

Subdivision Design

SUR 4463 (3 credits) Spring, 2023

Course Description: Design a medium-sized subdivision, master plan development, physical development considerations, legal requirements, comprehensive project, mock presentation and platting.

Instructor: Dr. Bon A. Dewitt (He, Him)
Room 305 Reed Laboratory
352-392-6010
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Office Hours: Period 4 - Monday, Wednesday, Friday (Other times by appointment)

Course Objectives/Outcomes

At the end of this course, each student will be able to:

- Design the layout of lots, streets, storm water retention areas, and open space for a residential land development
- Determine storm water runoff for an area using the Rational Method
- Interpret state and local government regulations relating to subdivision design
- Create a plat and set of plans for a residential subdivision development
- Work in multi-disciplinary teams

Course Meeting Times: Period 3 (9:35 – 10:25AM) Monday, Wednesday, Friday
Final Exam Schedule: 12:30pm – 2:30pm, Thursday May 4, 2023

Required Text:

Dewberry, 2019. "Land Development Handbook: A Practical Guide to Planning, Engineering, and Surveying," 4th ed. Sidney O. Dewberry – Editor-in-Chief. McGraw-Hill, New York.
ISBN 978-1-260-44075-1

Class Format, Make-up and Attendance Policies

The class meetings will consist of normal lecture days, two exam days, and "Project Workdays" which will generally occur on Fridays after the second week. (See calendar at the end of the syllabus). On normal lecture days, the instructor will present concepts related to subdivision design and students are encouraged to ask questions whenever clarification is needed. Exams will be 50 minutes long and take place online using Honorlock. During "Project Workdays" no new lecture material will be presented. Instead, students will have the opportunity to discuss their project work and get feedback from the instructor. In most cases, project work will continue either in the computer lab or in online groups.

Students are expected to attend *all* class meetings, either in-person or on Zoom. If the student is not in class by the time the instructor takes roll, he or she will not be counted for that day. Students taking the class at either the Ft. Lauderdale or Plant City REC must contact the instructor to make alternate arrangements. Exceptions to the above rule may be made, but only for cases of (in the instructor's opinion) extreme hardship.

All late assignments and project phases will be assessed a penalty of 25% per day. No late final projects will be accepted, i.e. they must be presented and handed in at the designated time.

Project Requirements

The main feature of this course is a hands-on, team project resulting in a set of design plans for a residential subdivision. This will involve extensive use of AutoCAD/Civil 3D software. With SUR3323 (or equivalent) being a prerequisite for this course, it is expected that every student will be able to contribute to the preparation and drawing of the plans. The AutoCAD/Civil 3D software is installed on the lab computers in 402 Reed Lab, but students can also access a downloadable student version for use on their personal computers.

Final Exam

The final exam for this course will consist of project presentations by individual teams and will take place at the officially designated time. Mark this on your calendar now, because it will not be changed. Any student asking to change the date and/or time of the final will be instructed to reread this paragraph. **The message is very clear – This final will take place at the officially designated time and will NOT BE CHANGED. If you miss the final you will either fail or receive an incomplete for this course.**

Assignments

- Local government meeting attendance and two page written summary
- Main class project: working in teams of three or four, students will complete six distinct phases of a residential subdivision design. Each phase will be due on a specific date and will be graded separately.

Evaluation of Student Learning

Meeting assignment	5 %
Attendance	10%
In-class exams	35 % (17.5% each)
Project	50 % (total of 6 phases)

Grading Scale

Course grades will **approximately** follow the default Canvas letter grade scale (94% = A, 90% = A-, 87% = B+, 84% = B, etc.). However, in order to avoid cases such as when a student misses a higher grade by a small fraction of a percent, the grade cutoff percentages may be adjusted (up or down) so that distinct percentage gaps will separate the letter grades.

For an explanation of the UF letter grade scale, see:

<https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx>

Lecture Topics and Readings

Lec.	Topic	Reading assignment
1	Course Introduction	Dewberry – Ch. 1 Overview, pp. 3-5
2	Overview of Land Development, Comprehensive Plan	Dewberry – Ch. 1.1, pp. 6-15; Ch. 2.2, pp. 29-40; Browse Chap 163 - FLA statutes (part II) www.leg.state.fl.us
3	Zoning	Dewberry – Ch. 2.3, pp. 41-66; Browse Alachua County ULDC, Ch. 403 “Zoning Districts”
4-5	General project overview	
6	Review of route geometry	Dewberry – Browse Ch. 3.3, pp. 171-206; Read Ch. 5.3. pp. 417-425
7	Subdivision Regulations	Dewberry – Ch. 2.4, pp. 67-74; Alachua County ULDC: Read Sec. 407.72-407.74, pp. 407-83 - 407-85 Browse Sec. 407.140-407.142, pp. 407-158 - 47-174
8-11	Conceptual Plan	Dewberry – Browse Ch. 4, pp. 307-378; “Coving” (Article posted); Browse Alachua Co. Corridor Design Manual (Article posted); Alachua County ULDC, Ch. 407, Article 5 “Open Space”
12	Earthwork fundamentals	Dewberry – Browse Ch. 3.4, pp. 207-224, Ch. 5.4, pp. 437-461
13-16	Storm Drainage	Dewberry – Browse Ch. 3.5, pp. 225-254, Ch. 5.6, sections 5.6.1-5.6.6, pp. 486-532 Alachua County ULDC, Ch. 407, Article 9, “Stormwater Management”;
17	Sanitary Sewer Design	Dewberry – Browse Ch. 5.6, sections 5.6.7-5.6.10, pp. 533-550
18	Water Supply Design	Dewberry-Browse Ch. 5.6, sections 5.6.11-5.6.16, pp. 551-585
	Exam 1	Covers Lectures 1-16
19	Boundary Location	Dewberry – Review Sections 3.2.5-3.2.7, pp. 150-159
20-21	Platting Regulations	Chap 177 - FLA statutes (part I) www.leg.state.fl.us ; Alachua County ULDC, Ch. 407, Article 8, Sec. 407.83, “Plat document requirements”
22	Utilities / Easements	
23-24	Street Layout - Horizontal, Vertical, Cross section	Dewberry – Review Ch. 5.3. pp. 417-425
25-26	Plans, Cost Estimate, Construction	Dewberry – Browse Ch. 6.2, pp. 650-663
27	Environmental Preservation & Permitting	Dewberry – Browse Ch. 6.1, pp. 638-649
	Exam 2	Covers Lectures 17-27

Other Information

Academic Honesty, Software Use, UF Counseling Services, Services for Students with Disabilities

In 1995 the UF student body enacted an honor code (see link below) and voluntarily committed itself to the highest standards of honesty and integrity. When students enroll at the university, they commit themselves to the standard drafted and enacted by students. <https://sccr.dso.ufl.edu/policies/student-honor-code-student-conduct-code/>

Preamble: In adopting this Honor Code, the students of the University of Florida recognize that academic honesty and integrity are fundamental values of the University community. Students who enroll at the University commit to holding themselves and their peers to the high standard of honor required by the Honor Code. Any individual who becomes aware of a violation of the Honor Code is bound by honor to take corrective action. Student and faculty support are crucial to the success of the Honor Code. The quality of a University of Florida education is dependent upon the community acceptance and enforcement of the Honor Code.

The Honor Pledge: We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity by abiding by the Honor Code.

On all work submitted for credit by students at the university, the following pledge is either required or implied: **"On my honor, I have neither given nor received unauthorized aid in doing this assignment."**

(Source: Student Conduct & Honor Codes 6C1-4.040: Philosophy and Definitions – accessed January 2018)

It is assumed all work will be completed independently unless the assignment is defined as a group project by the instructor.

This policy will be vigorously upheld at all times in this course.

Software Use:

All faculty, staff and students of the university are required and expected to obey the laws and legal agreements governing software use. Failure to do so can lead to monetary damages and/or criminal penalties for the individual violator. Because such violations are also against university policies and rules, disciplinary action will be taken as appropriate.

Campus Helping Resources

Students experiencing crises or personal problems that interfere with their general well-being are encouraged to utilize the university's counseling resources. The Counseling & Wellness Center provides confidential counseling services at no cost for currently enrolled students. Resources are available on campus for students having personal problems or lacking clear career or academic goals, which interfere with their academic performance.

- *University Counseling & Wellness Center, 3190 Radio Road, 352-392-1575,*
<https://counseling.ufl.edu/>

Counseling Services

Groups and Workshops

Outreach and Consultation

Self-Help Library

Training Programs

Community Provider Database

- *Career Connections Center*, First Floor JWRU, 392-1601, <https://career.ufl.edu/>

Students with Disabilities

The Disability Resource Center coordinates the needed accommodations of students with disabilities. This includes registering disabilities, recommending academic accommodations within the classroom, accessing special adaptive computer equipment, providing interpretation services and mediating faculty-student disability related issues.

0001 Reid Hall, 352-392-8565, <https://disability.ufl.edu/>

Spring 2023

Monday	Tuesday	Wednesday	Thursday	Friday
1/9 Lec. 1	1/10	1/11 Lec. 2	1/12	1/13 Lec. 3
1/16 M.L. King, Jr. Birthday	1/17	1/18 Lec. 4	1/19	1/20 Lec. 5
1/23 Lec. 6	1/24	1/25 Lec. 7	1/26	1/27 Project Kickoff
1/30 Lec. 8	1/31	2/1 Lec. 9	2/2	2/3 Project Workday
2/6 Lec. 10	2/7	2/8 Lec. 11	2/9	2/10 Project Workday
2/13 (Phase 1 due) Lec. 12	2/14	2/15 Lec. 13	2/16	2/17 No Class
2/20 Lec. 14	2/21	2/22 Lec. 15	2/23	2/24 Project Workday
2/27 Lec. 16	2/28	3/1 Lec. 17	3/2	3/3 (Phase 2 due) Project Workday
3/6 Lec. 18	3/7	3/8 Exam 1	3/9	3/10 Project Workday
3/13 Spring Break	3/14 Spring Break	3/15 Spring Break	3/16 Spring Break	3/17 Spring Break
3/20 No Class	3/21	3/22 (Phase 3 due) Lec. 19	3/23	3/24 Project Workday
3/27 Lec. 20	3/28	3/29 Lec. 21	3/30	3/31 Project Workday
4/3 Lec. 22	4/4	4/5 Lec. 23	4/6	4/7 (Phase 4 due) Project Workday
4/10 Lec. 24	4/11	4/12 Lec. 25	4/13	4/14 Project Workday
4/17 Lec. 26	4/18	4/19 Lec. 27	4/20	4/21 (Phase 5 due) Project Workday
4/24 Exam 2	4/25	4/26 Project Workday	4/27 Reading Day	4/28 Reading Day
5/1	5/2	5/3	5/4 (Phase 6 due) Final Presentations 12:30-2:30PM	5/5