<b>Name of the Teaching Faculty: Shri. SHEKHAR KUMAR SAHU</b>
<b>Subject: Project &amp; Seminar</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>	Group Discussion 1 : Discussion on some topics with essential Questions
	2 <sup>nd</sup>	Group Discussion 2 : Discussion on some topics with essential Questions
2 <sup>nd</sup>	1 <sup>st</sup>	Group Discussion 3 : Discussion on some topics with essential Questions
	2 <sup>nd</sup>	Selection of making a 3d printer
3 <sup>rd</sup>	1 <sup>st</sup>	Work load distribution to the students
	2 <sup>nd</sup>	Collecting Data on different type 3d printers
4 <sup>th</sup>	1 <sup>st</sup>	Collecting Data on different type 3d printers
	2 <sup>nd</sup>	Collecting the datasheet of Types of Arduino
5 <sup>th</sup>	1 <sup>st</sup>	Collecting the datasheet of Types of Arduino
	2 <sup>nd</sup>	Collecting the data sheet of stepper motors and drivers
6 <sup>th</sup>	1 <sup>st</sup>	Collecting the data sheet of stepper motors and drivers
	2 <sup>nd</sup>	Collecting the data sheet of stepper motors and drivers
7 <sup>th</sup>	1 <sup>st</sup>	Collecting the data sheet of stepper motors and drivers
	2 <sup>nd</sup>	Making a model on Autocad
8 <sup>th</sup>	1 <sup>st</sup>	Making a model on Autocad
	2 <sup>nd</sup>	Making a model on Autocad
9 <sup>th</sup>	1 <sup>st</sup>	Making a model on Autocad
	2 <sup>nd</sup>	Making a model on Autocad
10 <sup>th</sup>	1 <sup>st</sup>	Making a model on Autocad
	2 <sup>nd</sup>	Net weight calculation of the 3d printer
11 <sup>th</sup>	1 <sup>st</sup>	Timing belt and pulley material selection
	2 <sup>nd</sup>	Timing belt and pulley pitch and width calculation
12 <sup>th</sup>	1 <sup>st</sup>	Lead screw design and pitch calculation
	2 <sup>nd</sup>	Nut design ,load calculation
13 <sup>th</sup>	1 <sup>st</sup>	Load calculation on different stepper motors(torque calculation)
	2 <sup>nd</sup>	Load calculation on different stepper motors(torque calculation)
14 <sup>th</sup>	1 <sup>st</sup>	Electrical loads such as voltage and current calculation
	2 <sup>nd</sup>	Electrical loads such as voltage and current calculation
15 <sup>th</sup>	1 <sup>st</sup>	Slection of arduino , stepper motor and smps
	2 <sup>nd</sup>	Selection of lead screw material
16 <sup>th</sup>	1 <sup>st</sup>	Selection of beam materials

	2 <sup>nd</sup>	Collecting datasheet of different filament materials
17 <sup>th</sup>	1 <sup>st</sup>	Selecting PLA as filament material
	2 <sup>nd</sup>	Material selection
18 <sup>th</sup>	1 <sup>st</sup>	Material selection
	2 <sup>nd</sup>	Selecting PLA as filament material