



**Armstrong®**

# GLOBAL LEARNING

SCORECARD

# Armstrong University Online

**WHATEVER INDUSTRY YOU'RE IN, WE HAVE ONLINE COURSES TO HELP YOU HANDLE THOSE TOUGH, EVERYDAY ISSUES.**

At Armstrong, we understand that in any industry, utility management is as challenging as it is crucial. Every day you're faced with new demands and rising expectations to achieve more with less. Your job may be growing more difficult, but Armstrong University is here to make it easier.

Armstrong University Online gives you easy access to in-depth information and expertise that encompasses the processes, systems, products and requirements that are vital to serving your industry. We believe "Knowledge Not Shared is Energy Wasted"

Visit **armstrong**[international.com/university](http://international.com/university) to learn more, and use this handy scorecard to keep track of your progress.

## College of Environmental, Health and Safety

<input checked="" type="checkbox"/>	Course 1	First Aid, Medical and Blood borne Pathogen	30 Minutes
<input checked="" type="checkbox"/>	Course 2	Personal Protective Equipment	20 Minutes
<input checked="" type="checkbox"/>	Course 3	Hearing Conservation	20 Minutes
<input checked="" type="checkbox"/>	Course 4	Emergency Preparedness	20 Minutes
<input checked="" type="checkbox"/>	Course 5	Fall Protection	30 Minutes
<input checked="" type="checkbox"/>	Course 6	Lockout/Tagout	40 Minutes
<input checked="" type="checkbox"/>	Course 7	Compressed Gases and Flammable Liquids	30 Minutes
<input checked="" type="checkbox"/>	Course 8	Electrical Safety	35 Minutes
<input checked="" type="checkbox"/>	Course 9	Machine Guarding	12 Minutes
<input checked="" type="checkbox"/>	Course 10	Fire Protection	30 Minutes
<input checked="" type="checkbox"/>	Course 11	Hot Work	25 Minutes
<input checked="" type="checkbox"/>	Course 12	Confined Space Entry	30 Minutes
<input checked="" type="checkbox"/>	Course 13	Cranes, Hoists and Rigging	17 Minutes
<input checked="" type="checkbox"/>	Course 14	Line Breaking	30 Minutes
<input checked="" type="checkbox"/>	Course 15	Arc Flash Awareness	30 Minutes
<input checked="" type="checkbox"/>	Course 16	Powered Industrial Vehicles	20 Minutes
<input checked="" type="checkbox"/>	Course 17	EPCRA	30 Minutes
<input checked="" type="checkbox"/>	Course 18	Spill Prevention, Control & Countermeasures	20 Minutes
<input checked="" type="checkbox"/>	Course 19	Regulated Waste	30 Minutes
<input checked="" type="checkbox"/>	Course 20	Heat Stress	22 Minutes
<input checked="" type="checkbox"/>	Course 21	Storm Water Pollution Prevention Plan (SWPPP)	20 Minutes

## WE'LL SHOW YOU NEW AND BETTER WAYS TO SAVE TIME, MONEY AND ENERGY.

**Armstrong University Online** ([armstronginternational.com/university](http://armstronginternational.com/university)) offers courses to help you achieve all the following, and more.

- Increase production uptime and yield
- Maximize quality and profitability
- Improve safety
- Raise efficiency while cutting costs
- Reduce your carbon footprint
- Provide safety and comfort for customers, patients and staff
- Improve individual job performance
- Increase the value of employees throughout your organization

College of Steam Principles			
<input checked="" type="checkbox"/>	Course 1	Steam Basics	20 Minutes
<input checked="" type="checkbox"/>	Course 2	Typical Steam & Condensate System Components	30 Minutes
<input checked="" type="checkbox"/>	Course 3	Air & Non-Condensable Gases	22 Minutes
<input checked="" type="checkbox"/>	Course 4	Steam Quality	30 Minutes
<input checked="" type="checkbox"/>	Course 5	Water Hammer	30 Minutes
<input checked="" type="checkbox"/>	Course 6	Superheated Steam	30 Minutes

College of Steam - Generation			
<input checked="" type="checkbox"/>	Course 1	Typical Layout of a Boiler House	30 Minutes
<input checked="" type="checkbox"/>	Course 2	Types of Steam Boilers	30 Minutes
<input checked="" type="checkbox"/>	Course 3	Combustion Basics	30 Minutes
<input checked="" type="checkbox"/>	Course 4	Steam Costs	30 Minutes
<input checked="" type="checkbox"/>	Course 5	Drain Separators	30 Minutes
<input checked="" type="checkbox"/>	Course 6	Feedwater Pumps	30 Minutes
<input checked="" type="checkbox"/>	Course 7	Combustion Air Preheaters	23Minutes
<input checked="" type="checkbox"/>	Course 8	Introduction to Deaerators	60 Minutes
<input checked="" type="checkbox"/>	Course 9	Advanced Deaerator Practices	30 Minutes
<input checked="" type="checkbox"/>	Course 10	Typical Optimizations of a Boiler House	30 Minutes
<input checked="" type="checkbox"/>	Course 11	O&M Best Practices - Boilers	20 Minutes

### College of Steam - Distribution

<input checked="" type="checkbox"/>	Course 1	Piping Specifications	20 Minutes
<input checked="" type="checkbox"/>	Course 2	Designing Steam Distribution Piping	40 Minutes
<input checked="" type="checkbox"/>	Course 3	Steam Distribution Headers	30 Minutes
<input checked="" type="checkbox"/>	Course 4	Safety Relief Valves	33 Minutes
<input checked="" type="checkbox"/>	Course 5	Insulation	30 Minutes
<input checked="" type="checkbox"/>	Course 6	Pressure and Temperature Control Essentials	60 Minutes
<input checked="" type="checkbox"/>	Course 7	Noise-Meeting Regulatory Requirements for a PRV	20 Minutes
<input checked="" type="checkbox"/>	Course 8	Pressure Reduction Stations	30 Minutes
<input checked="" type="checkbox"/>	Course 9	Pressure Reduction Troubleshooting	20 Minutes
<input checked="" type="checkbox"/>	Course 10	Liquid Drainers	25 Minutes
<input checked="" type="checkbox"/>	Course 11	Typical Optimizations for a Steam Distribution System	20 Minutes

### College of Steam - Users

<input checked="" type="checkbox"/>	Course 1	Typical Steam Users	30 Minutes
<input checked="" type="checkbox"/>	Course 2	Basic Heat Transfer	23 Minutes
<input checked="" type="checkbox"/>	Course 3	Calculating the Amount of Steam Used in Equipment	35 Minutes
<input checked="" type="checkbox"/>	Course 4	Direct and Indirect Steam Heating	20 Minutes
<input checked="" type="checkbox"/>	Course 5	Heat Exchangers	20 Minutes
<input checked="" type="checkbox"/>	Course 6	Steam Traps	40 Minutes
<input checked="" type="checkbox"/>	Course 7	Control Valves	37 Minutes
<input checked="" type="checkbox"/>	Course 8	Steam Tracing	35 Minutes
<input checked="" type="checkbox"/>	Course 9	Steam Ejectors	20 Minutes
<input checked="" type="checkbox"/>	Course 10	Smart Solutions	35 Minutes
<input checked="" type="checkbox"/>	Course 11	Tank Heaters	32 Minutes
<input checked="" type="checkbox"/>	Course 12	System Solutions for Liquid Storage Tanks for HPI/CPI	30 Minutes
<input checked="" type="checkbox"/>	Course 13	System Solutions for Sterile Applications in Healthcare	30 Minutes
<input checked="" type="checkbox"/>	Course 14	Typical Optimization on Steam Users	35 Minutes
<input checked="" type="checkbox"/>	Course 15	O&M Best Practices for Steam Users	15 Minutes

### College of Condensate Return

<input checked="" type="checkbox"/>	Course 1	Calculating and Returning Condensate	42 Minutes
<input checked="" type="checkbox"/>	Course 2	Designing Condensate Return Lines	37 Minutes
<input checked="" type="checkbox"/>	Course 3	Condensate Quality and Contamination - Part 1	23 Minutes
<input checked="" type="checkbox"/>	Course 4	Condensate Quality and Contamination - Part 2	15 Minutes
<input checked="" type="checkbox"/>	Course 5	Flash Steam	30 Minutes
<input checked="" type="checkbox"/>	Course 5A	Water Hammer	30 Minutes
<input checked="" type="checkbox"/>	Course 6	Stalling Theory	40 Minutes
<input checked="" type="checkbox"/>	Course 7	Typical Condensate Return System Optimizations	25 Minutes
<input checked="" type="checkbox"/>	Course 8	O&M Best Practices for Condensate Return Systems	25 Minutes

### College of Flow Measurement

<input checked="" type="checkbox"/>	Course 1	Fundamentals of Flow Measurement - Introduction	30 Minutes
<input checked="" type="checkbox"/>	Course 2	Fundamentals of Flow Measurement - Advanced	25 Minutes

### College of Heat Recovery

<input checked="" type="checkbox"/>	Course 1	Typical Components of a Heat Recovery System	30 Minutes
<input checked="" type="checkbox"/>	Course 2	Combined Heating, Power and Cooling	30 Minutes
<input checked="" type="checkbox"/>	Course 3	Coolers and Condensers	25 Minutes

### College of Refrigeration

<input checked="" type="checkbox"/>	Course 1	Typical Components of a Refrigeration System	30 Minutes
<input checked="" type="checkbox"/>	Course 2	Coolers and Condensers	25 Minutes

### College of Hot Water

<input checked="" type="checkbox"/>	Course 1	Typical Energy Savings in Hot Water Systems	30 Minutes
<input checked="" type="checkbox"/>	Course 2	Legionella	38 Minutes
<input checked="" type="checkbox"/>	Course 3	Industrial Hot Water Systems	40 Minutes
<input checked="" type="checkbox"/>	Course 4	Industrial Water Temperature Controls & Washdown	30 Minutes
<input checked="" type="checkbox"/>	Course 5	Direct Contact Water Heating - Flo-Direct®	45 Minutes
<input checked="" type="checkbox"/>	Course 6	Institutional Hot Water Systems - Introduction	40 Minutes
<input checked="" type="checkbox"/>	Course 7	Institutional Hot Water Systems - Advanced	37 Minutes
<input checked="" type="checkbox"/>	Course 8	Institutional Water Temperature Controls	43 Minutes
<input checked="" type="checkbox"/>	Course 9	Heat Exchangers for Domestic & Process Hot Water	25 Minutes
<input checked="" type="checkbox"/>	Course 10	Water Boilers	30 Minutes
<input checked="" type="checkbox"/>	Course 11	Heat Pumps	30 Minutes

### College of Water Treatment

<input checked="" type="checkbox"/>	Course 1	Industrial Water Treatment	40 Minutes
<input checked="" type="checkbox"/>	Course 2	Water Chemistry and Corrosion	40 Minutes
<input checked="" type="checkbox"/>	Course 3	Boiler Water Treatment	30 Minutes

### College of Humidification

<input checked="" type="checkbox"/>	Course 1	Components of an HVAC System	22 Minutes
<input checked="" type="checkbox"/>	Course 2	Fundamentals of Humidification	20 Minutes
<input checked="" type="checkbox"/>	Course 3	Psychrometrics	30 Minutes
<input checked="" type="checkbox"/>	Course 4	Absorption Distance	20 Minutes
<input checked="" type="checkbox"/>	Course 5	HVAC Controls - Humidity and Temperature	30 Minutes
<input checked="" type="checkbox"/>	Course 6	Electrode Steam Humidifiers	25 Minutes
<input checked="" type="checkbox"/>	Course 7	Pressurized Steam Humidifiers	30 Minutes
<input checked="" type="checkbox"/>	Course 8	Gas Fired Steam Humidifiers	30 Minutes
<input checked="" type="checkbox"/>	Course 9	Hydro-Pneumatic Humidifiers	30 Minutes
<input checked="" type="checkbox"/>	Course 10	Resistive Heating Element Steam Humidifiers	35 Minutes
<input checked="" type="checkbox"/>	Course 11	Evaporative Pad Adiabatic Humidifiers	35 Minutes

## **WE BELIEVE, “KNOWLEDGE NOT SHARED IS ENERGY WASTED®”**

Armstrong in partnership with Spring Arbor University is proud to advise you that Armstrong University courses deliver training that carries Continuing Education Units (CEU) from an accredited institution of higher education.

If you require CEU's for your professional education requirements, you have the opportunity to purchase CEU's for the successful completion of specially assembled packaged courses.

### **Continuing Education Unit (CEU) Packaged Courses**

- College of Steam Principles - .25 CEU
- College of Steam Generation - .50 CEU
- College of Steam Distribution - .50 CEU
- College of Steam Users - .50 CEU
- College of Condensate Return - .50 CEU
- Safety Training 101 - .75 CEU

## **READY TO LEARN MORE?**

For information about our extensive curriculum of online courses, training, seminars and other learning opportunities, visit Armstrong University at [armstronginternational.com](http://armstronginternational.com). You can also reach us by sending an email to: [university@armstronginternational.com](mailto:university@armstronginternational.com)



INTELLIGENT SOLUTIONS IN STEAM, AIR AND HOT WATER

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