

## Tárgytematika / Course Description

### Programming in LabView

GKNM\_INTA074

**Tárgyfelelős neve /**

**Teacher's name:** dr. Pozna Claudiu Radu

**Félév / Semester:** 2021/22/1

**Beszámolási forma /**

**Assesment:** Vizsga

**Tárgy heti óraszám /**

**Teaching hours(week):** 0/3/0

**Tárgy féléves óraszám /**

**Teaching hours(sem.):** 0/0/0

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### OKTATÁS CÉLJA / AIM OF THE COURSE

The aim of the course is to introduce the LabVIEW programming ecosystem. Course gives you the chance to discover the LabVIEW environment and interactive analysis, dataflow programming, and common development techniques in a hands-on format. The aim is to learn how to develop data acquisition, instrument control, data-logging, and measurement analysis applications. At the end of the course, you will be able to create applications using the state machine design pattern to acquire, analyze, process, visualize, and store real-world data.

<http://www.sze.hu/~hernolabview/>

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### TANTÁRGY TARTALMA / DESCRIPTION

Introduction to LabVIEW

Exploring an Existing Application

Creating Your First

Debugging and Troubleshooting

Executing Code Repeatedly Using Loops

Working with Groups of Data

Executing Code Based on a Condition

Writing and Reading Data to File

Reusing Code

Measurement (NI DAQ Device)

Grouping Data of Mixed Data Types

Implementing a Sequencer

Transferring Data

Communicating Between Parallel Loops

Transferring Data — Queues

Event-Driven Programming

VI Server Architecture

Developing an Error Handling Strategy

Distributing Applications

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## **SZÁMONKÉRÉSI ÉS ÉRTÉKELÉSI RENDSZERE / ASSESMENT'S METHOD**

Every student has to choose and prepare an own developed project before the exam period.

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## **KÖTELEZŐ IRODALOM / OBLIGATORY MATERIAL**

National Instruments: Getting Started with LabVIEW 2011;

Winograd, T., Flores, F., Understand Computers and Cognition. Addison Wesley 2008;

Ashcraft, M.,H., Cognition. Prentice Hall 2006

Luger, G.,F., Artificial Intelligence Structures and Strategies for Complex Problem Solving. Addison Wesley 2009;