### Module title
Applied Differential Geometry

### Abbreviation
10-M=VADGin-152-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
The module builds on the topics covered in module 10-M=ADGM and discusses selected applications of differential geometry, e.g. at the interface of control theory and mechanics (subriemannian geometry), in the smooth optimisation on manifolds or applications in physics.

### Intended learning outcomes
The student is acquainted with selected advanced applications of differential geometry. He/She is able to establish a connection between his/her acquired skills and other branches of mathematics and questions in physics.

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

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<th>Type</th>
<th>Number of Weekly Contact Hours</th>
<th>Language</th>
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### Module taught in
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)

- 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: 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 International (2015)