

1. Intro to Engineering a Robot (7.14%)

Learning Targets

1.1 I can understand and apply the engineers design process for robotics

Learning Target	Descriptor	Definition
4	Proficient	I can understand and apply the engineers design process for robotics
3	Developing	I can partially understand but apply the engineers design process for robotics
2	Basic	I can partially understand and partially apply the engineers design process for robotics
1	Minimal	I can barely understand and barely apply the engineers design process for robotics
0	No Evidence	No evidence shown.

2. What is a robot? (7.14%)

Learning Targets

2.1 I can identify numerous robots and robotic systems.

Learning Target	Descriptor	Definition
4	Proficient	I can identify numerous robots and robotic systems.
3	Developing	I can identify several (5-6) robots and robotic systems.
2	Basic	I can identify some (3-4) robots and robotic systems.
1	Minimal	I can identify a few (1-2) robots and robotic systems.
0	No Evidence	No evidence shown.



3. Intro to Inventor (7.14%)

Learning Targets

3.1 I can create a basic part, make a contact set, and make improvements.

Learning Target	Descriptor	Definition
4	Proficient	I can create a basic part, make a contact set, and make improvements.
3	Developing	I can create a basic part, make a contact set, but not make improvements.
2	Basic	I can create a basic part, struggle to make a contact set, and not make improvements.
1	Minimal	I can barely make a part.
0	No Evidence	No evidence shown.

4. Robotic - appropriate and safe operation (7.14%)

Learning Targets

4.1 I can understand and apply safe operation procedures at all times.

Learning Target	Descriptor	Definition
4	Proficient	I can understand and apply safe operation procedures at all times.
3	Developing	I can understand and apply safe operation procedures most all times.
2	Basic	I can understand and apply safe operation procedures some times.
1	Minimal	I can understand but cannot apply safe operation procedures.
0	No Evidence	No evidence shown.



5. Know Robotic Components (7.14%)

Learning Targets

5.1 I can identify and describe numerous components.

Learning Target	Descriptor	Definition
4	Proficient	I can identify and describe numerous components.
3	Developing	I can identify and describe many (9-10) components.
2	Basic	I can identify and describe some (7-8) components.
1	Minimal	I can identify and describe a few (5-6) components.
0	No Evidence	No evidence shown.

6. Mechanical Creations/Fasteners (7.14%)

Learning Targets

6.1 I can recognize and appropriately use all mechanical fasteners.

Learning Target	Descriptor	Definition
4	Proficient	I can recognize and appropriately use all mechanical fasteners.
3	Developing	I can recognize and appropriately use most mechanical fasteners.
2	Basic	I can recognize and appropriately use some mechanical fasteners.
1	Minimal	I can recognize and appropriately use a few mechanical fasteners.
0	No Evidence	No evidence shown.



7. Object Manipulation (7.14%)

Learning Targets

7.1 I can understand the 10 methods that a robot system can manipulate objects.

Learning Target	Descriptor	Definition
4	Proficient	I can understand the 10 methods that a robot system can manipulate objects.
3	Developing	I can understand 8-9 methods that a robot system can manipulate objects.
2	Basic	I can understand 6-7 methods that a robot system can manipulate objects.
1	Minimal	I can understand 4-5 methods that a robot system can manipulate objects.
0	No Evidence	No evidence shown.

8. Drive Mechanisms (7.18%)

Learning Targets

8.1 I can identify and correctly apply Speed Torque and Power.

Learning Target	Descriptor	Definition
4	Proficient	I can identify and correctly apply Speed Torque and Power.
3	Developing	I can identify and apply Speed Torque and Power.
2	Basic	I can identify 2 of the three, Speed Torque and Power.
1	Minimal	I can identify 1 of the three, Speed Torque and Power.
0	No Evidence	No evidence shown.



9. Custom Part Design (7.14%)

Learning Targets

9.1 I can create a custom virtual prototype followed by a physical working part with revisions.

Learning Target	Descriptor	Definition
4	Proficient	I can create a custom virtual prototype followed by a physical working part with revisions.
3	Developing	I can create a custom virtual prototype followed by a physical working part but without revisions.
2	Basic	I can create a custom virtual prototype but not a physical part.
1	Minimal	I can create a virtual prototype .
0	No Evidence	No evidence shown.

10. Essay on Application, Use, and Understanding of Radio Control Robots (7.14%)

Learning Targets

10.1 I can effectively describe Electrical Devices, Input devices, and Motion Devices as they interface as a system.

Learning Target	Descriptor	Definition
4	Proficient	I can effectively describe Electrical Devices, Input devices, and Motion Devices as they interface as a system.
3	Developing	I can effectively describe Electrical Devices, Input devices, and Motion Devices as they interface as a system.
2	Basic	I can describe 2 of the three devices Electrical Devices, Input devices, and Motion Devices but not as they as they interface as a system.
1	Minimal	can describe 1 of the three devices Electrical Devices, Input devices, and Motion Devices but not as they as they interface as a system.
0	No Evidence	No evidence shown.



11. Programming Languages (7.14%)

Learning Targets

11.1 I can understand the differences between 7 common languages.

Learning Target	Descriptor	Definition
4	Proficient	I can understand the differences between 7 common languages.
3	Developing	I can understand the differences between 5 common languages.
2	Basic	I can understand the differences between 3 common languages.
1	Minimal	I can understand the differences between 1 common languages.
0	No Evidence	No evidence shown.



12. Hello World - LEDs and Motion Programming (7.14%)

Learning Targets

12.1 I can Demonstrate without error programming of blinking LEDs

Learning Target	Descriptor	Definition
4	Proficient	I can Demonstrate without error programming of blinking LEDs
3	Developing	I can Demonstrate with some error programming of blinking LEDs
2	Basic	I can Demonstrate with partner help programming of blinking LEDs
1	Minimal	I can Demonstrate with instructor help programming of blinking LEDs
0	No Evidence	No evidence shown.

12.2 I can understand and demonstrate without error programming of DC Motors

Learning Target	Descriptor	Definition
4	Proficient	I can understand and demonstrate without error programming of DC Motors
3	Developing	I can understand and demonstrate with some error programming of DC Motors
2	Basic	I can understand and demonstrate with partner help programming of DC Motors
1	Minimal	I can understand and demonstrate with partner help programming of DC Motors
0	No Evidence	No evidence shown.

12.3 I can understand and demonstrate without error programming of Servos.

Learning Target	Descriptor	Definition
4	Proficient	I can understand and demonstrate without error programming of Servos.
3	Developing	I can understand and demonstrate but with some error the programming of Servos.
2	Basic	I can understand and demonstrate with partner help programming of Servos.
1	Minimal	I can understand and demonstrate with instructor help programming of Servos.
0	No Evidence	No evidence shown.



13. Sensors - Line and Ultrasonic Programming (7.14%)

Learning Targets

13.1 I can understand and demonstrate with no error, the programming of Line Sensors

Learning Target	Descriptor	Definition
4	Proficient	I can understand and demonstrate with no error, the programming of Line Sensors
3	Developing	I can understand and demonstrate but with some error the programming of Line Sensor
2	Basic	I can understand and demonstrate but with partner help, the programming of Servos.
1	Minimal	I can understand and demonstrate but with instructor help, the programming of Servos.
0	No Evidence	No evidence shown.

14. Essay on Application, Use, and Understanding of Autonomous Robots (7.14%)

Learning Targets

14.1 I can Effectively Describe the interface between Sensors and Object Manipulation Devices.

Learning Target	Descriptor	Definition
4	Proficient	I can Effectively Describe the interface between Sensors and Object Manipulation Devices.
3	Developing	I can Describe some of the interface between Sensors and Object Manipulation Devices.
2	Basic	I can only Describe Sensors AND Object Manipulation Devices.
1	Minimal	I can only Describe Sensors OR Object Manipulation Devices.
0	No Evidence	No evidence shown.

Submitted on 6/21/2021 by