Name: Robert Lefrandt	Grading Quarter: 4	Week Beginning: Wk5 04/15/2024
School Year: 2023-24	Subject: Automation & Robotics	

Monday

Notes:

Notes:

Robotic Assemblies Mechtronics

Engineering: ReEngineering Reverse Engineering

Structural Chassis frame body

Mechanical (Motion) Gear: Box, train, parallel (linear) stack (vertical), ratio, torque speed

Electrical (Ohm's Law, Parallel/Serial Circuits) Chemical electrochemical

Physical Magnetism Batteries

Software Block PLC ladder logic, CNC, Python, C++,

Sensors Bump/touchDistance Light Camera

Physical Computing

AI Data Collect DataAnalyze

Collaborate with schools, 'Industry ProfessionalCommunity

NASA, Honeywell

04/15/2024 BRHS Robotics –

Objective:
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(AZ CTE Automation & Robotics-Program Description)

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- ANALYZE PROGRAMMABLE LOGIC CONTROLLER (PLC) SYSTEMS ***& (Block, C/C++, Python)***
- PERFORM DRAFTING TASKS-Make dimensional CAD drawings (e.g., 2D and 3D)
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- **Autodesk Tinkercad Team Fusion 360/Solidworks**: Combine 2d Sketch/3D Modeling
- Arduino R4 W (C/C++)/Raspberry Pi – Pico Bluetooth/WiFi (Python)
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Precision Machining :

- Manual/Traditional - Mill and Drill , **Pen Kit**
- CNC –ComputerNumeric Control –G/M Code
  - **eXpertMill VMC-0600 Milling Machine**
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Academic Standards:

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Arizona Department of Education Website:

Program Description/Industry Credentials/Coherent Sequence/

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04/16/2024 -

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