

Steamfitters MES(HVAC) Journeyman Advancement Training Schedule 2022/2023 email JATRegistration@lu420.com



2022	Monday		Tuesday			Wednesday			Thursday		
	Track 1	Track 2	Controls	Misc	REF	Track 3	Misc	Track 4	Misc	Controls	Boiler\Brnr
Week 1: 9/12 - 9/16	MESJ-101	MESJ-201*	CT-101		REF-101	MESJ-301		MESJ-401		CT-201	BB-104
Week 2: 9/19 - 9/23											
Week 3: 9/26 - 9/30											
Week 4: 10/3 - 10/7			LU420 MTG: No Class							CT-202	
week 5: 10/10 - 10/14											
week 6: 10/17 - 10/21		MESJ-202*									
week 7: 10/24 - 10/28		MESJ-203			REF-102						
week 8: 10/31 - 11/4			LU420 MTG: No Class								
week 9: 11/7 - 11/11			Election Day: No Class								
week 10: 11/14 - 11/18						MESJ-302				CT-203	
week 11: 11/21 - 11/25			CT-102							Thanksgiving	
week 12: 11/28 - 12/2		MESJ-204		CT-103			NFPA-70E				
week 13: 12/5 - 12/9			LU420 MTG: No Class								
week 14: 12/12 - 12/16	MESJ-102									(cont)	
week 15: 12/19 - 12/23			(cont)								

Steamfitters MES(HVAC) Journeyman Advancement Training Schedule Spring 2022

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	Track 1	Track 2	Controls Track	Misc	REF	Track 3	Misc	Track 4	Misc	Controls	Boiler\Brnr
week 16: 1/2 - 1/6	MESJ-103	MESJ-205	LU420 MTG: No Class			MESJ-303		MESJ-402	SS-101		
week 17: 1/9 - 1/13					REF-103						
week 18: 1/16 - 1/20											
week 19: 1/23 - 1/27		MESJ-206								CT204	
week 20: 1/30 - 2/3											
week 21: 2/6 - 2/10			LU420 MTG: No Class								
week 22: 2/13 - 2/17		MESJ-207	CT-103	CT-302					TD-Screw	CT-205	
week 23: 2/20 - 2/24											
week 24: 2/27 - 3/3	MESJ-104										
week 25: 3/6 - 3/10		MESJ-208	LU420 MTG: No Class								
week 26: 3/13 - 3/17					REF-104						
week 27: 3/20 - 3/24											
week 28: 3/27 - 3/31									PF-101		
week 29: 4/3 - 4/9	MESJ-105	MESJ-209	LU420 MTG: No Class								
week 30: 4/10 - 4/14		MESJ-210a*									
week 31: 4/17 - 4/21		MESJ-210b*	CT-102 VAV								
week 32: 4/24 - 4/28		MESJ-210c*	(5 nights)								
week 33: 5/1 - 5/5		MESJ-210d*	LU420 MTG: No Class								

Request Classes or information @ JATRegistration@LU420.com

Teardowns(Saturdays) to sign up email: JATRegistration@LU420.com

Please see flip side for course descriptions / nights credits, etc. * Please watch for updates at LU420.com training page**

School phone number (267) 350 - 2610

* - MESJ202 also includes an additional hands on classes for alignment and vibration analysis. Dates TBD by instructor with class

2022-2023 Steamfitter Journeymen Training Course Descriptions

please check LU420.com Training page for Schedule & Course description updates

email JATRegistration@lu420.com with questions & to request courses

School Phone (267) 350 - 2610



Track #1 Required Classes

MESJ-101	Fundamentals for Journeymen Advanced Training
MESJ-102	Overview & Safety use of various refrigerants in Refrigeration related systems
MESJ-103	Basic Controls & Pnuematic (see description below)
MESJ-104	Motors, Starters & Diagrams, Circuit Protection, etc.
MESJ-105	Science, Physics & Math fundamentals Overview for Start Test & Balance

Track #2 Required Classes

MESJ-201	Teardown Fundamentals: Dimensions, Tolerances, Clearances & Fits along with the basic fundamentals of Rigging and Teardown Disassembly & Analysis
	* One Tear down class (OT, YK, CVHE or 19XL) is required for completion of Tracks 1 & 2
MESJ-202	Hands on use of dimensions, tolerances & instruments & alignment of shafts including an overview/intro to reverse alignment, vibration & laser alignment.
	* NOTE: two hands on evening classes need to be scheduled as an add to this class
MESJ-203	Fundamentals of Single & Double effect Absorption Chillers
MESJ-204	Centrifugal Chiller Fundamentals
MESJ-205	Centrifugal Chiller monthly & annual maintenance
MESJ-206	Chiller Microprocessor & controls fundamentals
MESJ-207	Oiless VFD compressors: Overview & Intro
MESJ-208	VFD Course is a course combining the generic fundamentals of how PWM VFDs operate including semi-conductors, specific parameters of a couple of VFD brands installation requirements, start-up, commissioning & troubleshooting.
MESJ-209	Chiller Ref Update: new regs & update on Chiller Refrigerants
MESJ-210	combined classroom overview and shop demonstration of vibration analysis

Track #3 (Optional nites: SS-101, PF-101, etc.)

MESJ-301	Variable Refrigerant Flow ductless split systems Daiken & Mitsubishi
MESJ-302	Equipment Selection Course for Journey-persons
MESJ-303	MESJ-303 Course Advanced Airside Start, Test & Balance

Track #4 (Optional nites: SS-101, PF-101, etc.)

MESJ-401	MESJ-401 Course includes intermediate training: Waterside Start, Test & Balance
MESJ-402	MESJ-402 Course Advanced Waterside Start, Test & Balance

Boilers-Burners-Combustion, etc.

BB101	BB101 Course Boiler/burner basic maintenance, troubleshooting, combustion & safety
BB102	BB102 Course Boiler/Burner controls and safety devices
BB103	BB103 Course Advanced boiler/burner maintenance, repairs & combustion
BB104	BB104 Course Advanced boiler/burner control systems and calibrations

Night Count Requirements for JAT's & Controls Courses

Tracks#1-4 require JAT classes and others totaling of 31 nights each track.

JAT-1: 62 nights JAT-2: 62 nights Saturday =2.5 nights

Controls Track require CT-xxx classes and others total of 93 nights for EI(31),EII(31) & EIII(31)

Controls

MESJ-103	Basic Controls & Pnuematic course is the prerequisite for the Controls courses and MESJ courses. Electric, Electronic, Pnuematic and basic PID control is covered with appropriate electrical fundamentals.
CT101	PRE-REQ: CP-101 Controls Intro includes history & hierarchy, generic hardware (INs & OUTs) & software(algorithms). An overview of Unitary & Programmable control types, Application Specific Controllers, and network communication.
CT102	PRE-REQ: CT-101 Application Specific Controllers(ASC) Unitary, Fan coil, RTU, AHU & Chiller controllers(Carrier & Johnson) incl. specific setup of I\O's, setpoints & schedules, demonstrate associated communication and commissioning software.
CT103	PRE-REQ: CT-102 Programmable Controllers programming blocks; on\off, PID, setpoints & schedules, min\max\avg algorithms, etc. System communication & commissioning and the demonstration of the associated software is included.
CT-201	Fundamentals of Tridium Base Control Systems
CT-202	Tridium Operations is a short course exploring network controllers, creating and modifying schedules, and navigating and adjusting setpoints and parameters. Creating and viewing trends.
CT-203	PRE-REQ: CT-103 Tridium Configuration overviews of requirements for Tridium Certification & the config. portion: installing Comm ports, uploading controllers, creation of database, graphics and a sample of custom programming
CT-204	PRE-REQ: CT-105-O Intro\Overview to Honeywell Spider intro course: Spider Programmable Controllers: Real Time Internal Clock, Adap Integral Algorithm Integrated Actuator Option, Unitary & VAV Controller
CT-205	Honeywell SpiderII : Level II training: the Spider family of Programmable Controllers
CT301	Intro\Overview to Tracer is a short introductory course exploring Tracer controls.
CT302	Computer/Controls Networking & Terminology

Miscellaneous Courses

PF101	MESJ Pipefitting Fundamentals is a short course on pipe fitting fundamentals and fundamental math required for offsets, etc.
SM101	Service Management/Area Foreman Training

TD-Screw	Screw compressor operation, teardown and repair course
SS101	Steam Systems: Service & Troubleshooting Fundamentals is a new course geared towards service & troubleshooting and\or optimizing a customers facility. PRV's, traps, and condensate return systems will be explored.

Refrigeration

REF101	Commercial Refrigeration Cycles & Troubleshooting explores and compares real world and theoretical application and troubleshooting of the Pressure Enthalpy Cycle
REF102	Refrigeration Piping reviews the balance of oil return vs. pressure drop vs. efficiency as it relates to pipe sizing along with appropriate piping installation practices.
REF103	Commercial Refrigeration Part II explores components, refrigerant flow controls, temperature and defrost control of Commercial Refrigeration & Rack Systems
REF104	Advanced Supermarket Refrigeration explores secondary coolants(glycol), compound & cascade systems, CO2 Systems and A2L/A3 refrigeration systems