**Module title**  
**Abbreviation**

| Applied Differential Geometry | 10-M=VADGin-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)**

| 10 | numerical grade | -- |

**Duration**  
**Module level**  
**Other prerequisites**

| 1 semester | graduate | -- |

**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)*

| V (4) + Ü (2) |

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**

--

**Additional information**

--

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

--

**Module appears in**

Master's degree (1 major) Mathematics International (2015)
Master's degree (1 major) Mathematics International (2021)