



The logo features the text "NIDays" in white, enclosed within a white rectangular border. To the right of this, the words "ENGINEER" and "NEXT" are stacked vertically in a large, bold, white sans-serif font. A yellow graphic element, consisting of three parallel lines forming a stylized arrow or chevron shape, is positioned between the two words. The entire logo is set against a background of diagonal stripes in various shades of blue, green, and orange.

NIDays **ENGINEER**
NEXT





Take Full Advantage of the NI Academic Program

Nikolai Rösch

Academic Program Manager, CER
NATIONAL INSTRUMENTS

Maha Moatemri

Academic Account Manager, Switzerland
NATIONAL INSTRUMENTS

Agenda



Engineering
Trends &
Challenges



Software &
Curriculum
Resources



Project
Resources
& Hardware



Programs
&
Recognition



Engineering
Trends &
Challenges



Software &
Curriculum
Resources



Project
Resources
& Hardware



Programs
&
Recognition



Big Physics



Clean Energy



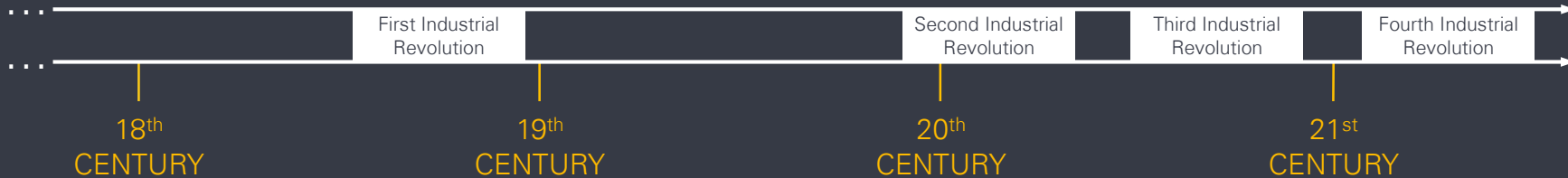
5G



IOT



Driverless Cars





IEEE SPECTRUM

2020 Will Be the Year When 5G Goes From Theory to Reality



MIT TECHNOLOGY REVIEW

2021 May Be the Year of the Fully Autonomous Car

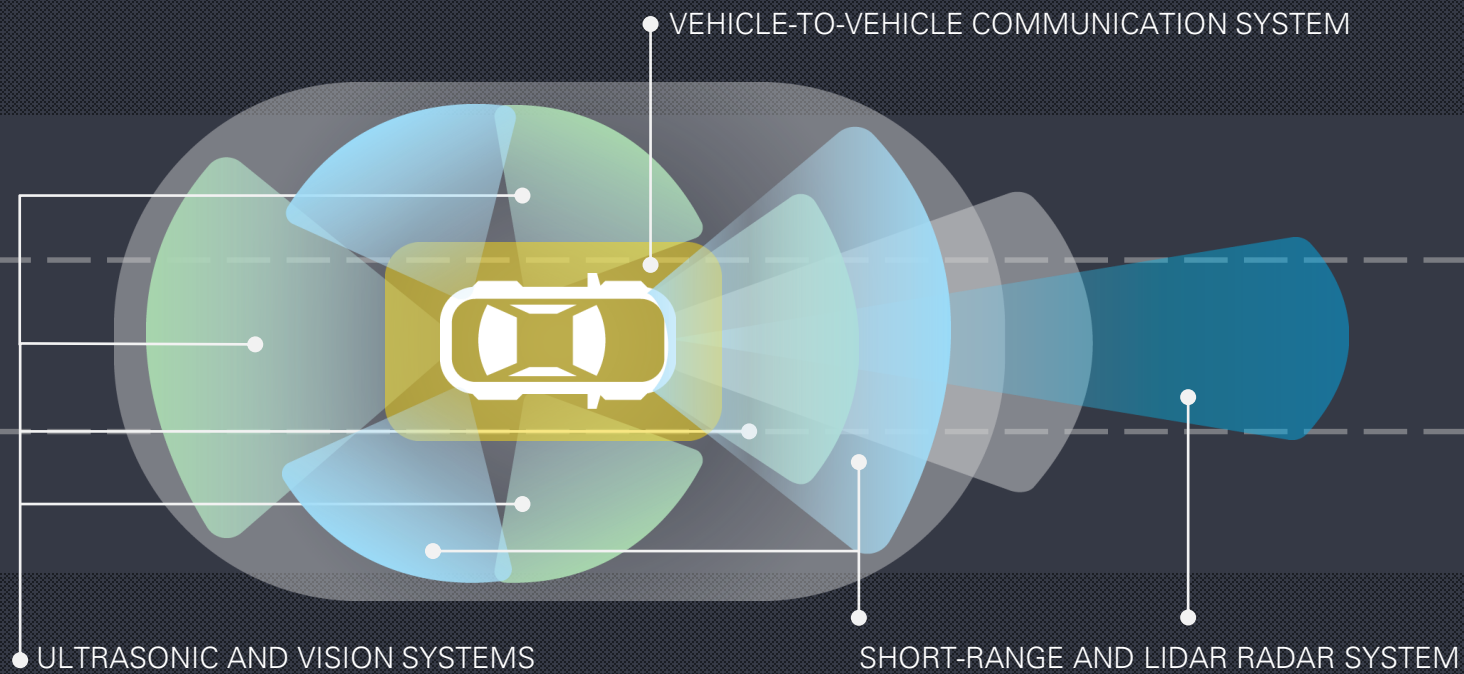


CISCO

50 Billion Devices Globally Will Be Connected to the Internet by 2020

CONVERGENCE

of Mechanical, Electrical, Computer,
and Control Components





Prepare Our Students for the Challenges of 2020 and Beyond



A NEW METHODOLOGY

Every Student Learns Through Design Work



Prepare and Motivate
Our Students



Learn Complex
Engineering Systems



Develop Well-
Rounded Engineers



Interdisciplinary Senior Project

ENGINEERING SYSTEMS DESIGN AND RESEARCH

5G

IoT

Smart Grid

Massive MIMO

Autonomous Vehicle

Cyber-Physical Systems

Smart Connected Factories

CORE CONCEPTS

Circuits

Intro to Controls

Signal Processing

Intro to Engineering

Sensors and Actuators

SUBSYSTEMS

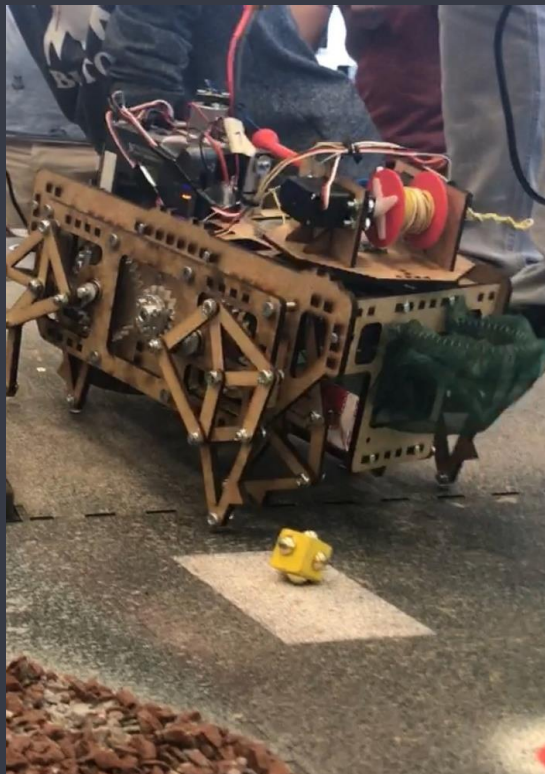
Mechatronics

Embedded Systems Design

Wireless Communications

HOW DO WE PREPARE

Students for Engineering System Design?



Innovation Project
ETH Zürich

Smart Device

myRIO

Client in a web browser

Remote access 221.0.0.1 Update list

Yc: 5 U: 1.5 Yc: 1314 pts

Ysc: 5 P: 0.1 Perturbation delay: 0

Teaching Control in MOOL
EPFL



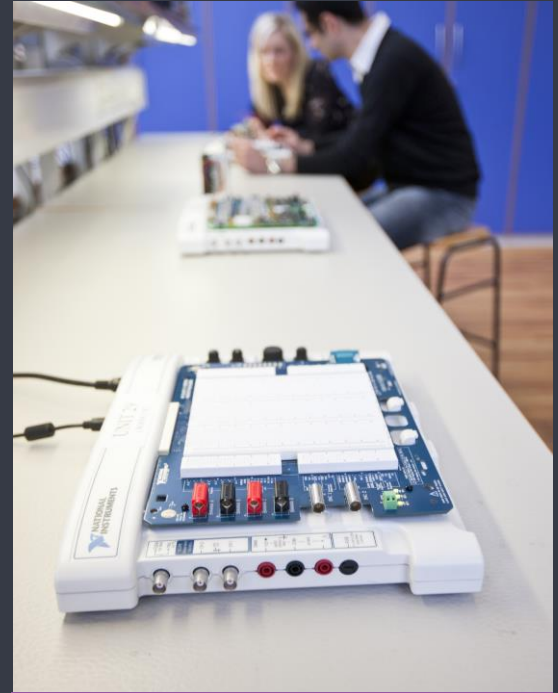
Focus Project 2016 - EOLOS
ETH Zürich



STUDIO LEARNING



REMOTE CLASSROOMS



HANDS-ON DESIGN



Engineering
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Software &
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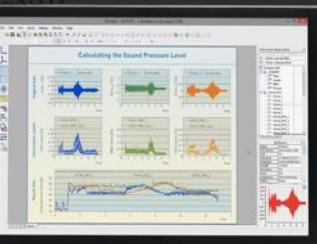
ACADEMIC SITE LICENSE

Every Student, Every Lab, Every Researcher

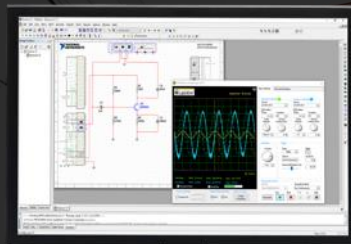


ACADEMIC SITE LICENSE

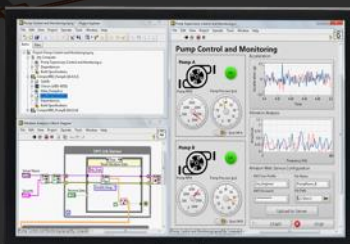
Comprehensive Suite of Over \$100,000 of NI Software



DIAdem



Multisim



LabVIEW



LabVIEW Communications



LabWindows™/CVI



Intuitive Engineering Workflows

Take Your First Measurement Faster



Iterative Data Exploration

Instantly Explore Your Engineering Data



Productive System Customization

Accelerate Your Development with an Enhanced Editor



Interactive Learning and Help Content

Learn What's Needed to Build the Project at Hand

ni.com/labviewnxdg

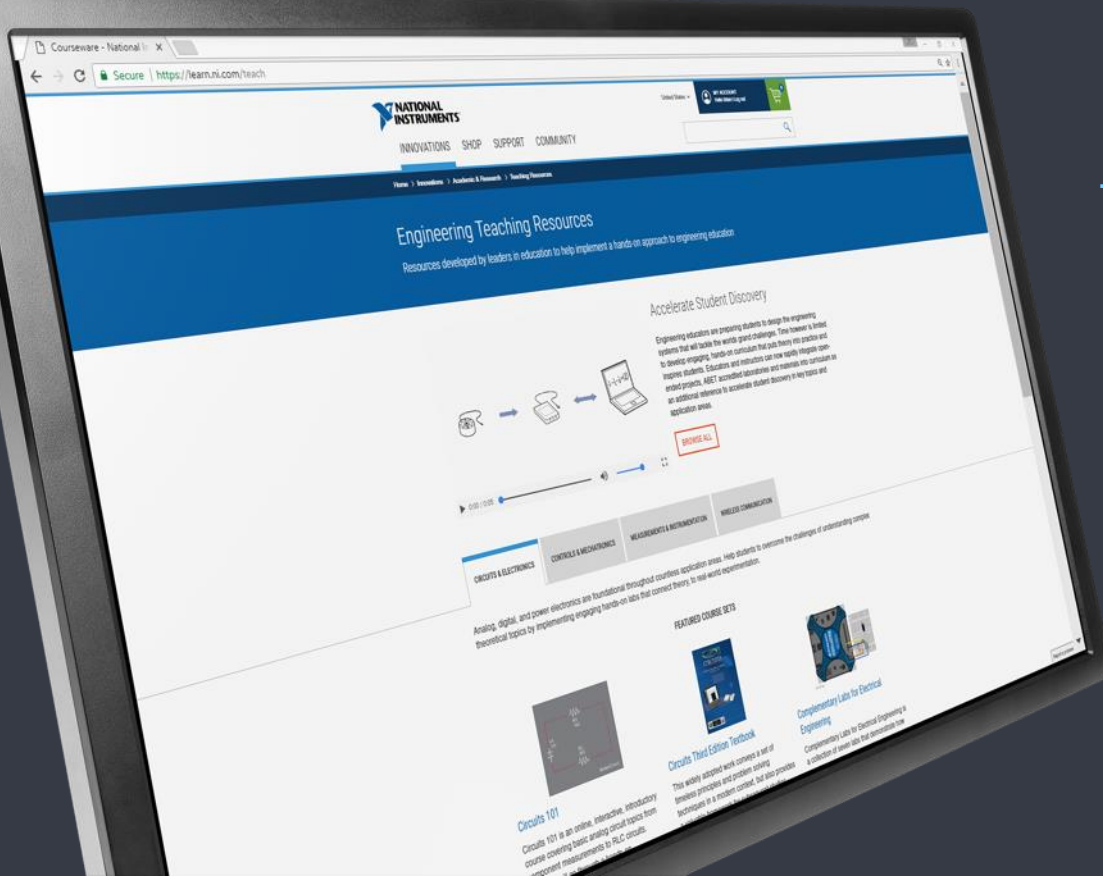
[ni.com/asl](https://www.ni.com/asl)



Self Paced Online Training

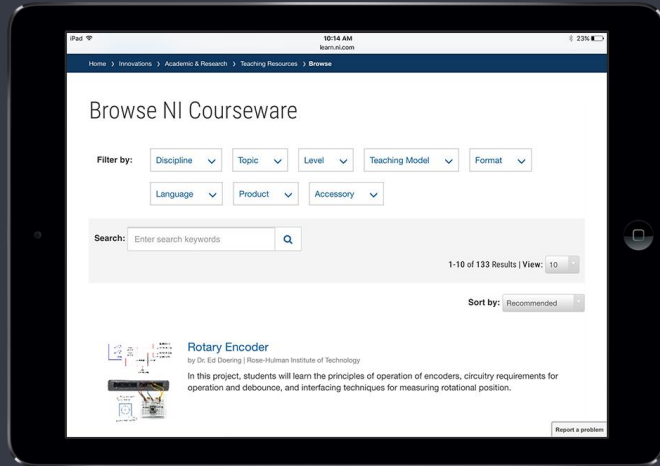
If your university holds an active Academic Site License, its educators, researchers, and graduate students are entitled to free self-paced online training.

Access online training now
ni.com/self-paced-training



Teaching Resources Portal

Materials to Engage Today's
Engineering Student



TEACHING RESOURCES PORTAL

Integrate open-ended projects rapidly

Easily find LabVIEW reference materials

Improve student outcomes with engaging labs

ni.com/teach



Engineering
Trends &
Challenges



Software &
Curriculum
Resources



Project
Resources
& Hardware



Programs
&
Recognition



Industry/Research

Student/Classroom

Measurement & Data Acquisition



Embedded Control & Monitoring



RF & Wireless Communications



Portable Instrumentation



Benchtop Instrumentation





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LabVIEW Academy



Student Benefits

Diversify Your Skill Set

Learn the skills to program in LabVIEW.

Boost Your Resume With LabVIEW Certification

Add LabVIEW Academy and the CLAD designation to your resume.

Expand Your Network

Connect with students and professionals who know LabVIEW and are seeking individuals with LabVIEW skills.

Train With Professional Educators

Study LabVIEW in a classroom environment with professors who have experience in teaching and research.

Institution Benefits

Equip Students to Succeed

Give students access to industry-standard tools they can use in classes, labs, and beyond.

Gain LabVIEW Academy Recognition

Receive recognition on ni.com for being an official LabVIEW Academy.

Access Learning Materials

Gain access to LabVIEW Core 1 and 2 curricula and the LabVIEW Academy program.

Reduce Time for Course Development

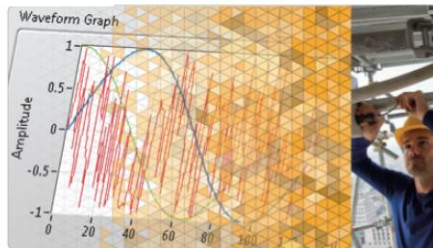
Use NI-recommended syllabi and complementary hardware to develop courses quickly.

Learn how to become a LabVIEW Academy
ni.com/academic/labview_academy.htm

LabVIEW Student Ambassadors



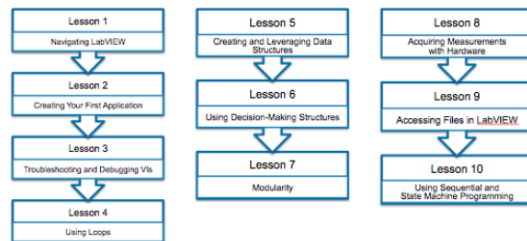
LabVIEW Core 1



3

Welcome to LabVIEW Core 1

Course Learning Map



7

Lesson 1 Navigating LabVIEW

Recognize the main components of the LabVIEW environment and create a new project and VI.

- A. What is LabVIEW?
- B. Project Explorer
- C. Parts of a VI
- D. Front Panel
- E. Block Diagram
- F. Searching for Controls, VIs, and Functions

8



Become a LabVIEW Student Ambassador
ni.com/academic/ambassadors/

STUDENT DESIGN COMPETITION

The LabVIEW logo, which consists of two overlapping squares with small squares at their intersections, forming a stylized 'L' shape.

Show us how you are incorporating LabVIEW into your final-year project for a chance to have your work published and win prizes.

Competition Prizes

Local Grand Prize: Regional industry award recognition

Global Grand Prize: Global award recognition and a trip to NIWeek

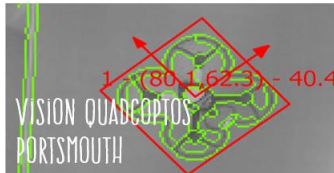
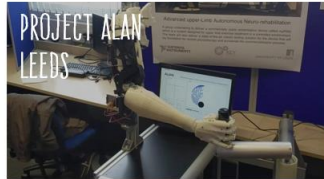
Main Reason to Enter

Exposure: For your students and your university

Find your local competition and submit your project
ni.com/studentdesign

STUDENT DESIGN COMPETITION

Top 10 Projects Worldwide 2016



Find your local competition and submit your project
ni.com/studentdesign

NI Engineering Impact Awards

The NI Engineering Impact Awards is a technical application contest that showcases the most innovative projects based on NI software and hardware. This is your chance to share your innovations with the NI community and network with NI leadership, trade press, industry leaders, and other category winners at the invitation-only awards ceremony and dinner.



Explore previous winners
ni.com/impactawards/explore_2016.htm

Participate in the NI Engineering Impact Awards
ni.com/impactawards/participate.htm

Why Do NI Invest in an Academic Program?



It all starts with academic.
At NI we're committed to
preparing the students of
today for the grand
engineering challenges of
tomorrow.

—Dr. James Truchard