

Kirk Dimond

Assistant Professor

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Architectural Expansion A303J | Office Hours: MW 10:30a-12:00p

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Syllabus

Course Description

Engineering aspects of landscape design site planning. Development of technical competency in grading, storm water management, and earthwork utilizing aesthetics and design principles as well as an understanding of ecological sensitivity and landscape performance.

Course Objectives and Learning Outcomes

Site Engineering for landscape architects requires you to develop the comprehension and skills necessary to enhance and/or maintain health, safety, and welfare for both users and the environment through the manipulation of topography, and clearly communicate those plans to other professionals and stakeholders. Thus, anticipated learning outcomes will emphasize development in *communication*, *design decisions and performance*, and *comprehension and skills* as follows:

Communication

Develop the ability to clearly communicate your work visually using hand drafting tools and CAD, and by using appropriate symbols and notations.

Design Decisions and Performance

Develop an understanding of design decision implications related to the four elements of Earth, Water, Fire and Air with the means to measure and evaluate landscape performance in those areas.

Comprehension and Skills

Develop a thorough working knowledge of the conceptual approaches to grading and drainage through understanding the trade-offs and synergies for social and environmental welfare related to :

Human safety, comfort and universal accessibility

Surface water management

Aesthetic and spatial perception

Environmental health and stewardship

Develop familiarity with SITES and LEED rating systems and evidence-based design precedents and opportunities.

Develop an understanding of techniques and operation of measuring equipment for surveying and performance analysis.

Course Approach

Site Engineering is the first course in the two course design implementation sequence. It is designed to introduce many of the knowledge and skill objectives that you will require in order to undertake the technical challenges of our profession. It should come as no surprise that the skills that you learn in this and the subsequent course will put you in a good position to work in many entry level positions and to move along in your professional career.

During the initial weeks of the term we will be introducing you to AutoCAD and its role in communication. This will normally be in the

first hour of the class. During the remainder of class time, and during the bulk of the semester, you will engage in site engineering through lectures, exercises, and assignments relating to the four elements (Earth, Water, Fire, and Air) with a particular focus on landscape performance. In the final weeks, you will apply your knowledge to a final project that demonstrates evidence-based design in grading and drainage.

The approach I take in teaching this course and other courses of this nature is one of active consultation. It is my intent to actively engage you in your learning by using a problem-based approach that challenges you to make decisions. Throughout the semester I will be stressing the importance of not only being able to solve the problem at-hand, but also to understand the conceptual approach to solving projects of this nature, and implications in your decision making.

My intention is to help you build a foundation for understanding not only how landscapes are built but how the decisions you make impact social and environmental welfare. Additionally, I am to ensure that you are prepared for the subsequent course in the construction sequence, LAR 555 Landscape Construction. My approach in teaching this course is to closely monitor your learning so I can emphasize or de-emphasize aspects to maximize your development. This is done by close consultation with you. I have the expectation that you will arrive on time to every class having reviewed the assigned reading material and that you will have with you the studio equipment (listed below) so that you can work in class. In studio, I may occasionally call the class together when there is a common problem where a general discussion might be of benefit. You will be responsible for all information communicated during class times. I also welcome and encourage your "listening in" on other student's reviews in studio. It is often said that you will learn more from your classmates than from me. Please do not hold back and do be forthcoming in your professional curiosity. Finally, Please don't hesitate to visit me during office hours or set up a time to meet outside of class. I believe very strongly that, if you have a question or a problem, you should not hesitate to come by and see me.

Assignments

Two important points should be noted concerning the numerous assignments.

1. Work submitted in this course will be completed on an individual basis. Exceptions to this point will be made very clear in the problem statement. You should pay very close attention to this because a) by not completing the work yourself you are forfeiting your learning opportunity and b) you are engaging in plagiarism (also know as academic misconduct) which carries severe penalties.
2. All work will be due at the beginning of class unless otherwise stated or agreed upon with you. There are numerous smaller assignments in this course. The workload will tend to be steady as opposed to a few larger projects. I will try to accommodate due dates with other classes but there are always unavoidable conflicts particularly at the end of the semester.

Equipment

Please come prepared to class with the following tools and materials.

- Laptop computer that meets the minimum specifications for AutoCAD or AutoCAD for Mac. (https://knowledge.autodesk.com/support/autocad/troubleshooting/caas/sfdcarticles/sfdcarticles/System-requirements-for-AutoCAD.html?_ga=1.59262893.1869717164.1471630001)
- An 18" roll of yellow or white tracing paper (a larger roll is OK but it is awkward) One idea is to buy both an 18" roll & a 36" OR buy a 36" roll and literally saw it in half (you may save a few dollars). Note that you will want to have a wide roll for design class.
- Premium quality drawing pencils (6B, 4B, 2B, HB, 2H, 6H)
- Scales: An Architect's scale and an Engineer's scale.
- A roll of drafting tape.
- A 30/60 drafting triangle. The preferred size is 10"/300mm or slightly larger. When triangles are too small you cannot draw the longer lines without a break (yuk!). When they are too large they are very awkward.
- A 45/45 drafting triangle. The preferred size is 8"/250 mm or 10"/300mm.

- A circle template
- Any reasonably sized calculator (you can also use your phone if needed).
- An Ames Lettering Guide or equivalent (I've never seen an equivalent but it might be out there!)
- 3 or 4 different colored pencils
- A drafting brush (or a 4" paintbrush (a new one!) will also work).
- Gray Roma Plastilina Modeling Clay (1 lb minimum... may be able to split 2 lb packages with classmates)
- Modeling Clay tools: Ribbon Scraper, Metal Scraper, Needle Tool

Optional

- 2 drafting pencils. These are the 'lead clinch' type not the .5 mm 'click type'.
- A lead pointer. This is used to sharpen your drafting pencils.
- Drafting leads of various hardnesses. I'd suggest you have each of the following: '2B' 'H', '2H', '6H' (a '5H' could be substituted for a '6H'). Just buy one lead of each. They are often sold in quantities of two so you can share with a classmate.

Again, PLEASE have this equipment with you at every class!

Course Textbooks

Harris, Charles and Nicholas Dines, Time Saver Standards for Landscape Architects (Second Edition), New York: McGraw Hill, 1998 (Required)

Strom, Steven, Kurt Nathan, and Jake Woland, Site Engineering for Landscape Architects (Sixth Edition, New Jersey: John Wiley & Sons, 2013 (Recommended; Full text available online)
(<http://site.ebrary.com/lib/arizona/detail.action?docID=10650019>)

Grading Policy

You are encouraged to discuss your progress with me at any time.

Final grades will be based only on the submitted projects and only completed work will be accepted. No partial assignments will be considered.

Late submissions are strongly discouraged. Documented illness or documented compassionate grounds only will be accepted to excuse late submissions. Late work will be downgraded in accordance with the policy adopted by the School. This policy, established by faculty and students, calls for a deduction of 10% per day for late work.

Grade A Work which reflects superior technical design and graphic ability. It is logically thought out and represented.

Grade B Work which shows a good understanding of technical design and which is graphically well presented.
Some revisions would be necessary.

Grade C Work which shows satisfactory understanding and execution of the project. Moderate revisions necessary.

Grade D Work which shows an inconsistent technical design and/or poor graphic presentation.

Grade F Work incomplete and/or project which shows a failure to comprehend or present subject matter.

<u>Project</u>	<u>% of final grade</u>
Exercises	55%
Final Project	35%
Participation	10%

Attendance Policy

Attendance during regularly scheduled class time is expected and will be factored into your final grade. Each unexcused absence will result in a deduction of 1 point from your final grade. Late arrivals may result in a .5 point deduction from your final grade.

All holidays or special events observed by organized religions will be honored for those students who show affiliation with that particular religion. The student should contact the instructor as soon as an unavoidable absence is known.

Classroom Behavior

The Arizona Board of Regents' Student Code of Conduct, ABOR Policy 5-308, prohibits threats of physical harm to any member of the University community, including to one's self.

Inclusive Excellence and Student Resources

Inclusive Excellence is a fundamental part of the University of Arizona's strategic plan and culture. As part of this initiative, the institution embraces and practices diversity and inclusiveness. These values are expected, respected and welcomed in this course.

This course supports elective gender pronoun use and self-identification; rosters indicating such choices will be updated throughout the semester, upon student request. As the course includes group work and in-class discussion, it is vitally important for us to create an educational environment of inclusion and mutual respect.

Other resources: Office of Diversity (<http://diversity.arizona.edu/>)
Counseling & Psych Services (<http://www.health.arizona.edu/counseling-and-psych-services>)
OASIS Sexual Assault and Trauma Services (<https://www.health.arizona.edu/oasis-sexual-assault-and-trauma-services>)

Special Needs and Accommodations

Students who need special accommodation or services should contact the Disability Resources Center, 1224 East Lowell Street, Tucson, AZ 85721, (520) 621-3268, FAX (520) 621-9423, email: uadrc@email.arizona.edu, <http://drc.arizona.edu/>. You must register and request that the Center or DRC send me official notification of your accommodations needs as soon as possible. Please plan to meet with me by appointment or during office hours to discuss accommodations and how my course requirements and activities may impact your ability to fully participate. The need for accommodations must be documented by the appropriate office.

Student Code of Academic Integrity

Students are encouraged to share intellectual views and discuss freely the principles and applications of course materials. However, graded work/exercises must be the product of independent effort unless otherwise instructed. Students are expected to adhere to the UA Code of Academic Integrity as described in the UA General Catalog. See: <http://deanofstudents.arizona.edu/codeofacademicintegrity/>.

Confidentiality of Student Records

<http://www.registrar.arizona.edu/ferpa/default.htm>

Subject to Change Statement

Information contained in the course syllabus, other than the grade and absence policy, may be subject to change with advance notice, as deemed appropriate by the instructor.