

Summary of key topics

definitions of terms (lecture number)

critical spatial thinking (1)

geographic information
science (1)

representation (1)

2.5D (1)

digital (1)

analog (1)

representative fraction (1)

binary (1)

ASCII (1)

short, long integer (1)

single, double precision float
(1)

BLOB (1)

interoperability (1)

atom of geographic
information (2)

Digital Earth (2)

discrete object
conceptualization (2)

shapefile (2)

continuous field
conceptualization (2)

six field representations (2)

ontology (2)

database management system
(3)

relational model (3)

table (relation) (3)

common key (3)

tuple (3)

relational join (3)

coverage (3)

arc (3)

node (3)

topology (3)

building topology (3)

choropleth map (3)

area-class map (3)

multipoint (4)

multipart polyline (4)

multipart polygon (4)

polyline M and Z (4)

overlaps in the coverage model (4)

class (4)

subclass (4)

inheritance (4)

behavior (4)

encapsulation (4)

split and merge rule (4)

spatially intensive attribute
(4)

spatially extensive attribute
(4)

hybrid data model (4)

geodatabase (4)

data model (5)

UML (5)

Microsoft Visio (5)

use case (5)

UNETRANS (5)

object in ESRI UML (5)

feature in ESRI UML (5)

abstract class (5)

association (5)

multiplicity (5)

aggregation (5)

composition (5)

association class (6)

DIME, TIGER (6)

geocoding (6)

linear referencing (6)

turntable (6)

network (6)

edge, junction (6)

Tobler's First Law (7)

Thiessen polygon (7)

spatial dependence (7)

spatial autocorrelation (7)

Moran and Geary indices (7)

semivariogram (7)

horizontal and vertical context (7)

spatial heterogeneity (7)

non-stationarity (7)

place-based analysis (7)

fractal (7)

Richardson plot (7)

metric georeference (8)

locator service (8)

gazetteer (8)

geoparsing (8)

National Grid (8)

global grid (8)

Quaternary Triangular Mesh
(8)

spatial analysis (9)

nominal, ordinal, interval,
ratio, cyclic data (9)

exploratory spatial data
analysis (9)

Pythagorean distance (9)

great circle distance (9)

trapezium algorithm (9)

shape measure (9)

buffer (10)

point in polygon (10)

Polygon overlay (10)

areal interpolation (10)

spatial interpolation (10)
inverse distance weighting
(10)
kriging (10)
variogram (10)
range (10)
sill (10)
nugget (10)
cross-validation (10)
density estimation (10)
kernel (10)
digital elevation model (11)
Shuttle Radar Topography
Mission (11)
paddyfields (11)

triangulated irregular mesh
(11)

Delaunay triangles (11)

digital line graph (11)

slope (11)

aspect (11)

watershed (11)

viewshed (11)

spread function (11)

centroid (12)

Varignon Frame (12)

point of minimum aggregate
travel (12)

spatial decision support
system (12)

spatial sample (12)

significance test (12)

random and independent sample (12)

generalization (12)

autonomous agent model (13)

cellular model (13)

model coupling (13)

multicriteria methods (13)

Analytical Hierarchy Process (13)