

# 2010 Course Catalog

**SIMPLE \* CONVENIENT \* RELEVANT**

Easily meet your continuing education requirements while keeping up on the latest industry topics with the leader in online education for the A/E/C industry.

**RedVector**  
*Online Education for Design and Construction*



## The Leader in Online Education!

Over 1,100 Online Courses Developed to Meet State Board and Professional Organization Requirements for Engineers, Architects, Contractors, Land Surveyors, Interior Designers, Landscape Architects and Other Industry Professionals.

**1-800-457-3586**  
**www.RedVector.com**

[www.RedVector.com](http://www.RedVector.com)

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1.800.471.5174

## What Is Included in the Exam Prep?

Our comprehensive exam preparation materials include the following for each exam:

- Downloadable Study Guide (PDF)
- Practice Exam Simulator & Online Terms Quiz
- Flashcards (electronic and printable)
- Helpful Study Resources

RedVector is a Registered Education Provider with the AIA and USGBC.



## RedVector

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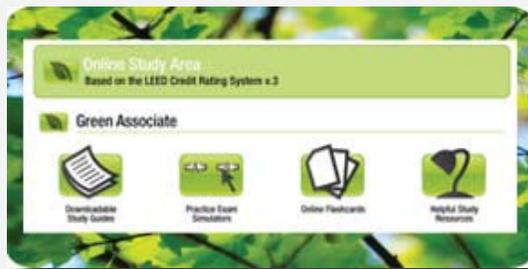
# LEED AP Exam Prep

**Plus the University of Tennessee Certificate in Sustainable Design and Green Buildings**

## Turn to the Education Source You Trust

With more than 2,400 hours of online education developed and available, we are the trusted education leader in the design and construction industry – so let us help you study for one of the most important exams of your career, the LEED AP Exam. We offer 16 different options for studying and testing your LEED and sustainable design knowledge – including our exclusive University of Tennessee Certificate in Sustainable Design and Green Buildings. Plus, easily meet your Green Associate education requirement with one of our customized Green Associate Qualification Course Bundles!

## New from RedVector LEED AP Prep Courses



## Exam Prep Options Made Easy

We have made it simple to identify the education that is right for you by organizing your options by exam:

- Green Associate
- Building Design and Construction
- Interior Design and Construction
- Building Operations and Maintenance
- New Homes

## University of Tennessee Certificate in Sustainable Design and Green Buildings + Exam Prep of Your Choice

These bundles come with our best-selling Certificate Program designed by the University of Tennessee College of Architecture and Design. The Level 1 Certificate is a 10-course series for 25 hours. It provides you significant knowledge of sustainable design and green building techniques while reviewing topics measured in the LEED AP Exam. Every course is delivered in a highly engaging and interactive online educational format. Included in the package are exam prep resources, giving you a winning combination that covers all angles!

## LEED Green Associate Qualification Certificate

This all-inclusive certificate and test prep bundle provides you with everything you need to qualify and begin preparation for the LEED Green Associate Exam. Included in this bundle is a 10-hour interactive online training course that is specifically designed for professionals looking to learn about green building principles. Upon the successful completion of this course you will receive a certificate that meets the Green Building Certification Institute's education program requirement for the LEED Green Associate Exam.

## About RedVector

Our committed team of creative professionals is dedicated to the belief that knowledge is the most powerful tool available for helping people enrich their lives, meet their goals, and achieve greater success.

Our course library boasts more than 1,100 essential and interactive offerings that cover continuing education requirements and corporate training. We are expanding quickly in volume and scope by integrating new industries and teaching technologies. All of our courses are developed to meet state board and professional organization requirements. They are authored by more than 100 exclusive subject matter experts. So far, more than 130,000 architects, engineers and contractors have chosen to bolster their knowledge and meet their continuing education requirements by taking RedVector courses.

RedVector's course designers are committed to providing the best resources and presentations. Our client services department employs a staff of full-time educational advisors to help clients meet online educational needs. The enterprise division works with corporate entities to develop customized in-house offerings.

RedVector's clientele includes individual licensees as well as large corporations. Strategic relationships with professional organizations such as the National Society of Professional Engineers (NSPE), the American Society of Civil Engineers (ASCE), the American Institute of Architects (AIA), American Society of Interior Designers (ASID), the International

Interior Design Association (IIDA), the American Institute of Constructors (AIC), and others have helped clinch RedVector's reputation as the undisputed primary choice for top-quality career education.

RedVector's enthusiasm and uncompromising integrity has been widely acknowledged in hundreds of trade magazines, newspapers and industry journals. The company was declared one of TampaBay's Best Places to Work 2006 by the *Tampa Bay Business Journal*.

RedVector's obligation to our clients does not stop with our impressive course library and course features. We provide full continuing education services which, at the forefront, include timely reporting to state licensing boards and professional organizations (where required). We work with almost 200 licensing and certification bodies and report completed course hours to 25 boards on a regular basis.

**RedVector sets the standard for excellence and innovation in online education for the engineering, architectural, interior design, construction, land surveying, building inspection and landscape architecture industries.**

In addition, RedVector's dedicated research staff tracks and maintains information on the licensing and certification rules and requirements for all of our licensed professions, making us experts on license renewal and continuing education issues. Our educational advisors are all trained to be able to help our clients pick out the right courses for their renewal every time, and provide support when questions arise.

Founded in October 1999, RedVector.com has grown from a modest idea for filling a growing need to a multinational venture that attracts over a million unique visitors annually from 50 states and 22 countries. RedVector is focused on providing the best client experience possible and has developed its continuing education services to support this core driver. Call toll-free today to experience RedVector for yourself – 1-800-457-3586.



# Course Library

## Green Building and Sustainable Design Courses

### Alternative Construction

- Adobe and Cob.....
- Bamboo.....
- Earthen Finishes.....
- Light Clay & Straw-Bale.....
- Natural Building, Codes & Regulations.....
- Natural Conditioning.....
- Rammed & Modular Earth.....
- Structural Properties.....



### Daylighting

- Fundamentals.....
- Occupant Productivity, Glazing Properties, & Electric Lighting.....
- Design Tools.....
- Daylighting in Design.....

### Designing for Sun, Wind, & Light

- Analysis Techniques.....
- Strategies for Building Groups.....
- Strategies for Building Parts.....
- Strategies for Buildings.....
- Strategies for Supplementing Passive Systems.....

### Green Building Materials

- Introduction.....
- Product Selection & Specification.....

### Green Design

- Introduction to Indoor Environmental Air Quality.....
- Introduction to Integral Sustainable Design Theory.....
- Introduction to Sustainability and Measurement Systems.....
- Introduction to Sustainable Design Materials and Resources.....
- Introduction to Sustainable Sites.....
- Introduction to Sustainable Water Systems I.....

### Green Infrastructure

- Introduction to High Performance Guidelines.....
- Best Practices for Site Assessment.....
- Best Practices for Pavement.....
- Best Practices for Utilities.....
- Best Practices for Stormwater Management.....
- Best Practices for Landscape.....

### Regenerative Landscape Design

- Shelters.....
- Solar Heating & IAO.....
- Sustainability.....
- Water.....

### Stormwater

- Stormwater Harvesting: A Green Concept.....
- Stormwater Management: An Introduction.....
- Stormwater Management: Low Impact Development (LID).....

### Sustainable Design

- A Primer.....
- An Integrated Process.....
- Masonry.....
- Materials.....
- Brick Masonry.....

### Energy

- Clean Energy: Recycled Energy Technologies.....
- Renewable Energy Generation.....
- Renewable Sources of Energy: Wind Power.....
- Solar Electric Generation: Technologies.....

### Additional Green Building

- 8 additional courses in Green Building & Sustainable Design, including:.....
  - » Greening of Healthcare Materials.....
  - » Historic Preservation: Energy Conservation.....
  - » Residential Green Building (2 courses).....



## Professional Development

### Leadership Challenge

- What Leaders Do.....
- Model the Way.....
- Inspire a Shared Vision.....
- Challenge the Process.....
- Enable Others to Act.....
- Encourage the Heart.....

### Management Skills

- A Manager's Guide to Performance Appraisals.....
- Stress & Change Management for Design and Construction Professionals.....
- The Art & Science of Delegation.....
- Coaching for Better Performance.....
- Role of the New Supervisor.....
- Rewards, Recognition & Motivation.....
- Leadership for Managers & Supervisors.....
- How To Handle Customer Conflict.....
- Employee Satisfaction.....
- Understanding the Hispanic Construction Worker.....
- Team Building Series (5 courses).....

- Motivating and Mentoring - A Profit Center.....
- Motivating Employees: Getting the Most from Your Team.....
- Managing Generation X.....
- Performance Indicators for Managing.....

- Maintenance.....
- Personnel Administration.....
- Personnel: EEO, Sexual Harassment, & Other Issues.....
- Sexual Harassment: Respecting the Individual.....
- Understanding Organizational Change (3 courses).....

### Ethics

- Ethical Decision Making for Engineers (4 courses).....

Ethics for Florida Building Inspectors  
Ethics for Land Surveyors: Decision-Making in Everyday Practice  
Ethics for Professional Architects (3 courses)  
Ethics for Surveyors and Mappers

### The Ultimate Project Manager

The Changing PM Role  
Managing Your Time  
Managing Project Studies & Reports  
Managing Design & Construction Phases  
Managing Quality  
Managing Risk  
Financial Management  
Project Management Technology  
Controlling Project Budgets & Schedules  
Project Close-Out



Managing the Proposal  
The Agreement  
The Project Management Plan  
The Project Schedule  
The Project Budget  
Managing The Project Team  
Managing The Client  
The Project Start-Up

### Additional Project Management

A/E's, Owners, & Contractors: Managing Projects to Success  
CPM Scheduling (4 courses)  
Developing & Managing a Project Budget  
Productive Project Meeting Methodology for Architects and Engineers  
Project Decision Making with Case Studies  
Project Management Basics  
Project Management for Florida Contractors  
Project Management Trends  
Project Management: Professional Techniques  
Project Risk Management

Project Team Management

### Financial Management

Negotiating Contracts  
Pricing for Profits, Generating Cash and Getting Paid  
Accounting & Cash  
Strategic Planning & Budgeting  
Financial Controls, Monitoring & Project Budgeting  
Controlling Labor Costs

### Financial Management

Accounting for Change Orders  
Purchasing  
Basic Financials for Land Surveyors

### Time Management

ABCs of Time, Goals & Purpose: The Big Picture

7 Steps to Mastering Time  
Tactical Time Management: An Advanced Course  
ABCs of Managing Time & Effort: The 80/20 Way  
ABCs of Goals  
Time Management for Designers

### Communications

Quick Writing Tips  
Effective Communication  
Basic Report Writing  
Effective Public Relations  
Effective Writing Skills for Business and Industry  
Business Communications: Effective Email  
Business Communications: Effective Meetings  
Business Communications: Effective Professional Presentations  
Business Communications: Letters  
Communicating with International Contractors  
Communication & Leadership



Business Writing (3 courses)  
Presentation Skills (2 courses)  
Technical Specifications Writing

### AIA's Essentials of Cost Management

Building Economics  
Cost Management Methodology  
Cost-Estimating Methodology  
Cost-Estimating Tools

### Mathematics

Algebra for Engineers (2 courses)  
Algebra for Engineers & Others (2 courses)  
Cost Estimating: Fundamentals  
Data Quality Assessment  
Statistical Analysis  
Statistical Analysis of Random Errors  
Data Validation  
Finance & Accounting for the Non-Financial Manager  
Basic Construction Math  
EXCEL for Engineers and Scientists: Calculations  
Excel: Proposal Preparation & Analysis for Engineers and Architects

### Business Ownership & Consulting

Pricing as a Professional  
Launching a Successful Start-Up Business:  
Entrepreneurial Basics  
Professional Liability (2 courses)  
Running Your Own Consulting Business: Getting Started  
Running Your Own Consulting Business: Revenue & Profit  
From Project Manager to Principal (4 courses)  
Ownership Transition: Designing & Starting the Program  
Ownership Transition: Determining Options & Candidate Selection  
Ownership Transition: Firm Value  
Managing a Buyout Program

# Course Library

Marketing Your Consulting Services (2 courses)

Winning Proposals (4 courses)

Business Reality Check: Pitfalls on the Path to Prosperity

## Liability & Risk

Court Decisions – Case Studies (12 courses)

Professional Standard of Care - Proof & Defense

Understanding Workers' Compensation for Employees

Understanding Workers' Compensation for Employers

Giving a Deposition

Tort Liability & Risk Management - Bicycle and Pedestrian Design

Risk Management for the Design Professional (3 courses)

## Additional Insurance, Liability & Risk

29 additional courses in insurance, liability & Risk Management

## Construction Management

Construction Arbitration (4 courses)

Construction Liens & Bonds

Construction Mediation: (3 courses)

Construction Paperwork

Understanding Construction Claims

## Additional Professional Development

Over 35 additional Professional Development courses, including:

- » Basic Blueprint Reading & Related Math
- » Partnering for Design & Construction Projects
- » Patent Protection Basics
- » Quality Management
- » Reliability Engineering Fundamentals
- » Safety: Developing an Employee Safety Orientation Program
- » Stress & Change Management for Design and Construction Professionals



## Safety

### OSHA Standards

OSHA Safety: Drilling

OSHA Safety: Introduction to Powered Industrial Trucks

OSHA Safety: Stairways and Ladders

OSHA Standards on Steel Erection

OSHA Concrete and Masonry Construction

OSHA Cranes, Derricks, Hoists, Elevators & Conveyors

OSHA Demolition

OSHA Electrical Regulations

OSHA Fatal Accidents & Prevention

OSHA Fire Protection & Prevention

OSHA Pressure Vessel Chemical Cracking

OSHA Recordkeeping: General Recording Criteria

OSHA Safety: Hazard Communication

OSHA Safety: Lead

OSHA Safety: MDA

OSHA Safety: Medical Services

OSHA Safety: Spray Booths

OSHA Signs, Signals & Barricades

OSHA Tools - Hand and Power

OSHA Underground Construction

OSHA Welding and Cutting

OSHA 10 Hour Card Program

Introduction to OSHA Electrical Safety

Fall Protection, Struck-By & Caught Between Accidents

Personal Protective Equipment

Scaffolds

Cranes & Other Hoists

Power Tools

Excavations

Materials Handling & Storage

Demolition

Hazards in Communication

## Toxic Mold

The Genesis of Toxic Mold

Toxic Mold Detection, Prevention, & Remediation

Toxic Mold: Managing the Legal & Insurance Risks

Toxic Mold: Regulations & Liability Issues

Mold Remediation in Schools & Commercial Buildings

## Fire Safety

Fire Part 1 - Workplace Fire Hazards & Preventing Fires

Fire Part 2 - Fire Protection Equipment & Techniques

Fire Safety Design: Egress & Extinguishing Systems

Fire! Designing Means of Escape

Fire Prevention Basics

## Construction Safety

Back Safety: Protection and Treatment Basics

NDA Drilling Safety Guide (2 courses)

Electrical Part 1 - Fundamentals, Materials & Equipment Grounding

Electrical Part 2 - Hazardous Location, Clearances & Safety Practice

Machine Operation

Material-Handling

Trades

Welding (2 courses)

Working with Chemicals

Storm Safe Homes: Building a Safe Room

Personal Protective Equipment (\*S)

Developing an Employee Safety Orientation Program

Arc Flash Hazard Analysis - The Basics

Asbestos Management

Asbestos: What Is It and Who Should Remove It?

Emergency Management Guide

Hazardous Waste: The Basics

Hazardous Waste: Treatment



Medical Waste Stream: Identification and Handling.....  
 Preventing and Investigating Accidents.....  
 Radon & New Homes.....  
 Radon Measurements.....  
 Safety - An Introduction.....  
 Site Safety Risk and Liability.....  
 Underground Natural Gas Storage: Basics.....



## Plumbing

Plumbing: Dental Offices & Working Drawings.....  
 Plumbing: Lead Work, Silver Brazing & Soft Soldering.....  
 Plumbing: Lift Stations, Pipes, Vents, Drain Lines & Septic Systems.....  
 Plumbing: Tips, Tricks and Tools.....  
 PVC Pipe - Which type should I use?.....

## Construction

### Concrete

Evaluation and Causes of Damage.....  
 Concrete Additives: Water-Repellency & Efflorescence Control in Masonry.....  
 Concrete Evaluation & Repair.....  
 Concrete Fundamentals: An Introduction.....  
 Self-Consolidating (SCC).....  
 Prestressed Concrete - An Introduction.....  
 CSDA's Basics of Concrete, Diamonds & Diamond Tools.....

### Masonry Design

Cementitious Masonry Units.....  
 Clay and Ceramic Products.....  
 Foundation and Retaining Walls.....  
 Installation and Workmanship.....  
 Natural Stone.....  
 Structural Masonry.....

### National Drilling Association

NDA Groundwater Knowledge - Certification.....  
 NDA Monitor Well Construction - Certification.....

### Roofing

Roofing Materials - Asphalt Shingles.....  
 Roofing Materials - Concrete Tiles.....  
 Roofing Materials - Flexible Membranes.....  
 Runoff Analysis using the USGS Method - Tennessee.....  
 Roofing - Flexible Membrane Wind Load Design.....

## Wood Design

Beam Design.....  
 Behavior of Structures Under Loads & Forces.....  
 Design Loads (3 courses).....  
 Properties of Wood & Lumber Grade.....  
 Structural Glued Laminated Timber.....

## National Electrical Code

2005 NEC Changes (19 courses).....  
 2008 NEC Changes (20 courses).....

## Florida-Specific

FL Building Code 2004 (3 courses).....  
 FL Statutes Ch. 489 (3 courses).....  
 Florida Building Code 2007 (4 courses).....  
 Florida Engineers' Laws and Rules [V.08].....  
 Florida Workers' Compensation Law.....  
 Florida: Building Inspector's Laws & Rules.....  
 Florida: MTS for Surveyors [V.07].....



## Management & Soft Skills

Please see the section titled Professional Development for these courses.....

## Additional Construction

Over 30 additional Construction courses, including:

- » Deck Building (2 courses)
- » Heavy Construction Equipment Basics (2 courses)
- » Insulated Concrete Forms: Today's Building Blocks
- » Insurance for Construction Defects
- » Interior Codes (9 courses)
- » Mechanical Design: Heating, Ventilating, and Air-Conditioning
- » Plumbing: Tips, Tricks and Tools Professional Painting
- » Residential Construction for Coastal Areas
- » Swimming Pools (3 courses):
- » Wind Mitigation Methodology: Retrofits for Existing Homes
- » Window Installation (3 courses)

## Architecture & Design

### Historic Preservation

Accessibility.....  
 An Introduction.....  
 Concrete and Terra-Cotta.....  
 Exterior Additions and Substitutions.....  
 Rehabilitating Interiors.....

Roofing for Historic Buildings.....

### Green Building & Sustainable Design

Please see the section titled Green Building for these courses.....

### Computer-Aided Design

Beginning CAD R2005 (9 courses).....  
 Beginning CAD R2006 (9 courses).....  
 Beginning CAD R2007 (8 courses).....  
 Beginning CAD R2008 (8 courses).....

### Building for Colleges & Universities

### Risk Free Guarantee



Don't worry.  
 If you don't like a RedVector course, we'll refund it or get you a new one.

# Course Library

Academic Buildings .....  
 Athletic / Recreation Facilities .....  
 Campus Planning .....  
 Housing .....  
 Libraries and Learning Centers .....

## Building for Senior Living

Acoustics & Lighting .....  
 Alzheimer's & Congregate Care .....  
 Continuing Care & Active Adult .....  
 Communities .....  
 Geriatric Med & Adult Day Care .....

Long-Term Care & .....  
 Assisted Living .....  
 Structural, Mechanical, .....  
 Plumbing & Fire .....

## Building Pathology

An Introduction .....  
 Columns and Walls .....  
 Foundations .....  
 Freeze-Thaw Cycling .....  
 Materials Pathology .....  
 Members and Connections .....  
 Parapets & Decks .....  
 Rising Damp & Salt Decay .....  
 Roofs .....  
 Site Drainage Problems .....  
 Thermal Movement, Corrosion, & the .....  
 Ozone .....  
 Walls and Thermodynamics .....

## Space Planning

Barrier Free Design .....  
 Design Fundamentals .....  
 Design Methodology .....  
 Furniture and Furnishings .....  
 History and Overview .....  
 Security Issues .....  
 Timber Bridge Design .....  
 Understanding Foundation Flood .....  
 Vents: Liability .....

## Brick Masonry

Moisture Control in Brick Masonry .....  
 Movement Joints in Brick Masonry .....  
 Manufacturing and Specifying of Clay .....  
 Brick Masonry .....  
 Flashing for Brick .....

## Feng Shui

Elements, Relationships, and Cycles .....  
 of Time .....  
 Life Map .....  
 The Basics .....

## Interior Lighting

Perception & Psychology .....  
 Brightness & Color .....  
 Daylight .....  
 Incandescent & Discharge Lamps .....  
 Light Control & Photometrics .....

Electricity .....  
 Luminaires .....  
 Design .....  
 American National .....  
 Standard Practice for .....  
 Office Lighting .....  
 Lighting Calculations .....  
 Lighting Fixtures and .....  
 Energy Efficiency .....

Essential Lighting:  
 The Language, Metrics & Process of  
 Lighting Design .....

## Indoor Air Quality

Humid Climate Issues .....  
 HVAC Systems & Common .....  
 Measurements .....  
 Introduction, Diagnosing & Mitigating .....

## Building Systems for Designers

Heating and Cooling .....  
 Systems .....  
 Security and .....  
 Communication .....  
 Systems .....  
 The Big Picture .....  
 Thermal Comfort .....  
 Water and Wastes .....

## Additional Architecture & Design

Over 35 additional Architecture and .....  
 Design courses, including .....  
 » A Wetland Primer (2 courses)  
 » Basic Civil Engineering (2 .....  
 courses)  
 » Coastal Engineering (3 courses)  
 » Fair Housing Accessibility .....  
 » Homeland Security (3 courses)



- » Noise Mitigation Through Design
- » Psychology of Color
- » Responsible Outdoor Lighting
- » Signage for Architects, Interior .....  
 Designers and Landscape .....  
 Architects
- » Site Planning and Design

## Roads & Parking Lots

### Asphalt & Pavement

Introduction to Superpave and .....  
 Materials Selection .....  
 Superpave Mixture Volumetrics .....  
 SuperPave: Aggregates & Mixtures .....  
 SuperPave: Binders .....  
 SuperPave: Introduction .....  
 SuperPave: Mix Design .....  
 Concrete Pavement Rehabilitation - .....  
 Diamond Grinding .....  
 Concrete Pavement Rehabilitation - .....  
 Full Depth Repair .....  
 Concrete Pavement Rehabilitation - .....  
 Partial Depth Repair .....  
 Concrete Pavement: Glass Fiber .....  
 Reinforced Polymers .....  
 Airport Pavements (3 courses) .....

### Roadway Design

Better Roadway Design - Curbs & .....  
 Pedestrian Control Devices .....  
 Better Roadway .....  
 Design - Curvature & .....  
 Passing Zones .....  
 Better Roadway .....  
 Design - Intersection .....  
 Signalization .....  
 Better Roadway .....  
 Design - Intersection .....  
 Signing .....  
 Better Roadway .....  
 Design - Intersections .....  
 Better Roadway Design - Lane .....  
 Assignment, Signals & Lighting .....  
 Preparing Infrastructure Plans for .....  
 Roadways .....  
 Highway Rumble Strips .....  
 Highway Engineering Series (9 .....  
 courses) .....



## Parking Lot Design

- Storm Drain Design
- Lighting
- Parking Demand
- Parking Geometrics
- Surface Lot Functional Design
- Traffic Impact & Site Access
- Design of Detention Ponds for Parking Lots

## Additional Roadway Courses

- 10 additional Roadway courses, including:
- » Basic Civil Engineering - Asphalt
  - » Traffic Calming
  - » Bridge Inspection and Maintenance

## Engineering

### Civil Engineering

- Pumping Stations Series (6 courses)
- Open Channel Hydraulics (4 courses)
- Subsurface Utility Engineering (2 courses)
- Advanced Wastewater Treatment Plant Design
- Basic Civil Engineering (6 courses)
- Pole Structural Loading
- Prestressed Concrete (3 courses)
- Hydraulic Steel Structure Design
- Manholes - Head Loss and Sizing
- Material Considerations in Steel - Brittle Fracture
- Excavation Safety and Shoring/OSHA Driven Piles: (5 courses)
- Earthquakes: The Basics
- Retaining Wall Design (2 courses)



## Additional Civil Engineering

- Over 30 additional courses for Civil Engineering, including:
- » Geotechnology: Cartography, Mapping and Map Servicing
  - » Use of Steel in Design & Construction
  - » Basic Wind Loads I: ASCE 7-05 Revealed
  - » Computer Analysis of Structures
  - » Concrete Evaluation & Repair
  - » Construction Administration: MEP courses (3 courses)
  - » Structural Analysis (3 courses)
  - » Performing MEP Commercial Building Surveys
  - » Tidal Hydraulics
  - » Trenchless Methods: An Introduction
  - » Septic System Design
  - » Sludge Waste Incineration
  - » Solid Waste Disposal: On-Site Incinerators For Solid Waste



## Environmental Engineering

- Stream Restoration (6 courses)
- Culvert Design for Fish Passage (2 courses)
- Industrial Noise Control
- Coastal Engineering: Storm Surge
- Coastal Geology: Terminology & Geologic Environments
- Landscaping with Native Plants
- Inland Wetland Restoration
- Wetland Delineation (2 courses)
- Floodplain Management and the NFIP
- Costs and Benefits of Natural Hazard Mitigation
- Earth Dynamics (6 courses)
- Erosion & Sediment Control
- Erosion and Sediment Control - An Overview
- Flood Mitigation and Special Flood Hazard Areas
- Making the Flood Zone Determination

- Hurricane Damage: Wind vs. Water Determination
- Channel Restoration (3 courses)
- Common Indoor Air Quality (IAQ) Measurements
- Diagnosing and Mitigating IAQ Problems (3 courses)

## Water Management

- Drinking Water Treatment: Arsenic Removal
- Onsite Wastewater Treatment - Disinfection
- Water Supply Systems in Buildings: The Basics
- Treatment System Selection
- EPA Onsite Wastewater Treatment (2 courses)

- Membrane Filtration (4 courses)
- Onsite Wastewater Treatment (9 courses)
- Basics of Industrial Wastewater Treatment
- Storm Water Treatment Using StormFilter Sewage Lift Station Design
- Storm Drain Inlets (4 courses)

## Additional Environmental and Water Management

- Over 35 additional Environmental and Water Management courses, including:
- » Runoff Analysis using the SCS Method (2 courses)
  - » Runoff Analysis using the USGS Method (4 state specific courses)
  - » Coastal Engineering: Tsunami
  - » Basic Erosion & Sediment Control
  - » Drinking Water (3 courses)
  - » Managing Water Use in Businesses and Homes
  - » Methods
  - » Advanced Stormwater Treatment (2 courses)
  - » Basics of Water Resources (2 courses)
  - » Constructed Wetlands - Free Water Surface Wetlands

### Risk Free Guarantee



Don't worry. If you don't like a RedVector course, we'll refund it or get you a new one.

## Chemical Engineering

- Cooling Towers.....
- Basics of Industrial Heat Transfer.....
- Making Decisions with Insulation.....
- Pinch Technology.....
- Pyrophoric Iron Fires.....
- Statistical Process Control.....

## Petroleum Engineering

- Biomass Oil Analysis: Research Needs and Recommendations.....
- Liquid Process Piping - General Piping Design.....
- Liquid Process Piping - Introduction and Design Strategy.....
- Gulf of Mexico OCS Oil and Gas Pipelines.....
- Liquefied Natural Gas - The Global Market.....
- MMS Case Studies - Offshore Oil & Gas Safety Alerts.....
- Oil and Gas Drilling Technologies.....
- Oil and Gas Well Plugging in Texas.....
- Texas Administrative Code (TAC) - Underground Injection Control.....
- US Code - Oil Pollution Liability & Compensation.....
- Waste Minimization in the Oil Field.....



## FEMA-Related

- FEMA Letters of Map Amendment/Revision.....
- Introduction to FEMA Flood Maps and Flood Studies.....
- Guide to Development in FEMA's Regulatory Floodway.....
- Guide to the FEMA Elevation Certificate.....

## Electrical Engineering and Analysis

- Electrical Phase Converters.....
- Basic Electricity (2 courses).....
- Battery Applications.....
- Capacitor Applications.....
- Circuit Analysis (AC) (9 courses).....
- Circuit Analysis (DC) (12 courses).....

- Electric Motors (4 courses).....
- Electric Power (2 courses).....
- Electrical Characteristics of Conductors.....
- Electrical Conductor Sizing.....
- Air Compressors.....
- Electric Power Course series (3 courses).....
- Electrical Equipment: Specifying the 3-Phase Substation Transformer.....
- Economic Conductor Selection.....
- Electric System Reliability Indices.....
- Overcurrent Protection (2 courses).....
- Overview of Electric Power Systems.....

- Printed Circuit Board Basics.....
- Transformers (3 courses).....
- Understanding Electric Rates.....

## Additional Electrical Engineering and Analysis

Over 20 additional courses in Electrical Engineering and Analysis, including:

- » Steam Turbines
- » Combustion Analysis
- » Compressed Air Systems (2 courses)
- » Electrical Tools (2 courses)
- » Introduction to Electronic Component Packages
- » Medium Voltage Underground Cables
- » NEC Motor Circuits/Calculations (2005)
- » Computerized Maintenance Management Systems
- » Energy Conversion Analysis
- » Gas Turbine Performance Enhancements
- » Power Cycles Analysis
- » Preventive Maintenance
- » Electric and Magnetic Fields

## Additional Engineering

Over 30 additional courses for Engineers, including:

- » Hot-Dip Galvanizing (3 courses)
- » Advanced Industrial Wastewater Treatment

- » Material Science: Properties of Metals
- » Energy Conversion Systems
- » Hurricane Mitigation: Design and Construction Lessons
- » In Situ Remediation Technologies for Contaminated Soils
- » Fuel Cell Power Systems
- » Mechanical Characteristics of Conductors
- » Sizing Electric Utility Service Entrance Equipment
- » Voltage Regulator Application
- » Mechanical Science: Heat Exchangers
- » Plasma (Ion) Nitriding - Level One

## Full Course Listing

The courses listed here are representative of our full course catalog featuring approximately 1,100 courses.

The full, searchable catalog is available at [www.RedVector.com](http://www.RedVector.com).

You can request a file of our full course list by contacting us at 1-800-457-3586.

## Contact RedVector

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#### Featured Author

Richard Kelso  
Professor

- P.E., NCEE, Ph.D.
- 32 years on faculty of the College
- 26 years managing a consulting engineering practice
- ASHRAE Board of Directors

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#### Featured Author

Mark DeKay  
Associate Professor

- AIA Education Honor Award: 1995
- Fulbright Fellowship: 2000
- AIA/Tides Foundation award: 2005
- 14 years teaching at university level

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#### More Information

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Email  
[Karen.Willis@RedVector.com](mailto:Karen.Willis@RedVector.com)

#### About the University of Tennessee College of Architecture and Design

Consistently ranked as one of the Best Southeastern Colleges by Princeton Review, the University of Tennessee College of Architecture and Design also was ranked the #2 program in Southern Universities by Design Intelligence. Certified by the National Architecture Accreditation Board, the faculty have received numerous national design awards and they currently serve on a wide variety of national boards and professional organizations.

Exclusively through RedVector, the University of Tennessee College of Architecture and Design offers the Online Certificate in Sustainable Design and Green Buildings.

#### RedVector.com

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