

# **LESSON PLAN**

**SUB:- SIMULATION PRACTICE ON MATLAB**

**BRANCH:- ELECTRICAL ENGG.**

**SEMESTER:-4<sup>TH</sup>**

**NAME OF FACULTY:- DHARMENDRA SAHOO**



**GOVERNMENT POLYTECHNIC,  
BHADRAK**

<b>Sl. No.</b>	<b>Topic</b>	<b>Expected Date of Completion</b>	<b>Actual Date of Completion</b>	<b>Teaching Learning Process</b>
	<b>Introduction to MATLAB programming:</b>			
<b>1.</b>	Functions and operation using variables and arrays. To learn Algebraic Function			
<b>2.</b>	Functions and operation using variables and arrays. To learn trigonometric Function.			
<b>3.</b>	Functions and operation using variables and arrays. To learn exponential Function.			
<b>4.</b>	To learn Arithmetic operator			
<b>5.</b>	To learn Relational and Logic operator			
<b>6.</b>	Matrix formation and its manipulation			
<b>7.</b>	Vector manipulation: Use of linspace to create vectors			

<b>8.</b>	To create, add and multiply vectors. Use of sin and sqrt functions with vector arguments.			
<b>9.</b>	Use of sin and sqrt functions with vector arguments			
<b>10.</b>	Two dimensional Plots and sub plots			
<b>11.</b>	Two dimensional Plots and sub plots			
<b>12.</b>	Label the plot and printing. Write and execute a file to plot a circle, impulse, step, ramp, and sine and cosine functions.			
<b>13.</b>	Write and execute a file to plot a circle, impulse, step, ramp, and sine and cosine functions.			
<b>14.</b>	<b>Introduction to SIMULINK:</b>			
<b>15.</b>	Use of Commonly used blocks, Math operation block and Display block from SIMULINK library.			
<b>16.</b>	Use of logical and relational operator block.			
<b>17.</b>	Use of Sim-Power system block to use Electrical sources, elements and Power electronics devices			
<b>18.</b>	Use of Sim-Power system block to use Electrical sources, elements and Power electronics devices			
<b>19.</b>	Verification of Network theorems.			
<b>20.</b>	Verification of Network theorems.			
<b>21.</b>	Simulation of a half wave uncontrolled rectifier. Simulation of 1-phase full bridge controlled rectifier.			

<b>22.</b>	Simulation of step-down chopper.			