



TURFGRASS DRAINAGE

It's been said that common sense and drainage are needed to grow turf, and if short on the former, than add more of the latter. This course covers various aspects of turfgrass drainage including soils, layers, root zone construction, drainage technologies and cultivation techniques to improve drainage.

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Course Structure:

This course is organized into three units. Each week will have a video lecture and a short 5- to -10 question quiz. Students should contact Alec with questions related to the course content or with questions about Masterio, quizzes, grades etc. The preferred method of communication is the instructors email listed above. Any general questions about GreenKeeper University should be directed to help@greenkeeperapp.com.

Course Content:

All video lectures will be posted on the course's Masterio site (<http://gku.greenkeeperapp.com>). A PDF copy of the lecture materials will be posted below each video link. Reading assignments will be posted in addition to the video lectures. Supplemental readings and videos will be posted when applicable. The supplemental content is not required to pass the weekly quizzes. They are designed to provide additional information about a topic. Video lectures are approximately 45- to -60minutes in length.

Weekly Quizzes

Each week concludes with a 5 question reading assignment quiz and a 10 question lecture quiz. They are designed to emphasize the core concepts from the past week. Quiz questions are displayed one-at-a-time with immediate feedback to help students understand why an answer is correct or incorrect. While GreenKeeper University courses are not graded, students must earn a 70% on a quiz to pass that week. Quizzes can be taken as many times as possible to earn a passing grade.

This course will be completed, and 1 credit will be earned once a student passes all three quizzes.



COURSE TOPICS & SCHEDULE

SECTION 1: HYDROLOGIC CYCLE AND SOIL DRAINAGE

Lecture 1 –Hydrologic cycle, evapotranspiration, transpiration, precipitation, infiltration, and water runoff.

Lecture 2 – Soil Drainage

- Natural processes of soil drainage, cohesive/adhesive properties between water and soil colloids.
- Reading Assignment – Winning Strategies to Overcome Adverse Soil Conditions**
- Improving the rooting environment of nearly impermeable soils irrigated with reclaimed water.

SECTION 2: SUBSOIL AND SURFACE DRAINAGE SYSTEMS

Lecture 3 –Remove of water that has infiltrated into the soil.

Lecture 4 – Surface Drainage Systems

- Runoff intercept drainage is essential for presenting saturated soil conditions and standing water.
- Reading Assignment – USGA Recommendations for a Method of Putting Green Construction**
- USGA recommendations for putting green construction

SECTION 3: PUTTING GREEN CONSTRUCTION AND CULTURAL PRACTICES

Lecture 5 –USGA putting green construction method.

Lecture 6 – Cultural Practices

- Organic matter management, cultivation, sand topdressing, and wetting agents to improve water infiltration.
- Reading Assignment – Managing Organic Matter in Putting Greens**
- Effectively managing organic matter will help create the firm and smooth putting greens that golfers come to expect.