An Educational Program of the
The General Society of Mechanics and Tradesmen of the City of New York

PROGRAM CATALOG
Fall 2014
Spring 2015

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OFFICERS OF
THE GENERAL SOCIETY OF MECHANICS AND TRADESMEN
2014

The Mechanics Institute was founded in 1858 by the General Society of Mechanics and Tradesmen of the City of New York.

The officers of the General Society’s for the year 2014 are:

Gottfried Weissgerber, President
Gerard Drohan, Jr., Vice-President
Nili Olay, Treasurer
Andrew Schon, Secretary

MECHANICS INSTITUTE
SCHOOL COMMITTEE

Mechanics Institute’s School Committee is comprised of one chairperson and selected members of the General Society of Mechanics and Tradesmen. The School Committee meets ten times per year to review school operations, formulate policy, determine budgets, and provide direction. The members of the School Committee’s for the year 2014 are:

Andis Woodlief, Chair
Kent Butler
Gerard Drohan, Jr. P.P.
Ellen Fisch
John L. Flynn
James Hennelly
Andrew Schon
Thomas Stein
Lisa Wolf

Front cover design by: Robert Cincinnati

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The contents of this catalog supersede the information in all previous editions.
MECHANICS INSTITUTE

School Catalog
Fall 2014 / Spring 2015

The Mechanics Institute is an educational program of The General Society of Mechanics and Tradesmen of the City of New York, a 501 (c) 3 Non-Profit Organization.
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**A BRIEF HISTORY**

of our
MECHANICS INSTITUTE

It is obvious from the leather bound certificates on display and the number of students milling about the stair well that this is a Mechanics Institute in the traditional sense – a place of learning for trades people.

~ Cathy Milward-Bason

A Great Tradition: The Mechanics Institute of New York City
Australian researcher of existing Mechanics Institute still in operation

Among the many resplendent flags unfurling in the midtown Manhattan breeze is the gold and royal blue emblem of the General Society of Mechanics and Tradesmen. Beneath that flag, which flies above 20 West 44th Street, is the entrance to the stately landmark building that has been the General Society’s historic home for over a century. Housed within the oak and marble walls, beneath the subdued glow of polished antique lamps, is New York City’s oldest technical school – the Mechanics Institute.

A Proud Tradition of Training Working Adults

The General Society of Mechanics and Tradesmen of the City of New York was founded on November 17, 1785, by twenty-two skilled tradesmen and craftsmen who gathered in Walter Heyer’s public-house on Pine Street in lower Manhattan. The aims of the General Society were to provide cultural, educational, and social services to families of skilled craftsmen. During this early period, The General Society celebrated the mutuality and centrality of the craft community. Apart from its charitable activities, the Society played a prominent role in
the festivities that marked patriotic holidays, carrying banners emblazoned with its slogan “By Hammer and Hand all Arts do Stand.”

In 1820, The General Society opened one of the city's first schools that was free to members. There was no public school system in New York at the time, and only two other free schools were to be found in the entire city – one in the almshouse, and the other open only to the children of freed slaves. Our school opened with seventy students. Children of members were admitted free of charge, and a small fee was required from all others. (Later that same year the Society added a separate school for girls.) The school, which became the Mechanics Institute in 1858, continues to provide tuition-free evening instruction in trades-related education.

In 1858, after the New York City public school system had been sufficiently developed and daytime instruction became widely available, The General Society elected to convert its school into a Mechanics Institute that would provide training to those citizens whose work obligations prevented their pursuit of a formal technical education.

Historically, Mechanics Institutes were educational establishments formed to provide adult education, particularly in technical subjects, to working men and, later, women. As such, they were often funded by local industrialists on the grounds that they would ultimately benefit from having more knowledgeable and skilled employees. The Mechanics Institutes also served as “libraries” for the adult working class.

The first Mechanics Institute was incorporated in Glasgow in November 1823, founded on work begun at the turn of the previous century by George Birkbeck. Through the auspices of the Andersonian University, Birkbeck first offered free lectures on arts, science, and technical subjects in 1800. This Mechanics Class continued to
meet after he moved to London in 1804, and in 1823 they decided to formalize their organization by incorporating themselves as the **Mechanics Institute**. The London Mechanics Institute (later Birkbeck College) followed in December 1823, and by the mid-19th century, there were over 700 institutes in towns and cities across the UK, the United States, and Australia, some of which became the early roots of other colleges and universities.

Small tradesmen and workers could not afford subscription libraries, so benevolent groups and individuals created "Mechanics Institutes" that contained inspirational and vocational reading matter, for a small rental fee. Later, popular non-fiction and fiction books were added to these collections. Beyond lending books, Mechanics Institutes, also provided lecture courses, laboratories, and in some cases contained a museum for the members’ entertainment and education.

Our new Mechanics Institute’s focus was revised to provide **“privately-endowed free evening instruction to respectable young men and women to improve themselves in their daily vocations,”** and to assist those who were obliged to become wage earners before completing their desired education.

Many of the Institute’s early alumni, such as Andrew H. Dykes of Dykes Lumber, Harry S. Weller of the L.J. Wing Manufacturing Co., and Andrew G. Hagstrom, of the Hagstrom Map Company, became renowned and respected members of industry and society.

Between 1898 and 1903, Andrew Carnegie, a member, contributed over half a million dollars to The General Society. Generous gifts to create our present school came in from other members as well, and by 1913 enrollment at Mechanics Institute had reached 2,300.

Today, The General Society is located at 20 West 44th Street, across from the Harvard Club of New York, and is listed on the National Register of Historic Places.

**Institutional Philosophy**
The Mechanics Institute is firmly committed to the belief that by optimizing students’ skills in their respective trades, we provide a tangible benefit to the students and their employers and enhance their roles as productive members of society.

Instructors at Mechanics Institute are inspired to teach out of personal pride in their trades and a sincere desire to pass on their experience and knowledge to others. It is for this reason that our Mechanics Institute has long been recognized as a traditional meeting ground where motivated men and women can develop and enhance their abilities under the guidance of accomplished instructors who work in the field.

In achieving these goals, we gain the satisfaction of helping fill the critical needs of those who directly and indirectly reap the rewards of our programs — the graduates, industry, and New York City, of which we are all a part.

### Mission Statement

**Mechanics Institute’s** historic existence is founded on the belief that education is the key to life’s success. Our steadfast conviction is built on our commitment to help those who are willing to help themselves. To this end, we are dedicated to:

- preparing the foundation for those willing to rise;
- providing the ladder for those willing to climb; and
- fueling the spirits of those willing to soar.

### Statement of Ownership

Mechanics Institute is a tuition-free coeducational evening technical program founded and supported by The General Society of Mechanics and Tradesmen of the City of New York. The program was established in 1858 to provide instruction in technical trades to qualified individuals who would benefit from learning skills that lead to gainful employment.
MECHANICS INSTITUTE TODAY

*He that hath a trade hath an estate,*  
*and he that hath a calling hath an office of profit and honor.*

~Benjamin Franklin

The Mechanics Institute offers tuition-free instruction to individuals who are currently employed in industries related to the disciplines we offer. The Institute provides such qualified individuals with the technical knowledge necessary to advance in their chosen fields. While Mechanics Institute is not a trade school, it does offer comprehensive instruction in a wide variety of subject areas related to the building and construction industry and has trained more skilled workers than any other institution in the nation.

A multi-tiered curriculum effectively establishes Mechanics Institute as a unique educational program.

- The *technical programs* offer construction programs, which are expanded and updated on an ongoing basis.
- The *professional school* offers programs for tradespeople, business owners, general contractors, and construction managers in areas relevant to growing and enhancing their small businesses.
- The *school of continuing education* offers stand-alone courses and short-term programs to individuals seeking personal development.

Industry-Specific Instruction

In recent years Mechanics Institute has also developed and conducted client-tailored instruction workshops for various business entities within the building and construction trades industry. Past industry clients include the New York State Department of Correctional Services, New York City Department of Buildings, the New York Public Library, the DC-37 Education Fund, the Regional Alliance for Small Contractors, Consolidated Edison of NY, the International Alliance of Theatrical Stage Employees (Local 1, I.A.T.S.E.), and the Insulation Contractors Association of the City of New York.
General Facilities and Equipment

When you first visit the Mechanics Institute, your attention is immediately drawn to the building’s landmark façade, which was built in 1891 and has been well-preserved over the years. Entering the building, you find yourself facing our Library’s oak, brass, and glass doors.

To the right is an elevator, which provides visitors with access to the building’s six floors. To the left is a sweeping marble staircase, fitted with polished brass handrails and amber-shaded lamps.

The school’s administrative offices are located on the second floor, which also houses one computer labs and four drafting classrooms. The fourth floor has two lecture classrooms, one lecture hall, and a faculty lounge.

The school’s approach to technical instruction remains traditional in nature. Instructional methodologies incorporate the latest educational technology, including desktops, laptops, and assorted audio-visual media.
ADMISSIONS POLICIES

…the main consideration should be to help those who will help themselves; to provide part of the means by which those who desire to improve may do so; to give those who desire to rise the aids by which they may rise; to assist, but rarely or never to do it all. Neither the individual nor the race is improved by alms giving…

~Andrew Carnegie
Benefactor of the Mechanics Institute

Entrance Requirements

Mechanics Institute offers tuition-free technical programs in the following building and construction trades:

- Electrical Technology
- HVAC Systems
- Plumbing Design
- CAD and BIM
- Project Management
- Historic Preservation
- Facilities Management
- Virtual Design and Construction

Applicants may only enroll in the program that is most related to their current, or recent, field of employment. While two programs may not be taken concurrently, a student who has completed one program may subsequently enroll in another program unrelated to his/her current field.

To qualify for admission, applicants must present the following items:

- ✓ college transcript, high school diploma, or GED
- ✓ Social Security card
- ✓ letter of employment describing the nature of their work
- ✓ recent pay stub from their place of employment
- ✓ two current color passport-type photographs

In addition to the above items, applicants must
- ✓ possess a working knowledge of English
- ✓ submit a formal Letter of Application to the school
- ✓ submit their registration fee at the time they register
Credit for Prior Instruction
To satisfy the graduation standards in their respective programs, students should take the required core and elective courses in the sequence prescribed. Credit toward Mechanics Institute’s certificate of completion is only awarded for instruction received at the Institute. Because of the specific course content of our programs, credit cannot be awarded for training acquired at other institutions.

Returning Students
Mechanics Institute provides updates on its policies, procedures, and requirements with each new edition of the catalog. For this reason, returning students are encouraged to carefully review the most current catalog and become familiar with changes that may be in effect.

Alumni are welcome to return to the Institute to pursue other disciplines. Alumni returning for continuing education may take AutoCAD, mathematics, or elective courses from within the various disciplines we offer (see page 50). Alumni returning to enroll in a comprehensive program must take their courses in the sequence prescribed by that program.

Former students who did not graduate but who wish to continue instruction after an extended leave not exceeding four (4) years must begin as new students, unless they are within one hundred (100) hours of program completion.
REGISTRATION, LAB, AND MATERIALS FEES

Registration Fee
The registration fee is $100 per semester. Please note that the registration fee is non-refundable once your courses have been scheduled.

Annual Membership Fee
The annual membership fee, which qualifies the applicant for enrollment in Mechanics Institute’s courses and programs, is $75. Note: All fees are due at the time of registration and must be in the form of cash, money order, or certified check.

Lab Fees
Students enrolling in AutoCAD courses are required to pay a $200.00 lab fee. Lab fees are due at registration and must be in the form of money order or certified check. Lab fees are non-refundable after the second week of classes.

Materials Fees
Enrollment in some courses, such as Visual Communication, Pipe Drafting, and Professional Development, may be subject to an additional materials fee. This fee will vary depending on the course and the amount of materials required. Individual instructors will describe the exact materials and their costs to students, and fees are due by the second week of the semester. Materials fees are not refundable after the third week of classes.

Nondiscrimination
Mechanics Institute enrolls all applicants meeting the above entrance requirements regardless of race, color, creed, sex, age, or place of national origin.
INSTITUTIONAL STANDARDS

To make a good engineer, chemist, or architect, the only sure way is to make first, or at least simultaneously, an observant, reflecting and sensible person whose mind is not only well stored, but trained also to see, compose, reason and decide.

~ Charles William Eliot
President of Harvard from 1869 to 1909

Attendance
Mechanics Institute has a mandatory attendance policy. Attendance is taken by instructors and submitted to the registrar. In order to receive credit, students must be in their assigned classrooms at the start of class and attend the entire session.

Make-Up Hours
A student’s first and second absences are documented but excused. Students with more than two absences are required to make up hours as an alternative to having their enrollment terminated. Make-up requirements will be determined and assigned by the instructor and approved by the Director.

Dress Code
Students are expected to present a dignified appearance at all times. Attire should reflect maturity and must not be distracting or disruptive. Attire containing offensive words, logos, or political content is regarded as inappropriate and unacceptable. Headwear, including hats, baseball caps, and headphones may not be worn within the premises of The General Society.

Exams, Tests, Quizzes, and Assignments
Written exams, tests, quizzes, and/or assignments are given throughout the semester in addition to the final exam. Oral exams are not used to assess student progress. Frequent testing allows instructors to assess student progress in a consistent manner and provides students with feedback on their progress.
Make-Up Exams
There are no make-up exams for missed quizzes, tests, or midterms. Make-up exams are only given for missed finals. A student who for good cause is compelled to miss a final exam must formally notify the instructor in advance of the scheduled exam date. A copy of this notification must be presented to the registrar. The student will then be informed of an alternate exam date for a make-up final. All such students taking a make-up final must test on the same date.

A student who fails to take either the original or the make-up final will receive a 0 (zero) score and his/her final grade will be determined on the basis of prior work and tests completed in that semester.

Exam Scheduling and Final Grade Disclosure
Instructors will inform students of their final exam date at least two weeks in advance of the date. The final exam date must be at least one session earlier than the final day of classes. The final day of classes is reserved for review of the final exam (or assignment.) Instructors must also inform students of their final grade for the course on the final class day.

Textbooks
Instructors will inform students of the textbooks required for their courses at the start of each semester. All course work and tests, and subsequently grades, are based on textbook material.

Course or Schedule Adjustment
When feasible, changes in courses or schedules may be requested up until the second week of the semester. A service fee will be charged for all course or schedule adjustments. No course or schedule adjustments will be allowed after the third week of the semester.

Course Withdrawal
A student wishing to drop a course must formally notify the Institute within the first three weeks of the semester by completing a Withdrawal
Request form. Such students are considered to have officially withdrawn and may return and re-enroll in the course in a future semester.

A student who stops attending classes without formally withdrawing from classes will be considered to have failed the class for poor attendance and issued a 0 grade. In the event that such a student wishes to return in a future semester, there will be a processing fee for revising the status from “failed” to “withdrew” and allowing the student to repeat the course.

Course Drops
A student who withdraws after the third week of the semester, or who stops attending without formally withdrawing from classes, will be considered to have dropped the course. Any student who withdraws or is terminated during two consecutive semesters will be ineligible for readmission into the program.

Grade Weightings
All written quizzes, tests, exams, and/or student assignments must be completed in a timely manner, and all final grades without exception must be turned in by instructors before the last day of the semester.

Written Quizzes, Test, Exams, or Assignments ............. 50%
Punctuality, Attentiveness, Classroom Participation ...... 10%
Final Exam ......................................................... 40%

Grade Equivalents
95 – 100 .............................................................. Excellent
85 – 94 ................................................................. Very Good
75 – 84 ................................................................. Good
70 – 74 ................................................................. Passing
Below 70 ............................................................. Failed

Grade Disputes
If a student believes there is justification for disputing a grade, he/she must do so within one week of the grade’s posting by meeting with the registrar. A conference will then be scheduled with the Director, the student, and the instructor. Both the student and the instructor will be afforded the opportunity to express their views, and allowed to present
material (work, assignments, exams, etc.) to substantiate their positions. The Director will make a determination regarding the disputed grade within one week of the conference. The decision of the Director will be final.

**Report Cards**

Report Cards will reflect the course taken and grades received for the semester. Report Cards are *not* mailed to students, but may be picked up in person. Alternatively, grades may be requested by phone three weeks after the end of a given semester.

**ACADEMIC CALENDAR**

Mechanics Institute’s academic year consists of a fall and a spring semester, with a break between the Christmas and New Year holidays. Each semester is thirteen (13) weeks in duration. The fall semester begins the first Monday after Labor Day and ends around the second week in December. The spring semester begins the third Monday after New Year’s Day and ends around the third week in April.

Since the exact starting and ending dates of each semester will vary from year to year, applicants should see the catalog addendum for the specific year or speak with an Institute administrator. Enrollment applications are not accepted after the final date of registration, and no late registration will take place after the start of the new semester.

**Institute’s Hours of Operation**

From September to April, hours of operation are Monday through Thursday, from 1:00 pm to 9:00 pm, and Friday, from 10:00 am to 6:00 pm. From April to September, hours of operation are Monday through Thursday, from 10:00 am to 6:00 pm, and Friday, from 10:00 am to 6:00 pm. The Institute does not close over the summer.

**Class Schedules**

To accommodate the student work schedules, instruction is conducted throughout four different evening sessions. Each session meets for two
hours per evening, two days per week, for a total of thirteen (13) weeks as indicated below:

Monday and Wednesday from 5:00 pm to 7:00 pm, and 7:00 pm to 9:00 pm. Tuesday and Thursday from 5:00 pm to 7:00 pm, and 7:00 pm to 9:00 pm.

**Holidays Observed**
Mechanics Institute is closed during the following holidays on the dates they are officially observed during the Academic Year:

- New Year’s Day
- Martin Luther King Day
- Presidents’ Day
- Good Friday
- Memorial Day
- Independence Day
- Labor Day
- Columbus Day
- Veterans Day
- Thanksgiving Day
- Christmas Day

**STUDENT SERVICES**

**The Family Education Rights and Privacy Act of 1974**
In this day of concern over privacy in every form, the Mechanics Institute ensures the confidentiality of student educational records in accordance with the Family Education Rights and Privacy Act of 1974 (aka the *Buckley Amendment*).

In essence, the Buckley Amendment states that access to confidential information, beyond that required for normal business of the Mechanics Institute, may be granted only to the student. As stipulated by this Act, the only information that may be publicly released is directory information, which includes items such as name, class, college, major, and telephone number.

The institute may also disclose information from a student's educational records without a student's consent to either individuals or entities permitted such access under applicable federal and state law. Currently enrolled students must contact the Registrar to restrict release of directory information.
Non-directory information, such as grades or disciplinary records, will not be released to a third party without express written consent of the student.

Students have the right to review their own educational records for information and to determine accuracy. A photo I.D. or other equivalent documentation or personal recognition by the custodian of record will be required before access is granted.

**Official Transcripts**

Transcripts listing a student’s courses and grades, and bearing the seal of Mechanics Institute, are issued to employers, potential employers, and other educational / instructional institutions. Transcripts must be requested on business letterhead and accompanied by a signed release from the student or graduate.

Alternatively, students or graduates may complete and sign a Transcript Request Form available from the registrar, and provide the name and address of third party (business or school) to whom the transcript should be sent. Transcripts are not provided to students, nor to third parties lacking the student’s signed release. A $30 processing fee is required for each request.

**Student Identification Cards**

Identification cards are provided to students at the start of each semester and are valid only for the semester in which they are issued. The ID cards must be presented in order to enter the Institute’s premises. Students who lose or forget their ID cards must see the registrar to have them replaced in order to be allowed access to the classrooms. There is a $10 administrative fee to replace lost cards.

**Drafting Lockers**

Lockers for storing course-related supplies are available for the convenience of students on a first come-first served basis. Students using them do so at their own discretion as the Institute disclaims any responsibility for their security. Mechanics Institute is not responsible for loss of personal property.
Students acknowledge Mechanics Institute’s policy of removing locks and discarding the contents of lockers after the end of each semester and should therefore remove their lock and locker’s contents by the last day of classes.

STANDARDS OF CONDUCT

Termination of Enrollment
Mechanics Institute was established in 1858 to provide instruction in technical and building trades to qualified but under-served individuals who benefit from learning these skills that lead to gainful employment. Students are expected to conduct themselves as mature and responsible working professionals while on Institute premises. The Institute reserves the right to immediately terminate the enrollment of any student for any of the following, or similar, actions:

- Implicitly or explicitly threatening another student, an instructor, or other employee of the Mechanics Institute
- Cheating, stealing, plagiarizing, or similar fraudulent behavior
- Disrespectful, abusive, and disruptive behavior
- Defacing or damaging Institute property or equipment
- Using cell phones anywhere on the Institute premises
- Eating anywhere on the Institute premises
- Failing to comply with Institute policies or directives as communicated by administrative or instructional staff.

Harassment Policy
It is the policy of the Mechanics Institute to maintain a professional environment and a workplace that is free from harassment or intimidation of either a verbal or physical nature. This is not limited to sexual harassment, but includes any harassment based on age, race, national origin, color, handicap, veteran status, sexual preference, or religion.

Administrative staff, faculty, and students have the responsibility for adhering to acceptable standards of personal behavior and for ensuring
that others have the opportunity to carry out their work and assignments in a professional atmosphere, free from harassment.

Sexual advances and other verbal or physical conduct of a sexual or discriminatory nature are considered illegal harassment and will not be tolerated. Sexual harassment is defined as:

-- an expressed statement or implication that an employee, instructor, or student is expected to comply with sexual demands as a condition of employment or receipt of a satisfactory grade;

-- any instance where a sexual demand is used as the basis for business or employment decisions, or in student registrations or evaluations;

-- any occasion where an employee, instructor, or student finds that sexual demands, references, or the atmosphere regarding sex significantly interferes with his/her performance at work or in the Institute, or creates an unfriendly, threatening, or offensive work area or learning environment.

Any violation of the Harassment Policy will result in disciplinary actions, up to and including termination of enrollment or employment.

**Drug Awareness/Substance Abuse Policy**

In compliance with the Drug-Free Schools and Communities Amendment Act of 1989 (Public Law 101-226), Mechanics Institute, as a matter of policy, prohibits the manufacture and unlawful possession, use, or distribution of illicit drugs and alcohol by students on its property and at any school activity. Any violation of this policy will result in appropriate disciplinary actions, up to and including termination of enrollment. Where it is apparent that a violation of law has occurred, the appropriate law enforcement authorities will be notified.

**Cell Phones**

Mechanics Institute’s policies on disruptive behavior extend to the use of cellular phones that can disrupt instruction within the Institute’s environment. Such disruption may subject the student to dismissal.
Students are required to turn off their cell phones upon entering the building.

**Commencement Exercises**
Commencement exercises celebrating the motivations, efforts, and accomplishments of our graduates are held within the traditional and historic setting at the General Society’s Library, located on the ground floor of the building.

![Image of graduates in a library]

**Eligibility for Graduation**
Students are eligible for graduation when they have successfully:
- ✓ completed the attendance requirements of the program
- ✓ completed the course requirements of the program
- ✓ maintained a final grade of 70% or better in all courses, and
- ✓ satisfied all financial obligations to the Institute, including payment of the graduation fee.

Institute policies prevent the issuing of transcripts, report cards, and/or certificates of completion to any student who has not fully satisfied all
financial obligations, or who owes homework, assignments, books, or other materials to the Mechanics Institute or General Society. There is a $100 graduation fee to cover the costs associated with documenting records, grades, and certificates. Once all graduation requirements are met, the student will be eligible to receive his/her certificate of completion.

**Awards and Scholarships**

Since 1882 the Society has maintained scholarships for the benefit of students of Mechanics Institute. Among these are:

The **George E. Hoe** medal and scholarship, funded by this past president of the Society, are awarded to graduates who have demonstrated significant achievement during their enrollment at Mechanics Institute.

The **Albert A. Cuneo Scholarship Fund** is awarded to graduates who demonstrate excellence in their work and diligence in their attendance throughout their years of study at Mechanics Institute. This award provides funding for a course of study at a school of the student’s choosing.

The **Thomas S. DeNapoli Award**, sponsored by KND Licensed Electrical Contracting & Services Corp., is presented to one outstanding graduate from the Electrical Technology program.

The **MBA Scholarship Awards**, sponsored by the Mortgage Bankers Association of New York, is presented to one outstanding student from each program.

The **Alan Senzer Award**, sponsored by Alan Senzer, is presented to one outstanding graduate from the Construction Project Management program.

**Technical Book Awards**, funded by **Leon F. Munier** and **Frank E. Cass**, are presented to deserving HVAC and Plumbing graduates respectively.

The **American Society of Sanitary Engineering** also funds an annual award to one outstanding graduate from the Plumbing Technology program.
DISCLAIMERS

Course Schedules
Mechanics Institute makes every effort to schedule courses so that, a) introductory courses are available for beginning students, b) core courses are available for active students, and c) elective courses are available for those who desire them. Students should understand, however, that constraints with personnel and facilities availability may prevent the Institute from offering every one of our courses during every semester.

It is conceivable that a given semester’s course schedule may not accommodate the needs of every one of our students. Similarly, the Institute may, at its discretion, postpone or cancel specific courses for lack of enrollment or like circumstances.

Students whose outside responsibilities conflict with the course schedule are advised to explore all possible options before deciding to withdraw from a course.

Credential
The Mechanics Institute is an educational program of The General Society of Mechanics and Tradesmen. The Mechanics Institute’s certificate of completion is a professional credential awarded to students who successfully complete the courses required for a given program. The certificate has no degree equivalence and is not necessarily recognized by other degree-granting institutions. Among the institutions that selectively allow credit for a number of our courses are Empire State College, Baruch College, and New York City Technical College.

Policies and Procedures
The purpose of this catalog is to provide students of Mechanics Institute, as well as applicants to the school, with general information regarding the school’s policies and procedures. At its discretion, the school reserves the right to review these policies and procedures and change or modify them, from time to time, as it deems necessary.
Statement Regarding Apprenticeship Programs

Since 1858, Mechanics Institute has provided “privately endowed free evening instruction to assist respectable young men and women to improve themselves in their daily vocations.” Today, Mechanics Institute remains a tuition-free evening school, continuing to offer instruction in the technical phases of various building trades. However, Mechanics Institute does not provide technical training, directly or otherwise, for any given trade or any particular trade apprenticeship program. Any questions or clarifications in this regard should be addressed to the attention of the Director, Mechanics Institute, 20 West 44\textsuperscript{th} Street, New York, NY 10036.
Mechanics Institute offers tuition-free instruction to individuals who are employed in the building and construction trades and provides them with the technical knowledge necessary to advance in their respective fields. While Mechanics Institute is not a trade school, it does offer comprehensive instruction in a wide variety of subject areas related to the building and construction industry.

A multi-tiered curriculum effectively establishes Mechanics Institute as a unique educational facility where the learning needs of every applicant can be satisfied, if not in whole, at least in part. The Electrical Technology, HVAC Systems, and Plumbing Design disciplines that comprise our technical programs are expanded and updated on an ongoing basis to ensure their viability and real-world relevance of our program offerings.
ELECTRICAL TECHNOLOGY PROGRAM

The Electrical Technology program is a three-year discipline designed to provide students with a practical understanding of electrical work as it applies to the field of construction. The core courses for the first year of the program focus on Direct Current circuits, where students revisit the rudiments of electrical theory, including Kirchoff’s Law, Ohm’s Law, and the technical mathematics required for electrical design.

Subsequent courses provide a thorough exposure to alternating circuit theory, electrical motors, electronics, and cost estimating. The program is rounded out with rigorous course work in commercial and industrial wiring. Throughout the program, students are able to “personalize” their instruction by choosing elective courses that they find relevant to their current employment and future career objectives.

Who should enroll in the Electrical Technology program?

Individuals employed as electrician’s helpers, as well as those working in any of the diverse fields that rely on an integral understanding of electricity. Those working in these areas in a managerial or supervisory capacity will also benefit from the thorough understanding of electrical code and compliance issues provided by this program.

Please note: The chart below represents a sample course sequence and may not reflect the order in which actual courses are completed.

<table>
<thead>
<tr>
<th>Year</th>
<th>Semester</th>
<th>Code</th>
<th>Course Name</th>
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<tbody>
<tr>
<td>First</td>
<td>First</td>
<td>MA VOC</td>
<td>Vocational Mathematics</td>
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<tr>
<td></td>
<td></td>
<td>EL 101</td>
<td>Introduction to DC Circuits I</td>
</tr>
<tr>
<td>First</td>
<td>Second</td>
<td>MA TEC</td>
<td>Technical Mathematics</td>
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<tr>
<td></td>
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<td>EL 102</td>
<td>Introduction to DC Circuits II</td>
</tr>
<tr>
<td>Second</td>
<td>First</td>
<td>MA ELE</td>
<td>Electrical Mathematics</td>
</tr>
<tr>
<td></td>
<td></td>
<td>EL 201</td>
<td>Alternating Current Theory I</td>
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<tr>
<td>Second</td>
<td>Second</td>
<td>PH PRAC</td>
<td>Practical Physics</td>
</tr>
<tr>
<td></td>
<td></td>
<td>EL 202</td>
<td>Alternating Current Theory II</td>
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<tr>
<td>Third</td>
<td>First</td>
<td>EL CON</td>
<td>Electrical Motor Controls</td>
</tr>
<tr>
<td></td>
<td></td>
<td>EL 301</td>
<td>Commercial Wiring</td>
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<tr>
<td>Third</td>
<td>Second</td>
<td>PD 101</td>
<td>Professional Development</td>
</tr>
<tr>
<td></td>
<td></td>
<td>EL 302</td>
<td>Industrial Wiring</td>
</tr>
</tbody>
</table>
MA VOC Vocational Mathematics
This course is a prerequisite for students entering the Electrical Technology or HVAC Systems Technology programs. The educational objective of this course is to enable those employed in said trades to solve the problem that may arise in their daily work. The basics of arithmetic, the use of formulas, and the simple applications of algebra and geometry, form the basis of the work in this course.

EL 101 Introduction to DC Circuits I
The educational objective of this course is to introduce the student to the Fundamentals of Direct Current (DC) theory. Ohms Law and its applications are examined, and combinations are studied. 
Prerequisite: MA VOC – Vocational Mathematics

MA TEC Technical Mathematics
The educational objective of this course is to aid those who are interested in electrical mechanical and engineering work to solve the problems and use the formulas pertaining thereto. The course includes all the algebraic processes involved, with special attention given to solving all forms of equations, use of scientific notation, geometry, and trigonometry.

EL 102 Introduction to DC Circuits II
The educational objective of this course is to build upon the understanding of Direct Current (DC) theory presented in EL 101. The student will study the application of series, parallel and combination circuits. Topics such as Kirchoff’s Law, wire sizing, and magnetism are covered in detail.

MA ELE Electrical Mathematics
The educational objective of this course is to provide electrical students who have completed E2 with advanced formulas and problem-solving skills required in Industrial Electricity. The course builds on topics taught in Technical Math, and proceeds to cover the more advanced elements of scientific notation, geometry, and trigonometry.

EL 201 Alternating Current Theory I
The educational objective of this course is to introduce the student to the fundamentals of Alternating Current (AC) theory. Topics will include trigonometry for AC electricity, generation of alternating current, introduction to vectors, and circuit analysis with resistors, capacitors, and inductors.
Prerequisites: EL 102 – Introduction to DC Circuits II; MA ELE – Electrical Mathematics

PH PRAC Practical Physics
This course is a prerequisite for students entering the Electrical Technology or Plumbing Design programs. The educational objective of this course is to re-familiarize students with the principles of physics which govern the processes of their industries. Course topics include lectures and experiments in energy, pressure, heat, fluids, and motion.

EL 202 Alternating Current Theory II
The educational objective of this course is to build upon the understanding of the AC theory presented in EL 201. The course will cover the principles of series and parallel resonance and
filters, followed by a study of alternating current power, two- and three-phase systems, transformer connections, three-phase Wyes and Delta circuits, and power factor correction. Prerequisite: EL 201 – Alternating Current Theory I

**EL 301 Commercial Wiring**
The educational objective of this course is to introduce the student to commercial wiring. The course covers the fundamentals used in wiring modern commercial buildings for power, light and heat. Topics include computing building loads, switches and receptacles selection, conductor and branch circuit selection, feeder sizing, over-current protection, short circuit calculations, and electric service for buildings followed by the basics of building lighting, heating and cooling (HVAC) systems.

**PD 101 Professional Development**
This course is a requisite for all programs offered at Mechanics Institute. The educational objective of this course is to provide the student with the techniques, methods, and procedures necessary for seeking and acquiring new or better employment. Topics include identifying abilities, temperament, and assets, constructing a resume, researching employment, and understanding the interview process.

**EL 302 Industrial Wiring**
The educational objective of this course is to introduce the student to industrial wiring. The course builds upon the knowledge gained from the commercial wiring course and applies it to wiring of industrial buildings. Topics include electric service from the generator to the unit substation followed by topics on feeder systems, panel board sizing and selection, busway and, underground systems, grounding, lightning protection on through wiring of hazardous locations. Additional topics include sections on fiber optics and basic wiring and installation methods for motors and lighting systems as well as application of power factor correction for industrial facilities. Prerequisite: EL 301 – Commercial Wiring

### ELECTRICAL ELECTIVES

**EL BPR Blueprint Reading for Electricians**
The educational objective of this course is to introduce the electrical technology student to the skills of understanding and reading wiring-related blueprints and construction drawings, and to coordinate the information represented by each type of drawing.

**EL TRO Electronics for Electricians**
The educational objective of this course is to introduce the student to the fundamentals of transistor and solid state switching devices found in industrial applications. It will introduce concepts on control logic and power handling circuits. Prerequisites: EL 201 – Intermediate Industrial Electricity I; MA TEC – Technical Mathematics

**EL EST Electrical Estimating**
The educational objective of this course is to introduce the student to the fundamentals of estimating for working electricians. The course will cover the fundamentals used in the Layout of Electrical Drawings, Electrical Symbols, Types of Building Drawings, Electrical Wiring Diagrams,
Site Plans, and Electrical Specifications. At the completion of the course, the student will have a working understanding of Estimating Aids and Systematic Take-off, and a practical familiarity with Electrical Contracting and Estimating Procedures.

**EL COD Electrical Code Analysis**
The educational objective of this course is to explain NEC code changes in relation to installations, products, and equipment. New articles explore critical operations power systems, reinforced thermosetting resin conduit, control systems for permanent amusement attractions, and electrified truck parking space equipment. Residential AFCI protection is extended. Most far-reaching is the definition of neutral.

**EL REN Introduction to Renewable Energy**
The educational objective of this course is to provide students with an understanding of the fundamentals of renewable energy source and their applications. Solar, wind, and geothermal energy sources will be studied, as well as how they function and how they are utilized in real-world applications. Upon completion, students will be able to demonstrate basic knowledge of renewable energy sources and selection criteria. They will be able to perform calculations to determine suitability based on efficiency and costs.
H.V.A.C. SYSTEMS DESIGN PROGRAM

The HVAC Systems Design program is a three-year discipline designed to provide students with a practical understanding of heating, ventilation, and air conditioning concepts as they apply to the field of construction. The core courses for the first year of the program focus on fundamental refrigeration concepts, where students revisit the mechanical functions of condensers, evaporators, compressors, and expansion valves.

Subsequent courses provide a thorough exposure to heat load calculations, electric power supply, and psychometrics and humidification. The program is rounded out with rigorous course work in control systems and applications. Throughout the program, students are able to “personalize” their instruction by choosing elective courses that they find relevant to their current employment and future career objectives.

Who should enroll in the HVAC Systems Design program?

Individuals employed as HVAC mechanics, as well as engineers working in any of the diverse fields that rely on an integral understanding of heating, cooling, and boilers. Those working in the HVAC field in a managerial or supervisory capacity will also benefit from the thorough understanding of refrigeration theory provided by this program.

Please note: The chart below represents a sample course sequence and may not reflect the order in which actual courses are completed.

<table>
<thead>
<tr>
<th>Year</th>
<th>Semester</th>
<th>Code</th>
<th>Course Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>First</td>
<td>First</td>
<td>MA VOC</td>
<td>Vocational Mathematics</td>
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<tr>
<td></td>
<td></td>
<td>RF INT</td>
<td>Fundamentals of Refrigeration</td>
</tr>
<tr>
<td>First</td>
<td>Second</td>
<td>PH PRA</td>
<td>Practical Physics</td>
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<tr>
<td></td>
<td></td>
<td>RF HLC</td>
<td>Heat Load Calculations</td>
</tr>
<tr>
<td>Second</td>
<td>First</td>
<td>VC 101</td>
<td>Visual Communication</td>
</tr>
<tr>
<td></td>
<td></td>
<td>RF EPS</td>
<td>Electric Power Supply</td>
</tr>
<tr>
<td>Second</td>
<td>Second</td>
<td>RF PSY</td>
<td>Psychometrics &amp; Humidification</td>
</tr>
<tr>
<td></td>
<td></td>
<td>RF CYC</td>
<td>Refrigeration Cycle (w/Ph Charts)</td>
</tr>
<tr>
<td>Third</td>
<td>First</td>
<td>RF DFE</td>
<td>Ducts, Fans, &amp; HVAC Equipment</td>
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<tr>
<td></td>
<td></td>
<td>RF CEN</td>
<td>Centrifugal &amp; Absorption Machines</td>
</tr>
<tr>
<td></td>
<td>Second</td>
<td>PD 101</td>
<td>Professional Development</td>
</tr>
<tr>
<td></td>
<td></td>
<td>RF SYS</td>
<td>Control Systems &amp; Applications</td>
</tr>
</tbody>
</table>
MA VOC Vocational Mathematics
This course is a prerequisite for students entering the Electrical Technology or HVAC Systems Technology programs. The educational objective of this course is to enable those employed in said trades to solve the problem that may arise in their daily work. The basics of arithmetic, the use of formulas, and the simple applications of algebra and geometry, form the basis of the work in this course.

RF INT Fundamentals of Refrigeration
The educational objective of this course is to provide the student with a detailed understanding of refrigeration components. Students will be given a working familiarity with condensers, evaporators, compressors, and expansion valves.

PH PRAC Practical Physics
This course is a prerequisite for students entering the Electrical Technology, Plumbing Design, or HVAC Systems programs. The educational objective of this course is to re-familiarize students with the principles of physics which govern the processes of their industries. Course topics include lectures and experiments in energy, pressure, heat, fluids, and motion.

RF HLC Heat Load Calculations
The educational objective of this course is to build upon the fundamentals covered in RF 101. Instructional topics include fundamentals of thermodynamics heat transfer, heat loss and heat gain calculation, ventilation, and infiltration.

VC 101 Visual Communication
This course is a requisite for students entering the Plumbing Technology and HVAC Systems programs. The educational objective of this course is to provide students with a working familiarity with drafting tools and their use. They will learn the use of equipment such as T-squares, triangles, scales, and compasses. Students will enhance their understanding of their trade by assignments in rendering art, plans, and visual concepts that communicate the architect’s or contractor’s perception.

RF EPS Electric Power Supply for Refrigeration Systems
The educational objective of this course is to provide the student with a detailed understanding of the types of utility electric supply, electric motors, and basic electric control circuits that are used in refrigeration systems.

RF PSY Psychometrics and Humidification
The educational objective of this course is to introduce the student to the properties of air changes in volume and temperatures, and gas laws. Students will be given a working familiarity with psychometric charts, which are used extensively to study humidification and washers.

RF CYC Refrigeration Cycle with pH Charts
The educational objective of this course is to provide the student with a detailed understanding of the refrigeration cycle. Students will work extensively with the Pressure Enthalpy (pH) Chart and saturated and superheated tables of refrigerants, refrigerant pipe sizing, including single and double risers.
RF DFE Ducts & Fans, and HVAC Equipment
The educational objective of this course is to provide the student with a detailed understanding of the fundamentals of HVAC air distribution systems including, fan laws, fan curves and pressure losses. The student will be required to design air distribution systems using the equal friction and velocity method. This course will also include review and analysis of an existing air distribution system of a high-rise building.

RF CEN Centrifugal and Absorption Machines
The educational objective of this course is to introduce the student to the components of centrifugal systems and capacity controls. Students will be given a working familiarity with the fundamentals of absorption systems including absorber, absorbent, solutions, and operating techniques.

PD 101 Professional Development
This course is a prerequisite for all programs offered at Mechanics Institute. The educational objective of this course is to provide the student with the techniques, methods, and procedures necessary for seeking and acquiring new or better employment within his/her profession. Tasks and topics include identifying desires, abilities, temperament, and assets, constructing a resume, researching employment, and understanding the interview process.

RF SYS Control Systems & Applications for HVAC
The educational objective of this course is to introduce the student to the control theory including control loop components and configurations. Students will be given a working familiarity with the operational details of control devices, and applications including mixing dampers, heating and cooling strategies.

HVAC Electives

RF BPR Blueprint Reading for HVAC
The educational objective of this course is to introduce the HVAC student to the skills of understanding and reading heating and air conditioning-related blueprints and construction drawings, and to coordinate the information represented by each type of drawing.

RF HYD HVAC Hydronics
The educational objective of this course is to provide the student with a detailed understanding of the fundamentals of HVAC piping, pumps, and pump curves. This course will also include the review of an existing piping distribution system of a high-rise building.

RF LPB Low Pressure Boilers
The educational objective of this course is to provide the student with a detailed understanding of boiler operation principles, operating procedures, and operating safety. Other instructional topics will include feedwater systems, steam systems, and information pertinent to boiler operation licensing.
PLUMBING DESIGN PROGRAM

The Plumbing Design program is a three-year discipline intended to provide students with a practical understanding of the NYC Plumbing Code, advanced plumbing theory, and plumbing design concepts as they apply to the field of construction. The core courses for the first year of the program focus on NYC code compliance, where the students are exposed to technical requirements mandated by the Department of Buildings.

Subsequent courses provide a thorough exposure to plumbing estimating, technical drafting, and blueprint reading. The program is rounded out with rigorous course work in plumbing design. Throughout the program, students are able to “personalize” their instruction by choosing elective courses that they find relevant to their current employment and future career objectives.

Who should enroll in the Plumbing Design program?

Individuals employed as plumbers’ helpers, as well as those working in any of the diverse fields that rely on an integral understanding of plumbing, heating, and sanitary systems. Those working in the plumbing field in a managerial or supervisory capacity will also benefit from the thorough understanding of plumbing theory provided by this program.

Please note: The chart below represents a sample course sequence and may not reflect the order in which actual courses are completed.

<table>
<thead>
<tr>
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<tbody>
<tr>
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<td>First</td>
<td>MA VOC</td>
<td>Vocational Mathematics</td>
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<td></td>
<td></td>
<td>PL 101</td>
<td>Introduction to NYC Plumbing Code I</td>
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<tr>
<td></td>
<td>Second</td>
<td>VC 101</td>
<td>Visual Communication</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PL 102</td>
<td>Intro to NYC Plumbing Code II</td>
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<tr>
<td>Second</td>
<td>First</td>
<td>PH PRAC</td>
<td>Practical Physics</td>
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<td></td>
<td></td>
<td>PL 201</td>
<td>Plumbing Theory I</td>
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<td>Second</td>
<td>PL 202</td>
<td>Plumbing Theory II</td>
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<tr>
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<td></td>
<td>PL BPR</td>
<td>Blueprint Reading for Plumbers</td>
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<tr>
<td>Third</td>
<td>First</td>
<td>PL 301</td>
<td>Plumbing Design I</td>
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<td>PD 101</td>
<td>Professional Development</td>
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<td>Third</td>
<td>Second</td>
<td>PL 302</td>
<td>Plumbing Design II</td>
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<tr>
<td></td>
<td></td>
<td>CD 101</td>
<td>Intro to AutoCAD</td>
</tr>
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</table>
MA VOC Vocational Mathematics
This course is a prerequisite for students entering the Electrical Technology or HVAC Systems Technology programs. The educational objective of this course is to enable those employed in said trades to solve the problems that may arise in their daily work. The basics of arithmetic, the use of formulas, and the simple applications of algebra and geometry, form the basis of the work in this course.
Co-requisite: PL 101 – Introduction to NYC Plumbing Code

PL 101 Introduction to NYC Plumbing Code I
The course covers the fundamentals of sanitary and wastewater drainage and vent systems, domestic hot and cold water systems and natural gas systems. The students will be introduced to drafting procedures as applied to the preparation of plumbing floor plans and elevation drawings as a means of understanding and reading contract documents and shop drawings. The course includes an overview of the Plumbing Code with respect to location and content of the various disciplinary requirements.
Co-requisite: MA VOC – Vocational Mathematics, or VC 101 Visual Communication

VC 101 Visual Communication
This course is a requisite for students entering the Plumbing Technology and HVAC Systems programs. The educational objective of this course is to provide students with a working familiarity with drafting tools and their use. They will learn the use of equipment such as T-squares, triangles, scales, and compasses. Students will enhance their understanding of their trade by assignments in rendering art, plans, and visual concepts that communicate the architect’s or contractor’s perception.
Co-requisite: PL 102 – Introduction to NYC Plumbing Code II

PL 102 Introduction to NYC Plumbing Code II
This course continues with subjects on the fundamentals of the plumbing systems. The students will be required to prepare plumbing floor plans and elevation drawings of a low rise building in order to visualize and understand the various components of the systems.
Prerequisite: PL 101 – Introduction to NYC Plumbing Code I
VC PL1 Visual Communication

PH PRAC Practical Physics
This course is a prerequisite for students entering the Electrical Technology or Plumbing Design Programs. The educational objective of this course is to re-familiarize students with the principles of physics which govern the processes of their industries. Course topics include lectures and experiments in energy, pressure, heat, fluids, and motion.

PL 201 Plumbing Theory I
This course introduces the student to the design of the plumbing and fire standpipe systems, including drafting layouts, application of the New York City Plumbing Code, with special emphasis on sizing, system perimeters and regulatory requirements, and lectures on the basic principles of hydraulics as applied to the flow of liquids and gases in a piping system.
Prerequisite: PL 102 – Introduction to NYC Plumbing Code II
PL 202 Plumbing Theory II
This course is a continuation of second year design and layout of plumbing and fire standpipe systems. The course will examine more detail in the design of high-rise multi-zone building with special emphasis on equipment selection for fire pumps, booster pumps, water heaters, and storm water drainage system design including site and roof retention and detention.
Prerequisite: PL 201 – Plumbing Theory I

PL BPR Blueprint Reading for Plumbers (alternatively students may take AR BPR, below.)
The educational objective of this course is to introduce the plumbing student to the skills of understanding and reading plumbing-related blueprints and construction drawings, and to coordinate the information represented by each type of drawing.

PL 301 Plumbing Design I
An advanced third year in design of plumbing and fire standpipe systems, including shop-drawing layouts with slot and sleeve placement, and location and elevations with respect to benchmarks and building axis lines. The course will cover pressure ratings concerning the gravity and pneumatic pressure tanks for domestic water and fire protection systems.
Prerequisite: PL 202 – Plumbing Theory II

PD 101 Professional Development
This course is a prerequisite for all programs offered at Mechanics Institute. The educational objective of this course is to provide the student with the techniques, methods, and procedures necessary for seeking and acquiring new or better employment within his/her profession. Tasks and topics include identifying desires, abilities, temperament, and assets, constructing a resume, researching employment, and understanding the interview process.

PL 302 Plumbing Design II
This course continues with the focus on plumbing layout and fire protection systems. The course will cover the minimum code requirements for the design of low and high rise buildings and will explore and compare the cost implications of designing plumbing systems in excess of such minimum requirements, and the potential for any long term savings as a result of the implementation of more stringent construction procedures with respect to such systems.
Prerequisite: PL 301 – Plumbing Design I

CD 101 Introduction to AutoCAD
The educational objective of this course is to teach the student with a working knowledge of computers the fundamentals of Computer Aided Design (CAD), utilizing AutoCAD. The course focuses on the principles and conventions of CAD as used by the drafting/engineering professional, including Drawing Tools, Polylines, Layers, Text and Dimensioning.

PLUMBING ELECTIVES

PL EST Plumbing Estimating
This course teaches plan interpretation and trade coordination, basic fundamentals for estimating. Take off, pricing and labor items. This course is also recommended for Graduates of our Plumbing Program and others.
Our multi-tiered curriculum has effectively established Mechanics Institute as a unique educational facility where the learning needs of every applicant are satisfied, if not in whole, at least in part. Comprehensive programs in Project Management, Historic Preservation, Construction Documents & Design (including BIM), and Facilities Management offer business owners, general contractors, preservationists, and commercial property managers the necessary state-of-the-art instruction in areas relevant to growing and enhancing their enterprises.
CONSTRUCTION PROJECT MANAGEMENT

Project Management is the discipline of organizing and managing resources in such a way that these resources deliver all the work required to complete a project within defined scope, quality, time, and cost constraints. As a discipline, Project Management developed from different fields of application including architecture, construction, and engineering. The forefather of project management is considered to be Henry Gantt, who is acknowledged as the father of planning and control techniques.

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<tr>
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<tbody>
<tr>
<td>First</td>
<td>First</td>
<td>PM INT</td>
<td>Construction Administration</td>
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<td>PM MDS</td>
<td>Construction Methods &amp; Materials</td>
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<tr>
<td>First</td>
<td>Second</td>
<td>PM BPR</td>
<td>Blueprint Reading</td>
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<td></td>
<td></td>
<td>PM EST</td>
<td>Construction Cost Estimating</td>
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<tr>
<td>Second</td>
<td>First</td>
<td>PM SUS</td>
<td>Sustainable Architecture</td>
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<td>PM CNT</td>
<td>Contract Administration</td>
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<td>Second</td>
<td>Second</td>
<td>PM SCH</td>
<td>Project Scheduling</td>
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<td></td>
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<td>PM PHO</td>
<td>Architectural Photography</td>
</tr>
</tbody>
</table>

Please note: The above chart represents a sample course sequence and may not reflect the order in which actual courses are offered or completed.

**PM INT Construction Administration**
The educational objective of this survey course is to provide the student with an overview of the skills required in the field of construction project management. The course includes a preliminary exposure to the practices used by the industry in such areas as construction technology, plan reading, cost estimating, project scheduling, and contract administration.

**PM MDS Construction Methods and Materials**
The educational objective of this course is to introduce the student to the various materials used in construction, along with the methods in which they are used. The course includes a review of the complete job cycle from preliminary design and budget, through estimating, purchasing, scheduling, project management, to final competitive details.

**PM BPR Blueprint Reading**
The educational objective of this course is to introduce the student to the skills of understanding and reading architectural, structural, mechanical and electrical construction drawings, and to coordinate the information represented by each type of drawing.
PM EST Estimating For Building Construction
The educational objective of this course is to introduce the student to estimating for the general construction trades. Major trades covered in class work are excavating, concrete, masonry, carpentry and plastering. Construction Procedures and trade practices are reviewed. Methods of taking off quantities from Construction Document Drawing and of organizing data are described. Typical problems and homework are analyzed in class. The general approach emphasizes the logical separation of material quantities and work operation, and is applicable to all construction trades.

PM SUS Sustainability
The educational objective of this course is to provide the student with a detailed overview of sustainable, or “green”, architecture, allowing him to understand the roles of the designer, builder, and manager in the process. The course balances the theoretical with the practical and presents its topics in a manner that is equally relevant to architects, engineers, interior designers, and construction protect managers.

PM CNT Contract Documents
The educational objective of this course is to introduce the student to an understanding of the Nature of Contracts. Course includes lectures on the bidding for and negotiating of construction contracts, contract administration, as well as handling claims and disputes, changes in the work of contracts, and completion of contracts and payments.

PM PHO Architectural Photography
The educational objective of this course is to provide the student with the techniques, methods, and procedures used in photographing building interiors and exteriors. Upon satisfactory completion of this course, the student will be able to interact with professional photographers on behalf of his/her employer. The student will further be able to effectively use photography as a tool to document compliance, document liability, and archive construction progress or completed work.

PM SCH Project Scheduling
The educational objective of this course is to introduce the student to the scheduling aspects of a construction project. The student will learn how to create the initial timing schedule. Topics include scheduling of resources, costs, and personnel/labor. Using manual calculations to develop the schedule will provide the student with background and analysis prior to devoting time and effort to the actual scheduling.

PROJECT MANAGEMENT ELECTIVES

PM EST II Advanced Cost Estimating:
The educational objective of the Advanced Cost Estimating course is to student’s ability in estimating construction costs. Major trades covered in class work are Basic Concepts of Labor, Material and Equipment Cost Calculations, Plant Precast Structural Concrete, Shop-fabricated Structural Wood, Architectural Wood Casework. This course offers students the opportunity to learn quantity take-off procedures and pricing methodologies. Prerequisite: PM EST Estimating For Building Construction
**PM SPL Introduction to Space Planning**
The educational objective of this course is to provide students with an introduction to the world of space planning utilizing the basics for creating workspaces in the corporate and commercial fields. The lectures and assignments will also introduce the student to interior space planning and the basic requirements for drawing and reading space and partition plans.

**PM COM Project Management Communication**
With shorter production cycles and the demand for projects being faster, cheaper, and better, the need for project communications tools has increased. Developed with the project manager and project team in mind, this course provides the best practices, tips, tricks, and tools for successful project communications and planning. It is broken down into various project communications tools to support the execution and completion of a project. Illustrations of charts, graphs and tables are all available and ready to use on projects immediately.

**PM GRA Construction Graphics**
The educational objective of this course is to present how construction drawings are used to implement the construction process. Students will gain an overview of construction drawing basics as well as thorough coverage of standard construction sequence, including site work, foundations, structural systems, and interior work and finishes.

**PM SUP Building Construction Superintendence**
The educational objective of this course is to introduce the student to the superintending of general construction for small and large operations. Instructional topics include staff organization and preparatory arrangements, it then treats in detail: excavations, foundations, wood, concrete and steel constructions brick and stone masonry, plumbing, heating and electrical work. Course includes discussions on material, handling equipment, construction schedules and more.

**PM IBC International Building Code**
The educational objective of this course is to provide the student with a fundamental understanding of the 2000 International Building Code of New York City. Students will learn how the code was developed and how it is used, as well as how it applies to design and construction. Upon course completion, students will have an understanding of the relationship between codes and practice in areas of design and construction.

**CD 201 Intermediate AutoCAD**
The educational objective of this course is to assist the student who has successfully completed C2 to acquire intermediate skills in drafting, and/or CAD. The course will cover all areas required for the student to be able to produce professional quality two-dimensional drawings. Topic covered included Drawing Setup, Customizing AutoCAD, Scripts, Menus, Diesel, and Auto LISP Basics.
HISTORIC PRESERVATION

Historic Preservation is the act of maintaining and repairing existing historic structures (and materials) and the retention of a property's form as it has evolved over time. When considering the United States Department of Interior's interpretation, "Preservation calls for the existing form, materials, features, and detailing of a property to be retained and preserved. This may include preliminary measures to protect and stabilize it prior to undertaking other work – or protection and stabilization may be an end in itself, for example, in an archeological project".

Historic Preservation is a vital tool in the effort to save historic buildings and locales. It helps maintain a community’s historical roots and provides various educational opportunities.

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<th>Year</th>
<th>Semester</th>
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<th>Course Name</th>
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<td>First</td>
<td>First</td>
<td>HP INT</td>
<td>Introduction to Historic Preservation</td>
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<td>HP VSL</td>
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<td>HP HAA</td>
<td>Historical American Architecture</td>
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<td>HP ARC</td>
<td>Architecture Aspects of Building Typology</td>
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<td>Second</td>
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<td>HP CON</td>
<td>Construction Aspects of Building Typology</td>
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<td>HP RES</td>
<td>Restoration Techniques</td>
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<td>HP GIS</td>
<td>Geographic Information Systems</td>
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<td>HP PHO</td>
<td>Architectural Photography</td>
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</tbody>
</table>

Please note: The above chart represents a sample course sequence and may not reflect the order in which actual courses are offered or completed.

**HP INT Introduction to Historic Preservation**
The educational objective of this course is to introduce the student to the basic principles governing the field of historic preservation in the U.S. Course information will include architectural history and vocabulary, preservation history and policy, methods and techniques of historic preservation, and case studies of New York City buildings and landmarks. By the completion of the course, students will be able to create their own framework with which to make balanced judgments/judicial decisions about their own preservation projects.

**HP VSL Visual Literacy**
The educational objective of this course is to provide the Historic Preservation student with a hands-on understanding of the process of creation. Class lectures and work assignments will allow the student to effectively communicate on paper the tangible and abstract concepts related to the preservation of historic structures. Upon satisfactory completion of this course, the
student will be familiar with the basic cognitive processes that drive visual perception and expression, incorporating observation, memory, and rendering into a creative whole.

**HP HAA Historic American Architecture**
The educational objective of this course is to introduce the student to the American architectural archetypes and architectural styles specific to New York City. Course information will include architectural history and vocabulary and history of a number of New York City landmarks. Course assignments will include a presentation about architectural style(s), an informational handout, and a scholarly paper. By the completion of the course, students will be able to identify common American architectural styles and use that information in evaluating historic significance of a specific resource, create a presentation, and develop an informational handout.

**HP ARC Architecture Aspects of Building Typology**
The educational objective of this course is to familiarize the student with the variety of building types that exist in New York City. Course information will provide students with an understanding of development by both style and function (style being a matter of architectural history while function being a matter of social history.) By the completion of the course, students will be able to identify common building types and use that information in evaluating the historic significance of a specific structures.

**HP CON Construction Aspects of Building Typology**
The educational objective of this course is to familiarize the student with the construction technology used in the building of historical structures. The material presented will enable architects, engineers, and preservationists to analyze historic building components such as cast iron columns, wrought iron beams, load-bearing masonry, and wood structural systems. By the completion of the course, students will be able to assess a building’s original design by means of visual inspection, analysis criteria, and comparative data regarding structural shapes.

**HP RES Restoration Techniques**
The educational objective of this course is to introduce the student to the techniques used in the restoration of materials, including wood, masonry, ceramics, plaster, paint, glass, and metal. The course will examine technological, social, and environmental influences on how building materials deteriorate, and how they can be properly restored.

**HP GIS Introduction to Geographic Information Systems**
The educational objective of this course is to give the student an overview of how Geographic Information Systems (GIS) are used for the mapping – and retrieving – of spatial information. Major topics covered in class work include basic introduction to the use of software, concepts of information gathering and mapping, and using GIS to generate information about a specified area.

**HP PHO Architectural Photography**
The educational objective of this course is to provide the student with the techniques, methods, and procedures used in photographing building interiors and exteriors. Upon satisfactory completion of this course, the student will further be able to effectively use photography as a tool to document compliance, document liability, and archive construction progress or completed work.
VIRTUAL DESIGN & CONSTRUCTION

The Construction Documents & Design program is a two-year discipline intended to provide the student with a practical understanding of the drafting methods and applications that are used in the field of construction. Core courses focus on the rudiments of conceptualizing and drafting, as the student learns the principles for putting designs on paper and giving expression to concept.

Subsequent courses teach the practical aspects of computer-assisted design, or AutoCAD, while exposing the student to the construction and interpretation of blueprints from an industry-wide perspective. Throughout the program, students are able to “personalize” their instruction by choosing elective courses that they find relevant to their current employment and future career objectives.

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<td>First</td>
<td>CD CAD1</td>
<td>Introduction to CAD Applications</td>
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<td>First</td>
<td>VSL</td>
<td>Visual Literacy</td>
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<td>Second</td>
<td>CD CAD 2</td>
<td>Intermediate CAD Applications</td>
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<td>Second</td>
<td>DWG</td>
<td>Principles of Manual Drafting</td>
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<td>CAD 3</td>
<td>Advanced CAD Applications</td>
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<td>SPL</td>
<td>Space Planning</td>
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<td>BPR</td>
<td>Blueprint Reading</td>
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<td>Second</td>
<td>PHO</td>
<td>Architectural Photography</td>
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</table>

Please note: The above chart represents a sample course sequence and may not reflect the order in which actual courses are offered or completed.

**CD CAD 1 Introduction to CAD**
The educational objective of this course is to teach the student with a working knowledge of computers the fundamentals of Computer-Assisted Design (CAD), utilizing AutoCAD. The course focuses on the principles and conventions of CAD as used by the drafting/engineering professional, including Drawing Tools, Poly-lines, Layers, Text, and Dimensioning.

**CD VSL Visual Literacy**
The educational objective of this course is to provide the student with a hands-on understanding of the process of creation. Class sessions and work assignments allow the student to express on paper the tangible and abstract concepts related to the built environment. Upon satisfactory completion of this course, the student will be familiar with the basic processes that drive visual perception and expression, incorporating observation, memory, and rendering into a creative whole.
CD CAD 2 Intermediate CAD Applications
The educational objective of this course is to assist the student who has successfully completed CD 1 in acquiring intermediate skills in CAD. The course will cover all areas required for the student to produce professional quality two-dimensional drawings. Topics covered include Drawing Setup, Customizing AutoCAD, Scripts, Menus, Diesel, and Auto LISP Basics.

CD DWG Principles of Manual Drafting
The educational objective of this course is to introduce students to the fundamental principles of drafting. The student will acquire a practical understanding of manual drafting through the use of assignments in rendering art, plans, and visual concepts that communicate the designer’s perception. Emphasis is placed on the quality of the line work, lettering, and scale accuracy.

CD CAD 3 Advanced CAD Applications
The educational objective of this course is to provide advanced instruction to the student who has successfully completed CD 02 and a requisite course in drafting (or equivalent work experience). This course includes three-dimensional drawing, advanced dimensioning, data & image exchange, shading, rendering and solid modeling.

CD SPL Introduction to Facilities Space Planning
The educational objective of this course is to provide students with an introduction to the world of space planning utilizing the basics for creating workspaces in the corporate and commercial fields. The lectures and assignments will also introduce the student to interior space planning and the basic requirements for drawing and reading space and partition plans.

CD BPR Blueprint Reading
The educational objective of this course is to introduce the student to the skills of understanding and reading architectural, structural, mechanical and electrical construction drawings, and to coordinate the information represented by each type of drawing.

CD PHO Architectural Photography
The educational objective of this course is to provide the student with the techniques, methods, and procedures used in photographing building interiors and exteriors. Upon satisfactory completion of this course, the student will be able to interact with professional photographers on behalf of his/her employer. The student will further be able to effectively use photography as a tool to document compliance, document liability, and archive construction progress or completed work.

Intro to Building Information Modeling / CD BIM
A fall program is being planned and developed to introduce students to Building Information Modeling (BIM) – the industry’s state-of-the-art imaging program. This new course will expose the student to the various existing BIM platforms, what they do, and how they interact with a construction project. Please inquire with a school administrator for further information.
FACILITIES MANAGEMENT

Facilities management is the supervision of buildings and services. The services are sometimes considered to be divided into "hard services" and "soft services." Hard services include such things as ensuring that a building's air conditioning is operating efficiently, reliably, safely and legally. Soft service includes such things as ensuring that the building is cleaned properly and regularly or monitoring the performance of contractors (e.g. builders, electricians). The term "facility management" is similar to "property management" but is generally applied to larger and/or commercial properties where the management and operation is more complex.

Facilities management may range from the small scale (e.g. single small building custodial services) to the large scale or even on an international scale, as in the provision of global service to a multinational corporation. It is the role of facility manager to ensure that everything is available and operating properly for building occupants to do their work. The facility manager generally has the most influence upon the quality of life within a facility.

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<tr>
<td>First</td>
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<td>FM INT</td>
<td>Intro to Facility Management</td>
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<td>FM</td>
<td>Building Typology and Architecture</td>
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<td>Second</td>
<td>FM BPR</td>
<td>Construction Drawings</td>
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<td>FM MDS</td>
<td>Construction Technology &amp; Methods</td>
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<td>First</td>
<td>FM CNT</td>
<td>Contract Administration</td>
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<td>FM BSS</td>
<td>Security in Building Design</td>
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<td>Second</td>
<td>FM SCH</td>
<td>Project Scheduling</td>
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<td>FM SPL</td>
<td>Space Planning</td>
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</table>

Please note: The above chart represents a sample course sequence and may not reflect the order in which actual courses are offered or completed.

FM INT Intro to Facility Management
The educational objective of the Facilities Management course is to provide the student with the techniques, methods, and procedures used to effectively manage facilities-related projects. The course is intended for managers new to Facilities Management or those looking to broaden their understanding of professional FM practice. The course will provide best practices knowledge and guidance on how to apply ideas effectively across a range of different organizations.
FM Building Typology and Architecture
The educational objective of this course is to familiarize the student with the variety of building types that exist in NYC. It will provide students with an understanding of development by both style and function. By the completion of the course, students will be able to identify common building types and use that information in evaluating the significance of a specific structure.

FM MDS Construction Methods and Technology
The educational objective of this course is to introduce the student to the various materials used in construction, along with the methods in which they are used. The course includes a review of the complete job cycle from preliminary design and budget, through estimating, purchasing, scheduling, project management, to final competitive details.

FM BPR Construction Drawings
The educational objective of this course is to introduce the student to the skills of understanding and reading architectural, structural, mechanical and electrical construction drawings, and to coordinate the information represented by each type of drawing.

FM EST Construction Cost Estimating
The educational objective of this course is to introduce the student to estimating for the general construction trades. Major trades covered in class work are excavating, concrete, masonry, carpentry and plastering. Methods of taking off quantities from Construction Document Drawing and of organizing data are described.

FM CNT Contract Administration
The educational objective of this course is to introduce the student to an understanding of the Nature of Contracts. Course includes lectures on the bidding for and negotiating of construction contracts, contract administration, as well as handling claims and disputes, changes in the work of contracts, and completion of contracts and payments.

FM Security in Building Design
The educational objective of this course is to introduce the student to site security in building design. Key areas covered are Crime Prevention through Environmental Design, threat analysis, design issues, technology and materials, emergency planning, and an overview of how these principles are applied in diverse settings ranging from governmental buildings to healthcare facilities.

FM SCH Project Scheduling
The educational objective of this course is to introduce the student to the scheduling aspects of a construction project. The student will learn how to create the initial timing schedule. Topics include scheduling of resources, costs, and personnel/labor. Using manual calculations to develop the schedule will provide the student with background and analysis prior to devoting time and effort to the actual scheduling.

FM SPL Intro to Space Planning
The educational objective of this course is to provide students with an introduction to the world of space planning utilizing the basics for creating workspaces in the corporate and commercial fields. The lectures and assignments will also introduce the student to interior space planning and the basic requirements for drawing and reading space and partition plans.
CONTINUING ED COURSES

Mechanics Institute welcomes applicants interested in pursuing technical instruction for personal enrichment. Such applicants, who may not be interested in committing to the longer term requirements of our Technical or Professional programs, may enroll in any elective course and most introductory technical core course. (Note: Not every course listed in the catalog is offered every semester, so applicants should check with the Institute.)
COMPUTER-ASSISTED DRAFTING (CAD) and BUILDING INFORMATION MODELING (BIM)

Computer-assisted design, or CAD, is the use of a wide range of computer-based tools that assist engineers, architects, and other design professionals in their design activities. It is the main geometry authoring tool within the Product Lifecycle Management process and involves both software and sometimes special-purpose hardware.

CAD originally meant Computer-Aided Drafting because in the early days CAD was really a replacement for the traditional drafting board. Now, CAD usually means Computer Aided Design to reflect the fact that modern CAD tools do much more than just drafting.

CD 101 Introduction to AutoCAD
The educational objective of this course is to teach the student with a working knowledge of computers the fundamentals of Computer Aided Design (CAD), utilizing AutoCAD. The course focuses on the principles and conventions of CAD as used by the drafting/engineering professional, including Drawing Tools, Polyline, Layers, Text and Dimensioning.

CD 201 Intermediate AutoCAD
The educational objective of this course is to assist the student who has successfully completed CD 101 to acquire intermediate skills in drafting, and/or CAD. The course will cover all areas required for the student to be able to produce professional quality two-dimensional drawings. Topic covered included Drawing setup, Customizing AutoCAD, Scripts, Menus, Diesel, and Auto LISP Basics.

CD 301 Advanced AutoCAD
The educational objective of this course is to provide advanced instruction to the student who has successfully completed CD 201 and a requisite course in drafting (or equivalent work experience). This course includes three-dimensional drawing, advanced dimensioning, data & image exchange, shading, rendering and solid modeling.

CD BIM Intro to Building Information Modeling
A fall program is being developed to introduce the student who is conversant in CAD to BIM – the industry’s state-of-the-art imaging program. This new course will expose the student to the various existing BIM platforms, what they do, and how they can interact with a building project. Please refer to our BIM pamphlet for further information.

Other Advanced CAD and BIM courses are also offered with specific relevance, focus, and assignments for the Electrical, HVAC, and Plumbing trades. Interested applicants should discuss the availability of these courses with an Institute representative.
PROFESSIONAL DEVELOPMENT

PD 101 Professional Development
This course is a prerequisite for all programs offered at Mechanics Institute. The educational objective of this course is to provide the student with the techniques, methods, and procedures necessary for seeking and acquiring new or better employment within his/her profession. Tasks and topics include identifying desires, abilities, temperament, and assets, constructing a resume, researching employment, and understanding the interview process.

PBD 201 Professional Business Development
The educational objective of the Professional Business Development course is to provide the student with the ability to accurately assess his/her role in the workplace in a manner that will markedly enhance his personal success along with the success of his/her business. The course explores the elements that support and advance business growth, and explains the use of marketing, networking, and social media from the perspective of modern enterprise. By the completion of the course, the student will have a practical understanding of marketing trends and will possess a working familiarity of how to leverage business cards, “elevator conversations,” websites, and other components of contemporary business.

PHOTOGRAPHY

PHO AR Architectural Photography
The educational objective of this course is to provide the student with the techniques, methods, and procedures used in photographing building interiors and exteriors. Upon satisfactory completion of this course, the student will be able to interact with professional photographers on behalf of his/her employer. The student will further be able to effectively use photography as a tool to document compliance, document liability, and archive construction progress or completed work.

PHO RAE Recording Architectural Elements
The educational objective of the Recording Architectural Elements course is to provide the student with the ability to identify, analyze, and capture the recurrent elements that appear in architectural facades. The course is conducted in three related but distinct segments as the student is tasked to explore the elements of color, texture, and pattern as used in construction design. By the completion of the course, the student will have developed a detailed appreciation of how color, texture, and pattern are utilized and design elements, as well as being skilled in recording these through the medium of digital photography.

PHO CD Capturing the Ethnic Environment
The educational objective of the Capturing Ethnic Environments course is to provide the student with the opportunity to explore the various ethnic enclaves that make up New York City, and the ability to determine what architectural characteristics serve to identify them. The course is structured in a manner that combines classroom lecture with photographic field assignments. Five field assignments will be assigned and five will be individually selected by the student. By the completion of the course, the student will have acquired a comprehensive portfolio that showcases the surface colors, visual flavor, and cultural textures of the ethnic urban environment, as well as a personal appreciation of the city’s diverse cultural fabric.
MATHEMATICS

MA VOC Vocational Mathematics
This course is a prerequisite for Electrical Technology and a co-requisite for HVAC Systems Technology. The educational objective of this course is to enable those employed in said trades to solve the problem that may arise in their daily work. The basics of arithmetic, the use of formulas, and the simple applications of algebra and geometry form the basis of the work in this course.

MA TEC Technical Mathematics
The educational objective of this course is to aid those who are interested in electrical mechanical and engineering work to solve the problems and use the formulas pertaining thereto. The course includes all the algebraic processes involved, with special attention given to solving all forms of equations, use of scientific notation and geometry and trigonometry. The beginning of the course will encompass a brief review of elementary mathematics.

MA ELE Electrical Mathematics
The educational objective of this course is to provide electrical students who have completed E2 with advanced formulas and problem-solving skills required in Industrial Electricity. The course builds on topics taught in E2, and proceeds to cover the more advanced elements of scientific notation, geometry, and trigonometry.
As part of its School of Continuing Education offerings, Mechanics Institute also develops and conducts client-tailored workshops for various business entities within the building and construction trades industry. Past clients include the NYS Department of Correctional Services, NYC Department of Buildings, NYC Department of Sanitation, the New York Public Library, the DC-37 Education Fund, the Regional Alliance for Small Contractors, and the Insulation Contractors Association of the City of New York.

Customer satisfaction surveys upon completion of training consistently rate Mechanics Institute’s workshops as exceeding client needs and expectations.

Businesses and city and state agencies interested in stand-alone BIM training – or other specialized training courses – should contact James Loriega at 212.840.1840 ext 1, to discuss how the Institute’s instructional faculty can develop unique workshops to fully address those specialized needs.

As an alternative, fill out the REQUEST FOR SPECIALIZED TRAINING form on page 53 and mail it to Mechanics Institute. This will entitle you to a written proposal from us that will outline a custom-tailored instruction program to uniquely address your particular needs.
REQUEST FOR SPECIALIZED TRAINING

Business or Agency name: _______________________________________________________
Name and title of contact person: ____________________________________________
Address: _____________________________________________________________
   City: _______________ State: _____ Zip Code: ________
Business phone no.: _________________________________________________________
E-mail address: ____________________________________________________________

Please answer the following four questions:

1. What type of work is your firm engaged in?
   _______________________________________________________________
   _______________________________________________________________
   _______________________________________________________________

2. What type(s) of specialized training are you seeking?
   _______________________________________________________________
   _______________________________________________________________
   _______________________________________________________________

3. How comprehensive would you like the training to be?
   □ Introductory  □ Detailed  □ Advanced  □ Basic Review

4. How many staff members or employees will receive this training?
   □ 10 or less  □ 10 - 20  □ 20 +  □ Specify no. ________

Tear out this page and mail it with your completed answers to:

MECHANICS’ INSTITUTE
20 West 44th Street
New York, NY  10036
Attn: Industry Training Dept.

We will respond as soon as we receive your information.
MECHANICS INSTITUTE’S

Fall 2014 / Spring 2015 Semester Schedules

As a general rule, Mechanics Institute’s spring semester begins the last Monday in January and ends thirteen weeks later. The fall semester begins the first Monday following Labor Day and also ends thirteen weeks later.

Fall 2014 Semester
   Begins Monday, September 08
   Ends Thursday, December 12

Spring 2015 Semester
   Begins Monday, January 26
   Ends Wednesday, April 23

Applicants who are returning students are advised to call the registrar’s office with any questions they may have regarding a specific semester’s starting and ending dates.
ABOUT THE GENERAL SOCIETY
OF MECHANICS & TRADESMEN

The General Society of Mechanics & Tradesmen of the City of New York was founded in 1785 by the skilled craftsmen of the City. Today, this 229 year-old organization continues to serve and improve the quality of life of the people of the City of New York through its educational, philanthropic and cultural programs including its tuition-free Mechanics Institute, The General Society Library, and its century-old Lecture Series.

In 1820, The General Society opened one of the City’s first free schools as well as the Apprentices Library. The school, which became the Mechanics Institute in 1858, continues to provide tuition-free evening instruction in trades-related education and provides a unique service to improve job opportunities for New Yorkers in the building and construction industry. It also provides a trained workforce for the building and construction industry. Without a tuition-free education, many of our students would be unable to get the technical education needed to advance in today’s environment. The Institute is the oldest privately supported technical school in New York City. Each fall, over 350 students enroll in Mechanics Institute’s programs including Virtual Design and Construction, Electrical Technology, HVAC Systems Design, Plumbing Design, Project Management, Facilities Management and Historic Preservation. Recently, the ground-breaking Building Information Modeling (BIM) program: “BIM FOR THE TRADES” was launched at the Mechanics Institute.

Founded in 1820, The General Society Library is the second oldest library in New York City and one of three remaining private membership circulating libraries. It serves the educational programs of The General Society. It also makes its extensive collections available to other institutions and the public. The book and periodical collections of the Library span two centuries and are suited to both scholarly research and recreational reading. Its archives date back to 1785. Members enjoy access to current fiction, biography, and non-fiction.

The Labor, Literature and Landmarks Series continues a tradition of public lectures that started at the Society in 1837. The Series brings people of diverse interests from the entire New York area into our Library space. Now in its fifth season, the Artisan Lecture Series pays tribute to the art of craftsmanship by featuring master artisans who lecture about the intricacies of their specialized crafts. The Artisan Lecture Series promotes the work and art of skilled craftsmen to assist in ensuring their unique knowledge is understood and carried forth for future generations.

Our building at 20 West 44th Street is the fifth home of The General Society. The façade of the building is a New York City landmark and the building itself is listed on the National Register of Historic Places. The library’s main reading room soars to a height of three stories and is topped by a magnificent skylight.

The General Society is a 501(c)3 nonprofit charitable organization.
THE GENERAL SOCIETY OF MECHANICS & TRADESMEN
20 WEST 44TH STREET
NEW YORK, NY 10036
212.840.1840 x1

Photo courtesy: S. Amiaga