SYLLABUS | LA 414/514 – Landscape Architectural Engineering 4
Fall Semester 2026 | TR 9:30 – 10:45am | AB14 + AB15

1. Course Information

Course Description (from the BSU Undergraduate Catalog)

Advanced methods of landscape architecture engineering and construction/implementation practices. Subjects include advanced applications for construction documentation, Building/Site/Land Information Modeling (e.g. BIM); documented sustainable design criteria/guidelines/techniques (e.g., SITES); landscape construction management; and post-construction evaluation. Course topics may include advanced sustainable site construction and landscape engineering applications for lighting, water, material selection, and landscape management (3 credits). Prerequisite: LA 313 or permission of the instructor.

Course Instructor

Paul Maginnity | AB113
Office Hours: By appointment

Course Objectives

This course will develop the student's capacity to…

A. Learn and apply current principles and practices of **post-occupancy evaluation**.
B. Learn and apply **landscape lighting** fundamentals.
C. Identify and apply **sustainable site design guidelines** (i.e., SITES v2 Rating System).
D. Learn and apply relevant principles and practices of **landscape construction management**.
E. Explore, learn, and apply **BIM** (building information modeling) theories, principles, processes, and tools.

Student Learning Objectives

The primary objective of this final LA engineering course is to help the student develop knowledge and insights related to important advanced implementation and documentation principles and practices in landscape construction. Upon successful completion of this course, the student will be able to do the following:

1. Apply the **SITES v2 Rating System** to **develop conceptual design solutions** to landscape/environmental problems in written and graphic form.
2. Apply the fundamentals of **landscape lighting** to develop a **simple lighting plan** for a small site.
3. Generate a **post-occupancy evaluation** that objectively evaluates (in written and graphic form) a built work of landscape architecture and makes [design] recommendations for improvement.
4. Apply a **suitable landscape construction management process** to coordinate and communicate **when and how multiple construction activities, estimates, and maintenance/management should be executed** for a given landscape design project.
5. Engage in the **BIM process** to create a **site/topographic model and unique 3-D site components using Revit**.

2. Course Overview, Text, and Format

Course Overview

This course will emphasize Building Information Modeling (BIM), which is rapidly becoming the basis for design operations across larger firms and organizations. BIM underscores the fact that Landscape Architects rarely work alone in the advancing digital world of environmental design and implementation. Project design and construction documentation methods are transitioning from simple 2D line drawings to data-rich 3D models full of intelligent objects (buildings, infrastructure, site/landscape structures, topography) – this data-rich

environment is known as BIM, and it is steadily approaching industry-standard status in environmental design. Although most current BIM tools and standards emphasize building and infrastructure/utilities projects, many Landscape Architects have begun to play significant roles using and evolving it to have critical impacts beyond objects…and into shaping the landscape.

Along with BIM principles and practices, the course will cover documented guidelines for sustainable site design (SITES v2), typical landscape construction management processes, common post-occupancy evaluation methods, and fundamentals of outdoor lighting. The application of these principles and practices, guidelines, processes, and methods will help validate (or invalidate) the integrity of original design intents for sites and site users. Sustainable site design principles and practices will be the lens through which all course content is delivered, discussed, and applied.

Course Text

There is no required text for the course. The following is an incomplete list of resources that may complement subjects covered in class discussions and assignments. All are available in the Architecture Library. Additional resources will be made available later.

- A Philosophy of Landscape Construction: The Vision of Built Landscapes (Ferguson, 2021)
- BIM teaching and learning handbook: implementation for students… (Hosseini, et al., 2022)
- BIM handbook: a guide to building information modeling for… (Sacks, et al., 2018)
- BIM for Landscape (Landscape Institute, 2016)
- Landscape Construction, 3rd Edition (Sauter, 2011)
- People Places (Cooper Marcus and Francis, 1997)
- Sustainable Landscape Management: Design, Construction, and Maintenance (Cook, 2011)
- The Art of Landscape Lighting: A Designer's Companion (Moyer, 2022)
- The Landscape Lighting Book (Moyer, 2013)

Course Format

The course will follow a typical seminar format consisting of lectures, demonstrations, videos, discussions, tutorials, and possible guest speakers. The course will be managed using Canvas (https://bsu.instructure.com/ – your BSU username and password are required for access). Assignments, handouts, lectures, and other course materials will be available there. The student must check the Canvas course site regularly for updates, announcements, and other pertinent materials. The student's BSU email will be the primary method of non-classroom communication. The student will submit all assignments to Canvas unless indicated otherwise.
Course file sharing/exchanging may also be done using Box, BSU's cloud storage solution that is freely available to all students. All students are strongly encouraged to set up and regularly use their Box account to back up or archive their coursework.

This course will also feature standard practice of quick digital design communication and quality control review. The primary software to be used is Bluebeam Revu. Academic licenses are available for request:
https://www.bluebeam.com/community/academic/
If students have any issues installing this software, it must be addressed with instructor immediately. Alternative PDF programs may be approved by instructor if no solutions can be found.

Autodesk Revit 2026 will be the featured BIM modeling software taught during the course. It is installed in the AB218 computer lab. Each student is strongly encouraged to install it on their own computer so related coursework can be completed outside the lab. Visit this website to learn how to obtain Revit and other Autodesk products for free: https://www.autodesk.com/education/students. NOTE: Revit is a Windows-based application but *can* run on a Mac using Bootcamp or other dual-boot application. The student should visit the Technology Helpdesk in Bracken for assistance.

Attendance

Attendance at lectures during scheduled class periods is expected. This also includes arriving on time and staying for the entire class. Class attendance is an expression of commitment, interest, and simple effort. Late arrivals to class and early departures from class are disruptive for everyone. Attendance will be recorded at the discretion of your instructor. If a student is absent, tardy, or leaves early for any reason, that student alone will be responsible for making up the work or catching up on the lessons/material covered while they were absent. The instructor will not repeat lectures or demonstrations. If a student knows in advance that they will be absent, tardy, or leaving class early, they are expected to inform the instructor immediately. **The student is allowed three (3) unexcused absences. Each unexcused absence thereafter will result in a 2.5% reduction of the student's final course grade.** A student will be considered late if they arrive to class more than 15 minutes late or leave class more than 15 minutes early. Three (3) lates will be counted as one (1) unexcused absence.

Course Expectations and Etiquette

The following will be the basis for evaluating a student's Progress and Participation (see Course Assessment below).

1. *Responsibility.* The student should take responsibility for their education. The instructor is here to create a quality learning environment for you. Learning depends on a positive attitude and a willingness to listen, ask appropriate questions, and do the work necessary to pass the class.
2. *Participation.* This course is designed to include discussion and other forms of collaboration and communication. Interaction with the instructor and classmates, engagement with the material, demonstration of skill development, and showing regular improvement are critical to a student's learning and final course grade. Therefore, the student is expected to be an active and attentive participant throughout the course.
3. *Professionalism.* The student should always demonstrate common sense and show respect for the instructor, fellow classmates, and the classroom/computers. If a student has issues or concerns directed at someone, please settle them civilly outside of class. Please avoid eating in the computer lab. If a student must bring food or drink to class, please ensure containers/packages are closed to avoid spilling on and potentially damaging the computers or peripherals. A student is expected to clean up any messes they make so the classroom is clean for the next lab user.
4. *Initiative.* Avoid procrastination! It leads to stress, anxiety, late or incomplete work, and/or failure. Always plan ahead, get started on assignments early, and be productive in and out of class. If a student has trouble with this, they should seek the instructor for advice. A student should ask questions whenever they don't understand something, and should do so immediately to avoid falling behind.

3. Course Assessments

Course Assessments

Student performance will be assessed using the following measures and relative values/percentages.

1. **Assignments (investigation, design, writing, technical/digital production, etc.) 85%**
    a. SITES + Lighting..... 17%
    b. Post-Occupancy Evaluation 11%
    c. Landscape Construction Management..... 12%
    d. BIM/Revit 45%
2. **Midterm Exam 10%**
3. **Progress and Participation (see Course Expectations and Etiquette above) 5%**

Total 100%

Grading Scale

All assigned student work will be evaluated using the following letter grades and percentages:

A (100-94)	**Distinguished Work** – work reflecting superior design, technical, graphic, and subject matter execution, with great attention to detail and accuracy; may exceed assignment requirements; revisions are unnecessary or minor.
A- (<94% - 90%)	Nearly Distinguished Work
B+ (<90% - 87%)	Very Good Work
B (<87% - 84%)	**Good Work** – work which demonstrates a solid understanding of the concepts, forms, structures, content, and their application in the assignment, but requires some revisions to clearly and completely communicate or to do so with complete accuracy
B- (<84% - 80%)	Average to Good Work
C+ (<80% - 77%)	Above Average Work
C (<77% - 74%)	**Average Work** – work which indicates a satisfactory understanding and execution of the assignment, but needs moderate revisions to fully communicate and thoroughly demonstrate implementation of concepts and/or requires moderate revisions to achieve complete accuracy.
C- (<74% - 70%)	Below Average Work
D+ (<70% - 67%)	Poor Work
D (<67% - 64%)	**Very Poor Work** – work which is partially incomplete and/or demonstrates a poor understanding of process, concepts, and/or content; solutions are inconsistent, significantly inaccurate, and/or fail to meet minimum requirements; work requires extensive revisions.
D- (<64% - 60%)	Extremely Poor Work
F (<60% - 0%)	**Failure** – work which is substantially incomplete and/or demonstrates a failure to either comprehend or implement the subject matter; most phases of work are incomplete and/or unacceptable; and/or work was not submitted.

Late Work

All assigned work must be submitted ON TIME for full credit. Late submittals **must be addressed immediately and communicated to instructor before the deadline**. Failure to communicate with instructor prior to submittal deadline, will result in a zero being recorded for that assignment, no exceptions.

At the discretion of the instructor, **late work will be penalized 10% if received after the specified deadline; thereafter, the penalty will be 5% per day** (Note: Days end at 5:00pm.). Assignments submitted more than five (5) days late will receive a score of zero (0).

Computer failure or related technical problems will not constitute an acceptable excuse for late work; students must plan responsibly and back-up their work in multiple locations. Incomplete submissions of work will be evaluated on the face value of work completed unless the instructor and student have made a prior arrangement. No Incomplete ("I") will be given as a course grade without sufficient and compelling cause (e.g., documented illness, family crisis, or the like). In such a case, your instructor must be fully informed and agree to the appropriateness of the incomplete.

NOTE: A final course grade of C- is required; anything lower will require that student to retake the course.

Generative AI Statement

The use of Artificial Intelligence (AI) to complete any assignment (in part or entirely) can be beneficial (brainstorming, image creation, research, writing assistance, etc.), but it can also be a form of cheating. Therefore, if AI is not explicitly part of a given assignment's workflow or deliverables, the student must consult with the instructor on the use of AI tools (e.g., ChatGPT, Claude, Midjourney, Adobe Firefly, or others) for completing any assigned work. If used, the student must cite any AI-generated material that informed their work. Using an AI tool to generate content without proper attribution constitutes a violation of Ball State University's Student Academic Ethics Policy. If it is appropriately determined by the instructor that the work submitted by the student is not their own (by way of plagiarism, unapproved use of AI tools, or other forms of cheating), a grade of zero (0) will be assigned for that work.

Academic Ethics

Academic dishonesty, such as plagiarism, involves violations of procedures which protect the integrity of the coursework completed by a student. Honesty, trust, and personal responsibility are fundamental attributes of the University community. Academic dishonesty by a student will not be tolerated, for it threatens the foundation of an institution dedicated to the pursuit of knowledge. To maintain its credibility and reputation, and to equitably assign evaluations of scholastic and creative performance, Ball State University is committed to maintaining a climate that upholds and values the highest standards of academic integrity.

The student is welcome to discuss assignments with fellow students. However, all work submitted by each student for evaluation must be the result of that student's individual effort. The instructors will adhere to university Academic Integrity policies and procedures.

Academic integrity violations include giving or receiving an unfair academic advantage (cheating), presenting someone else's ideas or work as your own (plagiarism), and falsifying academic records. The student should check with instructors if they are unsure whether something constitutes academic dishonesty. Examples of academic integrity violations include but are not limited to:

- Using resources not authorized by the faculty member (including devices, AI tools, hidden notes, and open books).
- Using commercial study websites to find answers to graded assignments (Chegg, Course Hero, StudyPool, OneClass, etc.).
- Without the instructor's written permission, giving away, buying, or selling graded assignments class notes, exams, study guides, or other course materials to other students or to third-party vendors (Course Hero, Chegg, 24HourAnswers, etc.).
- Working with another person on any assignment other than authorized group projects.
- Sharing or allowing others to access your files, whether done with permission or not.
- Reusing your own work from another semester, course, or section.
- Sharing answers with others during exams (passing notes, texting, whispering, gesturing).
- Discussing exam questions and answers with students who have not taken the exam.
- Soliciting others to complete work for you.

4. In Case of Emergency or Technical Issues

In Case of Emergency

If, for any reason, an emergency situation occurs during class and your instructors are unable to coordinate a response, PLEASE IMMEDIATELY LOCATE AND ACTIVATE THE RED CALL BUTTON LOCATED ON THE WALL in your studio and/or the AB 210 classroom (and other classrooms in which you may meet). Students should also call 9-1-1 or University Police at 765-285-1111.

Technical Assistance

If a student needs technical assistance with Canvas or other IT/hardware/software issues, they should contact the BSU Help Desk at 765-285-1517 or toll-free at 1-866-771-3276. The student may also visit the link below and follow the *Knowledge Base* link to find useful how-to videos and answers to many frequently asked questions. They are available for walk-in support at Tech Center, Bracken Library, room 101.

5. University Policies and Statements

University/Disability Statement

We are committed to ensuring that all members of the community are welcome, through valuing the various experiences and worldviews represented at Ball State and among those we serve. We promote a culture of respect and civil discourse. If you need course adaptations or accommodations because of a disability, please contact your instructor(s) as soon as possible. Ball State's Disability Services Office coordinates services for students with disabilities; documentation of a disability needs to be on file in their office before any accommodations can be provided. You can contact Disability Services at 765-285-5293 or dsd@bsu.edu. Please note that instructors are not authorized to determine disability, provide certification of disability, or to arrange for a determination of disability.

Student Leaves

Leaves and excuses by reason of bereavement (e.g., funeral, jury duty, medical, sports, religious holidays) shall comply with university Attendance Policies. Arrangement for completion of assigned work shall be made with the instructors.

Freedom of Expression

In this course, we are committed to fostering a learning environment that values intellectual diversity, encourages free expression, and promotes open inquiry. As members of the Ball State Community, we treat each person in the Ball State community with civility, courtesy, compassion, and dignity and respect and learn from differences in people, ideas, and opinions. Please review Ball State University's Statement on Freedom of Expression, the resources on Ball State's Freedom of Expression webpage, and Ball State's Beneficence Pledge.

Title IX

Ball State University is committed to providing a safe and inclusive learning environment for all students. If you or someone you know has experienced sexual harassment—including sexual assault, dating violence, domestic violence, or stalking, please know that you are not alone. The University offers support services and resources. For more information or to report an incident, please visit BSU's Title IX web page or contact the Title IX Coordinator at 765-285-1545 or at titleix@bsu.edu.

As your instructors, we are mandatory reporters under the Title IX policy and required to report any information we receive about possible sexual harassment. This includes information shared in class discussions, assignments, or private conversations.

What happens after we report? The Title IX Coordinator will email the person who experienced sexual harassment (complainant) and invite them to schedule a meeting. If the complainant chooses to meet with the Title IX Coordinator,

- Title IX Coordinator will offer supportive measures (e.g., counseling, extensions on deadlines, course-related adjustments, changes to work or class schedules, and/or referrals to campus offices), review the policy, and discuss options to move forward.
- If a complaint is filed by the complainant or the University, an investigation will begin following University policy.

Anti-Bias, Anti-Harassment, Sexual Harassment

To report a bias, harassment, or sexual harassment incident, use the reporting process found at the Say Something link.

- Ball State University's Say Something
- Ball State University's Anti-Harassment Policy
- Ball State University's Statement on Sexual Harassment

University Grade Appeal Policy

If you believe you received a final course grade that does not reflect your performance due to fairness or a procedural issue, you have the right to file an appeal within five (5) school days after final grades are posted by the Office of the Registrar. Review the University Grade Appeal Policy and Process.

6. Student Support Services

The Learning Center

The Learning Center offers free Tutoring and Academic Coaching for many courses at Ball State. Students can make appointments for online (Zoom) or in-person (NQ 350) appointments. To make an appointment, visit myballstate.bsu.edu and click on "Navigate" in the Academic Tools section, or just go directly to bsu.navigate.eab.com.

Testing accommodations for students with disabilities are available for students who have received the appropriate documentation from Disability Services. Tests may be administered in the Learning Center. Supplemental Instruction is available in select courses. If a student has an SI leader for their course, that person will provide students with information the first week of school regarding weekly study sessions. For more information about Learning Center programming, visit bsu.edu/learningcenter or call 765-285-1006. Follow us on Instagram: BallStateLC.

The Writing Center

All writers improve with practice and feedback, so students in this course are encouraged to use the Writing Center (in Robert Bell 295 during weekdays, Bracken Library First Floor West in the evenings, or online during any of our regularly scheduled hours) to get additional feedback on their writing.

The Writing Center offers free planning, feedback, and accountability sessions (in person and online) to all students composing essays, reports, reflections, research projects, web content, lesson plans, slideshows, poster presentations, resumes, and other digital or print texts. To schedule a free appointment to discuss writing, go to bsu.edu/writingcenter. Online and in-person appointments are available; however, students should plan ahead because appointments book quickly!

The Basic Needs Hub

If a student is having difficulty affording enough food, does not have a safe and reliable place to sleep, and/or is experiencing an emergency or crisis, help is available through the Basic Needs Hub. The Basic Needs Hub has information, resources, and provides individualized support to students. To talk with a supportive staff member about an experience, receive one on one assistance, or learn more about resources, students can submit a Basic Needs Assistance Form.

The Counseling Center

The Ball State University Counseling Center offers free and confidential services to all students. The Counseling Center is located in Lucina Hall, Room 320. To schedule an appointment, students can contact them at 765-285-1736. Ball State also offers a 24/7 Crisis Line, which can be reached at 765-285-HOPE (4673). The Crisis Line is a mental health resource for those who are struggling with any mental health concerns, including thoughts of self-harm and/or suicide.

At the Ball State Counseling Center, we see students for a variety of reasons, some of which include homesickness, relationship concerns, anxiety, and depression. At your first appointment, you will work with a therapist to create a plan that will connect you with resources that best fit your needs. We assist students with getting connected to therapy at our Center as well as connecting students to self-help resources, other on-campus resources, and community-based resources. All Ball State students also have access to several on-demand, self-help resources through a variety of different platforms. All of these resources, including a direct link to our website, can be found here.

The Speaking Center

The Speaking Center is a free resource available to all members of the BSU community wanting to improve their public speaking abilities. We offer personalized coaching designed to help you become a more confident and effective speaker. Our trained coaches provide constructive feedback and support throughout the entire speech preparation process, whether you are in the early stages of brainstorming ideas and organizing your thoughts, or you need to practice your delivery and refine your message.

The Center is in the David Letterman Communication and Media Building, room 302. To schedule an appointment, please access us through your Navigate app or use this direct link to sign up for a time**.** Appointments are available both in person and on Zoom. Appointments are available in person, on Zoom, and in virtual reality (VR) for those interested in practicing in an immersive speaking environment.

7. Student Privacy

FERPA and Privacy

As a student, your educational records are considered confidential. Under FERPA (Family Educational Rights and Privacy Act), your records are confidential and protected. Under most circumstances, your records will not be released without your written and signed consent. However, some directory information may be released to third parties without your prior consent unless a written request to restrict this is on file. You can learn more about student rights to privacy by reading Ball State's FERPA and Privacy and Protection.

To support a learning experience that is responsive to the needs, interests, and pace of our class community, the course schedule may shift over the semester. Likewise, this syllabus is subject to change in the event of extenuating circumstances. The most current version of the schedule and syllabus will always be available on Canvas. Please check there regularly for updates and contact your instructors if you have any questions.

8. Syllabus Disclaimer

This syllabus is intended to serve as a guide for the course and is subject to change at the instructor's discretion. While the core learning objectives and assessment methods will likely remain consistent, adjustments may be necessary due to unforeseen circumstances, pedagogical considerations, or to best meet the needs of the class. Students will be notified of any significant changes in advance.