## Module title
Overview Complex Analysis and Advanced Analysis for Teaching Degree (German Gymnasium)

## Abbreviation
10-M-FVL-Ü-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)

## Duration
1 semester

## Module level
Undergraduate

## Other prerequisites

### Contents
Advanced analysis of functions in several variables, integral theorems; complex differentiability and Cauchy-Riemann differential equations, path integrals and Cauchy integral theorems, isolated singularities, meromorphic functions and Laurent series, residue theorem and applications, Weierstraß product theorem and theorem of Mittag-Leffler, conformal maps.

### Intended learning outcomes
The student is acquainted with fundamental concepts and methods in analysis of several variables (including integral theorems) and complex analysis. He/She is able to relate these concepts with one another, and realises the advantages of thinking across the borders of different branches in mathematics.

### Courses
V (4) + Ü (2)

### Method of assessment
Oral examination of one candidate each (20 to 40 minutes)

Assessment will have reference to the contents of modules 10-M-FTHL and 10-M-VANL.

Language of assessment: German and/or English

### Allocation of places

### Additional information

### Referred to in LPO I
§ 73 I Nr. 1

### Module appears in
First state examination for the teaching degree Gymnasium Mathematics (2015)