

Module No.	Title of Module
10-MAT-MPDS2	Advanced Theory of Dynamical Systems

Recommended for	3rd semester of Int. Master Program Math. Phys.
Duration	1 Semester
Frequency	Every Winter Semester biannually
Course types	(1) Lecture „Advanced Dynamic Systems“ (2 SWS) = 30 h in class + 120 h individual studies = 150 h (2) Seminar „Advanced Dynamic Systems“ (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 understand a section of the theory of Dynamic Systems and to illustrate to current status of research orally and in written form as well as to apply the suitable methods on advanced problems.
Contents	Advanced topics from current research on an area of dynamic systems (e.g. Hamiltonian systems, ergodic theory, geometric dynamic systems) Lectures and seminars will be held in English. Students' performance has to be in English as well.
Prerequisites	None
Literature	B. Hasselblatt / A. Katok: Modern Theory of Dynamical Systems E. Zehnder: Lectures on Dynamical Systems, EMS, 2010
Examinations	Oral exam of 25 min Oral lecture (60 min.) + written report (4 weeks).
Requirements	attendance at lecture „Advanced Theory of Dynamical Systems “ (2 SWS) participation in seminar „Advanced Theory of Dynamical Systems “ (2 SWS)