

9. Course Schedule

Keyword Syllabus:

- Pairing Method, telescoping method, binomial sums, Fubini principle
- AM-HM-GM, Cauchy Schwarz, rearrangement, power mean inequalities
- Functional equations
- Modulo arithmetic, Fermat-Euler theorem, Chinese remainder theorem
- Divisibility problems and Diophantine equations
- Pigeonhole and inclusion-exclusion principles
- Recurrence relations and generating functions
- Mathematical games
- Geometry problems solved via coordinates, complex number, vector methods