

Module:	Elective Advanced Lectures: Theoretical Physics
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Module No.: physics70c

Course:	 Random Walks and Diffusion (T)
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Course No.: physics7502

Category	Type	Language	Teaching hours	CP	Semester
Elective	Lecture with exercises	English	1+1	3	ST

Requirements for Participation:**Preparation:**

Quantum mechanics and Thermodynamics

Form of Testing and Examination:

Requirements for the (written or oral) examination: Successful work within the exercises

Length of Course:

1 semester

Aims of the Course:

The aim of the course is to introduce the student to random processes and their application to diffusion phenomena

Contents of the Course:

Basics of probability theory, Master equation and Langevin equation, Law of large numbers and Central Limit Theorem, First passage problems, Large scale dynamics, Dynamical scaling.

Recommended Literature:

Will be announced in the first lecture