

SUR 4201 – Route Geometrics and Design

Course Syllabus

INSTRUCTOR: Prof. David Gibson
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Course Website: access through UF ELearning,
or through the Geomatics web site: <http://sfrc.ifas.ufl.edu/geomatics> select Course
Materials, select SUR 4201
or by a direct link: <http://sfrc.ifas.ufl.edu/Class/SUR4201/index.html>

Office Hours: Open Door Policy: If my door is open, please come in. I'm on campus
generally from 10AM to 3 PM.

TEXT: Course Handouts
No Required Text
Recommended Reference: Elementary Surveying, Wolf and Ghilani

COURSE OVERVIEW:

This course covers computer route geometry along with the basics of surveying. Included are: horizontal route design and calculation, vertical route design and calculation, cross section design and calculation, earthwork volume calculation, spirals, earthwork analysis, superelevation, AASHTO geometric design, route project flow, route plans, right of way, bearings, azimuths, elevations, coordinate systems. .

GRADING: A final grade for the course will be assigned based on the following point system

ITEM	POSSIBLE POINTS
2 Midterm Quizzes @100 pts each	200 poss. points
Final exam (comprehensive)	100 poss. points
Required "HW8 – Safe Road Evaluation"	20 poss. points
Total poss. pts=	320 poss. points

Optional HWs 1-7 -- Submit for grading, receive +5 course points each for complete solution, no partial credit.

Grade assignment will be by the UF Grade Scheme: A:greater than 95, A-:90-94.99, B+:87-89.99, B:83-86.99, B-:80-82.99, C+:77-79.99, C:73-76.99, C-:70-72.99, D+:67-69.99, D:63-66.99, D-:60-62.99, E:59.99 or less. Grades are assigned by straight cut-off with NO ROUNDING. (see UF policy below)

NOTE: Academic Honesty:

All students admitted to the University of Florida have signed a statement of academic honesty committing themselves to be honest in all academic work and understanding that failure to comply with this commitment will result in disciplinary action.

This statement is a reminder to uphold your obligation as a student at the University of Florida and to be honest in all work submitted and exams taken in this class and all others.

Lecture 28: Review of Plans 1

Lecture 29: Review of Plans 2 Review of Plans 2 Excel (pull this up and printout to help track the video)

Optional Content:

Lecture 30: Right of Way Acquisition

Lecture 31: Construction Layout Surveys:

Lecture 32: Tutorial Labs 2 and 3 Intro to Microstation:

Lecture 33: Tutorial Labs 4 and 5 Convert Graphics, Surface Modeling by TIN

Lecture 34: Tutorial Labs 6 and 8 Ground Profile, Vertical Design, Superelevation Shapes

Lecture 35: Tutorial Labs 9 and 10 Cross Sections, Slope Limits, Earthwork

Assignment: none