## **HOS 6932**

# **Advanced Turfgrass Culture**

**Course Syllabus for Fall 2025** 

#### Instructor:

Dr. Jason Kruse 1541 Fifield Hall Office: (352) 273-4569 Cell: (920) 319-6102

E-mail: jkk@ufl.edu

**Catalog Description:** HOS6932 (3cr.) – Advanced Turfgrass Culture. Comparisons of turfgrasses for their landscape and recreational uses. Growth characteristics, method of propagation, and basic management requirements, including control of important pest problems, are covered.

#### **Course Goals:**

In this course, you'll gain essential skills and knowledge to identify, establish, and maintain different types of turf for landscapes and recreational areas. Together, we'll explore how to choose and care for common turfgrasses and understand the science behind these choices. You'll also learn how research connects to real-world turf management, giving you tools to make informed, practical decisions in the field.

#### **Course Expectations:**

Success in this course relies on your active engagement and curiosity. Come prepared by reviewing the readings and keeping an open mind. We'll dive into topics that invite different perspectives, so join in our discussions with a willingness to listen, share, and learn from each other. Together, we'll create a respectful and collaborative learning environment where everyone's ideas are valued.

Education is a journey that requires both time and commitment. I understand that each of you has responsibilities outside of this course, and I appreciate the effort you're putting into your studies. Setting aside time for class preparation and assignments each week will help you get the most out of this course. I'm here to support you along the way.

I encourage you to take an active role in your learning, as engagement is key to success in this course. To stay on track, plan to set aside about 5-8 hours each week outside of class for reading, studying, and completing assignments. This course will challenge you, but your enthusiasm and effort will make a big difference. If you're managing other commitments, take a moment to consider if you can dedicate this time to get the most out of the course experience.

In our class discussions, listening attentively and respecting each other's perspectives will create a positive learning environment for everyone. Please keep our discussions focused and relevant, and avoid distractions like unrelated conversations or activities. This way, we all benefit from the opportunity to engage fully with the material and with each other. Let's work together to keep our space respectful and collaborative.

Being in class and actively participating are keys to making the most of our time together. I encourage you to come prepared and ready to engage in the discussions and activities we'll be doing each session. Your presence and involvement not only enrich your own learning but also strengthen our class community.

#### **Course Format:**

Lecture: 12:50 - 1:40 M W (1304 Fifield Hall)

Lecture/Lab: 12:50 – 3:40 F (1304 Fifield Hall/Turfgrass Envirotron)

#### **Recommended Texts:**

- Fundamentals of Turfgrass Management 5<sup>th</sup> Ed., N.E. Christians, Aaron J. Patton, and Quincy D. Law
- The Mathematics of Turfgrass Maintenance, 4th Ed., N.E. Christians and M.L. Agnew
- Florida Friendly Best Management Practices for Protection of Water Resources by the Green Industries

## **Optional Texts:**

- Diagnosing Turfgrass Problems: A Practical Guide, Ralph W. White and L.B. McCarty
- Destructive Turf Insects, 2<sup>nd</sup> Ed., H.D. Niemczyk and D.J. Shetlar

## **Course Objectives:**

- Recognize and describe the characteristics, growth habits, and adaptations of various warm-season and cool-season turfgrass species used in landscapes and recreational settings.
- Evaluate soil, climate, and site conditions to recommend appropriate turfgrass species that meet functional and aesthetic goals in specific environments.
- Identify common turfgrass health problems, including diseases, pests, and environmental stresses, and develop integrated management solutions.
- Apply best practices in turfgrass maintenance, including irrigation, fertilization, mowing, and pest management, with an emphasis on environmental stewardship and resource conservation.

Office Hours: Tuesdays, 2:00 PM – 4:00 PM, or by appointment (Zoom/In-person)

#### **Course Website:**

We will be using Canvas (elearning.ufl.edu) to communicate relevant course-related material, due dates, etc. You will login with your GatorLink username and password. Students must have an active GatorLink ID to access E-Learning. Should you encounter problems or you cannot remember your GatorLink login information, visit the GatorLink website [http://gatorlink.ufl.edu] or to the UF Computing Help Desk: (352) 392-HELP for assistance.

Find us on Facebook: <a href="http://www.facebook.com/ufturf">http://www.facebook.com/ufturf</a>

## **Teaching Format:**

Guest lectures, videotapes, and PowerPoint™ will be utilized to augment lectures of instructor. Several optional field trips will be conducted to acquaint students with the variety of occupations that are involved in the turfgrass industry. Lecture outlines will be made available in class or via the internet.

#### Safety:

Some parts of our lab sessions involve fieldwork, which may come with minor risks like sun exposure or insect bites, and, on occasion, a higher level of caution with equipment. Being mindful of safety in these environments is part of building good habits for a career in turf management. Please dress appropriately, stay aware, and let's work together to keep everyone safe and focused on learning.

**Professional Behavior:** This class will prepare you for your profession. Consequently, we expect everyone to behave accordingly. Practice common courtesies. Be on time for class. SILENCE YOUR CELL PHONES. This does not mean put it on vibrate and leave it on the table next to you. If you have an emergency for which you must take a call, step outside.

**Professional Behavior:** As we work together to build your skills for a career in turf management, let's all commit to creating a professional, respectful environment. Simple courtesies, like arriving on time and keeping distractions like phones to a minimum, go a long way. If something urgent comes up, just step outside to handle it.

## **Attendance and Participation**

Regular attendance is essential for your success in this course. Class sessions are designed to build on assigned materials through discussion, applied activities, and demonstrations that cannot be fully replicated outside of class.

- Expectations: You are expected to attend all scheduled lectures and participate actively.
- **Missed Content:** If you are absent, it is your responsibility to obtain notes or materials from a classmate. The instructor will not provide individualized make-up notes or handouts.
- **Assessments:** Make-up quizzes or exams will only be considered in cases of documented extenuating circumstances and must be communicated to the instructor as soon as possible.
- Applied Learning: In addition to class attendance, you are expected to spend independent time learning
  to identify specimens in the greenhouse and other designated areas, as this is a core component of the
  course.

#### **Examinations:**

<u>LECTURE:</u> One (1) mid-term exam and one (1) final exam will be given. The mid-term exam will only cover material presented since the last exam. The final exam *will be cumulative*, covering all material presented in both lecture and lab. Opportunities for extra credit will be discussed in class.

SCHEDULE: Exam 1 – October 11, 2024

Final Exam – TBD

Quizzes – Quizzes will be given weekly through Canvas

**Test Format:** Objective type questions requiring short precise answers along with those requiring mathematical calculations will predominate. Multiple choice, matching, and True/False questions will also be given. Application of lecture/laboratory material to realistic situations will be required.

**Semester Project:** Students in HOS6932 will be assigned to review a journal article focusing specifically on turfgrass management and present their review/summary of the journal article in class.

**Quizzes:** Quizzes will consist of 10 questions or less and are based on previous lecture and laboratory notes and exercises. There are no make-up quizzes, however you may drop your lowest two quiz grades. Quizzes are designed to keep you on track with the course lectures.

#### **Grading:**

<b>Point Distribution:</b>		Scale
Exam 1	25%	A 94 – 100%
Lecture Final	25%	A- 90 – 93%
Lecture Quizzes	30%	B+ 87 – 89%
Journal Review	20%	B 83 – 86%
		B- 80 – 82%
		C+ 77 – 79%
		C 73 – 76%
		C- 70 – 72%
		D+ 67 – 69%
		D 63 – 66%
		D- 60 – 62%
		E < 60%

#### **Grading Procedure:**

- **Grading Timeline:** Exams will be graded and returned within two weeks. Graded exams will be discussed during class, where any questions regarding grading or scores can be addressed.
- Dispute Resolution: Any questions regarding the final exam score, total accumulated points, or the
  assigned letter grade must be resolved within 72 hours of the final exam being returned. Grade
  disputes must be settled before final grades are submitted to the registrar's office.
- Make-up Exams and Extensions: Make-up exams are only available under documented extenuating circumstances. Requests for extensions or make-up opportunities must be communicated as soon as possible, ideally before the exam or assignment deadline.
- **Grading Policy Compliance:** All grading policies are consistent with current University of Florida grading standards, which can be reviewed at <u>UF Grading Policies</u>.

#### **Graduate-Level Semester Project: Turfgrass Research Article Review and Presentation**

#### **Purpose**

This project is designed to:

- 1. Strengthen your ability to critically evaluate scientific literature in turfgrass research.
- 2. Develop skills in synthesizing and communicating complex research findings.
- 3. Provide opportunities to share scholarly insights with peers in a professional setting.

## **Learning Outcomes**

By completing this assignment, you will:

- Identify and analyze recent peer-reviewed turfgrass research.
- Demonstrate critical thinking by evaluating research questions, methods, and conclusions.
- Communicate scientific findings clearly through both written and oral formats.
- Reflect on the implications of research for turfgrass science and management practices.

#### Task Breakdown

### 1. Article Selection

- Choose one peer-reviewed journal article published within the last **five years** from a reputable source (e.g., *Crop Science*, *Agronomy Journal*, *International Turfgrass Society Research Journal*).
- Ensure your article has sufficient depth for meaningful analysis.
- Submit your article for instructor approval by [insert date].

## 2. Written Review (3-5 pages, double-spaced, APA format)

Organize your review with the following sections:

- **Introduction**: Context and significance of the research in turfgrass science.
- Research Question: State the central hypothesis or objective.
- Methodology: Summarize the experimental design and methods.
- **Results**: Highlight key findings, including essential data or figures.
- **Discussion**: Evaluate implications, strengths, limitations, and connections to turfgrass management.
- Conclusion: Assess the overall contribution and note future research directions.

#### 3. Presentation (10–15 minutes, video format)

- Provide an engaging overview of the article's purpose, methods, and findings.
- Use visual aids (slides, charts, or figures) to support your key points.
- Connect findings to real-world turfgrass management applications.
- Upload your presentation to Canvas and be prepared for Q&A.

Your project will be graded on the following (100 points total):

- Article Selection & Relevance 10%
- Written Review (depth, clarity, critical evaluation) 40%
- Presentation (organization, clarity, professionalism) 30%
- Engagement & Q&A Response 10%
- Adherence to Guidelines (format, deadlines, APA citations) 10%

#### **Expectations for Success**

- **Excellent Work**: Critical, well-organized analysis with clear connections to turfgrass management; professional and engaging presentation.
- Adequate Work: Basic summary with limited depth or unclear implications; presentation meets requirements but lacks polish or engagement.
- **Needs Improvement**: Minimal analysis, poor organization, or failure to connect research to turfgrass management.

#### Support

If you encounter challenges in selecting or analyzing your article, reach out during office hours or via email. This project is intended not only as an evaluation, but also as a professional development opportunity to strengthen your ability to interpret and apply research.

#### **Course Policies:**

### **Attendance and Make-Up Policy**

Requirements for class attendance and make-up exams, assignments, and other work in this course are consistent with university policies. Click here to read the university attendance policies.

#### **Accommodations for Students with Disabilities**

Students with disabilities who experience learning barriers and would like to request academic accommodations should connect with the Disability Resource Center. It is important for students to share their accommodation letter with their instructor and discuss their access needs, as early as possible in the semester.

### **Grading Policy**

Information on current UF grading policies for assigning grade points can be found here.

#### **Course Evaluation**

Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available at <a href="https://gatorevals.aa.ufl.edu/students/">https://gatorevals.aa.ufl.edu/students/</a>. Students will be notified when the evaluation period opens, and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via <a href="https://ufl.bluera.com/ufl/">https://ufl.bluera.com/ufl/</a>. Summaries of course evaluation results are available to students at <a href="https://gatorevals.aa.ufl.edu/public-results/">https://gatorevals.aa.ufl.edu/public-results/</a>.

## **Materials and Supplies Fees**

There are no additional fees for this course.

#### **Online Course Communication**

For public course-related questions or discussions, please use the course discussion board on Canvas. For private communications, please email the instructor directly using your official UF email address.

## **Technical Issues**

If you encounter technical issues with the course website or related features, please contact the UF Computing Help Desk at 352-392-4357 or via e-mail at <a href="helpdesk@ufl.edu">helpdesk@ufl.edu</a>.

#### **Academic Honesty**

UF students are bound by The Honor Pledge which states, "We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the Honor Code." On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied: "On my honor, I have neither given nor received unauthorized aid in doing this assignment." The Conduct Code specifies a number of behaviors that are in violation of this code and the possible sanctions. If you have any questions or concerns, please consult with the instructor or TAs in this class.

#### **In-Class Recording**

Students are allowed to record video or audio of class lectures. However, the purposes for which these recordings may be used are strictly controlled. The only allowable purposes are (1) for personal educational use, (2) in connection with a complaint to the university, or (3) as evidence in, or in preparation for, a criminal or civil proceeding. All other purposes are prohibited. Specifically, students may not publish recorded lectures without the written consent of the instructor.

A "class lecture" is an educational presentation intended to inform or teach enrolled students about a particular subject, including any instructor-led discussions that form part of the presentation, and delivered by any instructor hired or appointed by the University, or by a guest instructor, as part of a University of Florida course.

Publication without permission of the instructor is prohibited. To "publish" means to share, transmit, circulate, distribute, or provide access to a recording, regardless of format or medium, to another person (or persons), including but not limited to another student within the same class section. Additionally, a recording, or transcript of a recording, is considered published if it is posted on or uploaded to, in whole or in part, any media platform, including but not limited to social media, book, magazine, newspaper, leaflet, or third party note/tutoring services.

A student who publishes a recording without written consent may be subject to a civil cause of action instituted by a person injured by the publication and/or discipline under UF Regulation 4.040 Student Honor Code and Student Conduct Code.

#### **Campus Resources**

#### Academic Policies and Resources

Academic policies for this course are consistent with university policies. See <a href="https://syllabus.ufl.edu/syllabus-policy-links/">https://syllabus.ufl.edu/syllabus-policy-links/</a>

## Campus Health and Wellness Resources

Visit <a href="https://one.uf.edu/whole-gator/topics">https://one.uf.edu/whole-gator/topics</a> for resources that are designed to help you thrive physically, mentally, and emotionally at UF. Please contact UMatterWeCare for additional and immediate support.

## Software Use

All faculty, staff and students of the university are required and expected to obey the laws and legal agreements governing software use. Failure to do so can lead to monetary damages and/or criminal penalties for the individual violator. Because such violations are also against university policies and rules, disciplinary action will be taken as appropriate.

#### Privacy and Accessibility Policies

· Instructure (Canvas)

o Instructure Privacy Policy

- o <u>Instructure Accessibility</u>
- ·Zoom
  - o Zoom Privacy Policy
  - o Zoom Accessibility

#### Graduate-Level Semester Project: Turfgrass Research Article Review and Presentation

**Overview:** As part of the graduate-level expectations for HOS6932 - Advanced Turfgrass Culture, you are required to complete a semester-long project that involves <u>selecting</u>, <u>reviewing</u>, <u>and presenting **two** scholarly journal articles</u> focused on turfgrass research. This project is designed to enhance your critical thinking skills, improve your ability to evaluate scientific literature, and provide an opportunity to share your insights with your peers.

## **Assignment Objectives:**

- 1. Identify a relevant and recent peer-reviewed journal article that addresses a topic within turfgrass research.
- 2. Critically evaluate the article, focusing on the research question, methodology, results, and conclusions.
- 3. Synthesize the information and prepare a clear and concise summary of the article.
- 4. Present your review to the class, highlighting the key findings, implications for turfgrass management, and any limitations or areas for future research.

#### **Instructions:**

#### 1. Article Selection:

- Choose a peer-reviewed journal article published within the last five years that is relevant to the field of turfgrass science. The article should be from a reputable journal, such as the *Crop Science*, *Agronomy Journal*, *International Turfgrass Society Research Journal*, or another similar publication.
- Submit your selected article to the instructor for approval by [specific date]. Ensure that the
  article has sufficient depth and complexity to allow for a thorough review.

#### 2. Review and Summary:

- Write a comprehensive review of the article, which should include the following sections:
  - **Introduction**: Briefly describe the topic and the significance of the research within the context of turfgrass science.
  - Research Question: Clearly state the research question or hypothesis that the article addresses.
  - Methodology: Summarize the experimental design, techniques, and methods used by the researchers.
  - **Results**: Highlight the key findings of the study, including any data, graphs, or tables that are central to understanding the results.
  - **Discussion**: Analyze the implications of the results for turfgrass management, noting any strengths, weaknesses, or limitations of the study.
  - **Conclusion**: Provide your overall assessment of the article, including its contribution to the field and any suggestions for further research.
- Your written summary should be 3-5 pages in length, double-spaced, using a standard font (e.g., Times New Roman, 12-point). Cite any additional references in APA format.

#### 3. Presentation:

- Prepare a 10-15 minute video presentation based on your written review. Your presentation should include:
  - A clear and engaging introduction to the article and its significance.
  - An overview of the research question, methodology, results, and conclusions.
  - Visual aids, such as slides or charts, to help convey the key points.
  - A discussion of the practical implications for turfgrass management and any potential applications.
- Be prepared to answer questions from your classmates and the instructor following your presentation.

## 4. Submission and Presentation Date:

- Submit your written review via Canvas.
- Video presentations will be uploaded to Canvas.

Evaluation Criteria: Your semester project will be evaluated based on the following criteria:

- Article Selection and Relevance (10%)
- Quality and Depth of Written Review (40%)
- Effectiveness of Presentation (30%)
- Engagement and Response to Questions (10%)
- Adherence to Guidelines (10%)

## **Additional Notes:**

- If you encounter any difficulties in selecting an article or need guidance on your review, please feel free to reach out during office hours or via email.
- This project is an opportunity to delve deeper into the research that informs best practices in turfgrass management and to share your insights with your peers. Approach it with curiosity and a commitment to thorough analysis.

Course Schedule				
Week	Module/Lecture Videos	Suggested Readings	Graded Work	
1	Introduction & Scope of the Industry	*Ch 1 pp. 1-6	Syllabus and     Handbook Quiz	
	2. Agrostology	*Ch 2 pp. 7-40	• Quiz 1	
2	3. Warm Season Grasses	*Ch 4 pp. 75-96	• Quiz 2	
	4. Cool Season Grasses	*Ch 3 pp. 41-74		
3	5. Climate (Atmospheric/Edaphic)	*Ch 12 pp. 269-284 PDF files	• Quiz 3	
4	6. Establishment	*Ch 6 pp. 111-146 ***Ch 8 pp.115-222	• Quiz 4	
5	7. Cultivation/Mowing	*Ch 9 pp. 209-224 *Ch 11 pp. 249-268	• Quiz 5	
6	8. Fertilization	*Ch 8 pp. 171-208	• Quiz 6	
7	9. Overseeding	*Ch 17 pp. 389-406 *Ch 20 pp 431-454	• Quiz 7	
8	10. Irrigation	*Ch 10 pp. 225-248 ***Chapter 7 pp. 107- 115	• Quiz 8	
9	11. Weeds and Weed Control	*Ch 13 pp. 287-330	• Quiz 9	
10	12. Pesticide Management	TBA	• Quiz 10	
11	13Fertilizer and Pesticide Calculations / Calibration	***MATH BOOK ***Ch4-6 pp. 45-106	• Quiz 11	
12	14. Insect Management	*Ch 14 pp. 331-352	• Quiz 12	
13	15. Disease Management	*Ch 15 pp. 353-378	• Quiz 13	
14	16. Nematode Management	*Ch 14 pp. 331-352	• Quiz 14	
15	17. Sod Production	*Ch 18 pp. 407-418	• Quiz 15	
16	18. Best Management Practices	****CH 1 & 2 pp. 1-10	• Quiz 16	
_	Final Exam: TBA		•	

<sup>\*</sup>Fundamentals of Turfgrass Management 5<sup>th</sup> Ed., N.E. Christians

\*\*\*The Mathematics of Turfgrass Maintenance, 4<sup>th</sup> Ed., N.E. Christians and M.L. Agnew

\*\*\*\*Florida Friendly Best Management Practices for Protection of Water Resources by the Green Industries