Module description

**Numeric of Partial Differential Equations**

**Abbreviation**

10-M=VNPE-161-m01

**Module coordinator**

Dean of Studies Mathematik (Mathematics)

**Module offered by**

Institute of Mathematics

**ECTS**

10

**Method of grading**

Numerical grade

**Only after succ. compl. of module(s)**

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**Duration**

1 semester

**Module level**

Graduate

**Other prerequisites**

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**Contents**

Types of partial differential equations, qualitative properties, finite differences, finite elements, error estimates (numerical methods for elliptic, parabolic and hyperbolic partial differential equations; finite elements method, discontinuous Gelerkin finite elements method, finite differences and finite volume methods).

**Intended learning outcomes**

The student is acquainted with advanced methods for discretising partial differential equations.

**Courses**

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

V (4) + Ü (2)

Module taught in: German and/or English

**Method of assessment**

(ctype, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)

a) written examination (approx. 90 to 120 minutes, usually chosen) or b) oral examination of one candidate each (approx. 20 minutes) or c) oral examination in groups (groups of 2, 15 minutes per candidate)

Assessment offered: In the semester in which the course is offered and in the subsequent semester

Language of assessment: German or English

creditable for bonus

**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**

Master’s degree (1 major) Mathematics (2016)
Master’s degree (1 major) Physics (2016)
Master’s degree (1 major) Economathematics (2016)
Master’s degree (1 major) Mathematical Physics (2016)
Master’s degree (1 major) Computational Mathematics (2016)
Master’s teaching degree Gymnasium MINT Teacher Education PLUS, Elite Network Bavaria (ENB) (2016)
Supplementary course MINT Teacher Education PLUS, Elite Network Bavaria (ENB) (2016)
Master’s degree (1 major) Computational Mathematics (2019)
Master’s degree (1 major) Mathematics (2019)