Module title			Abbreviation
Basic Differential Equations			10-M-GRDG-152-m01

Module coordinator	Module offered by
Dean of Studies Mathematik (Mathematics)	Institute of Mathematics

ECTS	Method of grading	Only after succ. compl. of module(s)
5	numerical grade	--

Duration	Module level	Other prerequisites
1 semester	undergraduate	--

Contents

Examples and natural appearances of ordinary differential equations, existence and uniqueness theorems (Picard-Lindelöf, Peano), systems of linear differential equations, applications and examples.

Intended learning outcomes

The student is aquainted with methods and concepts of ordinary differential equations. He/She is able to comprehend the central proof methods, can perform easy mathematical arguments and present them in written form. He/She can analyse basic mathematical problems and employ methods of differential equations to solve them.

Courses (type, number of weekly contact hours, language — if other than German)

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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. 60 to 90 minutes)
If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate).
creditable for bonus

Allocation of places

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Additional information

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Workload

150 h

Teaching cycle

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Referred to in LPO I (examination regulations for teaching-degree programmes)

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Module appears in

First state examination for the teaching degree Grundschule Mathematics (2015)
First state examination for the teaching degree Realschule Mathematics (2015)
First state examination for the teaching degree Mittelschule Mathematics (2015)
Teaching degree Grundschule Erweiterung Mathematics (2015)
Teaching degree Realschule Erweiterung Mathematics (2015)
Teaching degree Sonderpädagogik Erweiterung Mathematics (2015)
First state examination for the teaching degree Mittelschule Mathematics (2020 (Prüfungsordnungsversion 2015))
Exchange Program Mathematics (2023)
Teaching degree Realschule Erweiterung Mathematics (2015 Erweiterungsfach)
Teaching degree Grundschule Erweiterung Mathematics (2015 Erweiterungsfach)

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