Lecture course addressing the design and calculations of stormwater management systems, best management practices, surface and subsurface drainage systems, basic hydrology, horizontal and vertical layout, specifications of planting plans, demolition and tree preservation plans, specifications, and erosion and sediment control design and practices.

“Since we are part of nature...we empathize deeply with its ways... they serve as models of how things should be....”
- Lawrence Halprin

COURSE STRUCTURE

This is a lecture course that explores the basic principles of hydrologic systems and stormwater management as it relates to Southern Nevada. In addition to understanding fundamental concepts of stormwater through drainage patterns, volume calculations, green infrastructure and best management practices, contemporary strategies will be analyzed and tested within the context of dry arid climates and existing policies in Las Vegas.

Scheduled course time will also include the technical procedures for demonstrating stormwater management systems through advanced computational modeling, augmented fluid dynamics, and working physical models.

LEARNING OBJECTIVES

Learning Objective 1: Inquiry and Critical Thinking
Upon completion of this course, students will be able to generate design ideas derived from a critical approach to the research and analysis of multiple historical, technical, theoretical, social, political, economic, cultural and environmental contexts. An emphasis will be placed on the value of engaged scholarship and critical inquiry as means for determining appropriate design, management, and planning strategies in landscape architecture.

SLO 1.1
Access, collect, and use qualitative and quantitative resources to create precedent and typology case study analyses from the fine arts, natural sciences, social sciences, and humanities, as they apply to landscape architecture specific problems and questions.

SLO 1.2
Identify and critically analyze the lessons learned from precedent and typology case study investigations.
SLO 1.3
Generate and defend landscape architecture design, planning and management programmatic criteria and design proposals using the lessons learned from the case study analyses. An emphasis will be placed on the synthesized integration of the lessons learned from the appropriate precedent and typology case studies.

SLO 1.4
Generate and defend programmatic criteria and design proposals using the lessons learned to inform landscape architecture design, planning and management solutions at an introductory level. An emphasis will be placed on the evaluation and identification of conclusions, including areas where further inquiry may be needed.

Learning Objective 2: Design Process and Implementation
Upon completion of this course, students will be able to apply the design process as it relates to the professional practice of landscape architecture at an introductory level. An emphasis will be placed on the development of an iterative, critical, approach to designing at a variety of scales.

SLO 2.1
Generate appropriate site inventory, site analysis, and site programming schema. An emphasis will be placed on climatic conditions, soil types, hydrology, plant species and communities, and wildlife species and communities.

SLO 2.2
Generate and defend formal design concepts and proposals that integrate appropriate site design principles and typologies. An emphasis will be placed on a process-based, iterative approach, to creating two and three-dimensional compositions that incorporate an understanding of natural elements, systems, forms, and processes.

SLO 2.3
Generate and defend formal design proposals that integrate site design principles and typologies. An emphasis will be placed on an iterative approach to creating two and three-dimensional compositions at a reinforced level.

SLO 2.4
Incorporate the natural elements, forms, and processes of the project site. An emphasis will be placed on climatic conditions, soil types, hydrology, plant species and communities, and wildlife species and communities at a reinforced level.

SLO 2.5
Incorporate applicable site design strategies related to circulation, site grading and drainage, and stormwater management at an introductory level.

Learning Objective 3: Communication and Representation
Upon completion of this course, students will demonstrate the ability to apply a wide range of communication methods to articulate landscape architecture design proposals.

SLO 3.1
Demonstrate effective written, graphic, and oral communication skills through the delivery of project presentations at a reinforced level.

SLO 3.2
Produce effective graphic presentations using a wide range of appropriate analog and digital media at a reinforced level.

SLO 3.3
Apply innovative technologies commonly used to research, analyze, and communicate landscape architecture design proposals at a reinforced level.
**Learning Objective 4: Applied Technologies and Material Systems**
Upon completion of this course, students will demonstrate the ability to apply a wide range of appropriate design tools, material systems, and technical applications.

**SLO 4.1**
Use innovative tools, processes, and applications to generate technically accurate drawings and models at a reinforced level.

**SLO 4.2**
Use innovative tools, processes, and applications to generate technically accurate and environmentally appropriate grading, drainage, and stormwater management plans at an introductory level.

**SLO 4.5**
Use innovative tools, processes, and applications to generate digitally fabricated design prototypes at a reinforced level.

**SLO 4.6**
Demonstrate an understanding of the uses of applied technologies to promote the discipline of landscape architecture at a reinforced level.

**Learning Objective 5: Collaboration**
Upon completion of this course, students will be able to demonstrate the ability to work within larger collaborative systems.

**SLO 5.1**
Generate design proposals that acknowledge landscape architecture within the broader context of allied design professions at an introductory level at a reinforced level.

**SLO 5.2**
Work in collaboration with diverse groups to generate complex landscape architecture design proposals at a reinforced level.

**SLO 5.3**
Demonstrate awareness of one’s own place in and effect on the world at a reinforced level.

**Learning Objective 6: Leadership, Ethics, and Practice**
Upon completion of this course, students will be able to demonstrate an understanding of the need to manage, advocate, and act legally, ethically and critically for the good of the client, society, and the environment.

**SLO 6.1**
Demonstrate the need for landscape architects to provide leadership in the design, management, and planning of socially, economically, environmentally, and physically sustainable environments at a reinforced level.

**SLO 6.3**
Demonstrate a basic understanding of the ethical principles and legal aspects of the practice of landscape architecture at a reinforced level.

**SLO 6.5**
Generate a professional portfolio that documents entry-level professional skills at a reinforced level.
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Exercise 1.0 | Data Visualization
Parametric modeling is the translation of information or data into a decipherable form of visual communication. Abstracting data will lay the foundation for future exercises.

Exercise 2.0 | Environmental Analysis
Inventorying and analyzing the site conditions can inform responsive green infrastructure strategies for various temporal scenarios.

Exercise 3.0 | Green Infrastructure
Green infrastructure strategies use or mimic natural processes to provide ecosystem services. Healthy vegetation and soil, along with other performative amenities can reduce or eliminate stormwater runoff, help maintain water quality, and create comfortable urban environments.

In-Class Assignments
Examinations throughout the semester will gauge your comprehension and understanding of basic stormwater principles that include drainage, runoff volume, and green improvements.

Submission of Final Portfolio
At the end of the course all students will submit copies of their work in the form of digital portfolios. Submission of the course portfolio is mandatory – NO EXCEPTIONS.

Attendance
Class attendance at the start of and within the allotted time is mandatory, unless due to medical or family emergency or other excused reason.

Required
Strom, Steven; Nathan, Kurt; Woland, Jake; Lamm, David. Site Engineering for Landscape Architects. 6th Edition.

Recommended
Calkins, Meg. The sustainable sites handbook. 2011.


iTree Calculator. https://design.itreetools.org/.
Grading takes into consideration content and process, both of which are crucial to the evolution of any design student’s educational development. Evaluation of content is based on a student’s intellectual development and looks at both how the student articulates their design development and the originality and appropriateness of the idea. Evaluation of process considers the general quality, clarity, precision, and craftsmanship of the presentation. Thus, neither merely completing all the presentation requirements, nor merely having a good idea, will be enough to achieve a good grade. Curiosity and inquiry, ability to respond to criticism, ability to generate and critically analyze your own ideas, responsibility, and work ethic all play a role in this process.

**Grading Structure**

The following standards supplement the Grading System for Undergraduate Students as listed in the current Undergraduate Catalog.

**A**

Superior: Represents comprehensive excellence. Not only does the work fulfill all requirements in an excellent and professional manner but goes beyond the given requirements aiming at standards higher than requested. The student is an active and engaged participant in all class activities and intellectual progress and development have been demonstrated by the timely preparation of thoughtful work on a regular basis. This work is of a quality that is instructive to the teacher and exemplary to the rest of the class.

**B**

Above Average: Represents work that can be distinguished as being of truly “good” quality. This work is of a quality that has been instructive to the rest of the class. The work is free of significant flaws, is comprehensive in scope, and is recognizable as coherent architecture. The student is an active and engaged participant in all class activities and intellectual progress and development have been demonstrated by the timely preparation of work on a regular basis.

**C**

Average: Represents satisfactory and average performance. The work is free of major design flaws and is recognizable as coherent architecture. Intellectual progress and development have been demonstrated by the timely preparation of work on a regular basis. The student and instructor can take “satisfaction” in the average resolution of the design exercise. Students of Architecture, Interior Architecture and Design, and Landscape Architecture must attain a minimum grade of “C-“ in all coursework taken within the School of Architecture as a part of the completion of their major course requirements. Students who attain any grade below a “C-“ in any course within their major must retake that course and attain a minimum grade of “C-“ in order to advance towards graduation.

**D-F**

Failing: Represents substandard work that is not passable. Work has not fulfilled requirements, or has not been completed on time, or does not appropriately address the design exercise, and is unacceptable.

**I**

Incomplete: An Incomplete on a project can only be given in exceptional cases in which failure to complete the assignment is a result of illness or injury requiring a visit to a doctor, a death in the immediate family, military or legal obligations, or other equally serious reasons that can be documented in acceptable written form (such as medical records or legal notification). When possible, all outstanding circumstances that might impact the completion of a project should be brought to the instructor’s attention in advance of the class(es) that may be missed. In addition, documentation for excused absences must be provided no later than the third class meeting following the event or the absence(s) will be counted as unexcused and no Incomplete can be given. All incomplete work is subject to late penalties as per the instructor’s policy.
An Incomplete in a course is only given in exceptional cases where there is/was a serious excusable reason for not completing course requirements (see above). The quality of work in the course up to that point has been satisfactory and passing (see the Undergraduate Catalog for further details).

Instructors are permitted to assign + or – to grades. However, there is no grade of “A+” within these guidelines.

**UNLV LANDSCAPE ARCHITECTURE PROGRAM INCOMPLETE/LATE WORK POLICY**

**Attendance**
Class attendance at the start of and within the allotted time is mandatory, unless due to medical or family emergency or other excused reason. All medical related reasons require a doctor’s note the following class. Dismissal from and during class hours is to the discretion of the studio instructor. If you are not in attendance, your work is late and will be reflected in your final grade. **3 Unexcused absences will result in a FULL letter grade deduction.** Missing additional class will result in an incomplete grade for the studio course. Prior to the 3rd unexcused absence, the student will be notified with a warning.

**Late Work**
Work that is not ready at the start of class (1 pm) is considered late. **This includes pin-ups, desk crits, workshops, field visits, etc.** Late work will receive partial or no credit under these circumstances: **½ Letter Grade deduction if submitted BEFORE next class period, 1 Full Letter Grade deduction if not submitted by next class period.**

Review of late work for partial credit must be scheduled with course instructor during office hours. If appropriate, i.e. in the case of an excused absence, the decision to accept make up work will be handled by the studio critics on a case-by-case basis.

**Incomplete Work**
Incomplete work will not be accepted. The submission of incomplete work will result in the issuance a zero mark for that exercise.

**FACULTY EVALUATION OF STUDENT PROGRESS**

**Evaluations**
Student Evaluation of Faculty Member(s)
Students have the opportunity to formally evaluate the faculty at the end of term. You are also encouraged to speak to us at any time with responses, suggestions or feedback - positive or negative. It is important to keep up with good communications. Please bring up any concerns privately, or, if necessary, publicly, with the whole class.

Class evaluations will be available for students to complete during the last two weeks of class. All evaluations are confidential; instructors will never know how any one student responded to any question, and students will never know the ratings for any particular instructors.
Feedback from the instructor will occur in the following ways:
• on request from you
• assignment marks and comments

Grading / Exams / Grade Posting – Each assignment will receive a grade or comments and a “resubmit”. Grades will be provided in writing on assignments, and grade-to-date information will be available upon request.

**DOCUMENTATION AND RETENTION OF STUDENT WORK**

The Program will keep all presentation material for each project. The materials serve several functions to the Program and the University. They are used to document student outcomes during accreditation and to demonstrate the value of our Program to the University community. Nevertheless, please take photographs, digital images or copies of your projects to use in your portfolio. All students in all classes are required to submit a complete set of work digitally in .pdf format on a CD at the end of the semester to the course instructor.
Academic Misconduct
Academic integrity is a legitimate concern for every member of the Campus community; we all share in upholding the fundamental values of honesty, trust, respect, fairness, responsibility, and professionalism. By choosing to join the UNLV community, students accept the expectations of the Student Academic Misconduct Policy, and are encouraged to always take the ethical path whenever faced with choices. Students enrolling at UNLV assume the obligation to conduct themselves in a manner compatible with UNLV’s educational mission. An example of academic misconduct is plagiarism. Plagiarism is using the words or ideas of another person, from the Internet or any other source without proper citation of the sources. See the Student Conduct Code, https://www.unlv.edu/studentconduct/student-conduct.

Auditing Classes
Auditing a course allows a student to continue attending the lectures and/or laboratories and discussion sessions associated with the course, but the student will not earn a grade for any component of the course. Students who audit a course receive the same educational experience as students taking the course for a grade, but will be excused from exams, assessments, and other evaluative measures that serve the primary purpose of assigning a grade.

Classroom Conduct
Students have a responsibility to conduct themselves in class and in the libraries in ways that do not interfere with the rights of other students to learn or of instructors to teach. Use of electronic devices such as pagers, cellular phones, or recording devices, or potentially disruptive devices or activities, are only permitted with the prior explicit consent of the instructor. The instructor may rescind permission at any time during the class. If a student does not comply with established requirements or obstructs the functioning of the class, the instructor may initiate an administrative drop of the student from the course.

Copyright
The University requires all members of the University Community to familiarize themselves with, and to follow copyright and fair use requirements. You are individually and solely responsible for violations of copyright and fair use laws. The University will neither protect nor defend you, nor assume any responsibility for employee or student violations of fair use laws. Violations of copyright laws could subject you to federal and state civil penalties and criminal liability, as well as disciplinary action under University policies. Additional copyright policy information is available at http://www.unlv.edu/provost/copyright.

Disability Resource Center (DRC)
The UNLV Disability Resource Center (SSC-A, Room 143, https://www.unlv.edu/drc, 702-895-0866) provides resources for students with disabilities. Students who believe that they may need academic accommodations due to injury, disability, or due to pregnancy should contact the DRC as early as possible in the academic term. A Disabilities Specialist will discuss what options may be available to you. If you are registered with the UNLV Disability Resource Center, bring your Academic Accommodation Plan from the DRC to the instructor during office hours, so that you may work together to develop strategies for implementing the accommodations to meet both your needs and the requirements of the course. Any information you provide is private and will be treated as such. To maintain the confidentiality of your request, please do not approach the instructor in front of others to discuss your accommodation needs.

Final Examinations
The University requires that final exams given at the end of a course occur on the date and at the time specified in the Final Exam schedule. The general schedule is typically available at the start of the semester, and the classroom locations are available approximately one month before the end of the semester. See the Final Exam Schedule, https://www.unlv.edu/registrar/calendars.

Identity Verification in Online Courses
All UNLV students must use their Campus-issued ACE ID and password to log in to WebCampus.
UNLV students enrolled in online or hybrid courses are expected to read and adhere to the Student Academic Misconduct Policy, https://www.unlv.edu/studentconduct/misconduct/policy, which defines, “acting or attempting to act as a substitute for another, or using or attempting to use a substitute, in any academic evaluation or assignment” as a form of academic misconduct. Intentionally sharing ACE login credentials with another person may be considered an attempt to use a substitute and could result in investigation and sanctions, as outlined in the Student Academic Misconduct Policy.

UNLV students enrolled in online courses are also expected to read and adhere to the Acceptable Use of Computing and Information Technology Resources Policy, https://www.it.unlv.edu/policies/acceptable-use-computing-and-information-technology-resources-policy, which prohibits sharing university accounts with other persons without authorization.

To the greatest extent possible, all graded assignments and assessments in UNLV online courses should be hosted in WebCampus or another UNLV-managed platform that requires ACE login credentials for access.

**Incomplete Grades**
The grade of "I" (Incomplete) may be granted when a student has satisfactorily completed three-fourths of course work for that semester/session, but cannot complete the last part of the course for reason(s) beyond the student’s control and acceptable to the instructor, and the instructor believes that the student can finish the course without repeating it. For undergraduate courses, the incomplete work must be made up before the end of the following regular semester. Graduate students receiving “I” grades in 500-, 600-, or 700-level courses have up to one calendar year to complete the work, at the discretion of the instructor. If course requirements are not completed within the period indicated, a grade of “F” will be recorded, and the student’s GPA will be adjusted accordingly. Students who are fulfilling an Incomplete grade do not register for the course, but make individual arrangements with the instructor who assigned the “I” grade.

**Library Resources**
Librarians are available to consult with students on research needs, including developing research topics, finding information, and evaluating sources. To make an appointment with a subject expert for this class, please visit the Libraries’ Research Consultation website: http://guides.library.unlv.edu/appointments/librarian. You can also ask the library staff questions via chat and text message at: http://ask.library.unlv.edu/.

**Missed Classwork**
Any student missing class, quizzes, examinations, or any other class or laboratory work because of observance of religious holidays will be given an opportunity during that semester to make up the missed work. The make-up opportunity will apply to the religious holiday absence only. It is the responsibility of the student to notify the instructor within the first 14 calendar days of the course for Fall and Spring courses (except for modular courses), or within the first 7 calendar days of the course for Summer and modular courses, of their intention to participate in religious holidays which do not fall on state holidays or periods of class recess. For additional information, please visit the Policy for Missed Work, under Registration Policies, on the Academic Policies webpage, https://catalog.unlv.edu/content.php?catoid=6&navoid=531.

In accordance with the policy approved by the Faculty Senate regarding missed class time and assignments, students who represent UNLV in any official extracurricular activity will also have the opportunity to make up assignments, provided that the student provides official written notification to the instructor no less than one week prior to the missed class(es).

The spirit and intent of the policy for missed classwork is to offer fair and equitable assessment opportunities to all students, including those representing the University in extracurricular activities. Instructors should consider, for example, that in courses which offer a “Drop one” option for the lowest assignment, quiz, or exam, assigning the student a grade of zero for an excused absence for extracurricular activity is both contrary to the intent of the Faculty Senate’s policy, and an infringement on the student’s right to complete all work for the course.
This policy will not apply in the event that completing the assignment or administering
the examination at an alternate time would impose an undue hardship on the instructor
or the University that could reasonably have been avoided. There should be a good faith
effort by both the instructor and the student to agree to a reasonable resolution. When
disagreements regarding this policy arise, decisions can be appealed to the Department
Chair/Unit Director, College/School Dean, and/or the Faculty Senate Academic Standards
Committee.

For purposes of definition, extracurricular activities may include, but are not limited to: fine
arts activities, competitive intercollegiate athletics, science and engineering competitions,
liberal arts competitions, academic recruitment activities, and any other event or activity
sanctioned by a College/School Dean, and/or by the Executive Vice President and Provost.

Rebelmail
Rebelmail is UNLV’s official email system for students, and by University policy, instructors
and staff should only send emails to students’ Rebelmail accounts. Rebelmail is one
of the primary ways students receive official University communications, information
about deadlines, major Campus events, and announcements. All UNLV students receive
a Rebelmail account after they have been admitted to the University. Emailing within
WebCampus is also acceptable.

Tutoring and Coaching
The Academic Success Center (ASC) provides tutoring, academic success coaching, and
other academic assistance for all UNLV undergraduate students. For information regarding
tutoring subjects, tutoring times, and other ASC programs and services, please visit the
ASC website, https://www.unlv.edu/asc, or call 702-895-3177. The ASC building is located
across from the Student Services Complex (SSC). Academic success coaching is located
on the second floor of SSC A, Room 254. Drop-in tutoring is located on the second floor
of the Lied Library, and on the second floor of the College of Engineering building (TBE A
207).

UNLV Writing Center
One-on-one or small group assistance with writing is available free of charge to UNLV
students at the Writing Center, https://writingcenter.unlv.edu/, located in the Central Desert
Complex, Building 3, Room 301 (CDC 3–301). Walk-in consultations are sometimes
available, but students with appointments receive priority assistance. Students may make
appointments in person or by calling the Center, 702-895-3908. Students are requested
to bring to their appointments their Rebel ID Card, a copy of the instructions for their
assignment, and two copies of any writing they have completed on their assignment.