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IMTI ONLINE DISTANCE LEARNING

SCHOOL CATALOG

EDUCATING TRADE PROFESSIONALS

IMTI ONLINE STAFF

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Daniel J. Gorman	Corporate Officer
Amanda McGee	Vice President

CORPORATE

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Amber Caporuscio	Bookstore Mgr/Library Resources

INSTRUCTORS

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History:
The Industrial Management & Training Institute," is a coeducational technical institute founded in 1985 as Electrical Educators. In1998 the schools name was changed to its current name and the curriculum was expanded to offer full apprenticeship programs for electricians, plumbers, and HVAC mechanics. The institute was approved by the state of Connecticut Commissioner of Higher Education in 1985 and was granted its most recent 5 year approval in February 2014. In 2002 the institute was accredited by the National Center for Construction Education & Research (NCCER). The school received initial accreditation from the ACCSC in 1989 and was granted its most recent renewal of accreditation in February 2019 for a period of four years.

IMTI, through accreditation with NCCER, is offering students the ability to achieve college credits for their IMTI craft training when they enroll with Capital Technology University. A minimum of 30 credit hours must be completed from Capitol Technology University to obtain any baccalaureate degree regardless of the total amount of credit transferred in towards the degree. In 2020 IMTI formed, "IMTI ONLINE," which offers Distance Learning classes as an alternative method of training.

Philosophy: IMTI is dedicated to giving men and women the best possible training and education in technical fields that will allow them to meet the job requirements of modern industry. IMTI provides the most up to date courses available and teaches industry's methods through intensive classroom study and practical hands-on training. All IMTI programs are career oriented and our curriculum is an ongoing partnership between industry and education. IMTI prohibits discrimination of race, color, sex, religion, creed, age, and national origin in the admission and recruitment of students, the recruitment of faculty and staff and the operation of its programs and activities.

Statement of Mission: IMTI has a primary mission to provide up-to-date professional training programs that will prepare our students for gainful employment or advancement in their chosen fields of technology. IMTI continuously evaluates student outcomes and institutional goal achievement and uses these evaluations to improve our efforts for our students, staff, employers and the community.

IMTI Objectives: To provide programs that meet the career oriented needs and interests of our students for job demanding occupations. To establish the importance of theoretical knowledge and practical application used in industry today and in the future. To encourage our students to join and become active members in associations and organizations of their respective trade and obtain professional licensing when required.

GENERAL INFORMATION

Physical Facilities – The 19,800 square foot building allows for the following facilities: Financial Aid Office, library/ bookstore, 8 lecture rooms, and 6 laboratories: Plumbing, Electrical, HVAC, Electronics, computer testing room, and a student lounge. IMTI is handicapped accessible. In 2011, IMTI added a 3000 square foot classroom for Solar PV and Solar Thermal classroom and hands-on training including roof-top arrays and interior demonstration units. In 2018, IMTI added 400 square foot Piping Room. This newly designed space enables the students with more storage and working space for conduit and benders.

Student Transportation – IMTI is located just 1 mile south of Waterbury's downtown business district. Located at the intersection of I-84 and Rt. 8, IMTI is easily accessible.

Class Hours – The enrolled student will meet at least 2 hours a week with their instructor. The rest of the class hours are self-paced around the student's schedule.

Outside Studies – The time required for outside studies varies depending on the individual student and the program of study. During each students period of enrollment they will be required to complete at least one library resource assignment per training level. The assignment will be clearly defined by the instructor and may be completed during classroom hours or assigned as an out of school project. Any questions or difficulties with these assignments should be addressed with either the instructor or school director.

Attendance – IMTI has a required attendance of 95%. This means that a student must attend a minimum of 95% of each module, level and total program.

Make Up Work – The student is responsible to notify their instructor prior to or after any absence in order to receive make up work. All make up work will be performed before or after normal class schedules in the school's library or break room. A student with 95% attendance or above in a module will not be required to make up time. If a student falls below 95% attendance in any module the student will have to make up the entire time shortage and bring his/her attendance to 100% for that module. Make up time should be completed before the end of each module but in no event should extend beyond two weeks after the end of that module. Any student that does not complete a module within the make up time frame will be required to take the entire module over and pay the current tuition rate. In order to be eligible to make up time in a module a student must have at least 50% attendance in that module.

Grades and Examinations – You will be tested and quizzed periodically at the discretion of your instructors. Final

examinations are required for each module. Finals are counted as a third of your final average.

RULES AND REGULATIONS

Students are responsible for knowledge of all regulations as published in the schools catalog, posted on bulletin boards, or announced. A lack of knowledge of regulations does not exempt a student from penalties resulting in nonfulfillment of obligations.

Student Services– The welfare of our students is our primary concern as it is directly related to the student's ability to successfully complete the program. At IMTI, we provide a host of services to enhance the college experience of our students. Faculty and staff make a conscientious effort to know students as individuals and assist them in achieving their educational and personal goals. These services below provide critical support information and guidance to IMTI students.

Admissions and Records Office– Application and enrollment processing, student records management, academic transcript services.

Financial Aid Office– Our Financial Aid office will guide you through all available federal, state and local agency grants and loans. IMTI students may also be eligible for interest free institutional financing. Students that are having difficulty with payments should seek the guidance of the financial aid director.

Learning Resource Center / Bookstore– CTBI: The Campus Store has it all; textbooks, educational materials, stationery supplies. Also contains much of the institutes library resources and is available to students currently enrolled and past graduates. LRC hours: M- W, 8 am – 7pm and Thurs – Friday 8am – 3pm. Saturday hours are available the second Saturday of every month – 8 am – 12 pm.

Computer Lab – Computers, printers and software for class projects and assignments; computer in the library available for resume writing and job searches.

Counseling Services– Counseling services are available to assist in attaining personal and educational goals through tutoring. Any student interested in tutoring or students experiencing transportation or personal problems should contact the school director or the scheduling coordinator.

Scheduling and Attendance Coordinator– Advises students on academic probation to develop a plan to return to good academic standing by clarifying goals, objectives, interests and abilities to ensure that students are on the right track to succeed.

Student Employment – The Admissions/ Placement Director works with the student, to find a job that best suits his/her abilities and interests. All interested students should see the placement director to establish a resume and discuss their employment goals. A board with current job listings is also maintained in the foyer leading to the institutes shops.

License Preparation – A student upon graduation will be entitled to return and take the license review course for his journeyman's exam free of charge for the first time he takes the exam. The student is responsible to pay for all course materials, books and exam fees.

Advising – Students are encouraged to bring both educational and personal problems that may affect their training to the attention of their instructor and/or the school director. Every effort will be made to help our students resolve problems that could interfere with their educational success.

RULES AND REGULATIONS

Academic Standing – In order to remain in good academic standing a student must maintain a 2.0 grade point average and fulfill all other requirements of IMTI. The institute reserves the right to require withdrawal, at any time, of a student who has failed to give satisfactory evidence of sincerity of purpose in his/her efforts.

General Student Conduct – It is expected that all students will conduct themselves properly in an adult manner with respect to other students, staff and property of both the school and students. All students will be held responsible for their behavior at all times. Obscenity, vulgarity, use of alcoholic beverages and/or illegal drugs will not be tolerated and will be cause for dismissal.

Satisfactory Progress – After the first level of a program any student with a grade point average of 1.5 or lower must meet with the school director in order to continue in the program. After the second level any student who is still at 1.5 or below will be placed on academic probation and must bring his/her overall average to 2.0 by the midpoint of the third level in order to complete the program. Any student who fails to bring his/her overall average to 2.0 by the midpoint of the third level will be academically dismissed. Students will receive their academic standing in writing at the completion of each level. In order to be removed from academic probation, a student must achieve grades high enough to yield an overall grade point average of 2.0 .

IMTI Code of Conduct – It is expected that all students and employees will conduct themselves properly in an adult manner with respect to other students, staff and property of both the school and students. All students and employees will be held responsible for their behavior at all times. Obscenity, vulgarity, use of alcoholic beverages and/ or illegal drugs will not be tolerated and will be cause for dismissal. Cell Phone use is strictly prohibited during class time and violation will be cause for dismissal. Violation of accepted standards of conduct will be cause for referral to, and appropriate action by, the Director.

Whenever, for any reason, students desire to appeal a ruling made by the Director, they will apply for such an appeal to the CEO of the Institute.

Cell Phone use is strictly prohibited during class time and violation will be cause for dismissal. Violation of accepted standards of conduct will be cause for referral to, and appropriate action by, the Director. Whenever, for any reason, students desire to appeal a ruling made by the Director, they will apply for such an appeal to the President of the Institute. The IMTI Annual Security Report can be found on our website: http://imti.edu/ student/

Student Attire/Safety – All Students are required to wear long pants and closed toe shoes daily to comply with safety regulations in our shop area. No tank tops allowed.

Dismissal – Students will be dismissed from IMTI for the following reasons:

1. The student is not satisfying the school's minimum academic requirements.
2. The student is not satisfying the school's minimum attendance requirement (95%).
3. The student enters the school under the influence of alcohol or illegal drugs, possess a weapon or is found gambling.
4. The student's actions are harmful to either school staff or student body.
5. The student fails to meet his/her financial obligations to the school as outlined in the school enrollment agreement.

Re-entrance Procedure – A student who withdraws from school in good standing will be allowed to re-register in the same program. capacity and sincere intention to complete the program.

RULES AND REGULATIONS

Re-entrance Procedure – (Continued) A student who is re-admitted to the institution after being dismissed will be notified that they will be enrolled on a probationary status. This process applies only to dismissals caused by lack of satisfactory progress and will be approved only one time. It does not apply to voluntary withdrawals. All work successfully completed prior to withdrawal may be granted. Students will be charged the current reregistration fee of $75 and pay the current tuition rate.

Appeal Procedure – Students may appeal for one extra probationary period if they can demonstrate that the causes of the previous poor performance report will be eliminated and that they will show improvement during the probationary period. In this case the Director or President may determine that the student is making satisfactory progress towards his/her certificate despite the failure to conform within the minimum cumulative grade standards.

IMTI SCHOOL HOLIDAYS—

IMTI will remain closed during the holidays noted below for the 2024-2026 calendar year.

Day	2024	2025	2026
New Year's Day	Monday, January 1 (Classes Resume Tuesday, Jan 2)	Wednesday, January 1 (Classes Resume Thursday, Jan 2)	Thursday, January 1 (Classes Resume, Friday Jan 2)
Martin Luther King Day	Monday, Jan 15	Monday, January 20	Monday, January 19
Presidents Day	Monday, February 19	Monday, February 17	Monday, February 16
Good Friday	Friday, March 29	Friday, April 18	Friday, April 3
Memorial Day	Monday, May 27	Monday, May 26	Monday, May 25
Juneteenth	Wednesday, June 19	Thursday, June 19	Friday, June 19
July 4th Break	Monday July 1-5 (Classes Resume Monday, July 8)	Monday, June 30-July 4 (Classes Resume Monday, July 7)	Monday, June 29– July 4 (Classes Resume Monday, July 6)
Labor Day	Monday, September 2	Monday, September 1	Monday, September 7
Halloween	Thursday, October 31 (Evening Students Only)	Friday, October 31 (Evening Students Only	Not Applicable
Veteran's Day	Monday, November 11	Tuesday, November 11	Wednesday, November 11
Thanksgiving Break	Wednesday, November 27-29	Wednesday, November 26-28	Wednesday, November 25-27
Christmas Break	Tuesday, December 24– January 1 (Classes Resume Monday, January 6)	Wednesday, December 24– January 3 (Classes Resume Monday, January 5)	Thursday, December 24– January 4 (Classes Resume Monday, January 4)

RULES AND REGULATIONS

Resolving Student Concerns – The administration and faculty of Industrial Management and Training Institute are interested in seeing that every student enrolled receives the education and training that is outlined in this catalog.

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Students should follow the steps outlined below if they do not have their concerns addressed by the School Advisor:

1. Make an appointment to meet with the Director.
2. Be prepared to present to the Director a written list of specific concerns which you feel need to be resolved.
3. If you feel that the school has not satisfactorily answered or resolved School Calendar your concerns within 15 working days you should file an inquiry or complaint with the CT. Department of Higher Education - Department of Higher Education - 450 Columbus Boulevard, Suite 707, Hartford, CT 06103-1841 Tel: (860) 947-1800
4. Once a complaint has been made with the Department of Higher Education IMTI will make a response in writing to the State within twenty days. A copy of the response will be mailed to the student. A response will be made to the Accrediting commission within 10 days and a copy sent to the student.
5. After a complaint has been resolved the student and the Director will sign a statement of complaint resolution.

STUDENT COMPLAINT/GRIEVANCE PROCEDURE – Schools accredited by the Accrediting Commission of Career Schools and Colleges must have a procedure and operational plan for handling student complaints. If a student does not feel that the school has adequately addressed a complaint or concern, the student may consider contacting the Accrediting Commission. All complaints considered by the Commission must be in written form, with permission from the complainant(s) for the Commission to forward the complaint to the school for a response. The complainant(s) will be kept informed as to the status of the complaint as well as the final resolution by the Commission.

Please direct all inquiries to:
Accrediting Commission of Career Schools and Colleges
2101 Wilson Boulevard, Suite 302
Arlington, VA 22201
(203) 247-4212
www.accsc.org | complaints@accsc.org

A copy of the ACCSC Complaint Form is available at the school and may be obtained by contacting complaints@accsc.org or at http://www.accsc.org/Student-Corner/Complaints.aspx

RULES AND REGULATIONS

Hybrid Programs—
Electrical Program 825 Hours
Plumbing Program 823 Hours
HVAC Program 851 Hours
Solar Program 481 Hours

Admission Policy—IMTI seeks qualified applicants whose goal is a career in the industrial technical fields. IMTI requires a **High School Diploma, GED or equivalent.** Every individual is given the opportunity to apply. We encourage all individuals interested in an outstanding technical education.

Transfer of Credits—An applicant who has completed courses at an accredited school or college may transfer credits for similar courses at IMTI. Each request will be evaluated on an individual basis by the School Director. **Any student requesting credit for a class must present a transcript to IMTI prior to starting their program**. No credit will be given once enrollment is complete. Students considering continuing their education at or transferring to other institutions, **must not assume** that credits earned at IMTI will be accepted by the receiving institution. Students must contact the registrar of the receiving institution to determine what credits, if any, that institution will accept. At a minimum, 25% of the clock hours/ credits required to obtain a certificate from IMTI must be completed at IMTI. IMTI will accept all previous NCCER modules from. accredited training providers. The student must have successfully completed the module and performance test and have at least 95% attendance in each module.

Steps for Admission— Familiarize yourself with the description of the program you are interested in and write down any questions you have. When you meet with our admissions representative we will answer all of your questions. Call the Admissions Office to set an appointment to visit IMTI.

If you would like to see classes in session or meet with the instructors, tell us when you call so that we can accommodate your request.

Your admissions representative will also evaluate your ability to complete the program and show the proper motivation to proceed with the application process. He/ She will also explain the procedure for applying for financial assistance. All other questions on financial assistance must be directed to the Financial Aid Administrator.

You will be given a math aptitude test at the time of your interview. After the testing is complete, you will meet again with the admissions representative who will review your scores and answer any further questions. Your math scores are used to assist the instructors and evaluate your needs.

Final Examination Make-Up—If a student misses a final examination, he must receive the approval of the school director or attendance coordinator before arrangements can be made for the make-up.

Transcript of Record— All student's records are kept in a permanent file. Before a transcript is issued, the school must have written permission by the individual concerned. A student in good financial standing may obtain transcripts of his academic record for a fee of $2 per transcript.

RULES AND REGULATIONS

Required Completion Time – The maximum time frame allowed for completion of a program is 1.5 times the total number of weeks in the program under normal matriculation. Program Changes – IMTI reserves the right to modify, withdraw, or add to any course or curriculum offered or to change the order or content of any program with the approval of the Department of Higher Education.

Graduation Requirements – Each student must complete the required number of modules as described in the curricula for each program with a minimum grade point average of 2.0 and a cumulative attendance of 95% of each module. All financial obligations to the school must be fulfilled before a certificate can be awarded. Upon successful completion of a full-time program a certificate will be awarded.

Satisfactory Progress – After the first level of a program any student with a grade point average of 1.5 or lower must meet with the school director in order to continue in the program. After the second level any student who is still at 1.5 or below will be placed on academic probation and must bring his/her overall average to 2.0 by the midpoint of the third level in order to complete the program. Any student who fails to bring his/her overall average to 2.0 by the midpoint of the third level will be academically dismissed. Students will receive their academic standing in writing at the completion of each level. In order to be removed from academic probation, a student must achieve grades high enough to yield an overall grade point average of 2.0

Definitions— 1 Clock Hour = 50 minutes of instruction.

Academic Year: An academic year consists of 900 clock hours of instruction.

Grading System: All grades are a calculated by a numerical system and a corresponding quality point system. In order to successfully complete a module a minimum grade of 2.0 must be maintained and a minimum grade of 70 must be achieved for the module grade exam. Please note the grading chart below:

90-100	Outstanding	4.0
85-89	Superior	3.5
80-84	Excellent	3.0
75-79	Above Average	2.5
70-74	Average/Passing	2.0
65-69	Below Average	1.5
60-64	Poor	1.0
0-59	Failing	0.0
I	Incomplete	
W	Withdrawl	

Students who withdraw prior to the half way point of a module will receive a “W” and no numeric grade will be given. Students who withdraw after the half way point of a module will have the grade of “59” used in the calculation of their grade point average Incomplete grades will automatically convert to a “59” if the work is not made up in the time specified in the make up work policy. If a student repeats a module the most recent grade will replace the prior grade even if it is lower.

An Example of IMTI’s Grading System

	Weight		Grade		Final grade
Shop	15%	x	85	=	12.8
Participation	5%	x	95	=	4.8
Notes	5%	x	0	=	0.0
Homework	5%	x	70	=	3.5
Quiz	37%	x	70	=	25.9
Final Exam	33%	x	70	=	23.1
	100%				70
			GPA		2.0

RULES AND REGULATIONS

Career Planning—Career planning begins when each student chooses a program of study. However, each program offers various career avenues and a common complaint is, "I'm really not sure what career I want". In order to help inform our students and alleviate this uncertainty IMTI students are made aware of important issues to be considered in a career decision:

1. Which technical and licensed fields are expanding.
2. Where other IMTI graduates have been placed successfully.
3. Average starting salaries.
4. Opportunities for advancement with local industries and company benefits.
5. Technical training's role as a stepping stone to an engineering degree.
6. One-on-one discussions with counselors.

Financial Assistance for Those Who Qualify—A meeting with our Financial Aid Office will be scheduled following the submission of your admissions application. Information and assistance filling out all necessary forms for receiving awards will be discussed at this time. The financial aid director will also explain IMTI's interest free payment plan for interested students and parents.

IMTI CAN HELP YOU REACH ALL YOUR CAREER GOALS

Alumni: An alumni of over 4500 students from many different courses and seminars who are now in a position to assist you when you graduate.

Experienced Faculty: A faculty with substantial industrial experience and background.

Hands-on Training: Academic per request.

Easy Access: Convenience of location in Central Connecticut makes it easily accessible by car, bus or train.

Concentrated Programs: Study at your own pace and meet virtually with the instructor.

Placement Assistance: IMTI offers placement assistance to all graduates. Library Resource Center &Technical Bookstore: A complete line of technical materials for all trades.

MEMBERSHIPS

- International Association of Electrical Inspectors
- National Association of Plumbing, Heating & Cooling Contractors
- National Fire Protection Association
- National Safety Council
- American Society for Training & Development
- National Center for Construction Education and Research

TUITION & EXPENSES

Tuition—Tuition and other costs are explained in the enclosed insert which is an integral part of the catalog. Absence from class does not constitute withdrawal or reduce the financial obligation. Tuition does not include books and tools.

Cancellation and Refund Policies—When a student is denied access to an IMTI program all advance money is refunded. A student who cancels enrollment before the beginning of class will receive all advanced monies back. All refund and exchanges on books, tools and materials purchased at the CTBI Technical Bookstore are subject to the refund policy of the Bookstore. The percentage of refund to a student is prorated based on the number of school hours remaining in the student's program. The US Dept. of Education Federal Return of Funds Policy may be obtained in the IMTI of CT's Financial Aid Office.

Refund Policies— *A student who has completed 1-10% of the program hours will receive a 90% refund less a $100 administrative fee
*A student who has completed 11 - 25% of the program hours
will receive a 75% refund less a $100 administrative fee
*A student who has completed 26 - 50% of the program hours
will receive a 50% refund less a $100 administrative fee
*A student who completes 51 - 100% of the program hours will not receive a refund.

If more than one refund policy should apply the refund would be the one that most benefits the student. Applicants who have not visited the school prior to enrollment will have the opportunity to withdraw without penalty within three business days following either the regularly scheduled orientation procedures or following a tour of the school's facilities and inspection of equipment, training and services are provided.

TUITION & EXPENSES

Withdrawal—Any student withdrawing from a program is expected to notify IMTI in writing of their intent to withdraw. All refunds will be made within 45 days of the date of determination of withdrawal from the program. **When written notice is not given by the student the date of determination of withdrawal will be no more than 14 days from the last date of attendance. The refund calculation will be based on the students last day of verifiable attendance.**

Payment— Check or money orders should be made payable to IMTI. Visa, Master Card, Discover, and American Express are also accepted. Company PO's are acceptable upon approval of the school's President.

Leave of Absence— If a student is forced to interrupt his/her course for reasons of serious illness, accident, or other circumstances deemed justifiable by the School Official, he/she will be permitted to repeat the phase in whole or part without any additional charge. The student must request a leave of absence in writing from the school official. The request must include an effective date and date of return. A leave of absence can be no longer than 30 days unless specially approved. After this point a student must withdraw and re-enroll when they are able to return to class on a full-time basis. **Such an interruption would also affect a student's Financial Aid and must be discussed with the Financial Aid office immediately.**

Books and Supplies—Textbooks, supplies, and equipment are required for each program and MUST be purchased through Construction Training Bookstore Inc. These items are mandatory and must be purchased by the student.

Accreditation—

- ACCSC - Accrediting Commission for Career Schools and Colleges
- NCCER - National Center for Construction Education and Research.

Approvals—

- State of Connecticut Office of Higher Education
- Department of Labor Apprenticeship Training
- State of Connecticut Approving Agency for
- Veterans Education Benefits.
- Connecticut Worker's Compensation Commission
- Connecticut Division of Rehabilitation Services

Industrial Management Training Institute has been approved by the Connecticut State Approving Agency to train eligible veterans and their dependents. Please contact the VA hotline with any questions at 1-888-442-4551.
In accordance with Title 38 US Code 3679 subsection
(e), this school adopts the following additional provisions
for any students using U.S. Department of Veterans
Affairs (VA) Post 9/11 G.I. Bill(R) (Ch.33) or Vocational
Rehabilitation and Employment (Ch.31) benefits, while
payment to the institution is pending from the VA. This
school **will not:**

- Prevent the student enrollment;
- Assess a late penalty fee to;
- Require student secure alternative or additional funding;
- Deny their access to any resources (access to classes,
- libraries, or other institutional facilities) available to
- other students who have satisfied their tuition and fee
- bills to the institution.

TUITION & EXPENSES

Approvals— (CONTINUED) However, to qualify for this provision, such students may be required to: Provide Chapter 33 Certificate of Eligibility (or its equivalent) or for Chapter 31, VA VR&E's contract with the school on VA Form 28-1905 by the first day of class.

IMTI Directions—
East - Take I-84 to exit 22. Turn right at light; left at next light; left at the bottom of hill. IMTI is the only building on the right.

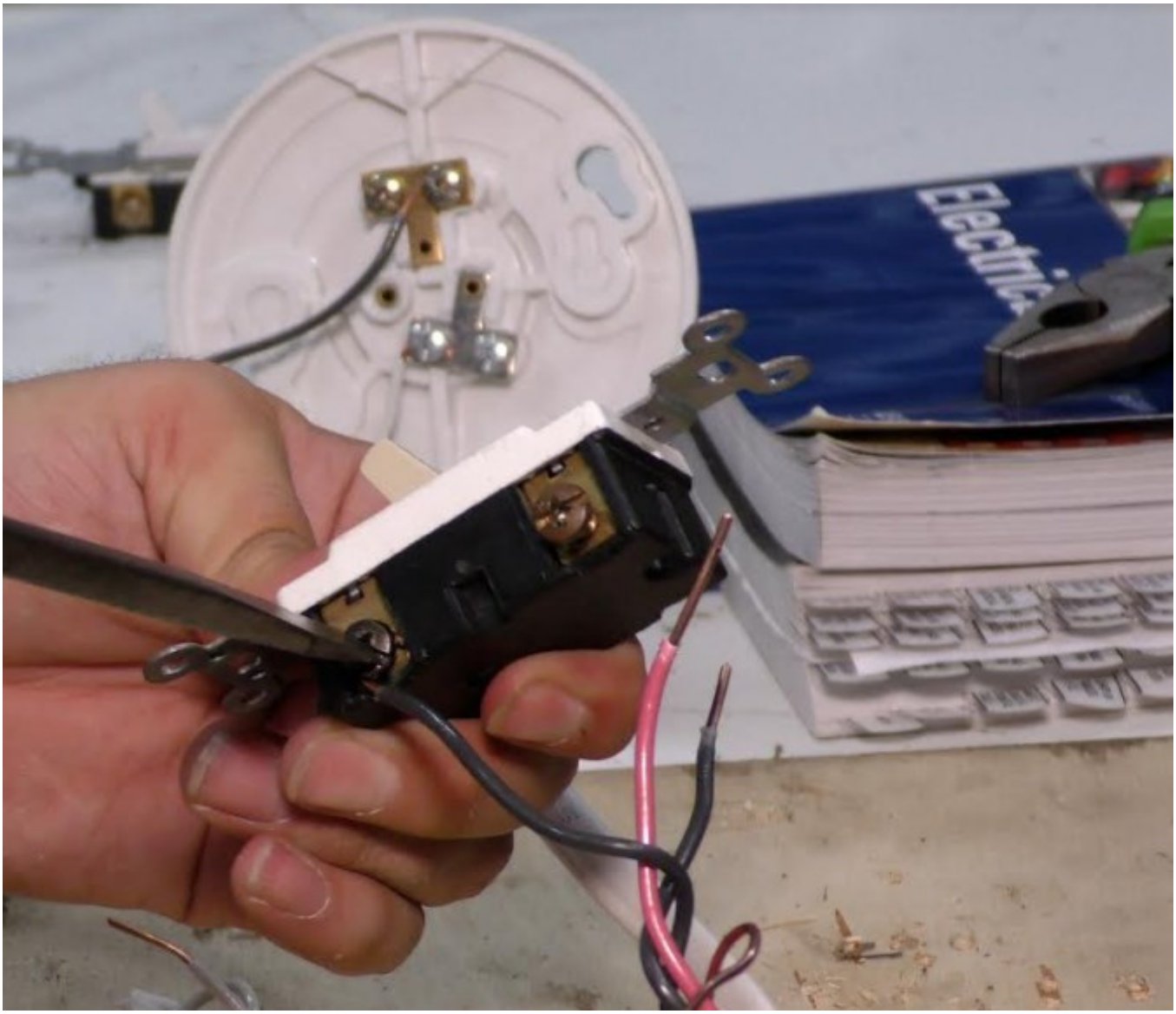
West - Take I-84 to exit 22. Turn left at the light; left at the 3rd light; left at the next light; left at the bottom of the hill. IMTI is the is the only building on the right. Detach and mail to IMTI, 233 Mill Street, Waterbury, CT 06706:

ELECTRICAL HYBRID PROGRAM

825 Hours

Electricians install electrical systems in structures; they install wiring and other electrical components, such as circuit breaker panels, switches, and light fixtures, and they follow blueprints, the *National Electrical Code*® and state and local codes. To prepare trainees a career in the electrical field, IMTI ONLINE in conjunction with NCCER offers a comprehensive, 4-level Electrical curriculum that complies with DOL time-based standards for apprenticeship.

Each module is prepared in an easy E-Text Online version for easy reading and the ability to annotate on each page. After reading is complete the student's will take online assessments of each module.



ELECTRICAL COURSE SUMMARY

825 Hours

All Courses below are online self-study courses with the exception of (IN-PERSON) Classes noted below.

MODULE	COURSE	CLOCK HOURS
00101 (IN-PERSON)	Basic Safety	30
00102	Intro to Construction Math	10
00103	Intro to Hand Tools	13
00104	Intro to Power Tools	10
00105	Intro to Construction Drawings	10
00106	Basic Rigging	7
00107	Basic Communication Skills	7.5
00108	Basic Employability Skills	7.5
00109	Intro to Material Handling	5
70101 (IN-PERSON)	Your Role in A Green Environment	15
26101	Orientation to the Trade	2.5
26102	Electrical Safety	10
26103	Intro to Electrical Circuits	7.5
26104	Electrical Theory	7.5

ELECTRICAL COURSE SUMMARY

825 Hours

MODULE	COURSE	CLOCK HOURS
26105	Intro to the NEC	7.5
26106	Device Boxes	10
26107	Hand Bending	10
26108	Raceways and Fittings	20
26109	Conductors and Cables	10
26110	Basic Electrical Construction Drawings	7.5
26111	Residential Electric Services	15
26112	Electrical Test Equipment	5
26201	Alternating Currents	17.5
26202	Motors, Theory, and Application	20
26203	Electric Lighting	15
26204	Conduit Bending	15
26205	Pull and Junction Boxes	12.5
26206	Conductor Installations	10
26207	Cable Tray	7.5

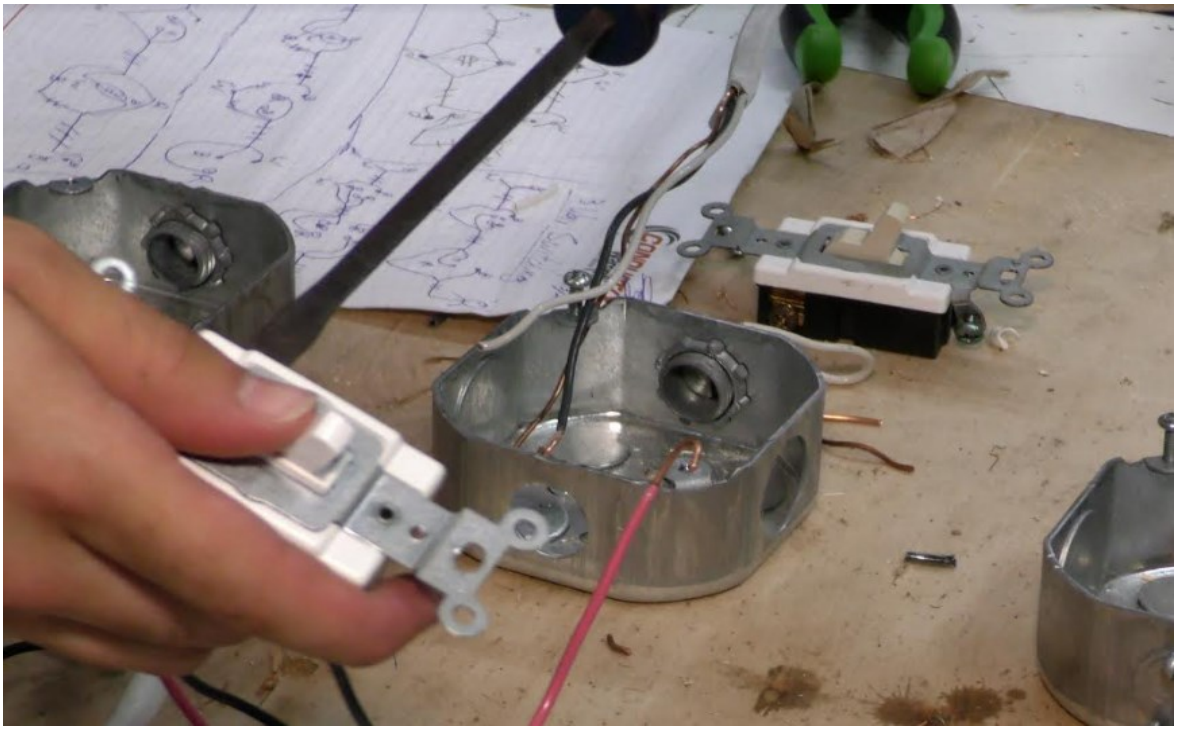
ELECTRICAL COURSE SUMMARY

825 Hours

MODULE	COURSE	CLOCK HOURS
26208	Conductor Terminations and Splice	7.5
26209	Grounding and Bonding	15
26210	Circuit Breakers and Fuses	12.5
26211	Control Systems and Fundamental Concepts	12.5
26301	Load Calculations– Branch and Feeder Circuits	17.5
26302	Conductor Selection and Calculations	15
26303	Practical Applications of Lighting	12.5
57101 (IN-PERSON)	Intro To Solar Photovoltaic	40
26304	Hazardous Locations	15
26305	Overcurrent Protection	25

ELECTRICAL COURSE SUMMARY

825 Hours



MODULE	COURSE	CLOCK HOURS
26306	Distribution Equipment	12.5
26307	Transformers	12.5
26308	Commercial Electrical Services	10
26309	Motor Calculations	12.5
26310	Voice, Data, and Video	10
26311	Motor Controls	12.5
26401	Load Calculations—Feeders and Services	20
26402	Health Care Facilities	10
26403	Standby and Emergency Systems	10
26404	Basic Electronic Theory	10
26405	Fire Alarm Systems	15
26406	Specialty Transformers	10
26407	Advanced Controls	20
26408	HVAC Controls	15

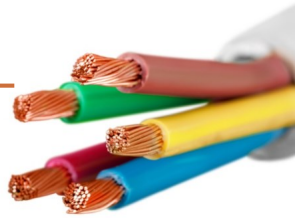
ELECTRICAL COURSE SUMMARY

825 Hours

MODULE	COURSE	CLOCK HOURS
26409	Heat Tracing and Freeze Protection	10
26410	Motor Operation and Maintenance	10
26411	Medium—Voltage Terminations and Splices	10
26412	Special Locations	20
46101	Fundamentals of Crew Leadership	22.5
33209	Wire & Cable Terminations	25
33301	Buses and Networks	25
33302	Fiber Optics	25

ELECTRICAL COURSE DETAIL

825 Hours



00101 Basic Safety– 30 Hours (IN-PERSON)
Explains the safety obligations of workers, supervisors, and managers to ensure a safe workplace. Discusses the causes and results of accidents and the dangers of rationalizing risk. Reviews the role of company policies and OSHA regulations in maintaining a safe workplace. Introduces common job-site hazards and protections such as lockout/tagout, personal protective equipment (PPE), and HazCom .

00102 Introduction to Construction Math– 10 Hours

Reviews basic mathematical functions such as adding, subtracting, dividing, and multiplying whole numbers, fractions, and decimals, and explains their applications to the construction trades. Explains how to use and read various length measurement tools, including standard and metric rulers and tape measures, and the architect's and engineer's scales. Explains decimal-fraction conversions and the metric system, using practical examples. Also reviews basic geometry as applied to common shapes and forms.

00103 Introduction to Hand Tools– 13 Hours
Introduces trainees to hand tools that are widely used in the construction industry, such as hammers, saws, levels, pullers, and clamps. Explains the specific applications of each tool and shows how to use them properly. Also discusses important safety and maintenance issues related to hand tools.

00104-15 Introduction to Power Tools – 10 Hours
Provides detailed descriptions of commonly used power tools, such as drills, saws, grinders, and sanders. Reviews applications, proper use, safety, and maintenance. Many illustrate show power tools used in on-the-job settings.

00105 Introduction to Construction Drawings – 10 Hours
Familiarizes trainees with basic terms for construction drawings, components, and symbols. Explains the different types of drawings (civil, architectural, structural, mechanical, plumbing/ piping, electrical, and fire protection) and instructs trainees on how to interpret and use drawing dimension.

00106 Basic Rigging– 7 Hours
Explains how ropes, chains, hoists, loaders, and cranes are used to move material and equipment from one location to another on a job site. Describes inspection techniques and load-handlings safety practices.

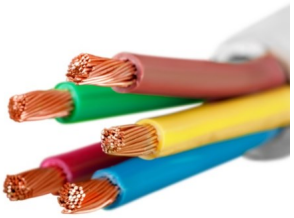
00107 Basic Communication Skills– 7.5 Hours
Provides trainees with techniques for communicating effectively with coworkers and supervisors. Includes practical examples that emphasize the importance of verbal and written information and instructions on the job.

00108 Basic Employability Skills– 7.5 Hours
Identifies the roles of individuals and companies in the construction industry. Introduces trainees to critical thinking and problem-solving skills and computer systems and their industry applications. Also reviews effective relationship skills, effective self-presentation, and key workplace issues such as sexual harassment, stress, and substance abuse.

00109 Introduction to Material Handling–5 Hours
Recognizes hazards associated with materials handling and explains proper materials handling techniques and procedures.

ELECTRICAL COURSE DETAIL

825 Hours



70101 Your Role in A Green Environment– 15 Hours (IN-PERSON)
Featuring a comprehensive vocabulary list, this module brings together the expertise of industry and higher education in defining a topic of growing international importance: green building. Geared to entry-level craft workers, this module provides fundamental instruction in the green environment, green construction practices, and green building rating systems.

26101 Orientation to the Electrical Trade– 2.5 Hours
Provides an overview of the electrical trade and discusses the career paths available to electricians.

26102 Electrical Safety– 10 Hours
Covers safety rules and regulations for electricians, including precautions for electrical hazards found on the job. Also covers the OSHA-mandated lockout/tagout procedure.

26103 Introduction to Electrical Circuits– 7.5 Hours
Introduces electrical concepts used in Ohm's law applied to DC series circuits. Covers atomic theory, electromotive force, resistance, and electric power equations.

26104-17 Electrical Theory– 7.5 Hours
Introduces series, parallel, and series-parallel circuits. Covers restive circuits, Kirchhoff's voltage and current laws, and circuit analysis.

26105 Introduction to the NEC– 7.5 Hours
Provides a road map for using the NEC®. Introduces the layout and the types of information found within the code book. Allows trainees to practice finding information using an easy-to-follow procedure.

26106 Device Box– 10 Hours
Covers the hardware and systems used by an electrician to mount and support boxes, receptacles, and other electrical components. Also covers NEC® fill and pull requirements for device, pull, and junction boxes under 100 cubic inches.

26107 Hand Bending– 10 Hours
Introduces conduit bending and installation. Covers the techniques for using hand-operated and step conduit benders, as well as cutting, reaming, and threading conduit.

26108 Raceways and Fittings– 20 Hours
Introduces the types and applications of raceways, wireways, and ducts. Stresses the appropriate NEC® requirements.

26109 Conductors and Cables– 10 Hours
Focuses on the types and applications of conductors and covers proper wiring techniques. Stresses the appropriate NEC® requirements.

26110 Basic Electrical Construction Drawings– 7.5 Hours
Describes electrical prints, drawings, and symbols, and the types of information that can be found on schematics, one-lines, and wiring diagrams.

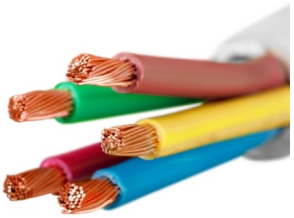
26111 Residential Electric Services– 15 Hours
Covers the electrical devices and wiring techniques common to residential construction and maintenance. Allows trainees to practice making service calculations. Stresses the appropriate NEC® requirements.

26112 Electrical Test Equipment– 5 Hours
Covers proper selection, inspection, and use of common electrical test equipment, including voltage testers, clamp-on ammeters, ohmmeters, multimeters, phase/ motor rotation testers, and data recording equipment.

26201 Alternating Currents– 17.5 Hours
Describes forces that are characteristic of alternating-current systems and the application of Ohm's law to AC circuits.

ELECTRICAL COURSE DETAIL

825 Hours



26202 Motors: Theory and Application– 20 Hours
Covers AC and DC motors, including the main components, circuits, and connections.

26203 Electric Lighting– 15 Hours
Introduces principles of human vision and the characteristics of light. Focuses on the handling and installation of various types of lamps and lighting fixtures.

26204 Conduit Bending– 15 Hours
Covers bends in conduit up to 6 inches. Focuses on mechanical, hydraulic, and electrical benders.

26205 Pull and Junction Boxes– 12.5 Hours
Explains how to select and size pull boxes, junction boxes, and handholes.

26206 Conductor Installations– 10 Hours
Covers the transportation, storage, and setup of cable reels; methods of rigging; and procedures for complete cable pulls in raceways and cable trays.

26207 Cable Tray– 7.5 Hours
Focuses on NEC® installation requirements for cable tray, including cable installations.

26208 Conductor Terminations and Splice– 7.5 Hours
Describes methods of terminating and splicing conductors, including preparing and taping conductors.

26209 Grounding and Bonding – 15 Hours
Focuses on the purpose of grounding and bonding electrical systems. Thoroughly covers NEC® requirements.

26210 Circuit Breakers and Fuses– 12.5 Hours
Describes fuses and circuit breakers along with their practical applications. Also covers sizing.

26211 Control Systems and Fundamental Concepts– 12.5 Hours
Gives basic descriptions of various types of contactors and relays along with their practical applications.

26301 Load Calculations - Branch and Feeder Circuits– 17.5 Hours
Explains how to calculate branch circuit and feeder loads for residential and commercial
applications.

26302 Conductor Selection and Calculations– 15 Hours
Covers the factors involved in conductor selection, including insulation types, current-carrying capacity, temperature ratings, and voltage drop.

26303 Practical Applications of Lighting – 12.5 Hours
Describes specific types of incandescent, fluorescent, and HID lamps, as well as ballasts. Also covers troubleshooting and various types of lighting controls.

57101 Intro to Photovoltaic– 40 Hours (In-Person) Covers the basic concepts of PV systems and their components, along with general sizing and electrical/ mechanical design requirements. Provides an overview of performance analysis and troubleshooting. Successful completion of this module will help prepare trainees for the North American Board of Certified Energy Practitioners (NABCEP) PV Entry Level Exam.

26304 Hazardous Locations– 15 Hours
Presents the NEC® requirements for equipment installed in hazardous locations.

26305 Overcurrent Protection– 25 Hours
Explains how to size and select circuit breakers and fuses for various applications. Also covers short circuit calculations and troubleshooting.

ELECTRICAL COURSE DETAIL

825 Hours

26306 Distribution Equipment– 12.5 Hours
Discusses switchboards and switchgear, including installation, grounding, and maintenance requirements. This module includes blueprints.

26307 Transformers– 12.5 Hours
Discusses transformer types, construction, connections, protection, and grounding.

26308 Commercial Electrical Services– 10 Hours
Covers the components, installation considerations, and NEC® requirements for commercial services.

26309 Motor Calculations– 12.5 Hours
Covers calculations required to size conductors and overcurrent protection for motor applications.

26310 Voice, Data and Video– 10 Hours
Covers installation, termination, and testing of voice, data, and video cabling systems.

26311 Motor Controls– 12.5 Hours
Provides information on selecting, sizing, and installing motor controllers. Also covers control circuit pilot devices and basic relay logic.

26401 Load Calculations - Feeders and Services – 20 Hours
Topics include basic calculation procedures for commercial and residential applications.

26402 Health Care Facilities– 10 Hours
Covers the installation of electric circuits in health care facilities, including the requirements for life safety and critical circuits.

26403 Standby and Emergency Systems– 10 Hours
Explains the NEC® requirements for electric generators and storage batteries.

26404 Basic Electronic Theory– 10 Hours
Explains the function and operation of basic electronic devices, including semiconductors, diodes, rectifiers, and transistors.

26405 Fire Alarm Systems– 15 Hours
Covers fire alarm control units, Digital Alarm Communicator Systems (DACS), wiring for alarm initiating and notification devices, and alarm system maintenance.

26406 Specialty Transformers– 10 Hours
Covers various types of transformers and their applications. Also provides information on selecting, sizing, and installing these devices.

26407 Advanced Controls– 20 Hours
Discusses applications and operating principles of solid-state controls, reduced-voltage starters, and adjustable frequency drives. Also covers basic troubleshooting procedures.

26408 HVAC Controls– 15 Hours
Provides a basic overview of HVAC systems and their controls. Also covers electrical troubleshooting and NEC® requirements.

26409 Heat Tracing and Freeze Protection– 10 Hours
Covers heat tracing systems along with their applications and installation requirements.

26410 Motor Operation and Maintenance– 10 Hours
Covers motor cleaning, testing, and preventive maintenance. Also describes basic troubleshooting procedures.

26411 Medium-Voltage Terminations and Splices– 10 Hours
Offers an overview of the NEC® and cable manufacturers' requirements for medium-voltage terminations and splices.

ELECTRICAL COURSE DETAIL

825 Hours

26412 Special Locations– 20 Hours
Describes NEC® requirements for selecting and installing equipment, enclosures, and devices in special locations including places of assembly, theaters, carnivals, agricultural buildings, marinas, temporary installations, wired partitions and swimming pools.

46101 Fundamentals of Crew Leadership– 22.5 Hours
Introduces trainees to the knowledge and skills required for team leadership. Covers practical information about today's construction industry; basic leadership skills; safety responsibilities of a supervisor; and a detailed survey of project control techniques.

33209 Wire & Cable Terminations– 25 Hours
Provides information and instructions for selecting, installing, and testing connectors and other terminating devices on cables used in low-voltage work, including telecommunications, video and audio, and fiber optics.

33301 Buses & Networks– 25 Hours
Details procedures for connecting computers and components, including network connections. Provides information on connecting controls and equipment in a control system, and explains how data is transferred between the nodes in a network.

33302 Fiber Optics– 25 Hours
Introduces the types of equipment and methods used in fiber-optic cable installation.

PLUMBING HYBRID PROGRAM

823 Hours

Most people are familiar with plumbers who come to their home to unclog a drain or install an appliance. In addition to these activities, however, plumbers install, maintain, and repair many different types of pipe systems. For example, some systems move water to a municipal water treatment plant and then to residential, commercial, and public buildings. Other systems dispose of waste, provide gas to stoves and furnaces, or supply air conditioning. Pipe systems in power plants carry the steam that powers huge turbines. Pipes also are used in manufacturing plants, such as wineries, to move material through production processes.

IMTIONLINE in conjunction with NCCER's four-level curriculum covers topics such as Plumbing Tools, Types of Valves, and Potable Water Treatment.

Each module is prepared in an easy E-Text Online version for easy reading and the ability to annotate on each page. After reading is complete the student's will take online assessments of each module.

PLUMBING COURSE SUMMARY

823 Hours

All Courses below are online self-study courses with the exception of (IN-PERSON) Classes noted below.

MODULE	COURSE	CLOCK HOURS
00101 (IN-PERSON)	Basic Safety	30
00102	Intro to Construction Math	10
00103	Intro to Hand Tools	13
00104	Intro to Power Tools	10
00105	Intro to Construction Drawings	10
00106	Basic Rigging	7
00107	Basic Communication Skills	7.5
00108	Basic Employability Skills	7.5
00109	Intro to Material Handling	5
02101	Intro to the Plumbing Profession	5
02102	Plumbing Safety	22.5
02103	Tools of the Plumbing Trade	10
02104	Intro to the Plumbing Math	12.5

PLUMBING COURSE SUMMARY

823 Hours

MODULE	COURSE	CLOCK HOURS
02105	Intro to the Plumbing Drawings	17.5
02106	Plastic Pipe & Fittings	12.5
02107	Copper Pipe & Fittings	12.5
02108	Cast Iron Pipe & Fittings	12.5
02109	Carbon Steel Pipe & Fittings	12.5
02110	Intro to Plumbing Fix-tures	7.5
02111	Intro to Drain, Waste, & Vent Systems	10
02112	Intro to Water Distribution Systems	10
02201	Plumbing Math Two	15
02202	Reading Commercial Drawings	25
02203	Structural Penetrations Installations & Fire Stopping	15

PLUMBING COURSE SUMMARY

823 Hours

MODULE	COURSE	CLOCK HOURS
02204	Installing & Testing DMV Pipping	30
02205	Installing Roof, Floor, and Area Drains	5
02206	Installing & Testing Water Supply Pipping	20
02207	Types of Valves	5
02208	Installing & Testing Water Supply Piping	20
02209	Installing Water Heaters	10
02210	Basic Electricity	10
02211	Fuel Gas Systems	20
02301	Applied Math	17.5

PLUMBING COURSE SUMMARY

823 Hours

MODULE	COURSE	CLOCK HOURS
02312	Sizing & Protecting the Water Supply System	30
02303	Potable Water Supply Treatment	15
02305	Types of Venting	20
02306	Sizing DWV & Storm Systems	20
02307	Sewage Pumps & Sump Pumps	12.5
02308	Corrosive-Resistant Waste Piping	7.5
02309	Compressed Air	10
02311	Service Plumbing	27.5
02401	Business Principles for Plumbing	15
02403	Water Pressure Booster & Recirculation Systems	12.5
02404	Indirect & Special Waste	17.5

PLUMBING COURSE SUMMARY

823 Hours

MODULE	COURSE	CLOCK HOURS
02405	Hydronic & Solar Heating Systems / Solar Thermal	17.5
02406	Codes	12.5
02408	Private Water Supply Systems	10
02409	Private Waste Disposal Systems	10
02410	Swimming Pools & Hot Tubs	7.5
02411	Plumbing for Mobile Homes & Travel Trailers	7.5
02412	Into to Medical Gas & Vacuum Systems	15
46101	Fundamentals of Crew Leadership	20
213 (IN-PERSON)	Solar Thermal	26
215 (IN-PERSON)	Mechanical Code	36
216 (IN-PERSON)	National Fuel Gas Code	36

PLUMBING COURSE DETAIL

823 Hours

00101 Basic Safety– 30 Hours (IN-PERSON)
Explains the safety obligations of workers, supervisors, and managers to ensure a safe workplace. Reviews the role of company policies and OSHA regulations in maintaining a safe workplace.

00102 Introduction to Construction Math – 10 Hours Reviews basic mathematical functions such as adding, subtracting, dividing, and multiplying whole numbers, fractions, and decimals, and explains their applications to the construction trades. Explains how to use and read various length measurement tools, including standard and metric rulers and tape measures, and the architect's and engineer's scales. Explains decimal-fraction conversions and the metric system, using practical examples. Also reviews basic geometry as applied to common shapes and forms.

00103 Introduction to Hand Tools – 13 Hours
Introduces trainees to hand tools that are widely used in the construction industry, such as hammers, saws, levels, pullers, and clamps. Explains the specific applications of each tool and shows how to use them properly. Also discusses important safety and maintenance issues related to hand tools.

00104 Introduction to Power Tools– 10 Hours
Provides detailed descriptions of commonly used power tools, such as drills, saws, grinders, and sanders. Reviews applications, proper use, safety, and maintenance. Many illustrate show power tools used in on-the-job settings.

00105 Introduction to Construction Drawings – 10 Hours
Familiarizes trainees with basic terms for construction drawings, components, and symbols. Explains the different types of drawings (civil, architectural, structural, mechanical, plumbing/piping, electrical, and fire protection) and instructs trainees on how to interpret and use drawing dimension.

00106 Basic Rigging– 7 Hours
Explains how ropes, chains, hoists, loaders, and cranes are used to move material and equipment from one location to another on a job site. Describes inspection techniques and load-handlings safety practices. Also reviews American National Standards Institute (ANSI) hand signals.

00107 Basic Communication Skills– 7.5 Hours
Provides trainees with techniques for communicating effectively with coworkers and supervisors. Includes practical examples that emphasize the importance of verbal and written information and instructions on the job. Also discusses effective telephone and e-mail communication skills.

00108 Basic Employability Skills– 7.5 Hours
Identifies the roles of individuals and companies in the construction industry. Introduces trainees to critical thinking and problem-solving skills and computer systems and their industry applications. Also reviews effective relationship skills, effective self-presentation, and key workplace issues such as sexual harassment, stress, and substance abuse.

00109 Introduction to Material Handling– 5 Hours
Recognizes hazards associated with materials handling and explains proper materials handling techniques and procedures. Also introduces materials handling equipment, and identifies appropriate equipment for common job-site tasks

PLUMBING COURSE DETAIL

823 Hours

02101 Introduction to the Plumbing Profession– 5 Hours
Introduces trainees to the many career options available in today's plumbing profession. Provides a history of plumbing and also discusses the current technology, industries, and associations that make up the modern plumbing profession. Also reviews human relations and safety skills.

02102 Plumbing Safety– 22.5 Hours
Discusses the causes of accidents and their consequences and repercussions in terms of delays, increased expenses, injury, and loss of life. Reviews the types and proper use of personal protective equipment (PPE). Instructs trainees in the use of critical safety information conveyed in hazard communication (HazCom), safety signs, signals, lockout/tagout, and emergency response. Covers confined-space safety, and reviews safety issues related to hand and power tools.

02103 Tools of the Plumbing Trade– 10 Hours
Instructs trainees in the care and use of the different types of hand and power tools they will use on the job. Gives trainees the information they need to select the appropriate tools for different tasks, and reviews tool maintenance and safety issues.

02104 Intro to Plumbing Math– 12.5 Hours
Reviews basic math concepts, such as whole numbers, fractions, decimals, and squares, and demonstrates how they apply to on-the-job situations. Teaches trainees how to measure pipe using fitting tables

02105 Intro to Plumbing Drawings– 17.5 Hours
Introduces trainees to the different types of plumbing drawings they will encounter on the job and discusses how to interpret and apply them when laying out and installing plumbing systems. Discusses the symbols used in plumbing and mechanical drawings and reviews isometric, oblique, orthographic, as well as schematic drawings.

02106 Plastic Pipe & Fittings– 12.5 Hours
Introduces trainees to the different types of plastic pipe and fittings used in plumbing applications, including ABS, PVC, CPVC, PE, PEX, and PB. Describes how to measure, cut, join, and support plastic pipe according to manufacturer's instructions and applicable codes. Also discusses pressure testing of plastic pipe once installed.

02107 Copper Pipe & Fittings– 12.5 Hours
Discusses sizing, labeling, and applications of copper tube and fittings and reviews the types of valves that can be used on copper tube systems. Explains proper methods for cutting, joining, and installing copper tube. Also addresses insulation, pressure testing, seis

02108 Cast-Iron Pipe & Fittings– 12.5 Hours
Introduces trainees to hub-and-spigot and no-hubcast-iron pipe and fittings and their applications in DWV systems. Reviews material properties, storage and handling requirements, and fittings and valves. Covers joining methods, installation, and testing

02109 Carbon Steel Pipe & Fittings– 12.5 Hours
Discusses threading, labeling, and sizing of steel pipe and reviews the differences between domestic and imported pipe. Covers the proper techniques for measuring, cutting, threading, joining, and hanging steel pipe. Also reviews corrugated stainless steel tubing.

PLUMBING COURSE DETAIL

823 Hours

02110 Intro to Plumbing Fixtures– 7.5 Hours
Discusses the proper applications of code approved fixtures in plumbing installations. Reviews the different types of fixtures and the materials used in them. Also covers storage, handling, and code requirements.

02111 Intro to Drain, Waste, & Vent Systems– 10 Hours
Explains how DWV systems remove waste safely and effectively. Discusses how system components, such as pipe, drains, traps, and vents work. Reviews drain and vent sizing, grade, and waste treatment. Also discusses how building sewers and sewer drains connect the DWV system to the public sewer system.

02112 Intro to Water Distribution Systems– 10 Hours
Identifies the major components of water distribution systems and describes their functions. Reviews water sources and treatment methods and covers supply and distribution for the different types of systems that trainees will install on the job.

02201 Plumbing Math Two – 15 Hours
Explains the Pythagorean theorem and reviews methods for laying out square corners. Discusses the techniques used to calculate simple and rolling offsets, as well as offsets on parallel runs of pipe.

02202 Reading Commercial Drawings– 25 Hours
Explains how to identify and interpret civil, architectural, structural, HVAC/mechanical, plumbing, and electrical drawings. Discusses how to ensure accurate dimensions, generate RFIs, and locate plumbing entry points, as well as how to establish piping routes and fixture locations. Isometric drawings, material takeoffs, approved submittal data, and Building Information Management (BIM), are also covered.

02203 Structural Penetrations Installations & Fire Stopping– 15 Hours
Introduces methods for adjusting structural members, insulating pipe, and installing fire-stopping. Covers reinforcement techniques for modified structural members; how to measure, cut, and install fiberglass and flexible foam insulation; and how to identify walls, floors, and ceilings that require firestopping.

02204 Installing & Testing DMV Piping– 30 Hours
Explains how to locate, install, connect, and test a complete drain, waste, and vent (DWV) system. Discusses how to develop material takeoffs, set up and use levels, locate building sewers and building drains, locate fixtures, and test a DWV system.

02205 Installing Roof, Floor, and Area Drains– 5 Hours
Covers the proper techniques for locating, installing, and connecting roof, floor, and area drains and floor sinks according to code. Discusses waterproof membranes and flashing, drain components, shower pans, trap primers, and proper drain applications.

02206 Installing & Testing Water Supply Pipping– 20 Hours
Explores the proper techniques for locating, installing, and testing complete water service and distribution systems, including meters, water heaters, water softeners, and hose bibbs. Introduces basic backflow and water hammer prevention, and discusses the installation of shower and tub valves, ice maker and washing machine boxes, and pipe stub outs and supports.

PLUMBING COURSE DETAIL

823 Hours

02207 Types of Valves– 5 Hours
Reviews types of valves, their components, and applications. Also covers valve servicing.

02208 Installing Fixtures & Valves– 20 Hours
Covers the installation of basic plumbing fixtures, including bathtubs, shower stalls, lavatories, sinks, water closets, and urinals. Reviews the installation of associated valves, faucets, and components. Explains how to connect appliances such as dishwashers, food-waste disposers, refrigerators and ice makers, and washing machines. Installing Water Heater

02209 Installing Water Heaters– 10 Hours
Discusses gas-fired, electric, tankless, heat pump, and indirect water heaters, components, and applications. Reviews proper installation and testing techniques and covers the latest code requirements for water heaters.

02210 Basic Electricity– 10 Hours
Introduces electrical safety and the principles of electricity including voltage, current, resistance, and power. Includes important electrical formulas, circuitry, and common plumbing-related electrical applications.

02211 Fuel Gas Systems– 20 Hours
Introduces techniques for safe handling of natural gas, liquefied petroleum gas, and fuel oil. Reviews fuel gas and fuel oil safety precautions and potential hazards, applications, systems installation, and testing .

02301 Applied Math– 17.5 Hours
Reviews math concepts, including weights and measures, area and volume, temperature, pressure, and force. Describes the six simple machines: inclined planes, levers, pulleys, wedges, screws, and wheels and axles.

PLUMBING COURSE DETAIL

823 Hours

02312 Sizing & Protecting the Water Supply System– 30 Hours
Teaches techniques for sizing water supply systems, including calculating system requirements and demand, developed lengths, and pressure drops. Reviews the factors that can reduce efficiency of water supply piping. Introduces different backflow prevention devices and explains how they work, where they are used, and how they are installed in water supply systems.

02303 Potable Water Supply Treatment– 15 Hours
Explains how to disinfect, filter, and soften water supply systems. Discusses how to troubleshoot water supply problems, flush out visible contaminants from a plumbing system, and disinfect a potable water plumbing system.

02305 Types of Venting– 20 Hours
Reviews the different types of vents that can be installed in a DWV system and explains how they work. Teaches design and installation techniques.

02306 Sizing DWV & Storm Systems– 20 Hours
Explains how to calculate drainage fixture units for waste systems. Reviews how to size drain, waste, and vent (DWV) systems; storm drainage systems; and roof storage and drainage systems.

02307 Sewage Pumps & Sump Pumps– 12.5 Hours
Discusses the installation, diagnosis, and repair of pumps, controls, and sumps in sewage and storm water removal systems.

02308 Corrosive-Resistant Water Pipping– 7.5 Hours
Discusses corrosive wastes and reviews related safety issues and hazard communications. Explains how to determine when corrosive-resistant waste piping needs to be installed, as well as how to correctly select and properly connect different types of piping.

02309 Compressed Air– 10 Hours
Explains the principles of compressed air systems and describes their components and accessories. Reviews installation and periodic servicing of air compressor systems.

02311 Service Plumbing– 27.5 Hours
Covers the troubleshooting and repair of fixtures, valves, and faucets in accordance with code and safety guidelines. Explains how to diagnose and repair water supply and drainage piping, water heaters, and other appliances and fixtures. Describes the effects of corrosion, freezing, and hard water on plumbing systems

02401 Business Principles for Plumbing– 15 Hours
Introduces concepts and practices that are essential for competitive, successful plumbing businesses. Also covers basic business accounting and project estimating, as well as techniques for cost control and task organization.

02403 Water Pressure Booster & Recirculation Systems– 12.5 Hours
Builds on trainees' previous experience with pumps, storage tanks, controls, and pipes and fittings by teaching how to assemble those components into systems that boost water pressure and provide hot water. Indirect and Special Waste.

02404 Indirect & Special Waste– 17.5 Hours
Describes the code requirements and installation procedures for systems that protect against contamination from indirect and special waste.

PLUMBING COURSE DETAIL

823 Hours

02405 Hydronic & Solar Heating Systems/ Solar Thermal– 17.5 Hours
Introduces the basic types of hydronic and solar heating systems and their components. Reviews hydronic and solar heating system layout, installation, testing, and balancing, and also discusses methods that inhibit corrosion in hydronic or solar heating systems.

02406 Codes– 12.5 Hours
Discusses the different codes used by plumbers across the country and explains how those codes are written, adopted, modified, and implemented.

02408 Private Water Supply Systems– 10 Hours
Describes the operation of pumps and well components. Reviews the qualities of good wells and how to assemble and disassemble pumps and components .

02409 Private Waste Disposal Systems – 10 Hours
Describes the types of private waste disposal systems, discusses the maintenance and installation of these systems, and explains how to determine the local code requirements for these systems. Covers percolation tests and sewage system planning and layout.

02410 Swimming Pools & Hot Tubs– 7.5 Hours
Introduces trainees to plumbing systems in swimming pools, hot tubs, and spas.

02411 Plumbing for Mobile Homes & Travel Trailers– 7.5 Hours
Describes the location and layout of plumbing systems for mobile home and travel trailer parks. Reviews how to design and lay out a system, how to connect water and sewer lines to a mobile home.

02412 Into to Medical Gas & Vacuum Systems– 15 Hours
Introduces the various types of medical gas and vacuum systems used in health care facilities. Covers the system requirements and professional qualifications required by code, describes common types of medical gas and vacuum systems, and introduces the safety requirements for installing, testing, and servicing these systems.

46101 Fundamentals of Crew Leadership– 20 Hours
Teaches the basic leadership skills required to supervise personnel. Discusses principles of project planning, scheduling, estimating, management, and presents several case studies for student participation.

213 Solar Thermal– 26 Hours (In-Person)
This module covers the fundamentals of design & installation of solar water heating systems, including the use of site-assessment tools for solar system design.

215 Mechanical Code– 36 Hours (In-Person)
This module covers general criteria of International Mechanical Code that relates to the design and installation of mechanical systems.

216 National Fuel Gas Code– 36 Hours (In-Person)
This course offers general criteria for the installation and operation of gas piping and gas equipment on consumers' premises. The student will learn to ensure better public safety and consumer satisfaction by correctly applying code requirements.

HVAC HYBRID PROGRAM

851 Hours

The increasing development of HVAC (heating and air-conditioning systems) technology causes employers to recognize the importance of continuous education and keeping up to speed with the latest equipment and skills. Hence, technical school training or apprenticeship programs often provide an advantage and a higher qualification for employment.

NCCER's program has been designed by highly qualified subject matter experts with this in mind. Our four levels, North American Technician Excellence (NATE) recognized, present theoretical and practical skills essential to your success as an HVAC installer or technician.

IMTIONLINE in conjunction with NCCER's four-level curriculum covers topics such as Intro to Heating, Sheet Metal Duct, Air Quality Equipment and much more.

Each module is prepared in an easy E-Text Online version for easy reading and the ability to annotate on each page. After reading is complete the student's will take online assessments of each module.

HVAC COURSE SUMMARY

851 Hours

All Courses below are online self-study courses with the exception of (IN-PERSON) Classes noted below.

MODULE	COURSE	CLOCK HOURS
00101 (IN-PERSON)	Basic Safety	30
00102	Intro to Construction Math	10
00103	Intro to Hand Tools	10
00104	Intro to Power Tools	13
00105	Intro to Construction Drawings	10
00106	Basic Rigging	7
00107	Basic Communication Skills	7.5
00108	Basic Employability Skills	7.5
00109	Intro to Material Handling	5
03101	Intro to HVAC	7.5
03102	Trade Math	10
03103	Copper & Plastic Pipping	10
03104	Soldering & Brazing	10

HVAC COURSE SUMMARY

851 Hours

MODULE	COURSE	CLOCK HOURS
03105	Basic Carbon Steel Piping Practices	10
03106	Basic Electricity	12.5
03107	Intro to Cooling	30
03108	Into to Heating	15
03109	Intro to Air Distribution Systems	15
03206	Alternating Currents	10
03302	Compressors	12.5
03301	Refrigerants & Oils	15
03205	Leak Detection, Evacua-tion. Recovery & Charging	30
03303	Metering Devices	12.5
03211	Heat Pumps	20
03215	Basic Maintenance	20

HVAC COURSE SUMMARY

851 Hours

MODULE	COURSE	CLOCK HOURS
03202	Chimneys, Vents, & Flues	5
03213	Sheet Metal Duct Systems	10
03214	Fiberglass & Fabric Duct Systems	7.5
03201	Commercial Airside Systems	12.5
03204	Air Quality Equipment	5
03203	Intro to Hydronic Systems	15
03313	Fastens, Hardware & Wiring Terminations	10
03314	Control Circuit & Motor Troubleshooting	30
03210	Troubleshooting Cooling	20
03311	Troubleshooting Heat Pumps	12.5
03209	Troubleshooting Gas Heating	15
03310	Troubleshooting Oil Heating	15
03312	Troubleshooting Acces-sories	7.5

HVAC COURSE SUMMARY

851 Hours

MODULE	COURSE	CLOCK HOURS
03315	Zoning, Ductless & Variable Refrigerant Flow Systems	15
03305	Commercial Hydronic Systems	12.5
03306	Steam Systems	10
03304	Retail Refrigerant Systems	15
03316	Customer Relations	5
03308	Water Treatment	10
03403	Indoor Air Quality	12.5
03404	Energy Conversation Equipment	7.5
03405	Building Systems Management	12.5
03402	Air System Balancing	15
03406	System Startup & Shutdown	15
03401	Construction Drawing & Specifications	12.5

HVAC COURSE SUMMARY

851 Hours

MODULE	COURSE	CLOCK HOURS
03407	Heating & Cooling System Design	22.5
03408	Commercial & Industrial Refrigeration	20
03409	Alternative Heating & Cooling Equipment	10
46101	Fundamentals of Crew Leadership	22.5
04101 (IN-PERSON)	Intro to the Sheet Metal Trade	5
04102 (IN-PERSON)	Tools of the Trade	5
04103 (IN-PERSON)	Intro to Sheet Metal Layout & Processes	7.5
04106(IN-PERSON)	Installation of Ductwork	15
26408	HVAC Controls	15
213 (IN-PERSON)	Solar Thermal	25
214 (IN-PERSON)	EPA Science	20
215 (IN-PERSON)	Mechanical Code	36

HVAC COURSE DETAIL

851 Hours

00101 Basic Safety– 30 Hours
Explains the safety obligations of workers, supervisors, and managers to ensure a safe workplace. Reviews the role of company policies and OSHA regulations in maintaining a safe workplace.

00102 Introduction to Construction Math – 10 Hours
Reviews basic mathematical functions such as adding, subtracting, dividing, and multiplying whole numbers, fractions, and decimals, and explains their applications to the construction trades. Explains how to use and read various length measurement tools, including standard and metric rulers and tape measures, and the architect's and engineer's scales. Explains decimal-fraction conversions and the metric system, using practical examples. Also reviews basic geometry as applied to common shapes and forms.

00103 Introduction to Hand Tools – 10 Hours
Introduces trainees to hand tools that are widely used in the construction industry, such as hammers, saws, levels, pullers, and clamps. Explains the specific applications of each tool and shows how to use them properly. Also discusses important safety and maintenance issues related to hand tools.

00104 Introduction to Power Tools– 13 Hours
Provides detailed descriptions of commonly used power tools, such as drills, saws, grinders, and sanders. Reviews applications, proper use, safety, and maintenance. Many illustrate show power tools used in on-the-job settings.

00105 Introduction to Construction Drawings – 10 Hours
Familiarizes trainees with basic terms for construction drawings, components, and symbols. Explains the different types of drawings (civil, architectural, structural, mechanical, plumbing/piping, electrical, and fire protection) and instructs trainees on how to interpret and use drawing dimension.

00106 Basic Rigging– 7 Hours
Explains how ropes, chains, hoists, loaders, and cranes are used to move material and equipment from one location to another on a job site. Describes inspection techniques and load-handlings safety practices. Also reviews American National Standards Institute (ANSI) hand signals.

00107 Basic Communication Skills– 7.5 Hours
Provides trainees with techniques for communicating effectively with coworkers and supervisors. Includes practical examples that emphasize the importance of verbal and written information and instructions on the job. Also discusses effective telephone and e-mail communication skills.

00108 Basic Employability Skills– 7.5 Hours
Identifies the roles of individuals and companies in the construction industry. Introduces trainees to critical thinking and problem-solving skills and computer systems and their industry applications. Also reviews effective relationship skills, effective self-presentation, and key workplace issues such as sexual harassment, stress, and substance abuse.

00109 Introduction to Material Handling– 5 Hours
Recognizes hazards associated with materials handling and explains proper materials handling techniques and procedures. Also introduces materials handling equipment, and identifies appropriate equipment for common job-site tasks

HVAC COURSE DETAIL

851 Hours

03101 Intro to HVAC – 7.5 Hours
Covers the basic principles of heating, ventilating, and air conditioning, career opportunities in HVAC, and how apprenticeship programs are constructed. Basic safety principles, as well as trade licensure and EPA guidelines, are also introduced.

03102 Trade Mathematics – 10 Hours
Explains how to solve HVAC/R trade related problems involving the measurement of lines, area, volume, weights, angles, pressure, vacuum, and temperature. Also includes a review of scientific notation, powers, roots, and basic algebra and geometry.

03103 Copper & Plastic Pipping– 10 Hours
Explains how to identify types of copper tubing and fittings used in the HVAC/R industry and how they are mechanically joined. The identification and application of various types of plastic piping, along with their common assembly and installation practices, are also presented.

03104 Soldering & Brazing – 10 Hours
Introduces the equipment, techniques, and materials used to safely join copper tubing through both soldering and brazing. The required PPE, preparation, and work processes are covered in detail. The procedures for brazing copper to dissimilar materials are also provided.

03105 Basic Carbon Steel Piping Practices– 10 Hours
Explains how to identify various carbon steel piping materials and fittings. The joining and installation of threaded and grooved carbon steel piping systems is covered, with detailed coverage of threading and grooving techniques included.

03106 Basic Electricity– 12.5 Hours
Introduces the concept of power generation and distribution, common electrical components, AC and DC circuits, and electrical safety as it relates to the HVAC field. Introduces reading and interpreting wiring diagrams.

03107 Intro to Cooling– 30 Hours
Explains the fundamental operating concepts of the refrigeration cycle and identifies both primary and secondary components found in typical HVAC/R systems. Common refrigerants are introduced as well.

03108 Intro to Heating – 15 Hours
Covers the fundamentals of heating systems and the combustion process. The different types and designs of gas furnaces and their components, as well as basic procedures for their installation and service, is provided.

03109 Intro to Air Distribution Systems– 15 Hours
Describes the factors related to air movement and its measurement in common air distribution systems.

03206 Alternating Current – 10 Hours
Covers transformers, single-phase and three-phase power distribution, capacitors, the theory and operation of induction motors, and the instruments and techniques used in testing AC circuits and components.

03302 Compressors– 12.5 Hours
Explains the operating principles of the different types of compressors used in comfort air conditioning and refrigeration systems, along with basic installation, service, and repair procedures for these compressors.

03301 Refrigerants & Oils– 15 Hours
Covers characteristics and applications of the current generation of refrigerants, including both pure and blended refrigerants. Also provides extensive coverage of lubricating oils used in refrigeration systems.

HVAC COURSE DETAIL

851 Hours

03205 Leak Detection, Evacuation, Recovery & Charging – 30 Hours
Covers the basic refrigerant handling and equipment servicing procedures to service HVAC systems in an environmentally safe manner.

03303 Metering Devices– 12.5 Hours
Covers the operating principles, applications, installation, and adjustment of the various types of fixed and adjustable expansion devices used in air conditioning equipment.

03211 Heat Pumps– 20 Hours
Covers the principles of reverse cycle heating, describes the operation of the various types of heat pumps, and describes how to analyze heat pump control circuits.

03215 Basic Maintenance– 20 Hours
Describes common tasks associated with basic maintenance. Specific tasks, such as lubrication and belt installation, are reviewed in detail.

03202 Chimneys, Vents, & Flues– 5 Hours
Covers the chimneys, vents, and flues that are used with fuel-burning furnaces and boilers.

03213 Sheet Metal Duct Systems – 10 Hours
Covers the layout, fabrication, installation, and insulation of sheet metal duct systems.

03214 Fiberglas & Fabric Duct Systems– 7.5 Hours
Reviews the application and methods of fabricating fiberglass duct systems. Installation guidelines and methods to repair damaged components.

03201 Commercial Airside Systems– 12.5 Hours
Introduces systems used in commercial structures such as schools and office buildings that are divided into comfort heating and cooling zones.

03204 Air Quality Equipment– 5 Hours
Introduces the factors related to indoor air quality and human comfort. Equipment used to control humidity is presented in detail.

03203 Intro to Hydronic Equipment– 15 Hours
Introduces hydronic heating systems, the fuels used to heat the water and the pumps that circulate the heated water.

03313 Fastens, Hardware & Wiring Terminations– 10 Hours
Covers a variety of fasteners, hardware, and wiring terminations used in HVAC systems including the installation of these components.

03314 Control Circuit & Motor Troubleshooting– 30 Hours
Proves information and skills to troubleshoot control circuits and electric motors found in heating and cooling equipment.

03210 Troubleshooting Cooling– 20 Hours
Proves guidance related to troubleshooting cooling systems.

03311 Troubleshooting Heat Pumps – 12.5 Hours
Proves a thorough review of heat pump systems, operating cycle and troubleshooting procedures for components.

03209 Troubleshooting Gas Heating– 15 Hours
Covers information and skills needed to troubleshoot gas-fired furnaces and boilers.

03310 Troubleshooting Oil Heating– 15 Hours
Describes the construction and operation of oil-fired heating systems and their components.

03312 Troubleshooting Accessories– 7.5 Hours
Delivers information and skills needed to troubleshoot various air treatment accessories used with heating and cooling equipment**.**

HVAC COURSE DETAIL

851 Hours

03315 Zoning, Ductless and Variable Refrigerant Flow Systems– 15 Hours
Introduces the information and skills needed to troubleshoot and repair zoned, ductless, and variable refrigerant flow systems.

03305 Commercial Hydronic Systems– 12.5 Hours
Reviews basic properties of water and describes how water pressure is related to the movement of water through piping systems. Describes various types and components of commercial hot-water heating and chilled-water cooling systems, and examines how those systems function.

03306 Steam Systems– 10 Hours
Focuses on the use of steam for storing and moving energy in HVAC systems. Reviews the fundamentals of water that relate to steam and describes the basic steam system cycle.

03304 Retail Refrigeration Systems– 15 Hours
Covers the applications, principles, and troubleshooting of retail refrigeration systems.

03316 Customer Relations– 5 Hours
Presents the importance of establishing good relations with customers and provides guidance on how to achieve that goal. Focuses on ways for a technician to make a good first impression and describes how to communicate in a positive manner with customers .

03308 Water Treatment– 10 Hours
Explains water problems encountered in heating and cooling systems and identifies water treatment methods and equipment. Covers basic water testing procedures and chemistry.

03403 Indoor Air Quality– 12.5 Hours
Defines the issues associated with indoor air quality and its effect on the health and comfort of building occupants.

03404 Energy Conservation Equipment –7.5 Hours
Covers heat recovery/reclaim devices, as well as other energy recovery equipment used to reduce energy consumption in HVAC systems.

03405 Building System Management– 12.5 Hours
Explains how computers and microprocessors are used to manage zoned HVAC systems.

03402 Air System Balancing– 15 Hours
Covers air properties and gas laws, as well as the use of psychrometric charts

03406 System Start-Up & Shut-Down– 15 Hours
Presents the procedures for the startup and shutdown of hot water, steam heating, chilled water, and air handling systems.

03401 Construction Drawings & Specifications– 12.5 Hours
Teaches how to interpret drawings used in commercial construction, including mechanical drawings, specifications, shop drawings, and as-builts.

03407 Heating & Cooling System Design– 22.5 Hours
Identifies factors that affect heating and cooling loads. Explains the process by which heating and cooling loads are calculated, and how load calculations are used in the selection of heating and cooling equipment.

03408 Commercial & Industrial Refrigeration– 20 Hours
Expands on the study of product and process refrigeration equipment .

HVAC COURSE DETAIL

851 Hours

03409 Alternative Heating & Cooling Equipment– 10 Hours
Describes alternative devices used to reduce energy consumption, including wood, coal, and pellet-fired systems, waste-oil heaters, geothermal heat pumps, solar heating, in-floor radiant heating, and direct-fired makeup units

46101 Fundamentals of Crew Leadership– 22.5 Hours
Covers basic leadership skills and explains different leadership styles, communication, delegating, and problem solving.

04101 Introduction to the Sheet Metal Trade– 5 Hours (IN-PERSON)
Summarizes the history and development of the sheet metal craft. Explains the benefits of apprenticeship training, and identifies career opportunities in the trade.

04102 Tools of the Trade– 5 Hours (IN-PERSON)
Describes the hand and power tools used in the sheet metal craft, including layout tools and cutting, bending, and forming machines. Includes safety and maintenance guidelines.

04103 Introduction to Sheet Metal Layout & Processes– 7.5 Hours (IN-PERSON)
Introduces parallel line development, radial line development, and triangulation. Covers the selection and use of layout, hand, and machine tools.

04106 Installation of Ductwork– 15 Hours (IN-PERSON)
Addresses ductwork assembly, use of different types of sealants, using lifts, and installation of ductwork.

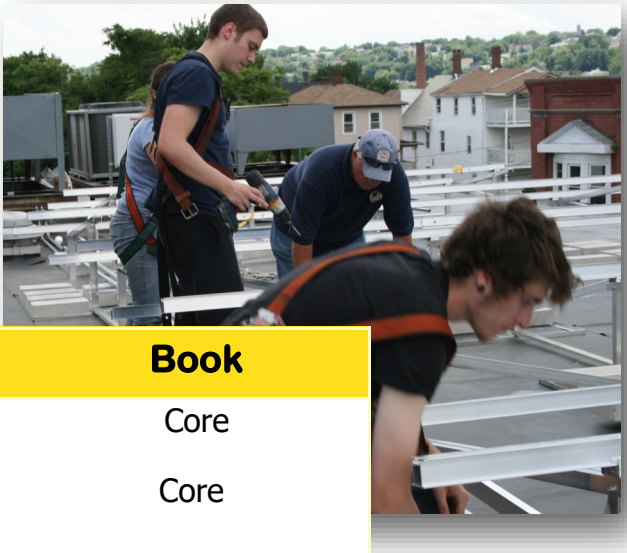
26408 HVAC Controls– 15 Hours
Provides a basic overview of HVAC systems and their controls. Also covers electrical troubleshooting and NEC® requirements. Heat Tracing and Free

213 Solar Thermal – 25 Hours (IN-PERSON)
This module covers the fundamentals of design & installation of solar water heating systems, including the use of site-assessment tools for solar system design.

215 Mechanical Code– 36 Hours (IN-PERSON)
This module covers general criteria of International Mechanical Code that relates to the design and installation of mechanical systems.

214 EPA Science– 20 Hours (IN-PERSON)
This course will enable students to apply the scientific principles of EPA science into their daily work. The student will prepare for and take the EPA refrigeration certification test.

Solar Photovoltaic Technician Program

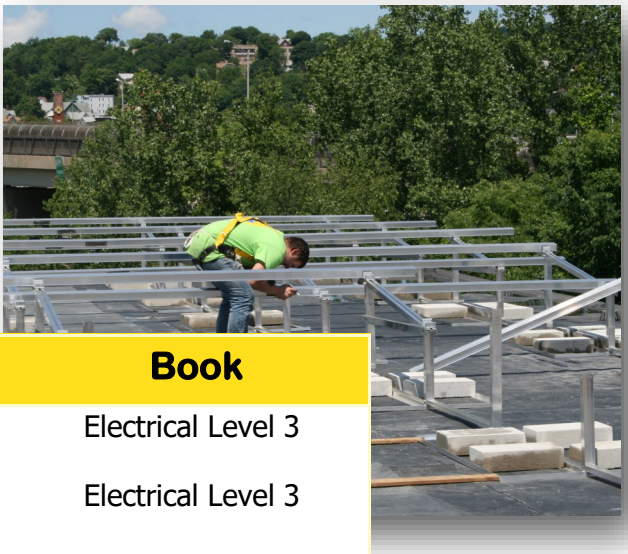


Day Program
481 Hours @ 21 Weeks

Evening Program
481 Hours @ 41 Weeks

Courses	Hours	Book	
00101-V6 Basic Safety	30	Core	
00102-V6 Intro to Math	10	Core	
00105-V6 Into to Drawings	10	Core	
00106-V6 Intro to Rigging	10	Core	
70101-15 Your Role in Green	10	Core	Core 75 Hours
26103-20 Intro to Circuits	10	Electrical Level 1	
26104-20 Electrical Theory	10	Electrical Level 1	
26105-20 Intro to NEC	8	Electrical Level 1	
26106-20 Device Boxes	10	Electrical Level 1	
26107-20 Hand Bending	13	Electrical Level 1	
26108-20 Wireways, Raceways	22	Electrical Level 1	
26110-20 Basic Electrical Docs	8	Electrical Level 1	
26111-20 Residential Wiring	16	Electrical Level 1	Electrical L1 97 Hours
26201-20 Alternating Current	20	Electrical Level 2	
26204-20 Conduit Bending	18	Electrical Level 2	
26207-20 Cable Tray	8	Electrical Level 2	
26209-20 Grounding & Bonding	17	Electrical Level 2	
26210-20 Circuit & Fuses	17	Electrical Level 2	Electrical L2 80 Hours

Solar Photovoltaic Technician Program



Day Program
481 Hours @ 21 Weeks

Evening Program
481 Hours @ 41 Weeks

Courses	Hours	Book	
26301-20 Load Calculations	22	Electrical Level 3	
26302-20 Conductor Selections	18	Electrical Level 3	
57101-11 Intro to Solar	40	Electrical Level 3	
26304-20 Hazardous Locations	29	Electrical Level 3	
26308-20 Commercial Electrical	10	Electrical Level 3	Electrical L3 119 Hours
26401-20 Load Calculations	23	Electrical Level 4	
26403-20 Standby & Emergency	10	Electrical Level 4	
26406-20 Specialty Transformers	12	Electrical Level 4	
26409-20 Heat Tracing & Freeze	10	Electrical Level 4	
26411-20 Medium-Voltage	12	Electrical Level 4	
26412-20 Special Locations	20	Electrical Level 4	
46101-20 Fundamentals of Crew	23	Electrical Level 4	Electrical L4 80 Hours

Total Hours 481

00101-V6 Basic Safety (30 Hours)
Work at construction and industrial job sites can be hazardous. Most job-site incidents are caused by at-risk behavior, poor planning, lack of training, or failure to recognize the hazards. To help prevent incidents, every company must have a proactive safety program. Safety must be incorporated into all phases of the job and involve employees at every level, including management.

00102-V6 Introduction to Construction Math (10 Hours)
Craft professionals rely on math to do their jobs accurately and efficiently. Plumbers calculate pipe lengths, plan drain slopes, and interpret dimensioned plans. Carpenters meet code requirements by using math to frame walls and ceilings properly. HVAC professionals develop ductwork and calculate airflow with practical geometry. Whichever craft lies in your future, math will play a role in it. This module reviews the math that you will need and sharpens the skills that you will be using in the exciting modules ahead.

00105-V6 Introduction to Construction Drawings (10 Hours)
Various types of construction drawings are used to represent actual components of a building project. The drawings provide specific information about the locations of the parts of a structure, the types of materials to be used, and the correct layout of the building. Knowing the purposes of the different types of drawings and interpreting the drawings correctly are important skills for anyone who works in the construction trades. This module introduces common types of construction drawings, their basic components, standard drawing elements, and measurement tools that are typically used when working with construction drawings.

00106-V6 Basic Rigging (10 Hours)
A common activity at nearly every construction site is the movement of material and equipment from one place to another using various types of lifting gear. The procedures involved in performing this task are known as rigging. Not every worker will participate in rigging operations, but nearly all will be exposed to it at one time or another. This module provides an overview of the various types of rigging equipment, common hitches used during a rigging operation, and the related Emergency Stop hand signal.

70101-15 Your Role In the Green Environment (15 Hours)
The construction industry is always changing. In this new era, the green environment is an important consideration. As a construction craft worker, you should know how daily activities at work and at home affect the green environment. With this knowledge, you can make smart choices to reduce your impact. This module explains how your daily choices make a difference. You will learn to measure your carbon footprint and reduce it. You will also learn how buildings affect the green environment and how green building rating systems work.

26103-20 Introduction to Electrical Circuits (10 Hours)
Discusses basic atomic and electrical theory and electrical units of measurement. Explains how Ohm's law and the power equation can be used to determine unknown values, and introduces electrical schematic diagrams.

26104-20 Electrical Theory (10 Hours)
Introduces basic circuits, as well as the methods for calculating the electrical energy within them. Covers resistive circuits, Kirchhoff's voltage and current laws, and circuit analysis.

26105-20 Introduction to the National Electric Code (NEC) (8 Hours)
Introduces the NEC® and explains how to use it to find the installation requirements. Provides an overview of the National Electrical Manufacturers Association and Nationally Recognized Testing Laboratories.

26106-20 Device Boxes (10 Hours)
Describes the various types of boxes and explains how to calculate the NEC® fill requirements for outlet adjunction boxes under 100 cubic inches (1,650 cubic centimeters).

26107-20 Hand Bending (13 Hours)
Covers methods for hand bending conduit, including 90-degree bends, back-to-back bends, offsets, and saddle bends. Describes how to cut, ream, and thread conduit.

26108-20 Wireways, Raceways, and Fittings (22 Hours)
Introduces various types of raceway systems, along with their installation and NEC® requirements. Describes the use of various conduit bodies.

26110-20 Basic Electrical Construction Documents (8 Hours)
Describes how to interpret electrical drawings, including the use of architect's and engineer's scales.

26111-20 Residential Wiring (16 Hours)
Covers basic load calculations and NEC® requirements for residential electrical systems. Describes how to lay out branch circuits, install wiring, size outlet boxes, and install wiring devices.

26201-20 Alternating Current (20 Hours)
Describes AC circuits and explains how to apply Ohm's law to solve for unknown circuit values.
26204-20 Conduit Bending (18 Hours)
Describes how to make conduit bends using mechanical, hydraulic, and electric benders.
26207-20 Cable Tray (8 Hours)
Discusses various types of cable tray, supports, and associated fittings. Explains how to determine the loads on a cable tray and calculate fill per NEC® requirements.
26209-20 Grounding & Bonding (17 Hours)
Explains the grounding and bonding requirements of NEC Article 250. Covers how to size the main and system bonding jumpers and the grounding electrode conductor for various AC systems.
26210-20 Circuit Breakers & Fuses (17 Hours)
Describes the operating principles of circuit breakers and fuses, and explains how to select and install overcurrent devices.

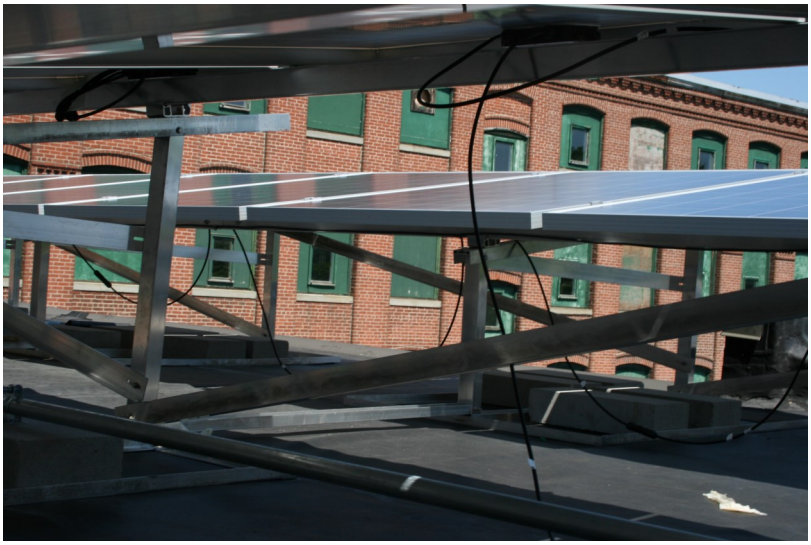
26301-20 Load Calculations– Branch and Feeder Circuits (22 Hours)
Explains how to calculate branch circuit and feeder loads for residential and commercial applications. Covers various derating factors.

26302-20 Conductor Selections and Calculations (18 Hours)
Explains how to make conductor calculations. Covers other factors involved in conductor selection, including insulation types, current-carrying capacity, temperature ratings, and voltage drop.

57101-11 Introduction to Solar Photovoltaic (40 Hours)
Welcome to Solar Photovoltaics training! In this program, you will learn about solar energy and how it is harnessed to provide electricity for residential, commercial, and utility installations. Along with reviewing a Solar PV system's primary component, this program addresses system installation, site assessment, system design, maintenance, and trouble-shooting. You'll also learn about Solar PV installation safety considerations.

26304-20 Hazardous Locations (29 Hours)
Covers the NEC® requirements for equipment installed in various hazardous locations.

26308-20 Commercial Electrical Services (10 Hours)
Covers the components, installation considerations, and NEC® requirements for commercial services.



26401-20 Load Calculations– Feeders and Services (23 Hours)
Covers basic calculations for commercial and residential applications, including raceway fill, conductor derating, and voltage drop.
26403-20 Standby & Emergency Systems (10 Hours)
Explains the NEC® installation requirements for electric generators and storage batteries used during such emergency situations.
26406-20 Specialty Transformers (12 Hours)
Covers various types of transformers, and provides information on selecting, sizing, and installing them.
26409-20 Heat Tracing & Freeze Protection (10 Hours)
Presents heat-tracing and freeze protection systems along with various applications and installation requirements
26411-20 Medium Voltage Terminations/ Splices (12 Hours)
Identifies types of medium-voltage cable and describes how to make various splices and terminations. Covers hi-pot testing.
26412-20 Special Locations (20 Hours)
Describes the NEC® requirements for selecting and installing equipment, enclosures, and devices for special locations that require unique attention. Locations include places of public assembly, theaters, carnivals, agricultural and livestock facilities, marinas, swimming pools, and temporary facilities.
46101-20 Fundamentals of Crew Leadership (23 Hours)
While this module has been designed to assist the recently promoted crew leader, it is beneficial for anyone in management. The course covers basic leadership skills and explains different leadership styles, communication, delegating, and problem solving. Jobsite safety and the crew leader's role in safety are discussed, as well as project planning, scheduling, and estimating. Includes performance tasks to assist the learning process.

PC SYSTEM REQUIREMENTS

In order to enroll in any HYBRID IMTI Online Program; the student must MEET the requirements below:

⇒ Must have access to a laptop or desktop Computer.

⇒ You may utilize a tablet but preferred method is on a PC for best experience.

⇒ Smartphones will work on our platforms but is not advised to be for this training.

WEB BROWSERS

Note that you may need administrative access to be able to install applications or make other changes to your computer. If the computer you are using is not your own personal property, you may need to contact your organization's IT department to make such updates.

OPERATING SYSTEMS

Windows 7, 8, 8.1 or Win 10.

MAC 10,1 or higher

BROWSER SETTINGS

- Pop-ups must be enabled.
- Cookies must be enabled.
- JavaScript must be enabled.

REMOTE PROCTORING REQUIREMENTS / HYBRID

- Web-Cam (Integrated or External)
- WebEx Meetings Installed

IMTI ONLINE APPLICATION

IMTI ONLINE Application For Registration:
I hereby make application to enroll in Industrial Management & Training Institute, Inc. in accordance with the conditions and terms of this application form, and the rules and regulations in the current catalog. Please complete all items.

First Name: _____ Last Name: _____ Address: _____
City: _____ St: _____ Zip: _____ S.S.#: _____-____-_____ Date of Birth: _____/____/_____
Phone (H) : (____) _____-_____
Phone (C) (_____) _____ -_____ E-Mail:_____ Citizenship Status: U.S. Citizen _____ Other _____ Alien #: _____

Program Desired
Hybrid Electrical [ ]
Hybrid HVAC [ ]
Hybrid Plumbing [ ]
Hybrid Solar [ ]

Apprentice Work Information

Name of Employer:_____ Contact:_____
Phone:_____
Apprentice Reg # On Card _____ Trade:_____

Ethnicity Information This Section is optional and used for a U.S. Department of Education Survey
Nonresident Alien _____ Black, non-Hispanic _____ American Indian/Alaska Native _____
Asian _____ Pacific Islander _____ Hispanic _____ White, non-Hispanic _____

High School Graduate? Yes_____ No _____ Year Graduated?_____
High School Attended _____ Did you receive your GED? Yes___No____
Year Received?_____State that awarded GED?_____

Applicants who have not visited the school prior to enrollment will have the opportunity to withdraw without penalty within three business days following either the regularly scheduled orientation procedures or following a tour of the school's facilities and inspection of equipment, training and services provided

In connection with my application with the school, I understand that a consumer report which may contain public records information is being requested. This report may include the following types of information: names and dates of previous employers, credit information, etc. I further understand that such report may contain public record information concerning my credit, bankruptcy proceeding, etc. from federal, state and other agencies which maintain such records. I have reviewed and accept the terms and conditions in this catalog; I agree to set forth payment when due and as later billed; I agree to comply with all the rules and regulations as printed in this catalog, or other rules and regulations of IMTI.

Date:_____ Signature:_____
Date:_____ Parent Signature (if applicant is under 18):_____

There is a $75.00 Non-Refundable Registration Fee for This Application

This Catalog /Publication is true and correct in content and policy

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