

Name: Robert Lefrandt	Grading
School Year: 2023-24	Subject: Automation & Robotics

Monday	<p>Notes:</p> <p>Robotic Assemblies Mechtronics</p> <p><u>Engineering:</u> Structural Chassis frame body</p> <p>Mechanical (Motion) Gear: Box, train, parallel (linear) stack (vertical), ratio, torque speed</p> <p>Electrical Chemical electrochemical</p> <p>Physical Magnetism Batteries</p> <p>Software Block PLC ladder logic, CNC, Python, C++,</p> <p>Sensors Bump/touchDistance Light Camera</p> <p>Physical Computing</p> <p>AI Data Collect DataAnalyze</p>	<p>08/21/2023 -Monday - 4th Week</p> <p>Objective: Apply basic engineering principles and technical skills for... artificial intelligent management ...the control languages.</p> <p>https://live-az-ade.pantheonsite.io/sites/default/files/2021/06/ProgramDescription_AutomationAndRobotics.pdf</p> <p>STANDARD 10.0 APPLY SENSOR SOLUTIONS</p> <p>10.1 Select sensors for use in a feedback control loop</p> <p>10.2 Construct and operate a system with a feedback control loop</p> <p>10.3 Calibrate sensors</p> <p>10.4 Gather and statistically analyze performance data on a control loop 10.5 Explain analog to dig</p> <p>https://www.azed.gov/sites/default/files/2021/01/AutomationandRoboticsTSs48050020N.pdf</p> <p>Lesson Overview:</p> <p><u>1st Semester Students:</u></p> <ul style="list-style-type: none"> • Login to VEX Certification Accounts: • VEX V5 • Block Programming • Python Programming • Workcell <ul style="list-style-type: none"> ○ Continue building VEX V5 Robots ○ Speedbot/Base Bot ○ https://www.vexrobotics.com/v5/downloads/build-instructions <p>Coding-Block:</p> <ul style="list-style-type: none"> ○ https://vr.vex.com/ ○ https://codev5.vex.com/ <p>Sensors</p> <ul style="list-style-type: none"> ○ Bump/touch, Distance, Light, Camera ○ AI ○ Data Analysis <p><u>2nd Semester Plus+ Students:</u></p> <ul style="list-style-type: none"> ○ Login to VEX Certification Accounts: <ul style="list-style-type: none"> ○ VEX V5 ○ Block Programming ○ Python Programming ○ Workcell <p>Circuits/Electronics</p> <ul style="list-style-type: none"> • Cut cables • Snap Circuits kit(s) <ul style="list-style-type: none"> ○ Rechargeable batteries • Tinkercade <ul style="list-style-type: none"> ○ 3D Modeling ○ Electric circuits ○ Arduino IDE – C/Python Programming
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