



City of Philadelphia



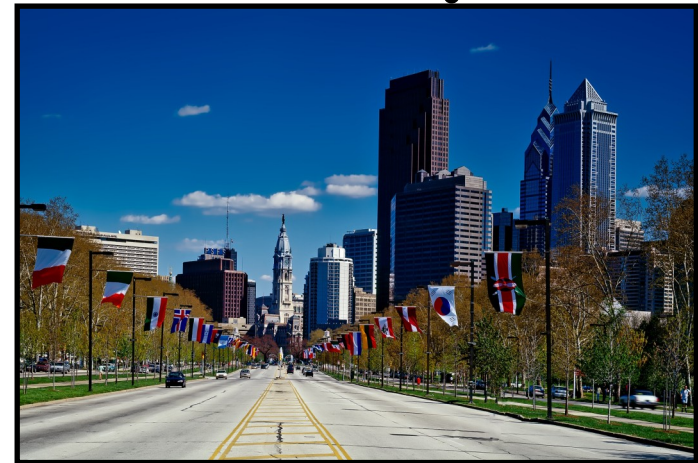
“Intelligence plus character, that is the goal of true education.”

— Martin Luther King, Jr.



CONSTRUCTION MANAGEMENT

Certificate Program



SPRING SEMESTER 2023

January 30, 2023 through May 11, 2023



Carlton Williams, Streets Commissioner

Christopher Newman, Deputy Commissioner, Administration

Angela C. Johnson, Training & Development Manager

**HISTORY OF THE CITY OF PHILADELPHIA
DEPARTMENT OF STREETS
CERTIFICATE IN CONSTRUCTION
MANAGEMENT PROGRAM**

In the late 1960's, the City of Philadelphia Department of Streets, along with the Philadelphia Water Department developed in-house, engineering and construction courses that would provide City employees with an opportunity to improve their present job performance as well as advance in their careers.

This brochure will provide information on the current class offerings, schedules, and locations. Please register early to avoid the disappointment of your class being either full or cancelled due to insufficient enrollment. You may download and complete the application from the Streets Department website:

https://streetsdept.phila.gov/construction_management.html

ACKNOWLEDGEMENTS

The Department of Streets would also like to thank those dedicated members of the department, both past and present, who had the vision to develop this type of program over 40 years ago. They have served as both committed faculty and content experts. Through theirs and others continuing efforts, this program continues to offer additional non-credit courses, many of which make up the present Construction Management Program, and provides employees opportunities for both personal and professional development.

**CERTIFICATE IN CONSTRUCTION MANAGEMENT
PUBLIC WORKS OPTION**

The City of Philadelphia - Department of Streets offers a Certificate in Construction Management to each employee who satisfactorily completes ten (10) eligible courses in this curriculum. The Office of Human Resources will determine where completion of the certificate meets the minimum requirements to qualify for certain Civil Service Examinations.



Ready to attend or return to college...

The Mayor's Returning to Learning Partnership, offers a 25% tuition discount program for City of Philadelphia employees in partnership with the following colleges:

- Chestnut Hill College
- Community College of Philadelphia
- DeVry University/DeVry's Keller School of Management
- Drexel University
- Drexel University Online
- Eastern University
- Immaculata University
- La Salle University
- Neumann University
- Peirce College
- Philadelphia University
- Rosemont College
- St. Joseph's University
- University of the Sciences
- Widener University

If you have questions or would like more



Transcript Update Project

The Training and Development Unit is currently working on updating the Transcripts of all enrolled students at the end of each semester. We recognize that many students have left the program and returned several times throughout their careers and that some records may not be complete.

If you receive a transcript that does not reflect all the courses that you believe you have completed, you may have the record corrected by submitting one of the following documents via e-mail to:

Aij.Vilakkupattathil@Phila.gov
Angela.C.Johnson@phila.gov

1. Previous transcript showing the class name, grade year and semester the course or courses were completed.
2. E-mail from your instructor showing the year and semester the class was taken and your final grade.

Note: If you completed courses at Community College of Philadelphia, they may not appear in your records. However, if you supply the above mentioned documentation, you will be given credit toward the completion of the program.

The courses that comprise the City of Philadelphia-Department of Streets Certificate in Construction Management are:	
1	AutoCAD 1 and AutoCAD 2 (Each semester= 1/2 credit)
2	Basic Construction Materials
3	Construction Cost Estimating
4	Construction Management and Scheduling
5	Contracts and Specifications
6	Fundamentals of the Design & Construction Process
7	Introduction to Methods of Construction and Project Management
8	Microsoft Office for Beginners
9	Reading Construction Plans (formerly Blueprint Reading)
10	Surveying 1
11	Surveying 2
*	Fundamentals of Math (not included in the certificate but required unless proof of a college level math course is submitted and accepted).

REQUIREMENTS FOR ADMISSION

You must be a permanent employee of the City of Philadelphia with a high school diploma or equivalent. Admission to specific programs may be tentative and require submission of additional documentation, demonstrating proficiency or prior applicable experience. In some cases, the program may identify potential students as needing developmental

PROGRAM COSTS
\$25.00 Per Course

PAYMENT COVERS:
Cost of course only

Note: You will only be refunded for course fees if you withdraw from the class prior to the first day of the semester via e-mail.

Acceptable Payments:
Money Orders ONLY

Students must submit their completed registration form AND payment prior to the registration deadline. All payments and registrations must be processed by mail:

The City of Philadelphia Department of Streets
Training and Development Unit
MSB Room 700
1401 JFK Boulevard,
Philadelphia, PA 19102

REGISTRATION DEADLINE:
January 20, 2023

CLASS SIZE

Enrollment is determined on a first come, first served basis as they are received by the Training & Development Unit.
A course may not run with less than ten (10) students.

ATTENDANCE

Participation in classes is mandatory. Instructors have the authority to establish minimal attendance requirements which will be considered in the final grade.

Auto CAD (Computer Assisted Drafting) Part 1

Description: This course will provide students the opportunity to become familiar with and perform basic functions of computer-aided drafting. Students are required to download AutoDesk software on their computers and will learn terminology concepts and basic principles of Computer Assisted Drafting (CAD) operations.

Target Audience: This coursework is geared toward providing the student ample background to continue the study of construction and construction management processes.

Note: Students are required to schedule a software implementation meeting with the instructor 2 weeks prior to the first class.

Thursdays

Start Date: February 2, 2023
Instructor: Charles Fuller
Time: 6:00 PM to 9:00 PM
Location: Online Via Zoom

***Students must purchase course materials independently**

Text: AutoCAD 2022: A Power Guide for Beginners and Intermediate Users
Author: CAD Artifex

Microsoft Office for Beginners

Description: This course covers the fundamentals of Microsoft Office Suite. Students will be provided with the basic functions of Microsoft applications which include, but are not limited to Access, Word, Excel, PowerPoint, Email, and Teams. The course serves as a tool providing a computing background that will help assist with other courses being offered within the Construction Management Certificate Program.

Target Audience: This course is geared toward those with inexperience with Microsoft Office and will work to provide students with background in computing to further equip the student to successfully complete the Construction

Thursdays

Start Date: February 2, 2023
Instructor: Tyler Barile, P.E.
Time: 6:00 PM to 9:00 PM
Location: Online Via Zoom

***Text is optional per Instructor**

Text: Microsoft Office 365 All-in-One for
Beginners and Power Users 2021
Author: Tech Demystified

QUESTIONS?

For general questions about the Streets Department
Construction Management Certificate Program,

please contact:

Aij.Vilakkupattathil@Phila.gov
 Angela.C.Johnson@phila.gov

**Streets Employees may
download a
Brochure and Application
please visit the
Streets Department's Intranet
Website at:**

[https://streetsdept.phila.gov/
construction_management.html](https://streetsdept.phila.gov/construction_management.html)

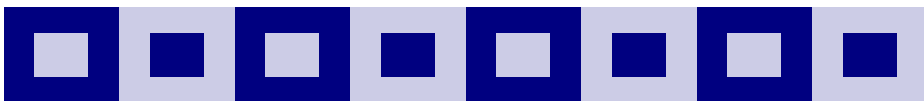
Additional Course Notes:

1. **The Fundamentals of Math course IS NOT applied toward the receipt of the ten (10) course certificate.** This course is considered remedial in nature but is designed to ensure the successful completion of the program.
2. **AutoCAD is a two-part course.** Students must complete both semesters in order to receive one (1) full credit toward the certification program.

The City of Philadelphia's Office of Human Resources (OHR) has determined that possession of the Construction Management Certificate issued by the City of Philadelphia demonstrates the successful completion of the Street's Department ten (10) course Construction Management Certificate Program is acceptable as part of the education requirement on the following Civil Service Examinations. The exam titles are listed below:

- Construction Projects Technician 1
- Construction Projects Technician 2
- Construction Projects Technician 3
- Highway Construction Inspector 1
- Construction Trades Inspector

****Make sure you upload copies of your transcript and completion certificate with your application for the exam and provide your HR Department with copies of these documents**



Fundamentals of Math

*This course does NOT count toward the CMP Certificate and is a **Refresher Course Only!***

Description: This course is a combination and accelerated review of basic math concepts found in the bulk of courses that make up the Construction Management curriculum. This course provides the student with the fundamental theories of mathematics and geometry, operations with fractions and decimals, ratio and proportion, and percentages, providing the foundation needed to grasp the complexities of higher level math courses.

Target Audience: It is recommended that any student who has not recently had a mathematics course, or is new to the Construction Management Certificate Program take this course first. This coursework is aimed toward providing the student the mathematical competence essential in the study of the construction and construction management processes.

Thursdays

Start Date: February 2, 2023

Instructor: Kasim Ali, P.E.

Time: 6:00 PM to 9:00 PM

Location: Online Via Zoom

***Students must purchase course materials independently**

Text: Basic Mathematics for College Students, 4th Edition

Author: Alan S. Tussy and R. David

Contracts and Specifications

Description: Study of the purposes, structure, and provisions of contemporary construction industry contracts. Relationships among owners, architects, and other design professionals, general and subcontractors, and vendors and suppliers are reviewed in detail. Students learn to adjust standard contract formats and specifications to tailor them for individual projects, according to C.S.I. procedure.

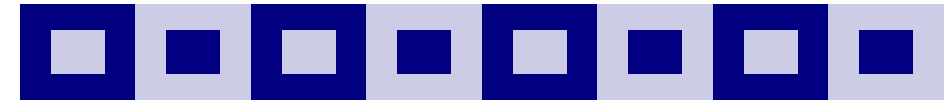
Target Audience: This course is geared toward those with inexperience with Microsoft Office and will work to provide students with background in computing to further equip the student to successfully complete the Construction Management Certificate Program.

Wednesdays

Start Date: February 1, 2023
Instructor: Mark Washington, P.E.
Time: 6:00 PM to 9:00 PM
Location: Online Via Zoom

***Students must purchase course materials independently**

Text: Contracts, Specifications, & Engineering Relations
Author: Daniel W. Mead



Spring Semester 2023 Course



Class Times: Three (3) hours per week for fifteen (15 weeks).



Basic Construction Materials

Description: This course covers the fundamental materials used in construction. Students will be provided with the basic knowledge and broad understanding of the most widely used materials in the construction industry such as aggregate, asphalt, Portland cement concrete, steel masonry and wood. The course emphasizes the materials origin, importance, properties, sampling and testing uses as well as how they fit together. The course will follow the industry standards from the American Concrete Institute (ACI), American Institute of Steel Construction (AISC), and the American Society of Testing Materials (ASTM).

Target Audience: This coursework is geared toward providing the student ample background to continue the study of construction and construction management processes in subsequent Streets Department Construction Management Program class offerings.

***There is no assigned text for this course!**

Mondays

Start Date: January 30, 2023
Instructor: Ryan Sen, P.E.
Time: 6:00 PM to 9:00 PM
Location: Online Via Zoom

***The Textbook is optional for this course!**

Text: **Materials for Civil and Construction Engineers, 3rd Edition**

Reading Construction Plans

Description: This course is intended to provide the student with a basic working knowledge of blueprint reading. The course emphasizes the importance of being neat, thorough, efficient, and organized when working with drawings. The majority of class time will focus on an assigned text highlighting residential construction. Part of the course will also include municipal construction with regard to streets, bridges and utilities.

Target Audience: This coursework is geared toward providing the student ample background to continue the study of construction and construction management processes in subsequent Streets Department Construction Management Program class offerings.

Wednesdays

Start Date: February 1, 2023
Instructor: Ryan Sen, P.E.
Time: 6:00 PM to 9:00 PM
Location: Online Via Zoom

***There is no assigned text for this course!**
Students will receive course materials via US Mail at the address provided during registration.

Fundamentals of the Design and Construction Process

Description: This course introduces students to the fields of architecture, construction, and related disciplines. Students learn basic terminology, documentation standards and techniques, and other significant factors influencing design and construction today. Constraints to construction, ethical issues, and the financing of projects are discussed. This overview provides students with a broad understanding of the design and construction fields.

Target Audience: This coursework is geared toward providing the student ample background to continue the study of construction and construction management processes in subsequent Streets Department Construction Management Program class offerings.

Wednesdays

Start Date: February 1, 2023
Instructor: Sylvester Montague
Time: 6:00 PM to 9:00 PM
Location: Online Via Zoom

***Students must purchase course materials independently**

Text: Building Construction, Drafting and Design
Author: John Molnar

Construction Cost Estimating

Description: This course is an introduction to the quantification of building components including blueprint reading, take-offs and application of unit costs in construction.

Target Audience: This coursework is geared toward providing the student ample background to continue the study of construction and construction management processes in subsequent Streets Department Construction Management Program class offerings.

Mondays

Start Date: January 30, 2023
Instructor: Tyler Barile, P.E.
Time: 6:00 PM to 9:00 PM
Location: Online Via Zoom

***Students must purchase course materials independently**

Construction Management and Scheduling

Description: This course is a thorough survey of the construction project management process from initial conception to completion. Topics include feasibility analysis, site/staging issues, software application, personnel management, contractual procedures, and safety. Students will be introduced to basic contractor operations, project administration, job planning, and Critical Path Method scheduling. After building a conceptual base, students will apply their scheduling knowledge to simulated projects.

Target Audience: This coursework is geared toward providing the student ample background to continue the study of construction and construction management processes in subsequent Streets Department Construction Management Program class offerings.

Tuesdays

Start Date: January 31, 2023
Instructor: Kevin McGinley
Time: 6:00 PM to 9:00 PM
Location: Online Via Zoom

***Students must purchase course materials independently**

Text: Construction Management
Author: Danial W. Halpin and Bolivar Z. Senior

Surveying 1

Description: This course presents a broad overview of the surveying method and covers the basic concepts of measurements, computations and surveying mathematics as it applies to building construction.

Target Audience: This coursework is geared toward providing the student ample background and continue the study of construction and construction management program class offerings.

Tuesdays

Start Date: January 31, 2023
Instructor: Louis LaForest, PLS
Time: 6:00 PM to 9:00 PM
Location: Online Via Zoom

***Students must purchase course materials independently**

Text: Elementary Surveying: An Introduction to Geomatics, 12th Ed.
Author: Charles Ghilani and Paul Wolf