Name:	Grading Quarter:	Week Beginning:	
Robert Lefrandt	4	05/05/2025	
School Year: 2024-25	Subject: Automation a	& Robotics/Engineering	

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Mc	Notes:	Monday:	Academic
Monday	Robotic	Apply basic engineering principles and technical skills for artificial	Standards:
ay	Assemblies	intelligent management the principles of robotics, design, operational	Arizono
	Mechtronic	testing, system maintenance, repair procedures, robot computer	Arizona
	Engineer:	systems, and control languages.	Department
	ReEngineer Reverse	(AZ CTE Automation & Robotics-Program Description)	of Education
	Engineering	PERFORM ELECTRICAL AND ELECTRONIC TASKS	Website:
	Structural	ANALYZE PROGRAMMABLE LOGIC CONTROLLER (PLC) SYSTEMS	
	Chassis	PERFORM DRAFTING TASKS-Make dimensional CAD drawings (2D/3D)	Program
	frame body	DESCRIBE THE OPERATION AND USE OF VARIOUS FORMS OR	Description/
	Mechanical	ELECTRICAL MOTORS	Industry
	(Motion)	Explain the operation and use of DC motors in automation controls	Credentials/
	Gear: Box,	PERFORM MECHANICAL SYSTEMS LINKAGES TASKS	Coherent
	train,	APPLY SENSOR SOLUTIONS	Sequence/
	parallel	DEMONSTRATE SAFE AND PROPER USE OF ELECTRONIC AND OTHER	www.azad.a
	(linear)	LABORATORY EQUIPMENT, TOOLS, AND MATERIALS	www.azed.g ov/cte/ar/
	stack	Lesson Overview: Workflow Process:	
	(vertical),	Level 1 Students:	www.azed.g
	ratio,	Login to VEX Certification Accounts:	ov/sites/defa
	torque	VEX V5 ,Block Programming, Python Programming, Workcell	ult/files/202
	speed	RemoteCotrol and building VEX V5Robots -Speedbot/Base Bot, Claw	1/06/Progra
	Mechtronic	Coding-Block/Python/C/C++	mDescription Automation
			AndRobotics.
	Electrical (Sensors : Bump/touch, Distance, Line Tracker, Camera , AI, Data Analysis	pdf
	Ohm's Law, Parallel/Seri	***Customizing Robots and Parts : After Completing 1 st Semester Skills	
		Level 2 Plus+ Students: Login to VEX Certification Accounts: (Complete	Az CTE Prof.
	al Circuits) Chemical	Certifications + Arduino/PCEP) -Testing RECF **Seniors This Wk5/5	Skills have 9
	e-chem	*Tinkercade(Autodesk)/PHET(Physics-Engineering-Tech) Univ-Colorado	areas of measuremnt
	Physical	3D Modeling, <mark>Electric circuits</mark> , <mark>Arduino IDE – C/Python Code</mark>	Notes Conti:
	Magnetism Batteries Software	Protyping: 2D Sketch > 3D Modeling > 3D Settings > 3D Printing	PhysComp
		Inkscape > Tinkercad > Ultimaker Cura (Settings) > Ultimaker	Embedded
		(Print)*Autodesk Fusion 360/Solidworks: Combine 2d Sketch/3D	smart, IIOT
	Block	Manual/Traditional - Mill and Drill , CNC/G/M Code	Al ,Data
	PLC ladder	Raspberry Pi – Pico Kit -Bluetooth/WiFi, Python Precision Machining	Collect Data
	logic, CNC,	CAD/CAM : 3D Printing	Analyze Data
	Python, C++		MachinLearn
	Sensors	Competitions: See Software App Design - FabLab/Engineering:	Collaborate
	touch, Dist	vr.vex.com-coding top6 in AZ	schools,
	Light, Camera	vr.vex.com: virtual Robotics-Coding: Block/Python Text-High Stakes	Industry
	Curreru	Other: Racing the Sun (RTS) *See FabLab- <mark>Maker Div.Awards: Rookie,</mark> Endurance	Community

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Tue	<u>Notes:</u>	Objective:	Academic
Tuesday	Robotic Assemblies	Apply basic engineering principles and technical skills for artificial	Standards:
γe	Mechtronic	intelligent management the principles of robotics, design, operational	Arizona
	Wieentronie	testing, system maintenance, repair procedures, robot computer	Department
	Engineer:	systems, and control languages.	of
	ReEngineer Reverse	(AZ CTE Automation & Robotics-Program Description)	Education Website:
	Engineering	PERFORM ELECTRICAL AND ELECTRONIC TASKS	website.
	Structural	ANALYZE PROGRAMMABLE LOGIC CONTROLLER (PLC) SYSTEMS	Program
	Chassis frame body	PERFORM DRAFTING TASKS-Make dimensional CAD drawings (2D/3D)	Description/
	frame body Mechanical	DESCRIBE THE OPERATION AND USE OF VARIOUS FORMS OR	Industry
	(Motion)	ELECTRICAL MOTORS	Credentials/
	Gear: Box,	Explain the operation and use of DC motors in automation controls	Coherent
	train,	PERFORM MECHANICAL SYSTEMS LINKAGES TASKS	Sequence/
	parallel	APPLY SENSOR SOLUTIONS	
	linear)	DEMONSTRATE SAFE AND PROPER USE OF ELECTRONIC AND OTHER LABORATORY EQUIPMENT, TOOLS, AND MATERIALS	www.azed.g
	stack	Laboratori Egoli Mellit, 10063, AND MATERIALS	ov/cte/ar/
	(vertical),	Level 1 Students:	www.azed.g
	ratio,	Login to VEX Certification Accounts:	ov/sites/defa
	torque	VEX V5 ,Block Programming, Python Programming, Workcell	ult/files/202
	speed	RemoteCotrol and building VEX V5Robots -Speedbot/Base Bot, Claw	1/06/Progra
	Electrical (mDescription
	Ohm's Law,	Coding-Block/Python/C/C++	_Automation AndRobotics.
	Parallel/Seri	Sensors :Bump/touch, Distance, Line Tracker, Camera, , AI, Data Analysis	pdf
	al Circuits)	***Customizing Robots and Parts : After Completing 1 st Semester Skills	b α.
	Chemical	Level 2 Plus+ Students: Login to VEX Certification Accounts: (Complete	Az CTE Prof.
	e-chem	Certifications + Arduino/PCEP)-Testing RECF **Seniors This Wk5/5	Skills have 9
	Physical	*Tinkercade(Autodesk)/PHET(Physics-Engineering-Tech) Univ-Colorado	areas of measuremnt
	Magnetism	3D Modeling, <mark>Electric circuits</mark> , <mark>Arduino IDE – C/Python Code</mark>	measuremme
	Batteries		<u>Notes Conti:</u>
	Software	Protyping: 2D Sketch > 3D Modeling > 3D Settings > 3D Printing	AI ,Data
	Block	Inkscape > Tinkercad > Ultimaker Cura (Settings) > Ultimaker	Collect Data
	PLC ladder	(Print)*Autodesk Fusion 360/Solidworks: Combine 2d Sketch/3D	Analyze Data
	logic, CNC,	Manual/Traditional - Mill and Drill , CNC/G/M Code	MachinLearn
	Python, C++	Raspberry Pi – Pico Kit -Bluetooth/WiFi, Python Precision Machining	Collaborate
	Sensors	CAD/CAM : 3D Printing	schools,
	touch, Dist		Industry
	Light,	Competitions: See Software App Design - FabLab/Engineering:	Community
	Camera	vr.vex.com-coding top6 in AZ	,
	PhysComp	vr.vex.com: virtual Robotics-Coding: Block/Python Text-High Stakes	
	Embedded	Other: Racing the Sun (RTS) *See FabLab-Maker Div.Awards: Rookie,	
	smart, IIOT	Endurance	

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edn	Robotic	Apply basic engineering principles and technical skills for artificial	Standards:
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	Gear: Box,	Explain the operation and use of DC motors in automation controls	Coherent
	train,	PERFORM MECHANICAL SYSTEMS LINKAGES TASKS	Sequence/
	parallel	APPLY SENSOR SOLUTIONS DEMONSTRATE SAFE AND PROPER USE OF ELECTRONIC AND OTHER	
	(linear)	LABORATORY EQUIPMENT, TOOLS, AND MATERIALS	www.azed.g
	stack	Lesson Overview: Workflow Process:	ov/cte/ar/
	(vertical),	Level 1 Students:	www.azed.g
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	Batteries Software	Protyping: 2D Sketch > 3D Modeling > 3D Settings > 3D Printing	<u>Notes Conti:</u> AI ,Data
	Block	Inkscape > Tinkercad > Ultimaker Cura (Settings) > Ultimaker	Collect Data
	PLC ladder	(Print)*Autodesk Fusion 360/Solidworks: Combine 2d Sketch/3D	Analyze Data
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	parallel	DEMONSTRATE SAFE AND PROPER USE OF ELECTRONIC AND OTHER	
	(linear)	LABORATORY EQUIPMENT, TOOLS, AND MATERIALS	www.azed.g
	stack	Lesson Overview: Workflow Process:	ov/cte/ar/
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	Python, C++	Raspberry Pi – Pico Kit -Bluetooth/WiFi, Python Precision Machining	schools,
	Sensors	CAD/CAM : 3D Printing	Inductor
	touch, Dist	Competitions: See Software App Design - FabLab/Engineering:	Industry Community
	Light,	vr.vex.com-coding top6 in AZ	community
	Camera PhysComp	vr.vex.com: virtual Robotics-Coding: Block/Python Text-High Stakes	
	Embedded		
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	-,	Endurance	

Frio	Notes:	Objective: No School	Academic
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	Ohm's Law,	Sensors :Bump/touch, Distance, Line Tracker, Camera, , AI, Data Analysis	AndRobotics.
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	Batteries	Protyping: 2D Sketch > 3D Modeling > 3D Settings > 3D Printing	Notes Conti:
	Software		PhysComp
	Block/PLC	Inkscape > Tinkercad > Ultimaker Cura (Settings) > Ultimaker (Print)*Autodesk Fusion 360/Solidworks: Combine 2d Sketch/3D	Embedded smart, IIOT
	ladder		Al ,Data
	logic, CNC,	Manual/Traditional - Mill and Drill , CNC/G/M Code	Collect Data
	Python, C++	Raspberry Pi – Pico Kit -Bluetooth/WiFi, Python Precision Machining	Analyze Data
	Sensors	CAD/CAM : 3D Printing	MachinLearn
	bump/touc	Competitions: See Software App Design - FabLab/Engineering:	Collaborate
	h DistLight,		schools,
	Camera	vr.vex.com-coding top6 in AZ	Industry
		vr.vex.com: virtual Robotics-Coding: Block/Python Text-High Stakes	Community
		Other: Racing the Sun (RTS) *See FabLab- <mark>Maker Div.Awards: Rookie,</mark> Endurance	- ···· /