Name:	Grading Quarter:	Week Beginning: 10
Robert Lefrandt	2	12/18/2023
School Year: 2023-24	Subject: Robotics	

Monday

#### Notes:

12/18/2023 Check for VEX Game Elements arrival/Register

Robotic Assemblies Mechtronics

Engineering: ReEngineering Reverse Engineering

Structural Chassis frame body

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

Electrical Chemical electrochemical

Physical Magnetism Batteries

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

Sensors
Bump/touchDis
tance
Light
Camera

Physical Computing

Al Data Collect DataAnalyze

Collaborate with schools, 'Industry ProfessionalCo mmunity

## **BRHS Finals Schedule**

# Monday, 12/18 Finals for Blocks 1 and 3

Block 1: 8:25 - 10:29 am

1A: 8:25 - 9:24

1B: 9:30 - 10:29

Block 2: 10:36 - 11:35 am

2A: 10:36 - 11:02

2B: 11:08 - 11:35

Lunch: 11:35 am - 12:15 pm

Block 3: 12:15 - 2:19 pm

3A: 12:15 - 1:14

3B: 1:20 - 2:19

Block 4: 2:25 - 3:30 pm

4A: 2:25 - 2:52

4B: 2:58 - 3:30

### Tuesday, 12/19

#### Finals for Blocks 2 and 4

Block 1: 8:25 - 9:25 am

1A: 8:25 - 8:52

1B: 8:58 - 9:25

Block 2: 9:32 - 11:35 am

2A: 9:32 - 10:30

2B: 10:36 - 11:35

Lunch: 11:35 am - 12:15 pm

Block 3: 12:15 - 1:15 pm

3A: 12:15 - 12:42

3B: 12:48 - 1:15 Block 4: 1:22 - 3:30 pm

4A: 1:22 - 2:21

4B: 2:27 - 3:30

Academic Standards:

AZ CTE

Automation & Robotics Tech-Standards

STANDARD 2.0
PERFORM ELECTRICAL
AND ELECTRONIC
TASKS

STANDARD 4.0 ANALYZE PROGRAMMABLE LOGIC CONTROLLER (PLC) SYSTEMS

STANDARD 7.0
PERFORM DRAFTING
TASKS
7.5 Make dimensional
CAD drawings (e.g., 2D
and 3D)

STANDARD 5.0
DESCRIBE THE
OPERATION AND USE
OF VARIOUS FORMS
OR ELECTRICAL
MOTORS

5.2 Explain the operation and use of DC motors in automation controls

STANDARD 6.0
PERFORM
MECHANICAL
SYSTEMS LINKAGES
TASKS
STANDARD 10.0 APPLY
SENSOR SOLUTIONS

STANDARD 13.0
DEMONSTRATE SAFE
AND PROPER USE OF
ELECTRONIC AND
OTHER LABORATORY
EQUIPMENT, TOOLS,
AND MATERIALS

Tuesday

Notes: 12/19/2023

Robotic Assemblies Mechatronics

Engineering: Re-Engineering Reverse Engineering

Structural Chassis frame body

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

Electrical Chemical electrochemical

Chemical Batteries Magnetism

Computer Sci. Hardware/Soft ware Block PLC ladder logic, CNC, Python, C++,

Sensors Bump/touch Distance Light Camera

**Physical** Computing Data Collect DataAnalyze

Collaborate with schools, 'Industry Professional-Community

## **BRHS Finals Schedule**

### Monday, 12/18 Finals for Blocks 1 and 3

Block 1: 8:25 - 10:29 am 1A: 8:25 - 9:24 1B: 9:30 - 10:29

Block 2: 10:36 - 11:35 am

2A: 10:36 - 11:02 2B: 11:08 - 11:35 Lunch: 11:35 am - 12:15 pm Block 3: 12:15 - 2:19 pm

3A: 12:15 - 1:14 3B: 1:20 - 2:19 Block 4: 2:25 - 3:30 pm

4A: 2:25 - 2:52 4B: 2:58 - 3:30

## Tuesday, 12/19

#### Finals for Blocks 2 and 4

Block 1: 8:25 - 9:25 am 1A: 8:25 - 8:52 1B: 8:58 - 9:25 Block 2: 9:32 - 11:35 am 2A: 9:32 - 10:30

2B: 10:36 - 11:35 Lunch: 11:35 am - 12:15 pm Block 3: 12:15 - 1:15 pm

3A: 12:15 - 12:42

3B: 12:48 - 1:15 Block 4: 1:22 - 3:30 pm 4A: 1:22 - 2:21

4B: 2:27 - 3:30

**TASKS** STANDARD 4.0 **ANALYZE** PROGRAMMABLE LOGIC CONTROLLER

> STANDARD 7.0 PERFORM DRAFTING **TASKS** 7.5 Make dimensional CAD drawings (e.g., 2D and 3D)

Academic Standards:

AZ CTE

Robotics

Automation &

**Tech-Standards** 

STANDARD 2.0

(PLC) SYSTEMS

AND ELECTRONIC

PERFORM ELECTRICAL

STANDARD 5.0 DESCRIBE THE **OPERATION AND USE** OF VARIOUS FORMS OR ELECTRICAL **MOTORS** 

5.2 Explain the operation and use of DC motors in automation controls

STANDARD 6.0 **PERFORM** MECHANICAL SYSTEMS LINKAGES TASKS STANDARD 10.0 APPLY **SENSOR SOLUTIONS** 

STANDARD 13.0 **DEMONSTRATE SAFE** AND PROPER USE OF **ELECTRONIC AND** OTHER LABORATORY EQUIPMENT, TOOLS, AND MATERIALS

	Notes: 12/20/2023		
	Robotic Assemblies	End 1 <sup>st</sup> Semester	
	Mechtronics		
	Engineering: ReEngineering		
	Reverse Engineering		
	Structural		
	Chassis frame body		
	Mechanical		
	(Motion) Gear: Box,		
	train, parallel (linear) stack		
	(vertical), ratio, torque speed		
	Electrical		
₩e	Chemical electrochemical		
Wednesday	Physical		
day	Magnetism Batteries		
	Software Block		
	PLC ladder logic, CNC,		
	Python, C++,		
	Sensors Bump/touchDis		
	tance Light		
	Camera		
	Physical Computing		
	Al Data Collect		
	Data Collect DataAnalyze		
	Collaborate with schools,		
	'Industry ProfessionalsCo		
	mmunity		

	Notes:		Academic
	12/21/2023		Standards:
			AZ_CTE
	Robotic	Winter Break	
	Assemblies Mechtronics		Automation & Robotics
	Mechinomics	Winter Break thru January 5 - District Closed	Tech-Standards
	Engineering:	·	
	ReEngineering		STANDARD 2.0
	Reverse		PERFORM ELECTRICAL
	Engineering		AND ELECTRONIC TASKS
	Structural		STANDARD 4.0
	Chassis frame		ANALYZE
	body		PROGRAMMABLE
	Mechanical		LOGIC CONTROLLER
	(Motion)		(PLC) SYSTEMS
	Gear: Box,		STANDARD 7.0
	train, parallel		PERFORM DRAFTING
	(linear) stack		TASKS
	(vertical), ratio,		7.5 Make dimensional
	torque speed		CAD drawings (e.g., 2D
			and 3D)
	Electrical		CTANDARD F O
=	Chemical		STANDARD 5.0 DESCRIBE THE
Thursday	electrochemical		OPERATION AND USE
ps.	Physical		OF VARIOUS FORMS
ay	Magnetism		OR ELECTRICAL
	Batteries		MOTORS
	Software		5.2 Explain the
	Block		operation and use of DC motors in
	PLC ladder		automation controls
	logic, CNC, Python, C++,		automation controls
	r ython, err,		STANDARD 6.0
	Sensors		PERFORM
	Bump/touchDis		MECHANICAL
	tance		SYSTEMS LINKAGES
	Light		TASKS
	Camera		STANDARD 10.0 APPLY SENSOR SOLUTIONS
	Physical		SENSON SOLUTIONS
	Computing		STANDARD 13.0
	20bacıı.ıp		DEMONSTRATE SAFE
	Al		AND PROPER USE OF
	Data Collect		ELECTRONIC AND
	DataAnalyze		OTHER LABORATORY
	C-II-I		EQUIPMENT, TOOLS,
	Collaborate with schools,		AND MATERIAL
	'Industry		
	ProfessionalsCo		
	mmunity		

	Notes:		Academic
	12/22/2023		Standards:
			AZ_CTE
	Dahatia		AZ_CIL
	Robotic	Winter Break	
	Assemblies		Automation &
	Mechtronics		Robotics
		Winter Break thru January 5 - District Closed	Tech-Standards
	Engineering:		
			STANDARD 2.0
	ReEngineering		PERFORM ELECTRICAL
	Reverse		AND ELECTRONIC
	Engineering		
	2.18.1.00.11.8		TASKS
	Structural		STANDARD 4.0
	Chassis frame		ANALYZE
	body		PROGRAMMABLE
	body		
			LOGIC CONTROLLER
	Mechanical		(PLC) SYSTEMS
	(Motion)		
	Gear: Box,		CTANDARD 7.0
			STANDARD 7.0
	train, parallel		PERFORM DRAFTING
	(linear) stack		TASKS
	(vertical), ratio,		7.5 Make dimensional
	torque speed		CAD drawings (e.g., 2D
			and 3D)
	Electrical		
			STANDARD 5.0
Friday	Chemical		
<u>i</u>	electrochemical		DESCRIBE THE
a			OPERATION AND USE
~	Discolard		OF VARIOUS FORMS
	Physical		
	Magnetism		OR ELECTRICAL
	Batteries		MOTORS
	C - (t		5.2 Explain the
	Software		
	Block		operation and use of
	PLC ladder		DC motors in
	logic, CNC,		automation controls
	Python, C++,		
			STANDARD 6.0
	Sensors		PERFORM
	Bump/touchDis		MECHANICAL
	· ·		SYSTEMS LINKAGES
	tance		
	Light		TASKS
	Camera		STANDARD 10.0 APPLY
			SENSOR SOLUTIONS
	Dlaveteel		
	Physical		CTANDARD 10.0
	Computing		STANDARD 13.0
			DEMONSTRATE SAFE
	Al		AND PROPER USE OF
			ELECTRONIC AND
	Data Collect		
	DataAnalyze		OTHER LABORATORY
	Collaborate with		EQUIPMENT, TOOLS,
	schools, 'Industry		AND MATERIAL
	ProfessionalsCom		· · · · · ·
	munity		
L	İ	I	