

Course content for International Master program „Mathematical modeling, computation and optimization“

Course name	Analysis and Numerics for Integral Equations
Contents and Objectives	<p><u>Contents:</u></p> <ul style="list-style-type: none"> • solvability theory for Fredholm, weakly singular, and strongly singular integral equations • algorithms for their numerical solution • stability and convergence of such algorithms <p><u>Objectives:</u> We introduce different classes of integral equations and concepts for their solvability theory and their numerical solution.</p>
Teaching	This course consists of lectures (4h/week).
Prerequisites	Basic courses in Analysis, Linear Algebra, and Functional Analysis.
Examination	Oral exam (30 minutes)
Credits	6 ECTS points
Frequency	This course is given at least every second year.
Workload	The estimated total working time for this course is 180 hours.
Duration	This course is given during one semester.