

Dear Class - we will be covering the following slides in the designated order. The slides are on the class web page but they are best studied by having a printout of the entire set. As stated in the syllabus, they are titled "GEOGRAPHIC INFORMATION SYSTEMS (GIS): A TECHNICAL APPROACH" and a printed version can be obtained at the Engineering Copy Center. They are also available on the secure page. It may take the folks at the copy center a day to produce them for you. The price is reasonable at around \$50 for 850 pages spiral bound to make it easy to take with you. Also, it is easy to take notes on the lectures by annotating them.

In the following I designate which slides we will go over. Once we have the bound copy of the slides I will give you the page numbers. Please note that a few of the slides are not in the bound set and you can print them as needed.

At times, I will also indicate what pages to read in the "Foundations of Multidimensional and Metric Data Structures" book (FMDS). I will update this writeup as we move along during the semester.

in3
in4
in5
in9
in10
in12
cm3
cm4
cm5
cm8
cm10
cm11
cm12
cm13
cm13.1
cm13.2
cm14
cm15
cm16
cm17
cm18
cm19
cm20
cm24
cm25
cm27
cm28
cm34
cm57
cm60
cm69
cm70
c11-c19
c112
c122-c125
c130
c133-c156
c160-c164

Winged-Edge slides (we0-we13) also read pp. 315-322 of FMDS

Vertex-Based Lath Representations also read pp. 331-345 of FMMDS
Triangulations (tg1-tg16) Also read pp. 346-350 of FMMDS
Surface Data (sf1-sf11)
Quadtree Background (bg1-bg8)
Object-based/Image-based Image and Object Reps.
Alternative Quadtree Representations (ar1-ar6)
Tessellations (tl1-tl15)
Neighbor Finding Methods in Quadtrees (nf1-nf9, hp11)
Quadtree Data Structure Conversion (qb1-qb16)
Geometric Properties in Quadtrees (gp1-gp5)
Transformations on Quadtrees (tf1-tf7)
Quadtree Region Expansion (bf1-bf8)
Hierarchical Representations of Point Data (hp1-hp24)
Linear Hashing (hp25-hp33)
Spiral Hashing (hp34-hp40)
Hierarchical Representations of Line Data (cd1-cd8, hp13, cd30, hi45, cd32-cd36)
Hierarchical Representations of Rectangle Data (rc1-rc17)
Plane-Sweep Methods (ps1-ps18)
Loose Quadtree and Partition Fieldtree
Range Trees and Priority search Trees
Hierarchical Representations of 3D Data (td1-td5)
Ranking in Spatial Databases (in)
Decoupling: A Free (?) Spatial Lunch (bv)
Similarity Searching in Multimedia Databases (1-24, 33-35-39)