

Module No.	Title of Module
10-MAT-MPFOP1	Functional Analysis / Operator Theory
Recommended for	2nd semester of Int. Master Program Math. Phys.
Duration	1 Semester
Frequency	Every other Summer Semester
Course types	(1) Lecture „Functional Analysis / Operator Theory" (2 SWS) = 30 h in class + 120 h individual studies = 150 h (2) Seminar „Functional Analysis / Operator Theory" (2 SWS) = 30 h in class + 120 h individual studies = 150 h
Workload	10 LP = 300 h
Aims	After active participation the students are able to show and apply the basic terms and methods of Functional Analysis (Compactness, selfadjoint operators, spectral theory). They can solve minor problems independently or in groups and verify proofs for completeness.
Contents	One ore more of the following topics: <ul style="list-style-type: none"> - Banach space theory - Function spaces - Operator Theory - Spectral Theory <p>Lectures and seminars will be held in English. Students' performance has to be in English as well.</p>
Prerequisites	None
Literature	N. Dunford, J. T. Schwartz: Linear Operators
Examinations	Oral exam of 25 min Oral lecture (60 min.) + written report (4 weeks).
Requirements	attendance at lecture „Functional Analysis / Operator Theory" (2 SWS) participation in seminar „Functional Analysis / Operator Theory" (2 SWS)