Stocksch 386 – Sustainable Site Design & Planning (SPIRE# 20893 S2)

Course Syllabus - Summer 2017 *(Note: Course Schedule is a separate document)*

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Regular Online Office Hours *by email appointment only.*

The most fundamental role of the Designer is to inspire and solve problems creatively and practically. Site design is both an art and science. Landscape designers are place-makers and space-shapers. Sustainable site design considers the impacts to future generations of the design solutions we choose to solve today's problems. By thoughtfully synthesizing site information, namely the natural and human factors that affect a site, we can create forward-looking design solutions that well serve both our human constituents and the natural world well into the future.

Course Description:

This course will be an exploration into the fundamentals of landscape design with particular attention to integrating both existing and new buildings sustainably into their landscapes and with a view to reducing maintenance needs. Students investigate sustainable design strategies that address the ecological, water, energy and food system links between buildings and their supporting sites, as exemplified by the LEED (Leadership in Energy and Environmental Design) rating system and Sustainable Sites Initiative (SITES). Topics include: design principles and process, natural factors (e.g. topography, soils, vegetation), green roofs, green walls/vertical gardens, rainwater collection systems, native planting, edible landscapes and permaculture, sustainable forestry practices, post-industrial landscapes, and the human use of outdoor spaces. Emphasis will be placed on cost saving techniques for creating self-sustaining, low maintenance sites. Many real world examples will be discussed.

This will be an introductory course focusing on the theory and practice of sustainable landscape design and planning. It is assumed that students have little or no background/professional experience in design or planning. The first half of the course will rely primarily upon readings, videos, lecture and discussion. A five minute long mid-term student briefing presentation will be assigned and presented online. In the second half of the course students will delve more deeply into applying the design process culminating in a focused 10 minute long final design project to be presented online.

Course Objectives:

- Gain understanding of sustainable landscape design principles and practices including natural and human factors

- Relate sustainable landscape/site design to energy, food and natural resource issues and the built environment

- Promote understanding of, and hone communication skills related to, professional-client relations

- Gain experience preparing a coherent sustainable landscape plan and plan set or related project

Course Structure:

The course will be divided into nine learning modules. Most modules will be one week in length, but some will be two weeks long. Two modules will consist of student presentations, the student briefing presentation and the final design project presentation, and discussion about each presentation. Modules will typically include:

- *Weekly Summary* will provide a list of all work to be completed during each respective week of class.

- *Discussion Question* of the week will be included in Weekly Summary. Instructor will post weekly discussion questions to which students will respond. Students will post responses to discussion question in "chat" format on course Blackboard website. *Discussion Question* responses will be due by 11:59 PM EST on date shown on Course Schedule. Weekly discussion questions will be posted online by 12:01 AM on the date in which they are due as shown on the Course Schedule. Online discussions will also be based upon textbook readings, lectures and/or other assigned materials such as videos or other web-based media. Discussions will also cover student presentations and general course questions/comments.

- *Lectures* by Instructor and Guest Lecturers posted to course's Blackboard website using Wimba system for video and audio recordings. Lectures will be posted as "archives." A full module's lecture will typically consist of a series of archives.

- *Required Readings* from the course's paper textbook acquired by students, and occasionally other sources that will be posted to course's Blackboard website. <u>Reading questions will be provided at the beginning of each module to help guide students through the required readings</u>. Reading questions are NOT assignments but rather guides and answers do NOT have to be submitted. Reading question answers will be provided at the beginning of the week following the reading due date. **Selected reading questions will appear on quizzes.** Readings will also be the subject of general discussion online in class and will be part of class participation portion of grades.

- *Optional Readings* from other resources are recommended for deeper understanding of subject matter covered.

- *Student Briefing assignment* of short duration intended to hone communication and promotional skills. Th*e* Instructor's suggested list of topics will be posted to the course Blackboard site.

- *Quizzes* – two scheduled quizzes will be given during the semester. Quizzes will draw primarily from required readings, lectures and videos.

- *Final Student Design Project assignment* of a very focused nature for a very small site or focused topic related to sustainable site design and planning. Projects must include food-producing and/or waste reduction aspects including water usage. Also incorporate reused and/or recycled materials where possible.

Grading:

Class Participation/Discussion Assignments = 25% (lowest grade will be waived)

Student Briefing Assignment = 25%

Quizzes = 25%

Final Student Project/Report = 25%

Class Session Content:

Required Textbook:

Thompson, J. William, and Sorvig, Kim, **Sustainable Landscape Construction**, Island Press, 2008. *Amazon.com may have for as little as $38.00.*

Optional (but recommended) **Resources:**

Reed, Sue, **Energy-Wise Landscape Design: A New Approach for your Home and Garden**, New Society Publishers, 2010.

Brown, Robert D., and Gillespie, Terry J., **Microclimatic Landscape Design: Creating Thermal Comfort and Energy Efficiency**, John Wiley & Sons, Inc., 1995.

Course Expectations

Students can expect to put in a minimum of 4 hours per module week to complete course assignments.

The course will be located and taught entirely within "Professor Benjamin's Classroom" on the UMass Online Blackboard Learn website. The one exception to this is course required textbook, which student's must purchase and read on their own (try Amazon.com first, but try other suppliers as well for best deals).

When logging onto the course Blackboard site, always check "Announcements" first!! Additional assignments and other important information will be posted here!

Technical Support

ANY **TECHNICAL DIFFICULTIES** ACCESSING COURSE BLACKBOARD SITE OR ANY ONLINE COURSE MATERIALS (E.G. LECTURES, VIDEOS, EMAIL) SHOULD BE REPORTED TO UMASS-AMHERST ONLINE SUPPORT BY CLICKING ON THE "**HELP & RESOURCES**" TAB ON LEFT SIDE OF COURSE HOMEPAGE AND FOLLOW THE APPROPRIATE LINKS.

Due to the online format's inherent communication limitations, all interactions between students and instructor will be polite and professional following current "netiquette" standards. The vast majority of student-instructor and student-student interactions will happen via email and chat provided within "Professor Benjamin's Classroom" on Blackboard class site. Online tone should be like professional at all times (similar to LinkedIn and not like Facebook). Instructor will be identified as "Prof. Benjamin" in all communications.

Instructor and Student Biographies (Bios). Instructor will post his biography and picture on course website as a standard discussion that all students enrolled in the course will see. For our first week of class, students will prepare a short bio (e.g. one page max) explaining why they have chosen to take the course and what they hope to get out of the course. Students should add any relevant details about their academic, professional or personal backgrounds that led them to this course. *Student bios help the instructor understand student levels with regard to course material and can greatly enrich interactions and networking opportunities within the classroom "community."* Student photographs are welcome but not required. Student bios will be posted to the course's Blackboard site as a standard discussion that all students enrolled in the course will see. Student bios must be uploaded by 11:59 PM during the first week of class as shown on the Course Schedule. New students will be added as necessary thereafter.

Instructor Lectures will be uploaded to the Blackboard site using the Blackboard Wimba program, which allows for the video and audio recording of lectures. Lectures will be posted to the course's Blackboard site as "archives." A full module's lecture will typically consist of a series of two-three archives which should be viewed in chronological order. A single archive will typically be about 30-45 minutes in length.

Lectures will be available at 12:01 AM on the date that they are assigned as shown on the Course Schedule.

Reading assignments will be primarily from required course textbook. Articles will also be assigned for some modules. Any assigned articles will be posted to the course Blackboard site as links or scans by 12:01 PM on by the end of the week that they are to be read as shown on the Course Schedule. *Readings will require thorough perusal but not necessarily a detailed reading.* **Students are not expected to understand the readings in detail, but rather to show**

comprehension of the main concepts discussed and to provide basic examples of these concepts. For example, a central tenet of sustainable site design is to minimize site disturbance during construction. Basic examples of how to do this are to reduce earthmoving activities and to protect and/or reuse on site soils wherever possible. Students do not need a deeper understanding of the technologies of soil protection or reuse but are certainly encouraged to explore these details more thoroughly on their own or as part of their briefings or final presentations.

Additional assignments will include videos and various weblinks to view and discuss in class. *Please note that all assignments are not necessarily shown on this Syllabus. Any additional assignments will be posted on Blackboard by 12:01 PM on Monday of the week they are to be viewed. Additional assignments will **not** have specific questions associated with them but a general review of the material is required.*

Students' discussion question responses will be due by 11:59 PM EST on the date shown on the Course Schedule for which the lectures and readings are assigned. Discussions will occur in the form of emails or chat on the course's Blackboard site and should be thought of as the online equivalent to "live" discussions in class. Discussion comments should be concise, to the point and thoughtful. When responding or referring to previous instructor or student comments, "Ditto" will NOT be an appropriate response, but rather providing a reason for supporting or adding to previous comment(s) will be acceptable. Expanding in a relevant way upon material covered in lectures, reading or other assignments and discussions to date is highly encouraged! Please use spell check for spelling and grammar!

Instructor's discussion feedback will be provided within four days of the week following the discussion due date with some occasional exceptions possible.

Student Presentations. Presentation assignments will include: 1) Briefing; and 2) Final Project. Presentations will consist of at minimum a written and graphic presentation. The written presentation must consist of one of the following (pick only one):

- Word/PDF document. 1- 3 pages. Include a summary of your position & bullets (1 for each point)

- Powerpoint Presentation. As many slides as needed to illustrate summary position & (bullet) points (5 Slides for Briefing, 10 Slides for Final)

In addition, students may add an audio component to their presentation by using audio function in Powerpoint or other methods, but adding **audio is** completely **optional**. Please note that adding audio to a powerpoint presentation increases the file size a lot. ***Please keep final presentations to maximum 100 MB file size (and much smaller file size is much better).***

Student Briefing Assignment. Students will give a five minute virtual discussion or presentation on topic related to sustainable landscape design and planning, and/or their term design project. *Use the Instructor's suggested list of ideas for briefing topics or come up with your own.* The purpose of the briefing is to efficiently explain the main points of the topic to inspire the listener to want more! Students should sell an idea as if you were a professional Designer and the class is your client, prospect, or reviewing body. Summarize what you've learned. Be concise and to the point! Remember, most people have short attention spans.

Briefings will be presented as a single document in Word/pdf or powerpoint format. An audio voiceover, similar to course lecture recordings, is encouraged but not required. Briefings must include text and some form of graphic component (e.g. photos, pictures, drawings, etc.). Graphics should be embedded in the primary text document. Students may include short video segments as links within or outside of main powerpoint presentation, but briefings must have some text/written communication. *Credit yourself and any outside sources you have used for your research and presented materials.*

Remember, the entire briefing presentation, including voiceover, should be *limited to five minutes (= 5 Slides)!*

Briefing Presentations will be posted to Discussion on Blackboard and submitted in Briefing Assignment for grade. Briefings will be saved to Blackboard as single documents.

Student Briefing topic descriptions (maximum one page) including intended sources will be due by 11:59 PM, at the end of the week shown on the Course Schedule. Briefing presentation must be uploaded by 11:59 PM on the date shown on Course Schedule. All students will review each other's briefings and engage in an interactive online discussion of briefings during the week shown on Course Schedule. Student discussion comments on each other's briefings will be due by 11:59 PM on the date shown on Course Schedule.

Student Final Design Projects. Projects will be very focused in nature taking a maximum of _10 minutes to present (= 10 Slides)_. Ideally student final design projects will emerge, at least in part, from the student briefing topic. For example, a briefing on Victory Gardens of the 1940s could inform a final design project for a community garden. However, the final design project may have no connection to the briefing. _Above all, have fun with this project and show your inspiration!_

The final design project should give the student a taste of how to synthesize site information -- the natural and human site factors discussed in lectures, readings and elsewhere – into inspired yet realistic and practical sustainable solutions to address the site's challenges and opportunities. Students will prepare a _simple_ plan set for their site designs consisting of, at minimum, a site analysis plan and a site design plan. Plan graphics will be guided by graphics discussed in lectures, shown in readings, and in other useful sources posted on the course's Blackboard site. Students are encouraged to include plan views (looking down on the site) and section/elevation views (looking at the site and buildings from various sides). Providing additional information such as construction details or product and/or material specifications/images and sources for materials selected will be highly encouraged!

As with the briefings, student will prepare final presentations in Word/pdf or powerpoint format with _optional_ audio voiceovers. Presentation will again be posted to Discussion on Blackboard and submitted in Final Presentation Assignment for grade. Final presentations will be saved to Blackboard as single documents.

Remember, the entire final project presentation, including voiceover, should be limited to 10 minutes!

Student Final Project descriptions (maximum two page) including intended sources will be due by 11:59 PM at the end of the week shown on the Course Schedule. Instructor will be available online to via email answer project related questions. Student presentation must be uploaded by 11:59 PM EST on the date shown on Course Schedule. All students will review each other's projects in Discussion during the week following their respective postings and Instructor will provide project feedback during the week shown on Course Schedule. Student discussion comments on each other's projects will be due by 11:59 PM on the date shown on Course Schedule**.**

Late Assignment Policy. Students will be allowed one late assignment posting for discussion assignments only. This one late assignment allowance is for the entire semester. Late assignments must be posted by 11:59 PM EST within two days of their original due date. NO OTHER LATE ASSIGNMENTS WILL BE ACCEPTED EXCEPT UNDER EXTREME CIRCUMSTANCES. Requests for late assignments must be communicated via email to the Instructor at least one full day prior to their due date. _Late student Briefings or Final Projects will NOT be accepted!_

Instructor's online office hours _by email appointment only._

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