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Irrigation Association | 8280 Willow Oaks Corporate Drive, Suite 400 | Fairfax, VA 22031-4507 | 703.536.7080 | www.irrigation.org



Smart practices. Sustainable solutions.



REGISTER NOW! IA has partnered with Cal Poly's Irrigation Training & Research Center to offer a series of online courses.

ONLINE LEARNING

Affordable, Relevant, On-Demand Education at Your Fingertips

The more your team knows, the better your bottom line. Enroll online today!

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Irrigation Association Online Learning

Affordable, Relevant, On-Demand Education at Your Fingertips

The Irrigation Association is committed to strengthening the industry's workforce. IA offers the best irrigation education in the industry, with targeted training for all experience levels, from basic to advanced. Grow your own skills and knowledge, improve your team's performance and see the results pay off, in the field and for your company's bottom line.

IA's interactive online classes and seminars make professional development easier than ever. Study at home or at work — at your own pace — without the cost and hassle of travel and time out of the office.

The Irrigation Association has partnered with Cal Poly's Irrigation Training & Research Center to offer a series of online courses for landscape irrigation. Each ITRC class includes:

- Videos
- Interactive assignments
- Reading
- Online quizzes

See page 3 for course descriptions, CEUs and pricing.

**WORTH
FOUR CEUs
EACH!**

Online Courses \$110 member | \$150 nonmember per course*

Earn four CEUs for each 4-hour interactive class



GET 90 DAYS OF UNLIMITED ACCESS TO:

- Online course with lesson summaries (*approximately four hours total classroom time*).
- Practical problems that apply learning to real-world solutions.
- Manual and/or workbook with step-by-step calculations.
- Additional resources, including pressure and friction loss charts, formulas and glossaries.
- Final test and certificate of completion at the end of the course.

Agriculture Irrigation Hydraulics

Understand how water pressure is created, managed and sustained in an agricultural irrigation system. This course focuses on the relationship between flow, velocity and pressure in typical agriculture systems.

Agriculture Sprinklers & Precipitation Rates

Review various types of agricultural sprinkler systems and their specific applications. Learn how to calculate precipitation rates and use them to create efficient irrigation schedules.

Electrical Troubleshooting for Landscape Irrigation Systems

Learn basic electrical terminology for landscape irrigation systems. Develop troubleshooting skills by using virtual meters to diagnose electrical problems commonly found in the field.

Introduction to Pumps

Understand when pumps are needed, how they work and interact with the irrigation system, and pump selection requirements. Learn how to read and interpret a typical pump curve.

Irrigated Soils

Gain a solid understanding of the soil-water relationship. Learn about soil components, formation, physical properties and textural classes. Topics include water movement within the soil and water uptake by plants.

Landscape Irrigation Hydraulics

Review the essentials of hydraulics for landscape irrigation, including the value and application of the "rule of three." This class focuses on the relationship between flow, velocity and pressure in landscape systems.

Landscape Irrigation Precipitation Rates

Use precipitation rates and matched rate zones to design and maintain effective landscape systems. Avoid problems and make better, faster decisions by understanding the rate at which a sprinkler system applies water.

Landscape Irrigation Scheduling

Create and implement effective irrigation schedules that supply the right amount of water at the right time. Review soil-water-plant relationships and learn how to manage irrigation scheduling to use water wisely and maintain the landscape.

Soil-Plant-Air Continuum

Learn how water moves from the soil to plants to the air and back again. This course covers how plants use water for transpiration and photosynthesis, store energy from the sun for use by other living things, and use and emit carbon and oxygen in a continuous cycle that is essential to life.

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* Prices are subject to change without notice

WORTH
ONE CEU
EACH!

Online Irrigation Seminars \$28 member | \$38 nonmember per seminar*

Earn one CEU for each 1-hour session

*Prices are subject to change without notice

Turf/Landscape Irrigation Topics

Analyzing Water Sources for Landscape Irrigation

Learn how to analyze available water sources and choose the best solution for the needs of a specific landscape site.

Auditing Landscape Drip Irrigation Systems

Review which factors can be measured and verified when auditing drip irrigation systems. Topics include calculating application rates to improve schedules.

Automating Water Flow Measurement With Sensors

Explore the use of flow sensors, which are critical to managing water resources. Topics include using flow sensors and measuring water flow.

Basics of Filtering

Learn about the many different types of filters. Topics include an overview of available filters for landscape irrigation projects that use alternate water supplies.

Catchment Systems for Alternate Water Sources

Discover different types of storage tanks that make it possible to use alternative water sources for irrigation. Presented by the American Rainwater Catchment Systems Association.

NEW Commissioning an Irrigation System

New green codes and standards are being adopted, which often require that the irrigation system be inspected and commissioned. Discuss the commissioning process.

Deficit Irrigation for Managing Landscapes

Learn different controller programming strategies and how to use them to reduce water use while maintaining healthy lawns and landscapes.

Do's & Don'ts of Backflow Prevention Devices

Discover how to use backflow prevention devices to protect water sources coming from multiple points of connection.

Estimating Landscape Plant Water

Learn how to estimate plant water use in urban settings with this guide for landscape irrigation systems.

Field Study of Uniformity Improvements From Multi-Stream Rotational Spray Heads

Review actual field applications of how new nozzles perform in existing irrigation systems. Discover how to use innovative nozzles to improve distribution uniformity.

Graywater Irrigation

Find out how to use graywater as an alternate source. Topics include code requirements; water quality issues; and selecting equipment to harvest, store and distribute graywater.

NEW A New Way to Evaluate Sprinkler Performance

Learn how sprinkler operational efficiency evaluates how sprinklers distribute water when used in different spacing configurations.

Proper Grounding Techniques

Master the theory of electrical surges. Learn how to make better decisions when specifying or installing grounding equipment.

Rainwater Harvesting — Engineered Failures

Learn about common problems in rainwater harvesting. Topics include solutions to avoid potential problems and ensure success.

Rainwater Harvesting for Irrigation

Review the components and equipment needed for rainwater harvesting. Topics include collection and storage, plus using rainwater for landscape irrigation.

Rainwater Harvesting — Underground Storage Design & Construction

Evaluate the pros and cons of various underground rainwater storage options, plus tips for proper installation.

Refining the Landscape Coefficient for Improved Irrigation Management

Learn to create effective irrigation schedules. Topics include how to use evapotranspiration data to better estimate plant water needs.

Return on Investment for Irrigation Upgrades

Review how to calculate the return on investment on innovative products and system upgrades to improve efficiency.

NEW Smartphone Apps for Irrigation Management

Learn about the latest tools for managing irrigation systems and their differences. Discover how to implement them to become a more effective water manager.

Starting With Efficiency

From a water provider's point of view, designing or installing an irrigation system should start with high efficiency. Learn different methods to achieve high efficiency using this philosophy.

NEW Sustainable Landscapes & Water-Use Efficiency

Learn key principles of sustainable landscapes and their impact on reducing water use. Understand how landscape modifications and the use of technology provide new opportunities for irrigation professionals to become part of the solution to managing water resources.

Treating Alternative Water For Irrigation

Discover different ways to treat alternative water for landscape irrigation use. Topics include how to comply with the many codes regulating alternative water.

Using Water Budgets as a Management Tool

Learn strategies to reduce water use while maintaining a viable landscape, even during drought conditions.

Water Movement in Soils & Its Implications for Drip Irrigation

Understand how water moves in the soil and the implications for landscape drip systems. Topics include how to position emitters or microsprays to apply water to encourage good root development.

Water Quality for Ornamental Plants/Landscaping

Learn about the water quality requirements of ornamental plants commonly used in managed landscapes.

Watering Within the Lines: Water-Use Restrictions vs. Water Budgets

Discover the relative savings from using a water budget instead of traditional watering restrictions. This case study presents an Austin Water pilot program to measure savings from quantity limits and flexible watering schedules.

Register online at
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Courses From Cal Poly's Irrigation Training & Research Center

Agriculture Irrigation Topics

Auditing Ag Drip/ Microirrigation Systems

Learn how to audit agriculture drip/microirrigation systems and evaluate how well emission devices are performing. Topics include implications for scheduling, optimizing yield, common problems and possible solutions.

Auditing Center Pivot Systems for Nozzle Performance

Discover how to audit center pivot systems and measure how nozzles apply water. Topics include using audit results to make better decisions about repairs and managing water resources.

Benefits of Pressure Compensation

Understand the benefits of different emission devices for agricultural drip irrigation systems. Includes real and theoretical case studies on using pressure and non-pressure compensating emission devices.

Calculating Precipitation Rates for Mechanized Ag Irrigation Systems

Learn how to calculate the rate of water application, essential for effective water management. Topics include creating irrigation schedules to reduce water and energy use without significant impact on yield.

Irrigating With Variable Rate Irrigation

Discover how to use variable rate irrigation as a water management strategy. Topics include defining VRI, various applications and using VRI to maximize irrigation efficiency.

Irrigation for Vegetable Crops

Make better decisions to maximize yield for high-value horticultural crops. Topics include irrigation best practices and managing water resources during drought.

Maintenance of Microirrigation Systems

Learn how to keep microirrigation systems working optimally. Topics include routine maintenance to avoid reducing the overall efficiency of microirrigation systems.

Recent Advances in Remote Sensing for Mechanized Irrigation Management

Explore how to remotely monitor center pivot or lateral move machines using sensors. This course covers best practices and recent advances in remote sensing.

Solutions for Maximizing Irrigated Areas Using Moving Sprinkler Systems

Discover economic solutions to maximize the irrigated area, increase yield and simplify irrigation management.

Water Movement in Soils

Understand important aspects of the soil-water relationship. Learn how to apply these concepts and principles to improve irrigation decisions and increase water-use efficiency.

ITRC: Basic Hydraulics (3 CEUs)

Master the core principles of how and why water moves in an irrigation system. This module covers basic terminology, static and dynamic conditions, accounting for energy in an irrigation system and basic design considerations.

Intermediate | Member \$80 | Nonmember \$105

ITRC: Basic Soil-Plant-Water Relationships (2 CEUs)

Learn about the basic relationships between water, plants and soil. Topics include soil moisture terminology, available water holding capacity, managing allowable depletion, soil moisture depletion and soil water potential.

Intermediate | Member \$55 | Nonmember \$70

ITRC: Distribution Uniformity & Precipitation Rate (1.5 CEUs)

Master two of the most important concepts in landscape irrigation: distribution uniformity and precipitation rate. This class covers measuring DU and PR and using this information for system design and irrigation scheduling.

Intermediate | Member \$45 | Nonmember \$60

ITRC: Evapotranspiration (1 CEU)

Learn how to measure evapotranspiration, or how quickly water moves through the plant and evaporates from the soil surface. This module outlines factors that influence ET rates and how to use ET to schedule irrigation.

Intermediate | Member \$28 | Nonmember \$38

ITRC: Irrigation System Components (3 CEUs)

Discover why successful irrigation design requires understanding system components and how they work together, regardless of system size, type or location. This class provides an overview of major component types used in landscape systems.

Beginner | Member \$80 | Nonmember \$105

ITRC: Landscape Irrigation Auditor (4 CEUs)

Use irrigation audits to inspect and measure how evenly sprinklers apply water. This module introduces five basic steps to prepare for and perform an audit on a landscape irrigation system.

Intermediate | Member \$110 | Nonmember \$145

ITRC: Landscape Sprinkler Design (8 CEUs)

Learn nine steps to create a workable landscape irrigation system design. Topics include collecting site data, determining component sizes, choosing component locations and calculating runtimes.

Advanced | Member \$220 | Nonmember \$285

ITRC: Scheduling for Auditors (2 CEUs)

Create irrigation schedules more easily with free tools from the Irrigation Association. This module covers how to use IA's auditing worksheets to create a simple irrigation schedule, as well as schedules that factor in designated watering days and soil moisture.

Intermediate | Member \$55 | Nonmember \$70

ITRC: Scheduling for Sprinkler Design (1.5 CEUs)

Learn how to schedule watering for an irrigation system. This course addresses when to water, how much to water and what to expect from a system controller.

Advanced | Member \$45 | Nonmember \$60

About the Irrigation Association

The Irrigation Association is the leading membership organization for irrigation equipment and system manufacturers, dealers, distributors, designers, consultants, contractors and end users. Together with its members, IA is committed to promoting efficient irrigation and to long-term sustainability of water resources.