Module title
Introduction to Labview
Abbreviation
11-LVW-152-m01

Module coordinator
Managing Director of the Institute of Applied Physics

Module offered by
Faculty of Physics and Astronomy

ECTS
6

Method of grading
Numerical grade

Only after succ. compl. of module(s)

Duration
1 semester

Module level
Graduate

Other prerequisites
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Contents
The module comprises basic and advanced courses. The basic course "NI LabVIEW Basic 1" is the first level of each LabVIEW learning phase. LabVIEW Basic provides a systematic introduction to the functions and application fields of the development environment of LabVIEW. The students become acquainted with dataflow programming and with common LabVIEW architectures. They learn to develop LabVIEW applications for various application fields, from assessment and measurement applications up to data collection, device control, data recording and measurement analysis. In the advanced course "NI LabVIEW Core 2", the students learn to develop comprehensive standalone applications, including the graphical development environment LabVIEW. The course builds upon LabVIEW Basic 1 and provides an introduction to the most common development technologies, in order to enable the students to successfully implement and distribute LabVIEW applications for different application fields. Course topics include techniques and procedures for the optimisation of application performance, e.g. through an optimised reuse of existing codes, usage of file I/O functions, principles of data management, event computing and methods of error handling. After finishing the course, the students have the ability to apply LabVIEW functions according to individual requirements, which enables a fast and productive application development.

Intended learning outcomes
The students have specific and advanced knowledge in the application field of LabVIEW. They know the principles of working with LabVIEW and are able to develop applications, e.g. for recording and analysing measuring data.

Courses (type, number of weekly contact hours, language — if other than German)
V (1) + R (3)
Module taught in: German or English

Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)
written examination (approx. 90 to 120 minutes) or oral examination of one candidate each (approx. 30 minutes) or oral examination in groups (groups of 2, approx. 30 minutes per candidate) or project report (approx. 8 to 10 pages) or presentation/talk (approx. 30 minutes).
If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed, the lecturer must inform students about this by four weeks prior to the original examination date at the latest.
Assessment offered: Once a year, winter semester
Language of assessment: German and/or English

Allocation of places
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Additional information
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Referred to in LPO I (examination regulations for teaching-degree programmes)
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Module appears in
Bachelor' degree (1 major) Physics (2015)
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<thead>
<tr>
<th>Bachelor's degree (1 major) Nanostructure Technology (2015)</th>
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<tr>
<td>Bachelor's degree (1 major) Physics (2020)</td>
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<tr>
<td>Bachelor's degree (1 major) Nanostructure Technology (2020)</td>
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<td>Bachelor's degree (1 major) Quantum Technology (2021)</td>
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