

Course general Description of Math 5311

January 22, 2024

This course is offered: (3rd Level)

General counting methods, The inclusion-exclusion principle.

Ordinary generating functions, Exponential generating functions, Recurrence relations.

The Pigeon-hole principle and its generalizations.

Techniques of computing Mobius functions, Mobius functions for special lattices.

Ramsey numbers, Ramsey theorem.

Essential References

1. A Course in Combinatorics, Cambridge University Press, 2nd edition, by J. H. Van Lint and R. M. Wilson, 2001.
2. Introductory Combinatorics, Paperback, 5th edition, by Richard A. Brualdi, 2009
3. Introduction to Graph Theory, Prentice Hall, 2nd Edition, by Douglas B. West, 2001.
4. Graph Theory, volume 244 of Graduate Texts in Mathematics. Springer, 1st edition, by J. A. Bondy and U. S. R. Murty, 2008.