Study programmes: PhD STUDIES - Mathematics

Course name: CODE 3M139 – Quasiconformal and Harmonic Mappings

Lecturers: Miodrag Mateljević, Vladimir Božin, Miljan Knežević

Status: Optional

ECTS: 9

Attendance prerequisites: No prerequisites.

Course aims: Mastering the concepts and methods of quasiconformal and harmonic mappings.

Course outcome: The student needs to understand and apply notions and techniques of quasiconformal and harmonic mappings.

Course content: Analytic definition of quasiconformal mappings. Geometric definition of quasiconformal mappings. The Beltrami equation and applications. Extremal problems. Teichmuller spaces. Harmonic mappings on surfaces.

Literature:

1. Lehto O., Virtanen K. I., *Quasiconformal Mapping*, Springer-Verlag, Berlin and New York, 1965.
2. Ahlfors L. V., Lectures *on Quasiconformal mappings*, Princeton, 1966.
3. Vaisala, *Lectures on n-Dimensional Quasiconformal Mappings*, Springer-Verlag, 1971.

Number of hours: 10	**Lectures**: 4	**Tutorials**: -	**Laboratory**: -	**Research**: 6

Teaching and learning methods: Frontal, tutorial and practical

Assessment (maximal 100 points)

Course assignments	**points**	**Final exam**	**points**
Lectures	-	Written exam	-
Exercises / Tutorials	50	Oral exam	50
Colloquia	-	Written-oral exam	-
Essay / Project	-		