



Indiana Fire Instructors Association

Advanced Fire Behavior for Instructors

Class Description:

Overall, firefighters spend very little time learning about fire. In comparison to time spent on other subjects; however, we call ourselves firefighters when we have very limited firsthand experience with fire. Many firefighters like to boast of experience when in reality their actual knowledge of fire behavior is nothing more than just getting lucky! Experience alone is insufficient. We must study fire behavior theory, along with the experience of others in order to survive the modern firefight.

Unless you live under a rock you have probably at least heard of recent fire science from UL, NIST. So how does all the science from UL, NIST and other organizations affect firefighting and how is it possible to teach it to firefighters. In this class we will look at the research, dissect it, and finally see what the practical outcome is. We will look at how that can be taught with theory, small scale experiments and full-scale evolutions in containers and likewise.

Topics to be covered:

- Describe the basic chemical and physical processes involved in combustion.
- Explain basic concepts of thermal dynamics, including: thermal energy, temperature, and methods of heat transfer.
- Describe the combustion process for gaseous, liquid, and solid fuels.
- Explain the concepts of heat of combustion and heat release rate.
- Describe the influence of the fuel/oxygen mixture on combustion.
- Explain the concept of chemical chain reaction as it relates to flaming combustion.
- Recognize characteristics of common types of combustion products.
- Be able to use terminology related to combustion and fire dynamics.
- Describe the general development of a fire and extension beyond a single room or compartment, including: Heat transfer methods, pressurization within the space, stages of fire development and transition from fuel controlled to ventilation controlled combustion.
- Explain the concepts of fire load and ventilation profile.
- Explain the significance of the transition from a contents fire to a structural fire.
- Be able to use terminology related to fire development, including: plume, ceiling jet, hot gas layer, neutral plane, flow path and gravity current.
- Explain the impact of the fires flow path.
- Discuss exterior fire stream application
- Discuss water characteristics and fog vs smooth bore in a compartment fire.
- Explain how door control saves lives both civilians and firefighters.

Location: Washington Twp. /Avon Fire Department
@ Avon Middle School / 7199 E. US Hwy 36
Avon, Indiana 46123

Date: March 10th & 11th 2018 (NOTE: You must attend both days, it is a 16hr class)

Time: 9:00 am to 5:00 pm both days **Cost: \$100**

See registration information below.

Note: Register ASAP the last time Lars taught this class in Indiana was 2014 and the class filled up very fast with students coming from as far as Canada!

BONUS* If you attend both days of the Advanced Fire Behavior class you may attend the "A Look at Swedish Rapid Response Vehicles / HMA Fire ultra- high pressure summit." for FREE.

Date: March 12. 2018

Instructor Bio:

Lars Axelsson is a former battalion chief with Värnamo Fire & Rescue in Sweden. He works with firefighter and instructor training surrounding fire behavior related topics and quality control. Besides his work as former battalion chief of training, Lars is a regular contributor to international fire behavior development group. Lars has been a highly sought-after fire behavior instructor teaching all over the world. Lars also operates the fire behavior website <https://swedishfirenerd.com/>





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Presents

Advanced Fire Behavior

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Host Location:

Washington Twp. / Avon Fire Department
@ Avon Middle School / 7199 E. US HWY 36
Avon, Indiana 46123

Name _____ Date _____

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City _____ State _____ Zip _____ Tel# _____

E-mail Address to e-mail invoice (If applicable) _____

Point of Contact _____ Tel # _____

Call registrations to 812-903-0103 or 800-235-0282. You may e-mail registrations to ifia@ifia.org or mail to: Indiana Fire Instructors Assoc., Inc (IFIA) 6229 Highway 150, Floyds Knobs IN 47119