MATH 3330 — Applied Graph Theory

List of topics for the first class presentation

Presentations should be 10–15 minutes long. Make sure to explain the topic with examples, but also give the formal argument. Use your own words, do not reproduce text from the book. Try to explain as clearly as possible. If you want to use the data projector, let me know one class in advance, and send me the presentation one day before. If you use overheads, please hand in a copy of your slides. If you use the black board only, please prepare a set of notes outlining your presentation.

1. Application 1.4.1, page 33. Application of connectedness to rigidity. Jan 23 or 25.
2. Theorem 1.5.4, page 41. A graph is bipartite if and only if it has no even cycles. Jan 23 or 25.
3. Proposition 3.1.1, p. 116. Every tree with at least one edge has at least two leaves. Jan 25 or Jan 30.
4. The graph reconstruction problem. Pages 83 and 84. Jan. 30 or Feb 1.
5. Center of a tree, p. 119–120. Especially prop. 3.1.12. Jan 30 or Feb 1.
6. Tree-graphic sequences. p. 121. Feb 6 or 8.
7. Application 6.2.4, page 258: sequencing two-person conferences. Feb 6 or 8.
8. DeBruyn seqences, pp.252–255. Feb 13 or 15.
9. Guam's postman problem, pp. 255–257. Guam's postman problem.