

iLAB

Rakhmatillaev Javlonbek
Andijan machine-building institute



**Modernization of Mechatronics and Robotics for Bachelor degree in
Uzbekistan through Innovative Ideas and Digital Technology
(MechaUz)**

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MECHAUZ_4.1 ESTABLISHMENT PLAN



Rethinking Mechatronics Design Education for the Modern Era

THE SOLUTION, A MODERN MECHATRONICS PROGRAM

Based on the mechatronic programs from different universities around the world that we have reviewed and our collaborations with various institutions, we have listed the following courses that would make up a well-rounded, modern Mechatronics program:

- Fundamentals
 - Sensors
 - Actuators
 - Microprocessor Architecture
 - Embedded Programming
- Integration
 - Control Systems I – Classical Control
 - Control Systems II – Modern Control
 - Digital Control Systems
 - Robotic Manipulators and Mobile Robotics
 - Flight Dynamics and Control
 - Mechanical Design (CAD)
- Design
 - Senior Design Project

Main Equipment in iLAB



NI ELVIS III



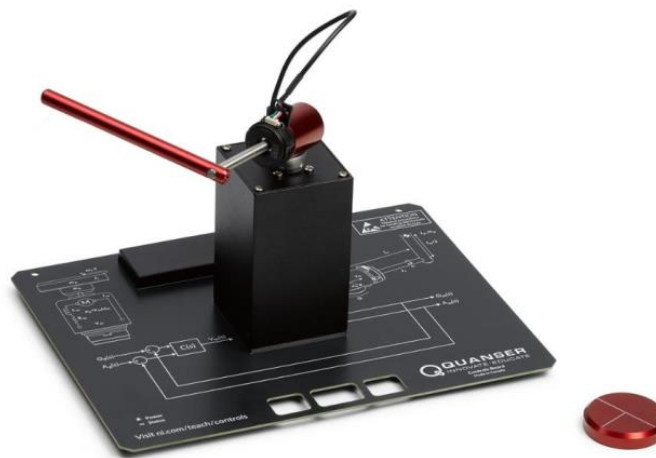
Mechatronics Sensor Board



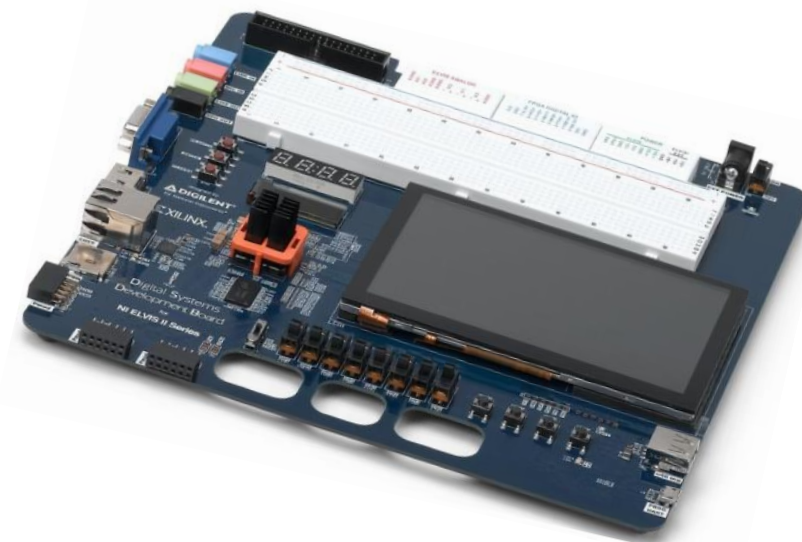
Mechatronics Actuators Board



Mechatronics Systems Board for NI ELVIS III

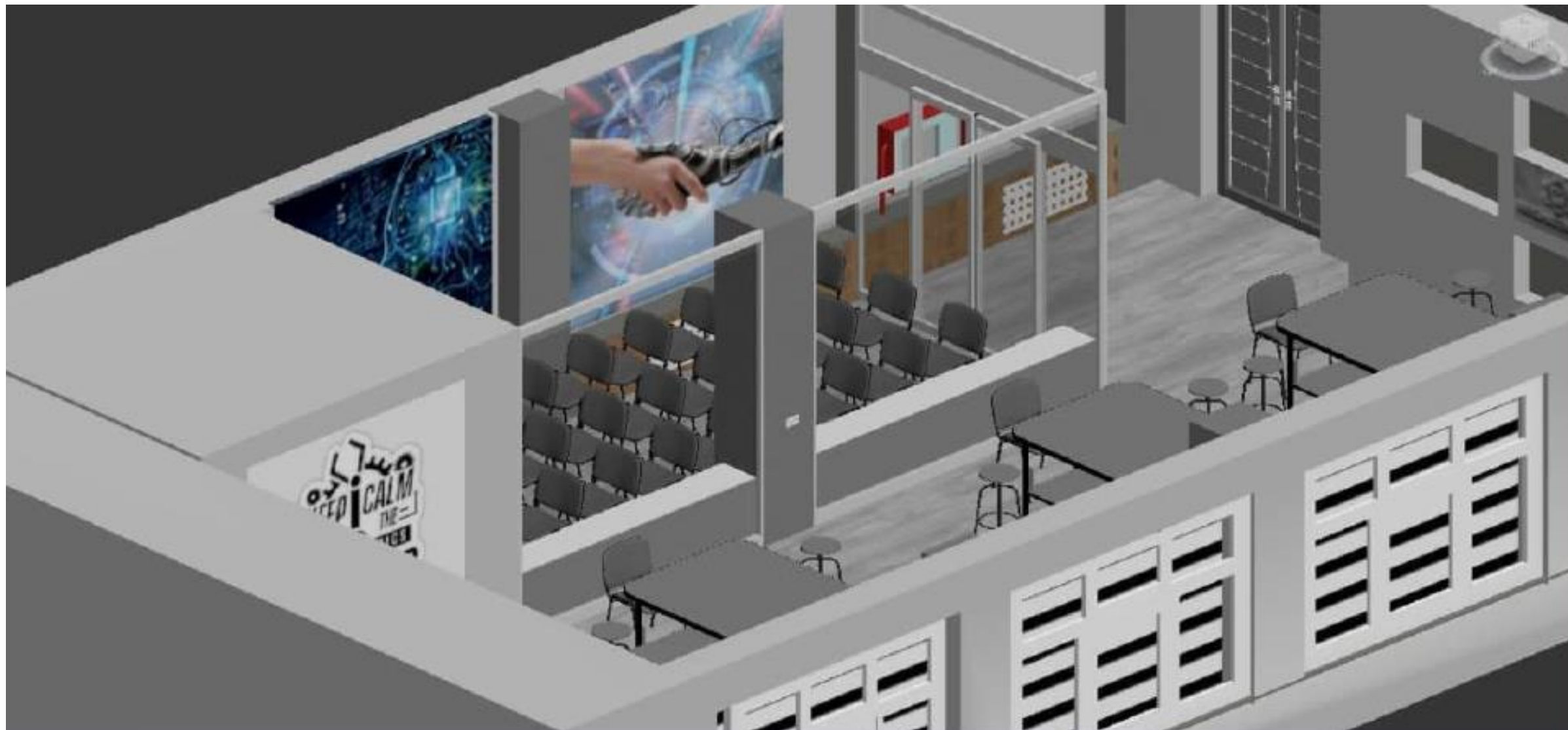


Controls Board for NI ELVIS III



Digilent Digital Electronics Board

Design of the i-Lab and Training center





i-Lab and Training center





Total capacity: 200



Target group: Students, teachers – professors, researchers and staff

iLAB serves for the students from the different majors

No	Name Academic Programs	Coverage of Bachelor Degree Students
1	Information Systems and Technologies	22 %
2	Biomedical Engineering	
3	Intellectual Engineering Systems	
4	Mechatronics and Robotics	
5	Automation of Production and Control	





THANK YOU FOR YOUR ATTENTION