

SUSTAINABLE LAND USE/CENG 485

Spring, 2007/08 (3 Credit Hours)

Instructor:	Robert Burtch
Office:	Johnson Hall 304
Office Hours:	M 10:00-10:50, T 3:00-3:50, W 12:00-12:50, R 1:00-1:50
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PREREQUISITE COURSES: Senior Status.

COURSE DESCRIPTION:

A senior capstone course including in part land use controls, land study and development design, site feasibility and utility service, site ecology, and social and psychological analysis of development. The roles and tasks of the site design professional are studied. A major design project will be undertaken. Emphasis will be on subdivision design, site design, cost analysis of development, and use of technical design software.

COURSE OBJECTIVE/FOCUS:

The objective of this course is to give the student an introduction to the principles of land development in general and subdivision development in particular. Emphasis will be placed on the subdivision process defined in the State of Michigan.

REQUIRED COURSE MATERIALS:

1. Textbook(s):	Land Development for Civil Engineers, 2 nd edition, by Dion, John Wiley & Sons, Inc. , 2002.
2. References:	Boundary Control & Legal Principles, 3rd. ed., C. M. Brown, et. al., John Wiley & Sons, Inc.
3. Additional Material:	Land Division Act, Certified Survey (Act 132)

COURSE SCHEDULE (Lec T, R 7:00 - 8:15, Lab Sec 211: W 8:00 - 10:50; Sec 212 R 2:00 - 4:50)

Week 1 Jan 14 - 18	Introduction: Understand course objectives, grading policy, etc.; Introduction to the land development process. History Of Land Development: Overall history and trends of cities from Neolithic time to the modern industrial city.
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Week 2 Jan 21 - 25 (No class 1/21)	History Of Land Development. Zoning And Regulation: Issues of land and municipal zoning and the different uses and classifications of zoning controls, land development site limitations, wet land, environmental restrictions, and endangered species.
Week 3 Jan 28 – Feb 1	Zoning And Regulation
Week 4 Feb 4 - 8	Development Design: Preparation of a site subdivision design in accordance with the Michigan statutory requirements including preliminary and final platting documents, Iterative nature of site design, Site-based limitations in development, Technical and professional issues in managing a development project from conception to completion.
Week 5 Feb 11 - 15	Michigan Land Division Act
Week 6 Feb 18 - 22	Mid-Term Exam #1, Feb 19 MSPS Annual Conference/Condominium Research
Week 7 Feb 25 - 29	Michigan Condominium Act and principles of site condominiums
Week 8 Mar 3 - 7	Alternatinve Design Possibilities: Principles of cluster development, Planned Unit development, Condominium development, and urban redevelopment.
March 10 - 14	Spring Break
Week 9 Mar 17 – 21 No classes 20-21	Transportation Systems: Importance of transportation systems in development and specific issues of vehicle, air, marine, & rail travel and freight systems.
Week 10 Mar 24 - 28	Transportation Systems
Week 11 Mar 31 – Apr 4	Mid-Term Exam #2, April 1 Engineered Services: Technical issues involved with site design feasibility and preliminary technical design of engineered services including water, sewage, solid waste, roads, traffic, drainage, grading and erosion control, and utilities. Perform preliminary engineering design of site systems.
Week 12 Apr 7 - 11	Engineered Services
Week 13 Apr 14 - 18	Engineered Services

Week 14 Apr 21 - 25	Government & Budgetary Restraints: Issues involved in obtaining governmental approval of a project with emphasis on emergency services, public health, and regulatory compliance, as well as financial feasibility concerns of the developer, Issues of governmental and social restrictions in land development.
Week 15 Apr 28 – May 2	Social And Cultural Issues: Different aspects of modern life that impact site design including education, religion, recreation, and entertainment.
Week 16	Final Exam: Thursday, May 8, 10:00 – 11:40

ASSIGNMENTS:

All work will be due on the date specified. Late assignments will be assessed a penalty of 5% per day or fraction thereof. All work must be completed to receive a passing grade for this course. No assignments will be accepted after the unit exam in which the assignment was given.

Each assignment will be submitted in a report folder. A cover sheet will be included with each assignment identifying the assignment, student name, and the class. Unless otherwise stated, only one assignment per folder will be accepted.

Assignments will be typed, unless the work requires numerical solutions. It is assumed that you can put together a correctly structured assignment, free of technical and spelling errors. Assignments with more than 4 combined spelling or grammar errors will be returned to be rewritten. I will require any student that is found to have significant deficiencies in their writing to use the services of the University Writing Center in an effort to improve such deficiencies to a satisfactory level.

When graphical output is required for an assignment, the output should be properly identified and located in the appropriate part of the assignment. If the graphical output is being done by hand, it must be drawn using a straight-edge and appropriate templates. Label all parts of the graphic as appropriate.

Work that is submitted in hand-written form must be prepared on engineering paper in pencil. Corrections will be erased or placed above the incorrect values that will be stuck out with a single line through the error. Use only the front side of the sheet. Always include units in the answer and highlight the answer by either underlining it, placing a box around the answer, or by using a highlighter. When you have answers that are less than 1, always begin the number with a zero. For example, .471 shall be written as 0.471. When writing angles, minutes and seconds must always have two units, excluding any decimal portion. If a minute or second contains only single units, i.e., 4 minutes, 7 seconds, the number shall be preceded by a zero. In this case, 04' 07". Unless otherwise stated, all angles will be presented in degrees, minutes and seconds format. Use common sense in portrayal of significant figures.

See sample assignments that identify a format that will be followed in submitting homework assignment.

Lab reports will consist of a least 3 main parts:

1. Purpose of the lab written in your own words.
2. Procedure. In this section succinctly identify the procedures employed in the lab and your results.
3. Conclusion. This section will consist of a discussion of the lab in general and upon your results in particular. Such items of importance might be the validity of the lab, limitations of the results, possible sources of errors that might affect the results, items you might have done differently, special problems encountered, etc.

ATTENDANCE POLICY

I understand that each student may upon occasion need to be away from class due to illness or other important matters. The following policy recognizes these life issues but at the same time reflects the real world need to be present in class in order to learn and share your learning with others in the class.

Each student will be allowed to miss up to 4 classes, either lectures or lab, without penalty. These absences may be for any reason and do not require giving me an excuse. A student who is absent a fifth time will be required to withdraw from the course if this absence occurs during the withdrawal period of the semester. If this absence occurs after the withdrawal period the student will receive a failing (F) grade in the course. The four absences a student may have represents nearly 10% of the meeting dates and far exceed any absence policy that would exist in business, industry or other professional areas. All laboratory absences must be made up during the semester.

Exceptions to the Attendance Policy (Verification of all exceptions is necessary):

1. A University-sponsored event in which an excused absence from the Vice President for Academic Affairs office is given.
2. Death of a family member or close personal relation (friends, neighbors).
3. Extended hospitalization (this does not apply to a visit to the health center because of a cold or other illness).
4. Jury duty or being subpoenaed to testify in a court case.
5. Dangerous weather conditions in which driving is considered by local authorities to be unsafe (for commuter students).

CLASS CONDUCT

It is essential that everyone in this class establish a mutual respect amongst each other in this class. Therefore, there are a few simple rules that you will be asked to adhere to, most of these can be defined as good manners. These rules are:

- Class starts on the hour so please make every effort to arrive on time by planning ahead for any contingencies.
- Class lasts for 50 minutes so do not begin to pack up your books and other items early. This is very distracting to me and your fellow students. You are expected to participate throughout the entire class period.
- Turn off all cell phones, pagers, pda's, and other electronic devices before class. If there are extenuating reasons, please see me.
- During the lecture, feel free to ask questions, but refrain from conducting personal conversations. Again, this is very disruptive.
- Sleeping, eating and reading newspapers are not allowed in class. While in class the student is expected to pay attention and participate in this class and not finish work for another class during this class periods.
- Come to class prepared. Instructional material students should not be without include, as a minimum, writing material, computer disks and calculators.
- Students are expected to check the web page for this course weekly and students are responsible for all material on this web page along with textbook and other readings.
- When you leave the classroom, please pick up after yourself. Try to leave the room cleaner than when you found it.

PERFORMANCE CRITERIA:

60% from exams and quizzes

40% from assignments

100% TOTAL

Students absent from class for a test must make arrangements to take the exam prior to the next class meeting. Failing to do so will result in a grade of 0%. It is the student's responsibility to call me to set up a time to make up the test. Missing quizzes will not be made up outside of class. This course may have a cumulative final exam. Extra credit may also be earned in this class by writing a term paper on an approved topic that is not discussed in class or significantly expands a topic covered in the lecture. Any paper not meeting the guidelines (see web page for course to link to this page) for term papers will not be accepted. The paper must be turned in no later than April 18. At most, the paper can contribute 10% of the final grade for this course.

GRADING POLICIES:

90 – 100% - A Range

80 – 89% - B Range

70 – 79% - C Range

60 – 69% - D Range

0 – 59% - F Range

Students absent from class for a test must make arrangements to take the exam prior to the next class meeting. Failing to do so will result in a grade of 0%. It is the student's responsibility to call me to set up a time to make up the test.

ADDITIONAL COMMENTS:

This class represents a commitment of time and energy for both the faculty and student. It is expected that the student put in an additional 2-3 hours of work for every credit hour of this course. This number represents an average and not an absolute maximum threshold. This means that some students will have to put in even more time to learn the material presented in this course. Work schedules or other responsibilities do not represent acceptable exceptions to this obligation.

Office hours are given above. Other times can be arranged if needed. If you have problems, please see me as soon as possible. Waiting until the end of the semester may be too late.

Final examination schedule guidelines from the Registration and Academic Guide:

In the event that three or more final examinations are scheduled on the same day during the examination week a student may elect to take only the first and last of those regularly scheduled on that day. Such election by the student to the affected instructor must be made no later than two weeks prior to the exam date. It will be the responsibility of the student to present authentication to the instructor of the course affected. The rescheduled exam will then be taken on another day during the examination week as arranged by the course instructor and the student.

FINAL NOTE:

I reserve the right to make needed and appropriate adjustments in this syllabus