



## Introductory Turfgrass Science & Management Certificate

GreenKeeper University is a self-paced, online educational program for current and aspiring turfgrass managers. The Introductory Turfgrass Science & Management Certificate program covers the principles of turfgrass science with topics ranging from turf selection to soil fertility to pest management. Learn from a dozen turf science and management experts with decades of experience in their related fields. This program is recommended for individuals with limited turfgrass management experience or formal turf management training. Students earn a certificate upon completion of the program.

**Course Lead:** Bill Kreuser, Ph.D.  
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### **Course Structure**

This course is organized into eight units of two or three lecture videos. Some lessons will also include supplemental material including articles, websites, and online-tools. There is a short comprehension quiz at the end of each section. Quizzes are designed to emphasize core concepts from within each section and mark progress towards a GKU Introductory Turf Science & Management Certificate. The certificate will be awarded once all the course content is marketed as 'Completed' and all the quizzes have been passed.

### **Course Content**

All video lectures are posted on GreenKeeper University's learning management system which is located at <http://GKU.GreenKeeperApp.com>. A PDF copy of the lecture materials is posted below each video link. Supplemental readings will also be posted below the video lectures, when applicable. The supplemental content is not required to pass the weekly quizzes but to provide additional information about a topic in that lecture. Video lectures range from approximately 45-90 minutes in length.

*Please direct specific questions regarding course content to the most appropriate instructor. Their contact information can be found at the end of this syllabus. If unsure which instructor to contact or there are a technical issues with the course, then please email Bill Kreuser at [Bill@GreenKeeperApp.com](mailto:Bill@GreenKeeperApp.com)*

### **Recommended Textbook**

While there is *NOT* a required textbook for GKU courses, it is great to have an introductory turf management text at your disposal for the Intro and Advanced Courses. We recommend [Fundamentals of Turfgrass Management 5<sup>th</sup> Edition](#) by Christians, Patton & Law. The Introductory Certificate content will follow this text.

### **Section Quizzes**

Each section concludes with a five to ten question quiz. They are designed to emphasize the core concepts from a within section. While GreenKeeper University quizzes are not graded on a point-scale (i.e., ABC), students must achieve a 70% score to pass each quiz. Quizzes can be taken as many times as possible to earn a passing grade.

### **Certificate Completion**

Students will be automatically granted their Introductory Turfgrass Science and Management certification once all the course content is marked "Complete" in the GKU system and all quizzes have been passed.



## COURSE SCHEDULE & INSTRUCTOR EMAIL CONTACTS

<b>SECTION 1:</b>	<b>The Turfgrasses and Their Establishment</b> Lecture 1: Cool-Season Grasses Lecture 2: Warm-Season & Ornamental Grasses Lecture 3: Turfgrass Establishment Techniques	<b>Instructor's Email</b> <a href="#">Dr. Bill Kreuser</a> <a href="#">Dr. Aaron Patton</a> <a href="#">Dr. Zac Reicher</a>
<b>SECTION 2:</b>	<b>Turfgrass Physiology</b> Lecture 4: Growth physiology and Plant Growth Regulators Lecture 5: Causes & Management of Abiotic Stress	<a href="#">Dr. Bill Kreuser</a> <a href="#">Dr. Bill Kreuser</a>
<b>SECTION 3:</b>	<b>Turfgrass Soils</b> Lecture 6: Soil Properties and Problems Lecture 7: Soil Nutrients and Turf Fertilization	<a href="#">Dr. Doug Soldat</a> <a href="#">Dr. Doug Soldat</a>
<b>SECTION 4:</b>	<b>Primary Turf Management Practices</b> Lecture 8: Mowing, Cultivation & Rolling Lecture 9: Turf Irrigation & Drainage	<a href="#">Dr. Thom Nikolai</a> <a href="#">Dr. Alec Kowaleski</a>
<b>SECTION 5:</b>	<b>Integrated Pest Management, Pesticides and Turf Diseases</b> Lecture 10: Basics of IPM, pesticide & pesticide safety Lecture 11: Diseases of Cool-Season Turf Lecture 12: Diseases of Warm-Season Turf	<a href="#">Drs. Jim Kerns &amp; Paul Koch</a> <a href="#">Dr. Paul Koch</a> <a href="#">Dr. Jim Kerns</a>
<b>SECTION 6:</b>	<b>Turf Pests and Sustainable Turf Management</b> Lecture 13: Turf Insects Lecture 14: Turf Weeds Lecture 15: Sustainability and the Value of Turf	<a href="#">Dr. Glen Obear</a> <a href="#">Dr. Aaron Patton</a> <a href="#">Dr. Frank Rossi</a>
<b>SECTION 7:</b>	<b>Applications of Turf Management</b> Lecture 16: Golf Course Management Lecture 17: Sports Field Management Lecture 18: Lawn Care Operation	<a href="#">Chris Tritabaugh</a> <a href="#">Dr. Evan Mascitti</a> <a href="#">Dr. Zac Reicher</a>
<b>SECTION 8:</b>	<b>Turf Management in Practice</b> Lecture 19: Calibration, Mixing Math, & GreenKeeper App Lecture 20: Increasing Turf Management Precision	<a href="#">Dr. Bill Kreuser</a> <a href="#">Dr. Bill Kreuser</a>