

SPRING 2010

JANUARY-JUNE SESSION

# CONSTRUCTION & INDUSTRIAL SKILLS

- Going Green...  
the Wave of  
the Future
- Apprenticeship  
Offers Opportunity
- Update  
Licensure  
Requirements



LORD FAIRFAX COMMUNITY COLLEGE

**WORKFORCE  
SOLUTIONS**

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

PROFESSIONAL DEVELOPMENT & CONTINUING EDUCATION

# Construction and Industrial Trades

## AutoCAD® 2009 Level 1

7 Sessions, Feb 1 – Feb 22, Mon Wed, 7 – 10 p.m.  
Middletown, \$355

Imagine taking a two-dimensional blueprint of a proposed building project and turning it into a 3-D CAD model. This course is designed to guide the beginning user into the dynamic world of 3-D. Basic computer skills and familiarity with drafting terminology is strongly suggested. Purchase textbook prior to the class. Check website for details.

## Construction Print Reading Basics

6 sessions, Feb 2 – Feb 18, Tue Thu, 6 – 10 p.m.  
Middletown, \$305

6 sessions, Mar 23 – Apr 8, Tue Thu, 6 – 10 p.m.  
Fauquier, \$305

Basic print reading is a foundational skill required in the industry and to make your business successful. Get comfortable with working drawings and drawing concepts; scale reading; dimensioning; construction math; plot plans; foundations and floor plans; elevations and sectional views; estimating construction costs; materials and specification analysis; symbols and abbreviations; trade information; framing construction; trade competency tests and more. Bring an architectural scale and a four-function calculator to class. Purchase textbook prior to the class. Check website for details.

## Construction Print Reading Advanced

8 sessions, May 18 – Jun 10, Tue Thu, 6 – 9 p.m.  
Middletown, \$375

Take your level of construction print reading to the next level. Study plans that include architectural, site, electrical, plumbing and mechanical, foundations, footings as well as takeoffs for each trade. Bring an architectural scale and a four-function calculator to class. Purchase textbook prior to class. Check website for details.

## Build a Class – OSHA

Need an OSHA class, but don't see it listed? We can build it. If you have an interest, please call our office at (540) 868- 7021 or e-mail [workforce@fcc.edu](mailto:workforce@fcc.edu) to pre-register. By pre-registering, you will be notified by e-mail or phone as soon as the class is scheduled. Participants will receive an OSHA General Industry or Construction U.S. DOL course completion card upon completion.



- ✓ OSHA 10 CFR 1910 General Industry
- ✓ OSHA 30 CFR 1910 General Industry
- ✓ OSHA 10 CFR 1926 Construction
- ✓ OSHA 30 CFR 1926 Construction



## Construction Cost Estimating

8 Sessions, May 25 - Jun 17, Tue Thu, 7 – 10 p.m.  
Middletown, \$295

How much will your next home or project cost to build? Construction estimating errors can be very expensive, not to mention embarrassing. This course is designed for the person who needs basic instruction in quantity take-off and pricing focusing primarily on residential construction. Learn how to examine the direct cost to install materials and equipment. Bring a four-function calculator to class. Basic computer skills and print reading proficiency is strongly recommended. Purchase textbook prior to class. Check website for details.

## ARC Flash NFPA 70E

1 Session, Apr 8, Thu, 6 – 10 p.m.  
Middletown, \$145

Electrical dangers such as shock, electrocution, arc flash, and arc blast will always be present on the job. Based on NFPA 70E, which has become the new standard for meeting OSHA training obligations, students will gain an immense respect for the power of electricity. Become OSHA compliant and learn the proper training and safety requirements to minimize the hazards and avoid injuries and death. Purchase textbook prior to class. Check website for details.

## Plumbing 3

10 Sessions, Feb 2– Apr 6, Tue, 6 – 9 p.m.  
Middletown, \$295

Examine the theory of operation and installation of residential, commercial, industrial and institutional fixtures, fittings, appliances; gas piping and appliance ventilation; corrosion control; levels and transits; offset calculations; and heat transfer from basic electricity. Purchase textbook prior to class. Check website for details.

Plumbing 1, 2 and 4 are offered on a rotating basis. For more information, contact Brian Wetter at 540-868-7119.

# Construction and Industrial Trades

## HVAC Troubleshooting and Repair 1

10 Sessions, Feb 8 – Apr 12, Mon, 6 – 9 p.m.  
Middletown, \$255

A comprehensive troubleshooting course for air conditioning, heat pump and commercial refrigeration technicians using state-of-the-art computer-based simulations. Be an expert when monitoring systems for proper operation; troubleshooting faults using built-in instrumentation; using diagnostic charts to assist in repairing systems; and performing quality checks on final operations.

## HVAC Troubleshooting and Repair 2

10 Sessions, Apr 26 – Jun 28, Mon, 6 – 9 p.m.  
Middletown, \$255

A comprehensive troubleshooting course for commercial and residential technicians using state-of-the-art computer-based simulations to make learning fast and thorough. Learn to monitor systems for proper operation; understand all the requirements for fossil fuel systems; troubleshoot faults using built-in instrumentation; and use diagnostic charts to assist in repairing systems. You'll be able to perform quality checks on all final operations.

## Programmable Logic Controls for the Beginner

8 Sessions, Mar 11 – Apr 29, Thu, 6 – 10 p.m.  
Middletown, \$559

As an introductory class to programmable logic controller systems, learn what they are, how they work and how they can be used to control various processes and machines. Designed for industrial maintenance and beginning programmers, this class includes Allen Bradley and SLC 500 basic instruction sets; software, hardware and troubleshooting components. Students will transfer, monitor, run projects, make program changes and interpret simple ladder logic.

## Basic and Advanced NEC Electrical Calculations

2 Sessions, Mar 20 – Mar 27, Sat, 8 a.m. – 5 p.m.  
Middletown, \$290

Become a pro at NEC electrical calculations such as conduit fill, box fill, residential service calculations, commercial service calculations, motor calculations, wire ampacities, and voltage drop. Boost your confidence as you prepare to take your Journeyman or Master exam!



“ I learned a great deal from this course. I hadn't previously welded before but the instructor gave me a good level of basic skills in a short amount of time. Thank you to Mr. Lewis for his kindness, professional skills, and teaching abilities. ”

– Michael, 2009 Welding Student

## Metal Machining-Lathe

6 Sessions, Apr 6 – Apr 22, Tue Thu, 6 – 10 p.m.  
Winchester Tool, \$395

Learn the hands-on techniques and skills for lathe machining including turning, drilling, tapping, boring and threading.

## Hydraulics Fundamentals and Beyond

12 Sessions, May 10 – Jun 16, Mon Wed, 6 – 8 p.m.  
Middletown, \$445

Learn the basics of hydraulic systems from theory to hands-on application. Hydraulic mathematics, physics and symbols will be covered to allow the understanding and necessary calculations of the overall system performance. You will learn how to develop maintenance, safety and troubleshooting procedures. Purchase textbook prior to class. Check website for details.

## Introduction to Arc Welding

11 Sessions, May 10 – Jun 14, Mon Wed, 6 – 10 p.m.  
Middletown, \$395

Learn from our AWS certified welding instructor. Gain the skills needed for a good paying job. Learn the basics of stick/arc and metal torch welding and everything you need to know to keep you safe in this hands-on class.

## Technical Assessments

These assessments focus on industrial technician skills including written and hands-on testing in such areas as programmable logic control, hydraulics, electrical, mechanical and pneumatics. This is a great way to screen new employees and identify skill gaps while offering an incentive to increase skill levels.

Contact: Brian Wetter at [bwetter@lfcc.edu](mailto:bwetter@lfcc.edu) or 540-868-7119

# Continuing Education and Licensure

**Journeyman, Master Plumbers, Electricians, HVAC Mechanics, and Gas Fitters** that are obtaining or renewing their licenses are now required by the Virginia Board of Contractors to take a predetermined number of continuing education hours specific to their trade.

*Our courses satisfy the Continuing Education Requirements of Virginia Department of Professional and Occupational Regulation (DPOR) and the Virginia Board for Contractors.*

Each course covers:

- ✓ New Code Definitions
- ✓ Major Code Changes
- ✓ Impacts on the Job
- ✓ General Use and Special Equipment

## Continuing Education for Electricians

Price: **\$125**

Pick from any of the dates listed below. In just 3 short hours earn your required continuing education credits. All classes are held at the Middletown campus from 8 to 11 a.m.

Jan 16	Feb 13	Mar 13	Apr 10
May 15	Jun 12	Jul 17	

## Continuing Education for HVAC

Price: **\$125**

Pick from any of the dates listed below. In just 3 short hours earn your required continuing education credits. All classes are held at the Middletown campus from Noon to 3 p.m.

Jan 16	Feb 13	Mar 13	Apr 10
May 15	Jun 12	Jul 17	

## Continuing Education for Gas Fitters

Price: **\$65**

Pick from any of the dates listed below. In just 1 short hour earn your required continuing education credits. All classes are held at the Middletown campus from 11 a.m. to Noon.

Jan 23	Feb 20	Mar 20	Apr 17
May 22	Jun 19	Jul 24	

## Continuing Education for Plumbing

Price: **\$125**

Pick from any of the dates listed below. In just 3 short hours earn your required continuing education credits. All classes are held at the Middletown campus from 8 to 11 a.m.

Jan 23	Feb 20	Mar 20	Apr 17
May 22	Jun 19	Jul 24	

“Worth the time and effort. Great for adult learning.”

– Cont Ed for Electricians Student

## Basic Contractor Licensing

Price: **\$199**

Pick from any of the dates listed below. Each class is held on Saturday from 8 a.m. to 5 p.m.

Jan 9, Fauquier	Feb 6, Middletown
Apr 3, Fauquier	Apr 10, Middletown
Apr 24, Luray-Page	May 22, Fauquier
Jun 12, Middletown	Jul 24, Middletown

This 8-hour course, required as pre-licensing education, provides an overview of the laws and regulations that govern contractor licensing and practicing in Virginia. This course is recognized by the Commonwealth of Virginia Department of Professional and Occupational Regulation Board for Contractors. Textbook included in the price of this class.

## Advanced Contractor Licensing

8 Sessions, Mar 9 – Apr 1, Tue Thu, 7 – 9:30 p.m. Middletown, **\$285**

This 20-hour course is designed to provide a basic understanding of business management subjects for contractor license applicants so that they may be successful in business. This class meets the requirement of the pre-licensing education and remediation training as determined by the Virginia Board of Contractors. Purchase textbooks prior to class. Check website for details.

## BLD Contractor Exam Prep Class

8-Hour Building Contractor Exam Preparation Class

1 Session, Feb 6, Sat, 8 a.m. – 5 p.m. Middletown, **\$225**

1 Session, Apr 24, Sat, 8 a.m. – 5 p.m. Middletown, **\$225**

**Exam Prep  
Manuals  
Included!**

This class will help those who must have the BLD designation on their license prepare for the examination. Review for the exam includes building planning, soil types, foundations, framing, exterior, finishing, and OSHA. This class IS NOT approved as a pre-licensing or remediation class by the Virginia Board of Contractors. It is strongly suggested you take the Basic Contractor Licensing class first. Purchase textbooks prior to class. Check website for details.

## CFC Prep and Certification Exam

2 Sessions, May 15 – May 22, Sat, 8:30 a.m. – 12:30 p.m. Middletown, **\$195**

Everyone who wants to work with refrigeration systems must be certified under the EPA guidelines. Learn the essentials of CFC, complete the exam during class and be on your way to a job!

# Continuing Education and Licensure

## Greenbuild Basics-Green Advantage Prep and Exam

5 Sessions, Mar 6 – Apr 3, Sat, 8:30 a.m. – 12:30 p.m.  
Middletown, \$499



In just 20 hours, learn basic information about new residential construction, remodel construction, and ways to operate your home and business more efficiently. Get smart about Energy Star ratings. Price includes the Green Advantage Residential Exam and book.

### Meet Your Instructor...

**Hugh (H.B.) Sager**, has been a contractor for over 10 years with 4 of those years spent researching and building energy efficient homes and structures. With a degree in History from Campbell University NC, H.B. returned to the area to work as an Environmental Health Specialist for the Health Department. A one year adventure into the private sector as a Soil Scientist led to the eventual full time jump into home building. Inspired to reevaluate how things are done pertaining to building practices; HB gained his Green Advantage® Certification.



## HVAC Mechanical-Virginia Journeyman or Master Code Prep

10 Sessions, Mar 4– May 6, Thu, 6 – 9 p.m.  
Middletown, \$375

You took HVAC classes, but now you realize that you need to have a Journeyman or Master license - this class is for you. Trades persons need to be licensed to demonstrate the level of competence needed in the field. This 30-hour class will help you navigate the ICC Mechanical Code 2006 in addition prepare you to sit for the exam. Purchase textbook prior to class. Check website for details.

## Gas Fitter-Virginia Journeyman or Master Code Prep

1 Session, Jun 26, Sat, 8 a.m. – 5 p.m.  
Middletown, \$195

If you need a Journeyman or Master license, this class is for you. Trades persons need to be licensed to demonstrate the level of competence needed in the field. This 8-hour class will prepare you to sit for the exam. Learn how to navigate the ICC Fuel Gas Code 2006 with ease. Purchase textbook prior to class. Check website for details.

## Apprenticeships

### Apprenticeship Trades Available at LFCC:

Apprenticeship is an agreement between an employer who needs a skilled worker and an individual (the apprentice) who wants to “earn while learning” a skilled occupation. Apprenticeship combines paid, on-the-job experience with classroom instruction to prepare individuals for the jobs of the 21st century. Apprenticeships are made possible by a partnership between the Department of Labor, an employer, and Lord Fairfax Community College (LFCC). Classes are open to all interested individuals and start in August and January every year.

Contact Brian Wetter:  
Ph: 540-868-7119  
Email: bwetter@lfcc.edu  
Website: www.LFCCworkforce.com

### Available at LFCC

- Cosmetology
- Electrical
- Heating, Ventilation and Air Conditioning (HVAC)
- Industrial Maintenance
- Landscaping
- Optician
- Plumbing
- Welding
- Any occupation your industry needs

## Online Training

### Busy Schedule? Try Classes Online

- ✓ **Convenient**
- ✓ **Affordable**
- ✓ **Effective**



Hundreds of courses are available including courses in computer technology, business and professional, and personal enrichment.

Visit [www.ed2go.com/lfcc](http://www.ed2go.com/lfcc) and [www.gatlineducation.com/lfcc](http://www.gatlineducation.com/lfcc) for a complete listing of classes, course content, start dates and prices.

## Easy Registration Options



**ONLINE** – Visit our website at [www.LFCCworkforce.com](http://www.LFCCworkforce.com)



**PHONE** – Call 540-351-1524 (Fauquier Campus) or 540-868-7021 (Middletown Campus) at least five days prior to the start of the class



**WALK-IN** – Directions to our Fauquier, Middletown and Luray-Page locations can be found on our website

McGraw-Hill Construction's Green Outlook 2009 says ***"The U.S. green building market is accelerating at a dramatic rate."*** Green building

is the bright

spot in an otherwise tough economy.

**Position yourself ahead of the rest. See inside for details on the **Greenbuild Basics class.****



LORD FAIRFAX COMMUNITY COLLEGE

**WORKFORCE SOLUTIONS**

PROFESSIONAL DEVELOPMENT & CONTINUING EDUCATION

**Middletown Campus**

173 Skirmisher Lane

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