| Name: | Grading Quarter: | Week Beginning: |
|----------------------|--|-----------------|
| Robert Lefrandt | 1 | 10/14/2024 |
| School Year: 2024-25 | Subject: Automation & Robotics/Engineering | |

| _ | Notes: | Teacher Professional Development | Academic |
|--------|-------------------------|--|-----------------------------|
| Monday | Robotic | Objective: | Standards: |
| ndav | Assemblies | Apply basic engineering principles and technical skills for artificial | |
| < | Mechtronic | intelligent management the principles of robotics, design, operational | Arizona |
| | Faginoori | testing, system maintenance, repair procedures, robot computer | Department |
| | Engineer: ReEngineer | systems, and control languages. | of |
| | Reverse | | Education |
| | Engineering | (AZ CTE Automation & Robotics-Program Description) | Website: |
| | Structural | PERFORM ELECTRICAL AND ELECTRONIC TASKS | 5 |
| | Chassis | ANALYZE PROGRAMMABLE LOGIC CONTROLLER (PLC) SYSTEMS | Program |
| | frame body | PERFORM DRAFTING TASKS-Make dimensional CAD drawings (e.g., 2D | Description/ Industry |
| | Mechanical | and 3D) | Credentials/ |
| | (Motion) Gear: Box, | DESCRIBE THE OPERATION AND USE OF VARIOUS FORMS OR | Coherent |
| | train, | ELECTRICAL MOTORS | Sequence/ |
| | parallel | Explain the operation and use of DC motors in automation controls | |
| | (linear) | PERFORM MECHANICAL SYSTEMS LINKAGES TASKS APPLY SENSOR SOLUTIONS | www.azed.g |
| | stack | DEMONSTRATE SAFE AND PROPER USE OF ELECTRONIC AND OTHER | ov/cte/ar/ |
| | (vertical), | LABORATORY EQUIPMENT, TOOLS, AND MATERIALS | |
| | ratio, | Lesson Overview: Workflow Process: | www.azed.g ov/sites/defa |
| | torque | Level 1 Students: | ult/files/202 |
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| | | VEX V5 ,Block Programming, Python Programming, Workcell | mDescription |
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| | al Circuits) | ***Customizing Robots and Parts : After Completing 1 st Semester Skills | Skills have 9 |
| | Chemical | Level 2 Plus+ Students: | areas of |
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| | Physical | Arduino/PCEP) | Notes Conti: |
| | Magnetism Batteries | Tinkercade(Autodesk)/PHET(Physics-Engineering-Tech) Univ-Colorado | PhysComp |
| | Software | 3D Modeling, Electric circuits, Arduino IDE – C/Python Code | Embedded |
| | Block | Protyping: 2D Sketch > 3D Modeling > 3D Settings > 3D Printing | smart, IIOT AI ,Data |
| | PLC ladder | Inkscape > Tinkercad > Ultimaker Cura (Settings) > Ultimaker | Collect Data |
| | logic, CNC, | (Print)*Autodesk Fusion 360/Solidworks: Combine 2d Sketch/3D | Analyze Data |
| | Python, C++ | Modeling | MachinLearn |
| | Sensors | Manual/Traditional - Mill and Drill , CNC –ComputerNumeric Control – | Collaborate |
| | touch, Dist | G/M Code | schools, |
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