COURSE SYLLABUS

Construction Course Online (Self-Paced)

Develop a thorough understanding of the building construction process, from initial site work to final system installations. This bundle gives you the essential skills to navigate every phase of construction and sets you up for a career in the industry.

> Group classes (Live Online) and onsite training are available for this course. For more information, email corporate@nobledesktop.com or visit: https://www.nobledesktop.com/classes/construction-fundamentals-bundle



hello@nobledesktop.com • (212) 226-4149

Course Outline

This package includes these courses

- Site Utilities, Earthwork & Foundation (Self-Paced) (10 Hours)
- Building Structure Course (Self-Paced) (10 Hours)
- Building Enclosure Course (Self-Paced) (10 Hours)
- Interiors & Finish Site Work (Self-Paced) (10 Hours)
- Fundamentals of MEP for Buildings (Self-Paced) (20 Hours)
- Building Construction Fire Protection (Self-Paced) (10 Hours)
- Construction Materials Course (Self-Paced) (30 Hours)

Attend up to two (2) of these elective courses for free (all are optional).

- Blueprint Reading Course - Commercial Construction (Self-Paced)
- Blueprint Reading Course - Residential Construction (Self-Paced)
- Intro to Construction Estimating Course (Self-Paced)

Site Utilities, Earthwork & Foundation (Self-Paced)

Learn about the roles played by the design & construction team. Learn how the site is prepared, the types of equipment used, different types of soil conditions & why various building foundations are used.

- The construction team and the on-site construction activities
- Different types of soils and subsurface conditions
- The equipment and the heavy equipment we use on a site – scrapers, dozers, excavators, and more
- Clearing and grubbing the site as well as installing the site utilities
- Preparing for our building, with earthwork and excavation support
- Installing foundations

Building Structure Course (Self-Paced)

Explore the key components of building structure design, including cranes, structural systems, and the materials used in construction. This course offers an in-depth study of cast-in-place concrete, precast concrete, steel, masonry, and tilt-up concrete and teaches you how these elements contribute to a safe and stable building.

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- Different types of soils and subsurface conditions
- The equipment and the heavy equipment we use on a site – scrapers, dozers, excavators, and more
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Building Enclosure Course (Self-Paced)

Learn about the building envelope, cold-formed steel stud systems, cladding systems, curtain walls, roofing systems and glass window systems. Learn how the building envelope keeps water out and controls temperature & humidity.

- The building envelope
- Maintaining the integrity of the building
- Keeping water out and controlling the building's temperature and humidity
- The most commonly used cold-formed steel stud systems for exterior walls
- Cladding systems and curtain walls
- Roofing systems and glass window systems

Interiors & Finish Site Work (Self-Paced)

Learn about wall types, interior partitions, drywall and drywall finishes and construction sequencing. Learn about construction sequences for curbs, asphalt paving & landscaping.

- The different types of wall and interior partitions.
- The sequence of building interior partitions.
- Different types of drywall and drywall finishes.
- The construction sequence for finishes.
- Different options for paint, flooring, ceilings and casework.
- The sequence for installing specialties and furniture options.

Fundamentals of MEP for Buildings (Self-Paced)

This course is an in-depth study of MEP and building systems, including thermal comfort, indoor air quality, HVAC controls & how plumbing, electrical & emergency distribution systems function.

- Thermal comfort and indoor air quality
- The types and major components of a mechanical system
- The purpose of HVAC controls
- How plumbing systems function
- Domestic water, drain, waste, and vent lines
- Components of the electrical distribution system

- Emergency and standby power

Building Construction Fire Protection (Self-Paced)

Learn many details about fire suppression systems, life-safety requirements, installing elevators, building commissioning, certificate of occupancy and project closeout.

- Wet-pipe and dry-pipe fire suppression systems
- The purpose and components of a fire alarm system
- Fire alarm inputs, controls, and outputs
- Elevator types and construction sequencing
- Final MEP system activities
- The purpose of commissioning
- The process to turn over a building and the requirements for post-occupancy

Construction Materials Course (Self-Paced)

This course offers a practical overview of the materials and systems used in residential and commercial construction, from concrete foundations through roofing systems. You'll examine how core materials are used, their key properties, and sustainability considerations to support informed decision-making on construction projects.

- Understand the properties and applications of core construction materials, including concrete, steel, and wood
- Explore sustainable and innovative materials used in modern construction
- Learn how to evaluate and select materials based on project requirements
- Apply material knowledge to both residential and commercial construction scenarios
- Assess material performance, durability, and cost considerations
- Identify industry trends and best practices in material selection and use