Course title: Discrete Mathematics 2	**Neptun code: GEMAN403-a**
Course coordinator: Dr. Jenő Szigeti, DSc, professor	
type of lesson and number of lessons: **lecture (2)**	
method of evaluation: colloquium	
curriculum location of the subject: (autumn/spring semester): autumn and spring	
pre-study conditions *(if any)*: -	
The task and purpose of the subject:	
The objective of the course is to introduce PhD students to discrete mathematical concepts related to the foundation of informatics research. The aim of the course is to develop the ability to identify and solve problems within this field.	
Course description:	
Counting, Generating functions and recursions. Fibonacci sequence. Catalan numbers.Stirling numbers of the first and of the second kind.	
Required literature:	
1. Lovász László: Combinatorial Problems and Exercises, American Mathematical Society, 2007. ISBN 0821842625 2. Richard P. Stanley: Catalan numbers, Cambridge University Press, 2015. https://doi.org/10.1017/CBO9781139871495 3. Ronald L. Graham, Donald E. Knuth, and Oren Patashnik: Concrete Mathematics: A Foundation for Computer Science"", Addison-Wesley Professional, 1994.	
Recommended literature:	
1. Martin Aigner: A Course in Enumeration, Springer, 2007. ISBN 3540390359	