* In general pt formule mai bine cautati in seminarii; demonstratiile + alte explicatii sunt in cursuri de obicei

1. Experiment, sample space, event - lecture 1, page 1
2. Union, intersection, difference, symmetric difference + their properties (commutative, associative, distributive) - l1, p2-3
3. Mutually exclusive, collectively exhaustive, partition - l1, p3
4. Rolling a die example which shows the relational algebra - l1, p4
   1. Also l1, p9
5. Demorgan’s laws - l1, p4
6. Sigma (𝞂) field, measurable space, def of probability - l1, p5
7. Probability space - l1, p6
8. Inclusion exclusion principle - l1, p7
9. Classical def of probability - l1, p8
10. Conditional probability, the multiplication rule - l2, p1
11. Total probability rule - l2, p2
12. (mutually) independent events - l2, p4
13. Bernoulli trial, binomial model - l2, p6
14. Hypergeometric model - l3, p1
15. Poisson model - l3, p2
16. The Three Shooters Problem - l3, p3
17. Pascal (negative binomial) - l3, p3
18. Geometric model - l3, p4
19. Random variable - l3, p6
20. PDF discrete - l3, p7
21. CDF discrete - l4, p1
22. Bernoulli distribution - l4, p3
23. Discrete uniform distribution - l4, p3
24. Binomial distribution - l4, p3
25. Hypergeometric distribution - l4, p4
26. Pascal distribution - l4, p4
27. Geometric distribution - l4, p4
28. Poisson distribution - l4, p5
29. Discrete random vector - l4, p5
30. Joint PDF, marginal PDF, sum and product of discrete random vectors - l4, p6
31. Scalar multiplication, quotient random vectors, independence - l4, p7
32. Continuous random variable, PDF, CDF - l5, p1
33. (continuous) uniform distribution - l5, p3
34. Normal distribution - l5, p4
35. Relation between the cdf of the normal distribution / standard normal.. - l5, p5
36. Exponential distribution - l5, p6
37. Continuous joint CDF - l5, p7
38. Continuous random vector, joint PDF - l5, p8
39. Marginal PDF, independence - l5, p9
40. Functions of continuous random variables - l5, p10
41. Expectation - l6, p1
42. Properties of the expected value - l6, p4
43. Variance, standard deviation, properties - l6, p7
44. Easier computational formula for variance - l6, p8
45. Moments - l6, p10
46. Quantiles - l7, p1
47. Covariance, correlation coefficient - l7, p3
48. Inequalities - l7, p6-7
49. Central limit theorem - l7, p10