| Name: | Grading Quarter: |
Robert Lefrandt	1
School Year: 2023-24	Subject: Automation & Robotics

	Notes:	08/07/2023
Monday	Robotic Assemblies Mechtronics Engineering: Structural Chassis frame body Mechanical (Motion) Gear: Box, train, parallel (linear) stack (vertical), ratio, torque speed Electrical Chemical Physical Magnetism Batteries Software Block PLC ladder logic, CNC, Python, C++, Sensors Physical Computing AI	Objective: Apply basic engineering principles and technical skills for... artificial intelligent management ...the principle control languages. https://live-az-ade.pantheonsite.io/sites/default/files/2021/06/ProgramDescription_AutomationAndRobotics.pdf Lesson Overview: 1st Semester Students: Login to VEX Certification Accounts Continue building VEX V5 Robots Speedbot/Basebot https://www.vexrobotics.com/v5/downloads/build-instructions 2ND Semester Plus+ Students: Login to VEX Certification Accounts Building VEX V5 Robots and customizing robots VEX V5 Parts (3D Print) Autodesk Tinkercad https://www.tinkercad.com/things/5zBduwCA6c9-vex-v5-parts VEX V5 and VEX Pro (CAD Files) https://www.vexrobotics.com/v5 https://www.vexrobotics.com/pro https://www.vexrobotics.com/v5/products/view-all/?q=__empty__&vex_site=cads&vex_m2_vexrobotics_cads%5BrefinementList%5D%5Bproduct_lines%5 Understanding VEX Classic and V5 Smart Motors https://kb.vex.com/hc/en-us/articles/360060929971-Understanding-V5-Smart-Motors https://wiki.purduesigbots.com/vex-electronics/vex-electronics/motors https://motors.vex.com/ https://motors.vex.com/introduction https://curriculum.vexrobotics.com/curriculum/speed-power-torque-and-dc-motors/classical-mechanics.h https://curriculum.vexrobotics.com/curriculum/speed-power-torque-and-dc-motors/dc-motors.html https://curriculum.vexrobotics.com/curriculum/speed-power-torque-and-dc-motors/simulate_and_size_a https://www.autodesk.com/education/edu-software/overview?sorting=featured&filters=individual https://motors.vex.com/brushed-brushless

		https://motors.vex.com/vexpro-motors

	Notes:	08/08/2023 - 2nd Week
Tuesday	Robotic Assemblies Mechtronics	Objective: Apply basic engineering principles and technical skills for... artificial intelligent management ...the principle control languages.
		https://live-az-ade.pantheonsite.io/sites/default/files/2021/06/ProgramDescription_AutomationAndRobotics.pdf
	Engineering: Structural Chassis frame body	
		Lesson Overview:
		1st Semester Students: Login to VEX Certification Accounts
	Mechanical (Motion) Gear: Box, train, parallel (linear) stack (vertical), ratio, torque speed	Continue building VEX V5 Robots Speedbot/Basebot https://www.vexrobotics.com/v5/downloads/build-instructions
		2nd Semester Plus+ Students: Login to VEX Certification Accounts Building VEX V5 Robots and customizing robots
		VEX V5 Parts (3D Print) Autodesk Tinkercad https://www.tinkercad.com/things/5zBduwCA6c9-vex-v5-parts
	Electrical Chemical Physical Magnetism Batteries	VEX V5 and VEX Pro (CAD Files) https://www.vexrobotics.com/v5 https://www.vexrobotics.com/pro
		https://www.vexrobotics.com/v5/products/view-all/?q=__empty__&vex_site=cads&vex_m2_vexrobotics_cads%5BrefinementList%5D%5Bproduct_lines%5
	Software Block PLC ladder logic, CNC, Python, C++,	Understanding VEX Classic and V5 Smart Motors https://kb.vex.com/hc/en-us/articles/360060929971-Understanding-V5-Smart-Motors
		https://wiki.purduesigbots.com/vex-electronics/vex-electronics/motors https://motors.vex.com/ https://motors.vex.com/introduction
	Sensors Physical Computing	https://curriculum.vexrobotics.com/curriculum/speed-power-torque-and-dc-motors/classical-mechanics.h
		https://curriculum.vexrobotics.com/curriculum/speed-power-torque-and-dc-motors/dc-motors.html
	AI	https://curriculum.vexrobotics.com/curriculum/speed-power-torque-and-dc-motors/simulate_and_size_a
		https://www.autodesk.com/education/edu-software/overview?sorting=featured&filters=individual
		https://motors.vex.com/brushed-brushless
		https://motors.vex.com/vexpro-motors

Wednesday	Notes: Robotic Assemblies Mechtronics <u>Engineering:</u> Structural Chassis frame body Mechanical (Motion) Gear: Box, train, parallel (linear) stack (vertical), ratio, torque speed Electrical Chemical Physical Magnetism Batteries Software Block PLC ladder logic, CNC, Python, C++, Sensors Physical Computing AI	08/09/2023 - 2nd Week Objective: Apply basic engineering principles and technical skills for... artificial intelligent management ...the principle control languages. https://live-az-ade.pantheonsite.io/sites/default/files/2021/06/ProgramDescription_AutomationAndRobotics.pdf Lesson Overview: <u>1st Semester Students:</u> Login to VEX Certification Accounts Continue building VEX V5 Robots Speedbot/Basebot https://www.vexrobotics.com/v5/downloads/build-instructions <u>2ND Semester Plus+ Students:</u> Login to VEX Certification Accounts Building VEX V5 Robots and customizing robots VEX V5 Parts (3D Print) Autodesk Tinkercad https://www.tinkercad.com/things/5zBduwCA6c9-vex-v5-parts VEX V5 and VEX Pro (CAD Files) https://www.vexrobotics.com/v5 https://www.vexrobotics.com/pro https://www.vexrobotics.com/v5/products/view-all/?q=__empty__&vex_site=cads&vex_m2_vexrobotics_cads%5BrefinementList%5D%5Bproduct_lines%5 Understanding VEX Classic and V5 Smart Motors https://kb.vex.com/hc/en-us/articles/360060929971-Understanding-V5-Smart-Motors https://wiki.purduesigbots.com/vex-electronics/vex-electronics/motors https://motors.vex.com/ https://motors.vex.com/introduction https://curriculum.vexrobotics.com/curriculum/speed-power-torque-and-dc-motors/classical-mechanics.h https://curriculum.vexrobotics.com/curriculum/speed-power-torque-and-dc-motors/dc-motors.html https://curriculum.vexrobotics.com/curriculum/speed-power-torque-and-dc-motors/simulate_and_size_a https://www.autodesk.com/education/edu-software/overview?sorting=featured&filters=individual https://motors.vex.com/brushed-brushless

		https://motors.vex.com/vexpro-motors

Thursday	Notes: Robotic Assemblies Mechtronics Engineering: Structural Chassis frame body Mechanical (Motion) Gear: Box, train, parallel (linear) stack (vertical), ratio, torque speed Electrical Chemical Physical Magnetism Batteries Software Block PLC ladder logic, CNC, Python, C++, Sensors Physical Computing AI	08/10/2023 - 2nd Week Objective: Apply basic engineering principles and technical skills for... artificial intelligent management ...the principle control languages. https://live-az-ade.pantheonsite.io/sites/default/files/2021/06/ProgramDescription_AutomationAndRobotics.pdf Lesson Overview: 1st Semester Students: Login to VEX Certification Accounts Continue building VEX V5 Robots Speedbot/Basebot https://www.vexrobotics.com/v5/downloads/build-instructions 2nd Semester Plus+ Students: Login to VEX Certification Accounts Building VEX V5 Robots and customizing robots VEX V5 Parts (3D Print) Autodesk Tinkercad https://www.tinkercad.com/things/5zBduwCA6c9-vex-v5-parts VEX V5 and VEX Pro (CAD Files) https://www.vexrobotics.com/v5 https://www.vexrobotics.com/pro https://www.vexrobotics.com/v5/products/view-all/?q=__empty__&vex_site=cads&vex_m2_vexrobotics_cads%5BrefinementList%5D%5Bproduct_lines%5 Understanding VEX Classic and V5 Smart Motors https://kb.vex.com/hc/en-us/articles/360060929971-Understanding-V5-Smart-Motors https://wiki.purduesigbots.com/vex-electronics/vex-electronics/motors https://motors.vex.com/ https://motors.vex.com/introduction https://curriculum.vexrobotics.com/curriculum/speed-power-torque-and-dc-motors/classical-mechanics.h https://curriculum.vexrobotics.com/curriculum/speed-power-torque-and-dc-motors/dc-motors.html https://curriculum.vexrobotics.com/curriculum/speed-power-torque-and-dc-motors/simulate_and_size_a https://www.autodesk.com/education/edu-software/overview?sorting=featured&filters=individual https://motors.vex.com/brushed-brushless https://motors.vex.com/vexpro-motors		

| Friday | Notes:

Robotic Assemblies Mechtronics

<u>Engineering:</u> Structural Chassis frame body

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

Electrical Chemical Physical Magnetism Batteries

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

Sensors Physical Computing

AI | 08/11/2023 - 2nd Week

Objective:
Apply basic engineering principles and technical skills for... artificial intelligent management ...the principle control languages.

https://live-az-ade.pantheonsite.io/sites/default/files/2021/06/ProgramDescription_AutomationAndRobotics.pdf

Lesson Overview:

<u>1st Semester Students:</u>
Login to VEX Certification Accounts

Continue building VEX V5 Robots
Speedbot/Basebot
https://www.vexrobotics.com/v5/downloads/build-instructions

<u>2nD Semester Plus+ Students:</u>
Login to VEX Certification Accounts
Building VEX V5 Robots and customizing robots

VEX V5 Parts (3D Print)
Autodesk Tinkercad
https://www.tinkercad.com/things/5zBduwCA6c9-vex-v5-parts

VEX V5 and VEX Pro (CAD Files)
https://www.vexrobotics.com/v5
https://www.vexrobotics.com/pro

https://www.vexrobotics.com/v5/products/view-all/?q=__empty__&vex_site=cads&vex_m2_vexrobotics_cads%5BrefinementList%5D%5Bproduct_lines%5

Understanding VEX Classic and V5 Smart Motors
https://kb.vex.com/hc/en-us/articles/360060929971-Understanding-V5-Smart-Motors

https://wiki.purduesigbots.com/vex-electronics/vex-electronics/motors
https://motors.vex.com/
https://motors.vex.com/introduction

https://curriculum.vexrobotics.com/curriculum/speed-power-torque-and-dc-motors/classical-mechanics.h

https://curriculum.vexrobotics.com/curriculum/speed-power-torque-and-dc-motors/dc-motors.html

https://curriculum.vexrobotics.com/curriculum/speed-power-torque-and-dc-motors/simulate_and_size_a

https://www.autodesk.com/education/edu-software/overview?sorting=featured&filters=individual

https://motors.vex.com/brushed-brushless

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