

MAD 5305 — Graph Theory

Section 1, Spring 1997.

Instructor: Bellenot.

The good doctor's Office: 002-B Love.

Office Hours: MF 2:30–3:00 or by appointment.

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Web Page: <http://www.math.fsu.edu/~bellenot/class/s97/graph>

Eligibility: Graduate standing

Text: Ronald Gould, *Graph Theory*. It looks like this book is out of print, xerox copies may be available at Target.

Coverage: Parts of most of the chapters (as time permits).

Grades: The easy going 85% A, 70% B, 55% C, 40% D.

Tests: None.

Projects: Each student will do a project on a pre-approved graph theory topic. The project's grade will be determined on both the many page document (at least 5 and usually 10-20) and the in class oral presentation. Presentations are the last week and a half of classes. The project is due Wednesday, April 9. The project is 20% of your grade.

Homework: The remaining 80% of your grade will be determined by homework problems. Some problems (most, but not all) will be graded on a 10 point scale. Only the top 90% of your graded homework is used to compute your homework average. Generally three homework problems (often proofs) will be assigned each Monday and due the following Monday.

The first HW set

1.14: A (p, q) graph G is *self complementary* if G is isomorphic to \bar{G} . Show that if G is self complementary, then $p \equiv 0$ or $1 \pmod{4}$.

1.15: Suppose $\Delta(G) = k$. Prove that there exists a supergraph H of G (that is, a graph H that contains G as a subgraph) such that G is an induced subgraph of H and H is k -regular.

1.16: Prove that if G is a regular bipartite graph with partite sets V_1 and V_2 then $|V_1| = |V_2|$.

Homework Rules

- Must be your **OWN** work.
- Must be neat and written in clear English.
- Must be on time – late homework is **NOT** accepted.
- Must be on 8.5 by 11 paper.
- Must be written in ink.
- Must use only one side of each page.
- Multiple pages must be stapled together.