



## **Course Catalog 2020**



## Welcome

### Welcome to Havtech Learning Institute

Havtech is the Mid-Atlantic's largest and most experienced commercial HVAC equipment, building automation systems, service and energy solutions provider in Maryland and the metro DC region.

### About Havtech Learning Institute

Havtech Learning Institute offers industry-leading training programs for heating, ventilating and air conditioning (HVAC) professionals, owner/operators, contractors, service technicians, building and systems engineers, designers, distributors, sales reps and internal employees. Whether receiving manufacturer training in our state of the art, in-house training center or receiving hands-on training at your location, we will create a tailored syllabus to meet the needs of your team. Our training center, located in Columbia Maryland, is equipped with a hands-on training lab that provides an in-depth look at some of the systems that Havtech offers. Off-site classes held by special request.

### Cancellation Policy

All payments are due upon registration and are non-refundable. However, if a student should need to cancel and reschedule their training, they may do so at no additional charge, as long as the change is made prior to the start of class. Name changes are also permitted at any time prior to the beginning of the class. Rescheduling and/or name changes will not be permitted after the class has begun.

All class dates are subject to change. Havtech reserves the right to cancel any class if the minimum enrollment requirement is not met or in the event of inclement weather or illness. All students will be alerted as early as possible in the event of a cancellation. The student may then either register for the next available date for the same course, or they may request a refund.

### Private Classes

Private classes are also offered at Havtech. Courses can be structured based on your requests. To request a private class, please email [training@havtech.com](mailto:training@havtech.com).

### Registration

To register for an HLI course, please visit [www.HavtechEvents.com](http://www.HavtechEvents.com). For additional questions or for more information on classes not listed in this catalog, please email [training@havtech.com](mailto:training@havtech.com) or call 443.367.9704.



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### Class Type



Hands-On Classroom





Virtual Training

# Commercial Training



## Daikin VRV® IV Installation







Course Code: LI-VIVL1

|                 |   |
|-----------------|---|
| Description     | Course covers the proper Installation practices for the Daikin VRV IV indoor and outdoor heat pump and heat recovery systems and accessories.                           |
| Target Audience | Design Build Mechanical Contractors, Installation Contractors, Technicians, Mechanics and Estimators  |
| Duration        | 8 Hours   |
| Prerequisites   | None  |
| Certification   | No  |
| Class Type      |   |

## Daikin VRV® IV Commissioning

Course Code: LI-VIV008

|                 |   |
|-----------------|---|
| Description     | Course covers the proper practices for the Daikin VRV IV equipment product line to include the pre-commissioning and System Commissioning Steps, set up of Selected Remote Controller and Outdoor Unit Field Settings, Outdoor Unit with Ducted Discharge Air & Indoor Units. |
| Target Audience | Mechanical Contractors, Installation Contractors, Technicians, Mechanics and Estimators   |
| Duration        | 16 Hours  |
| Prerequisites   | None  |
| Certification   | No  |
| Class Type      |     |

| Daikin VRV® IV Service & Troubleshooting        |  | Course Code: LI-VRVST2 | Daikin Best Practices for VRV® Installation |   | Course Code: LI-VRVBP1 |
|---|--|------------------------|---|---|------------------------|
| Description                                     | Course covers how to properly service and troubleshoot the Daikin VRV system using the proper instruments and procedures.  |                        | Description                                 | Course covers best practices for the proper installation of Daikin VRV systems and discusses VRV project management, the Daikin Express design document that is specific for every job and piping and wiring of indoor and outdoor units on heat pump and heat recovery systems. In addition, participants will learn about Daikin D-III Net wiring and system component addressing along with proper maintenance and service access. |                        |
| Target Audience                                 | VRV Service Technicians  |                        | Target Audience                             | Building Owners, General Contractors, Mechanical Engineers Architects, MEP Inspectors and Commissioning Agents  |                        |
| Duration  | 16 Hours   |                        | Duration                                    | 8 Hours   |                        |
| Prerequisites                                   | Attend Daikin VRV® IV Install (LI-VIVL1) and Daikin VRV® IV Commissioning (LI-VIV008)  |                        | Prerequisites                               | None  |                        |
| Certification                                   | No   |                        | Certification                               | No  |                        |
| Class Type                                      |   |                        | Class Type                                  |     |                        |
| Operations & Maintenance of Daikin VRV® Systems |  | Course Code: LI-VRVOP1 | Eaton DH1 VFD Certification Training        |   | Course Code: LI-EDH1   |
| Description                                     | Course covers the proper operation and maintenance of Daikin VRV IV indoor and outdoor heat pump and heat recovery systems and accessories. It also covers basic operation and function of Daikin’s user interface, the intelligent Touch Manager (iTM). |                        | Description                                 | Commissioner Certification Training to become a certified Eaton DH1 VFD Commissioner. Course completion will also reward you with additional drive warranty coverage.   |                        |
| Target Audience                                 | Building Engineers, Building Managers, Property Managers, Owners Operation Team  |                        | Target Audience                             | Mechanical Contractors, Installation Contractors, Technicians and Commissioning Agents  |                        |
| Duration  | 8 Hours  |                        | Duration                                    | 8 Hours   |                        |
| Prerequisites                                   | None   |                        | Prerequisites                               | None  |                        |
| Certification                                   | No   |                        | Certification                               | Yes   |                        |
| Class Type                                      |    |                        | Class Type                                  |    |                        |






# Light Commercial Training


## Daikin Single/Multi-Zone Install & Start Up

Course Code: LI-RIS008


|                 |  |
|-----------------|--|
| Description     | Course covers how to properly install and start up Daikin Ductless systems using preferred servicing equipment and procedures. |
| Target Audience | Mechanical Contractors, Installation Contractors, Technicians, Mechanics   |
| Duration        | 8 Hours  |
| Prerequisites   | None   |
| Certification   | No   |
| Class Type      |   |



## Daikin Single/Multi-Zone Service & Troubleshooting

Course Code: LI-RST008


|                 |   |
|-----------------|---|
| Description     | Course covers how to properly service and troubleshoot the Daikin Ductless System.    |
| Target Audience | Mechanical Contractors, Installation Contractors, Technicians, Mechanics              |
| Duration        | 8 Hours   |
| Prerequisites   | None  |
| Certification   | No  |
| Class Type      |  |

|  |  |                         |                 |  |                      |
|--|--|-------------------------|-----------------|--|----------------------|
| Daikin VRV LIFE® Install & Commissioning |  | Course Code: LI-VRVLIFE | Allied K-Series |  | Course Code: LI-AKS1 |
|--|--|-------------------------|-----------------|--|----------------------|

|                 |  |
|-----------------|--|
| Description     | Course covers how to properly install and start up the Daikin VRV LIFE Dual Fuel, “Mix and Match” system. The system can have a mix of VRV indoor units and one or two communicating gas furnaces. |
| Target Audience | Mechanical Contractors, Installation Contractors, Technicians, Mechanics   |
| Duration        | 8 Hours  |
| Prerequisites   | None   |
| Certification   | No   |
| Class Type      |   |

|                 |   |
|-----------------|---|
| Description     | Course covers the standard components of each unit, job-site requirements, startup process, maintenance and general service procedures.                                 |
| Target Audience | Installation Contractors, Startup and Service Technicians   |
| Duration        | 4 Hours   |
| Prerequisites   | None  |
| Certification   | No  |
| Class Type      |   |

|                                    |                       |
|------------------------------------|-----------------------|
| Daikin FIT Install & Commissioning | Course Code: LI-DFITM |
|------------------------------------|-----------------------|


|                 |   |
|-----------------|---|
| Description     | Course covers the introduction, applications, and installation instructions for the Daikin FIT residential inverter air conditioning units. Topics covered are nomenclature, unit features, inverter technology and components, inverter benefits, boost mode, and indoor unit options. Also covered are commissioning procedures that include the ComfortNet installation and set-up, charge mode, start-up, and the required system test. |
| Target Audience | Mechanical Contractors, Installation Contractors, Technicians, Mechanics  |
| Duration        | 8 Hours   |
| Prerequisites   | None  |
| Certification   | No  |
| Class Type      |    |



# Controls Training

## Daikin Controls Install & Commissioning

Course Code: LI-CIC016

|                 |   |
|-----------------|---|
| Description     | Course covers Daikin’s VRV System Overview & Control Logic as well as the operation, proper installation and commissioning of Daikin's Local Remote Controllers, Multi-Zone Controllers, Open Protocol Interfaces and Adapters. |
| Target Audience | Controls Commissioning Technicians, VRV Service Technicians   |
| Duration        | 16 Hours  |
| Prerequisites   | Attend Daikin VRV® IV Install (LI-VIVL1) and Daikin VRV® IV Commissioning (LI-VIV008)   |
| Certification   | No  |
| Class Type      |    |

## Daikin intelligent Touch Manager (iTM) Commissioning


Course Code: LI-ITM008

|                 |  |
|-----------------|--|
| Description     | Course covers proper programming and commissioning of Daikin’s iTM Controller. Students will configure and address indoor units, build schedules, Areas and Interlocks. They will also upgrade firmware and setup remote access on live controllers. |
| Target Audience | Controls Commissioning Technicians, VRV Service Technicians  |
| Duration        | 16 Hours   |
| Prerequisites   | Attend Daikin VRV® IV Install (LI-VIVL1), Daikin VRV® IV Commissioning (LI-VIV008), and Daikin Controls Install & Commissioning (LI-CIC016)  |
| Certification   | No   |
| Class Type      |   |





Daikin Controls Integrator

Course Code: LI-VRVCI08

|                 |   |
|-----------------|---|
| Description     | Course held by request only. Course covers the understanding and successful application and the proper methods for integrating the Daikin VRV control system. |
| Target Audience | Commissioning Technicians, BMS Integrators, VRV Service Technicians   |
| Duration        | 8 Hours   |
| Prerequisites   | None  |
| Certification   | No  |
| Class Type      |    |

AAON Controls

Course Code: LI-AC1

|                 |   |
|-----------------|---|
| Description     | Course covers proper programming and commissioning of AAON application specific controllers.  |
| Target Audience | Commissioning Technicians, Service Technicians  |
| Duration        | 8 Hours   |
| Prerequisites   | None  |
| Certification   | No  |
| Class Type      |   |





# Applications


## Daikin VRV® Local Design Workshops with WebXpress Guideline

Course Code: LI-VRVDW

|                 |   |
|-----------------|---|
| Description     | Course provides a comprehensive introduction to the VRV concept and an insight into the optimized design and application of VRV Systems including an overview of the features and benefits of the VRV system and its main components, Key factors that ensure optimized equipment design & selection, how to use the VRV WEB-Xpress selection tool, ad ‘Hands on’ project design and equipment selection. |
| Target Audience | Engineers, Architects, Design Build Mechanical Contractors, Installation Contractors  |
| Duration        | 8 Hours   |
| Prerequisites   | Attendees should have a foundational understanding of Daikin VRV® technology and application. Attendees should have a general understanding of Daikin City and the WebXpress selection program is ideal but is not a requirement.   |
| Certification   | No  |
| Class Type      |    |


OSHA 10

Course Code: LI-OSHA10

|                 |   |
|-----------------|---|
| Description     | Course provides individuals in the construction industry with the entry-level knowledge and ability to identify common risks and hazards found on most construction sites. This course will inform workers about their rights under the 1970 OSHA Act as well as how to identify, abate, avoid and proactively prevent job related hazards. |
| Target Audience | Mechanical Contractors, Installation Contractors, Technicians, Mechanics  |
| Duration        | 8 Hours x 2 days  |
| Prerequisites   | None  |
| Certification   | No  |
| Class Type      |    |

OSHA 30

Course Code: LI-OSHA30

|                 |   |
|-----------------|---|
| Description     | Course provides individuals in the construction industry with the entry-level knowledge and ability to identify common risks and hazards found on most construction sites. This course will inform workers about their rights under the 1970 OSHA Act as well as how to identify, abate, avoid and proactively prevent job related hazards. |
| Target Audience | Mechanical Contractors, Installation Contractors, Technicians, Mechanics  |
| Duration        | 8 Hours x 4 days  |
| Prerequisites   | None  |
| Certification   | No  |
| Class Type      |    |