

Keonics Certified Robotics (Design & Development)

Duration: 3 Months

1. Etymology
2. Histories
3. Components
 - 3.1 Power source
 - 3.2 Actuation
 - 3.3 Sensing
 - 3.4 Manipulation
 - 3.5 Locomotion
 - 3.6 Environmental interaction and navigation
 - 3.7 Human-robot interaction
4. Controls
 - 4.1 Autonomy levels
5. Robotics research
6. Dynamics and kinematics
7. Setting Expectations for Student Success
8. Relating Safety to Robotics Engineering
9. Investigating simple Mechanics
10. Identifying the Elements of Structural Design
11. Applying the engineering/design process
12. Understand robots fundamental
13. Investigating Electrical/Electronic systems
14. Understanding fluidic power
15. Applying motor & Activator
16. Exploring Microcontroller technologies
17. Programming Microcontrollers
18. Applying data Acquisition (Sensors)

19. Handling & Converting data
20. Interfacing to the Microcontroller
21. Design & Developing Intelligent Mechanics