GEOS 5v08 501 3D DATA CAPTURE AND GROUND GROUND LIDAR
Schedule for lectures
Fall 2005

Carlos Aiken
FO2.224A
972 883 2450
972 881 9496 (h)
214 535 6520 ©
aiken@utdallas.edu

Classes: Room FO 2222
Monday: 7:00PM-945PM
Office hours: 2-500pm M-Th
or appointment

COURSE OUTLINE

The goal of the class is to educate the student on 3D digital data acquisition in the field in both geosciences and non-geosciences applications.

Part 1: GPS; basics and applications to digital mapping; field exercises.(for those without GPS experience), emphasis on RTK GPS

Part 2: Laser rangefinder and scanners: basics and applications to digital mapping; field exercises

Part 3: Digital cameras: Digital photorealistic modeling; photogrammetry; field exercises

Part 4: Field project

Grade basis:

Exercises	30%
Semester Project	50%
Final Exam	20% FINAL OCT 31, 2005

There are many references and many different magazines and journals in my lab and you will be assigned readings.

Main references

See www.utdallas.edu/~aiken/LASERCLASS FOR MORE REFERENCES AND MATERIALS.
For those without much experience in GPS look into
www.utdallas.edu/~aiken/GPSCLASSS

Aiken, C., Xu, X., Thurmond, J., Abdelsalam, M., Olariu, M., Olariu, C., and Thurmond. A., 2004, 3D Laser scanning and virtual photorealistic outcrops: acquisition, visualization and analysis, Short Course #3, two day short course, 2004 AAPG Convention, 100p. (see www.utdallas.edu/~xuxue, go to 3D laser link I will send you user and passwords to download this manual)

Nielsen, K. C., Aiken, C. L. V., and Xu, X., Digital Mapping Methods: Accurate Digital Data Capture and Analysis for the Field Geoscientist, *GSA Continuing Educational Manual*, Geological Society of America, 119 p., 2000. (go to …,edu/~aiken/manuals and download this manual)