MATH 4483/5483: Graph Theory    Spring 2020

Meetings: TR 11:00am–12:15pm in Boyd 304
Textbook: *Graph Theory with Applications*
by Bondy and Murty, (ISBN 0-444-19451-7)
Instructor: Dr. Xiaofeng Gu (xgu@westga.edu)
Office: Boyd 316; Phone: (678) 839-4143
Office Hours: TR 10:00–10:50am, 2:00–3:20pm
Course Website: CourseDen

Reference books (no purchase required):

- *Graph Theory*, by Bondy and Murty, 2008
- *Graph Theory*, by Reinhard Diestel, 2017 edition (or other editions)

1 Course Description
Introduction to graph theory. Topics include the basics of graph theory, Trees, Connectivity, Euler Tours and Hamilton Cycles, Matching, Edge Colorings, Independent Sets and Cliques; Vertex Colorings and Planar graphs.

2 Objectives

1. A thorough understanding of the basic concepts: degree, path, cycle, tree, bipartite, etc.
2. An understanding of Connectivity, Euler Tours and Hamilton Cycles.
3. An understanding of Matching, Edge Colorings.
5. A thorough understanding of Vertex Colorings.
6. A thorough understanding of planar graph and its characterization.
3 Evaluation

Assignments (30%, including homework, in-class quizzes and presentations)
Tests (3 tests, 15% each, Chapters 1-3; 4-6; 7-9)
Final Exam (comprehensive and cumulative, 20%)
Attendance (5%)

Grades: Grades will be based on the following percentages.
- 90-100: A
- 80-89: B
- 70-79: C
- 60-69: D
- 0-59: F

4 Policies

Attendance and Responsibility: You are required to attend every class. Class attendance will be taken almost every class. Tardies and early leaves are not allowed. Two tardies/early leaves are counted as one absence. If a class is missed, you are responsible for all materials and assignments. After 2 absences, you will lose 1 point for each additional absence out of 5 total attendance points.

Equipment: Any cell phone is NOT allowed to use in class. Please silence your cell phone during the class. Calculators are not needed or allowed in this class.

Homework and Late Policy: You need to show your work in details to get credits. Every homework assignment must be turned in by the due date. Late homework within 3 days will get at most 60% credits, and no credit after 3 days.

Make-ups: Make-up tests will be granted only for excused absences. Official documents are needed. The student is required to contact the instructor in advance to schedule the make-up, or inform the instructor by email or phone as soon as possible on the test date. Any make-up test must be arranged within a week from the original date. **No make-up for quizzes and final exam.**

University Policies and Academic Support: For important policy information, i.e., the UWG Honor Code, Email, and Credit Hour policies, as well as information on Academic Support, Online Courses and Campus Carry, etc, please review the Common Language for Course Syllabi: [https://www.westga.edu/UWGSyllabusPolicies/](https://www.westga.edu/UWGSyllabusPolicies/).

You should read this at the beginning of each semester.

5 Important Dates

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<thead>
<tr>
<th>Date</th>
<th>Event</th>
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<tbody>
<tr>
<td>January 6</td>
<td>Classes begin</td>
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<tr>
<td>January 20</td>
<td>MLK Day (no classes)</td>
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<tr>
<td>February 28</td>
<td>Last day to withdraw with a grade of W</td>
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<tr>
<td>March 16–20</td>
<td>Spring Break (no classes)</td>
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<tr>
<td>April 27</td>
<td>Classes end</td>
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<tr>
<td>May 5, 11am–1pm</td>
<td>Final Exam</td>
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The instructor retains the right to modify this syllabus to better serve the course objectives.