

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 (FMMDS). 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 FMMDS

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)