Math 3541
TuTh 3:00-4:30
BELL 143

# TOPOLOGY
## Syllabus

Spring 1996

Instructor: **Dr. Art Duval**

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Office hours: **Mon, Wed 11–12; Tue, Thu 1–2**. Please feel free to come by any time during scheduled office hours. You are welcome to come at other times, but in that case, you might want to make an appointment, just to make sure that I will be there then. You can make an appointment simply by talking to me before or after class, or by calling me at my office or at home.

Textbook: **Munkres, Topology: a first course, Chs. 2–4, 8.**
The first (and larger) part of the course will cover the basics of general topology, including: the basic definitions and examples of topological spaces; connectedness; compactness; countability; and separability. The course concludes with an introduction to algebraic topology, in particular, homotopy theory.

Prerequisites: You are assumed to have completed an introductory graduate Analysis course (such as Math 3521 at UTEP), primarily for the "mathematical maturity," and because analysis provides most of the basic examples and much of the motivation for topology; the material will not rely on any specific result from analysis. The last part of the course on algebraic topology will require a certain comfort with the basics of group theory, such as found in the beginning of a Modern Algebra course (Math 3425 at UTEP).

GRADES: The course grade will be based entirely on homeworks. There will be an initial due date (spaced about two weeks apart) for each set of problems, by which time some work (however partial) must be turned in for each problem. These will be returned as soon as possible with questions and comments, after which the student may respond, revise, amend, and then resubmit the problem. Resubmitted solutions will again be returned with comments and may again be revised and resubmitted. No more than twelve problems may be submitted or resubmitted in a single week.

Some students may be selected to present brief summaries of one of their solutions in class (after it has been returned and graded). These presentations will supplement the student's grade. After such presentations, others may still continue to resubmit those same problems, making use of what has been presented. Other collaboration is also permitted, but you must write your solutions yourself.

Each problem will be graded with one of three grades:

$\surd-$ For a solution covering one special case; or an illustrative example.

$\surd$ For a solution covering most cases, with an adequate explanation.

$\surd+$ For a complete solution covering all cases, with a well-written explanation.

Note that how *well* you write your solution can often be the difference between a $\surd+$ and a $\surd$. An A will require 80% $\surd+$ (the remainder $\surd$); a B will require 100% $\surd$; and a C will require 50% $\surd$ (the remainder $\surd-$). The $+$'s and $-$'s cancel one another.

Drop policy: The deadline for student initiated drops with an automatic W is Fri. Feb. 23. From then until Fri. Apr. 19, you can drop the course by consulting me.