

Estructuras Discretas

Generating Functions (Biggs, 2 edition; Pages 357-375)

Catalan numbers (Van Lint-Willson 116-117)

Partition of positive integers (Biggs 276-389)

2.5 weeks

Cyclic order and Polya Theory (Biggs 390-404) and (Biggs 281-295)

Designs and Fisher inequality (Biggs 105-124)

Circulation and cuts

Cycle space

Application to eigenvalues

3 weeks

Error-correcting codes (Biggs 338-355)

1.5 weeks

Systems of distinct representatives (Van 35-40)

Dilworth theorem

Sperner's theorem

Erdos-Ko-Rado theorem (Van 42-48)

Linear extensions

Dimension of a partial order

1.5 weeks

Matchings, Covering and Packing (Diestel)

Random Graphs (Diestel)

Brooks theorem (West 191-199)

Critical graphs (West 210-212)

Menger's theorem (West 161-168)

Networks and flows in networks (West 176-180)

Proof of Kuratowski theorem (West 246-254)

Independent and dominating sets (West 113-118)

4 weeks

Number of monochromatic triangles (Diestel 269-271)

Ramsey theorem (West 380-383)

Ramsey number (West 383-386)

Graph Ramsey number (West 386-388)

1.5 weeks
