

CONTENT OUTLINE

CONSTRUCTION JOB SITE CONTROLS

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Suggested Duration: 90 hours

OVERVIEW

The purpose of this course is to provide participants with the knowledge necessary to manage a construction site. Participants will learn how to layout a job site, manage documents, materials, tools, and equipment as well as coordinate labour and sub-contracts.

PREREQUISITE

Although there is no formal educational prerequisite for this course, the participants' chances of success will be enhanced if their reading and comprehension skills are at a high school or equivalent level.

LEARNING OBJECTIVES

Upon successful completion of this course, participants will be able to:

- plan site layout
- manage materials
- manage equipment and tools
- maintain document control
- manage site labour and sub-contractors
- practice environmental controls
- identify concepts related to quality
- establish monitoring programs
- conduct project close-out

CONTENT

1. Plan site layout.

- areas for material storage, site office, temporary services, and parking
- access routes
- existing services
- possible public safety, fire, and environmental considerations
- layout / lines / levels (boundaries)
- site security

2. Manage materials .

- purchasing / ordering material
- sources for alternate materials
- receiving procedures
- storing materials
- inventory control systems
- safe material handling procedures
- scheduling material delivery
- review shop drawings, product data sheets, samples, mock-ups
- WHMIS
- minimizing material handling
- security of materials

3. Manage tools and equipment.

- tools and equipment
- maintenance programs
- equipment lists
- suppliers
- scheduling equipment use
- rental inventory
- product data sheets
- rental / purchase agreements
- security of equipment
- loss control

4. Maintain document control.

- methods of controlling documents
- methods for document storage
- document retrieval methods
- change documents (site, design, time, etc.)
- shop drawings
- job site journal (consequences of not keeping current)

5. Manage site labour and sub-contractors.

- trade overlaps
- union agreements
- good working environment / safety
- back-charges
- production management
 - o establish benchmark performance
 - o timecard process

- time management
- sub-contracts
- own forces

6. Practice environmental controls.

- laws and regulations (federal, provincial, and municipal)
- procedures to minimize waste (reduce, reuse, recycle)
- hazardous materials, dust, noise and air pollution

7. Identify concepts related to quality.

- quality control / quality assurance
- existing corporate national and international standards

8. Establish monitoring programs.

- quality / quantity control
- safety
- interrelationship of job progress, schedule, costs, and reporting
- changes / potential claims
- as built
- cost controls
- inspections

9. Conduct project close-out.

- deficiency list
- as built documents and manuals
- commissioning
- final inspections
- permits and certificates
- lessons learned

METHODOLOGY

This course lends itself to short lectures, case studies, and practical projects. Instructors may involve the participants in the following specific techniques and activities:

- icebreaker type activity to get students engaged as soon as possible;
- completing a purchase order and matching it to a packing slip;
- visiting a job site;

- exercises on rent vs. purchase;
- completing a purchase order;
- given a specification, identifying:
 - shop drawings, product data sheets, samples, mock-ups ,
 - applicable codes and standards,
 - testing requirements,
 - required tool list,
- resourcing a guest to speak on environmental / safety issues;
- analysing a safety program;
- analysing a quality assurance program;
- analysing a quality control program;
- working with drawings and specifications;
- establishing a benchmark performance (productivity).

ASSESSMENT

In order to successfully complete this course, participants will be expected to demonstrate that they have achieved the learning objectives. They will be evaluated through various assignments, projects, and/or tests based on each of these objectives. Final assessment for the course will be determined by the following weighting:

Learning Objective	Weighting (%)
1. Plan Site Layout.....	20
2. Manage Materials	5
3. Manage Tools and Equipment.....	5
4. Maintain Document Control	20
5. Manage Site Labour and Sub-Contractors.....	15
6. Practice Environmental Controls.....	10
7. Identify Concepts Related to Quality.....	10
8. Establish Monitoring Programs	10
9. Conduct Project Close-out.....	5
	100

RESOURCES

Reports, Manuals, Textbooks, and Documents

A Guide to the Project Management Body of Knowledge (PMBOK), PMI Standards Committee, Project Management Institute, 1996 [ISBN: 1-880410-12-5 (pbk. : alk. paper) / ISBN: 1-880410-13-3 (hdbk)]

Construction Site Management by William R. Mincks and Hal Johnston, Delmar (ISBN: 0-8273-7152-7) (<http://www.delmar.com>)

PMP Exam: Practice Test and Study Guide, ESI International, 1998 (ISBN: 1-890367-11-7)

PMP ©: Project Management Professional Study Guide, SYBEX Inc., 2002 (ISBN: 0-7821-4106-4)

Tool and Material Control Systems by James E. Rowings and Mark O. Federle, National Electrical Contractors Association (<http://www.necanet.org>)

Government/Association Websites

Canadian Construction Association (CCA) (<http://www.cca-acc.com>)

Canadian Construction Document Committee (<http://www.ccdc.org/home.html>)

Local construction associations

Other Resources

Applicable Acts and Regulations

Standard close-out documents such as OGCA – OAA (Ontario General Contractors Association – Ontario Association of Architects)