

**American Institute of Constructors**

**Constructor Certification Commission Document No. 29**

**Examination Specifications for the Level I (CAC) and Level II (CPC)  
Certification Examinations**

**Level I (CAC) Examination Specifications**

Specification Categories with Percentages of Questions on Examination

LEVEL 1 CONSTRUCTION FUNDAMENTALS EXAMINATION
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- C. Accounting and Financial Ratios
  - 1. Accounting Principles
  - 2. Financial Reports and Ratios
  
- D. Management Systems
  - 3. Project Controls
  - 4. Technology
  - 5. Current Concepts
  
- D. Ethics
  - 1. Constructor Code of Conduct
  - 2. Bidding, Purchasing and Professional Practice
  
- E. Risks
  - 1. Risk Identification
  - 2. Risk Mitigation

#### IV. MATERIALS, METHODS AND PROJECT MODELING & VISUALIZATION

- A. Construction Equipment
  - 1. Piling Equipment
  - 2. Sheet Piling, Cofferdams, Tie-backs
  - 3. Excavation Equipment
  - 4. Compaction Equipment
  - 5. Cranes and Lifting Equipment
  
- B. Reading Drawings and Schedules
  - 1. Sitework
  - 2. Concrete and Forms
  - 3. Rebar
  - 4. Structural Steel
  - 5. Carpentry
  - 6. Exterior Finishes
  - 7. Doors and Windows
  - 8. Interior ~~8.~~ . A Cr h Steel

4. Laws, Regulations, and Codes
5. Site Evaluation and Walk-thru
6. Insurance and Bonds
7. Value Engineering and Life cycle Costing
8. Temporary Site Layout

B. Estimates

1. Cost Breakdown Structure
2. Conceptual
3. Total Future Costs
4. Material Components
5. Equipment Productivity

C. Quantity Takeoff

1. Excavation
2. Forms, Rebar, Concrete
3. Rough Carpentry
4. Interior Finishes

VI. BUDGETING, COSTS AND COST CONTROL

A. Budgeting

1. Schedule of Values
2. Contingencies and Allowances

B. Cost Control

1. Productivity Rates, Earned Workhours
2. Unit Costs
3. Forecasts at Completion

C. Finalize Costs

1. Retainage
2. Back charges
3. Payments

D. Change Management

1. Schedule/Cost Impact
2. Change Orders
3. Resources

VII. PLANNING, SCHEDULING AND CONTROL

A. Logical Sequences of Design, Procurement and Construction

1. Work Breakdown Structure

2.

1. Subcontractors
  2. Materials
  3. Equipment
- B. Duties/Responsibilities
1. Construction Management and Engineering Job Descriptions
  2. Organizational Chart
  3. Design, Procurement and Construction Team
  4. Craft Trade Descriptions
- C. Job Site Mobilization
1. Site Layout Considerations
  2. Shop drawing, Product Data Submittal and Review Process
  3. Contract Clauses. Changes, Claims, Dispute Methods
  4. Quality Control, Inspection and Government Regulations
- D. Job Site Administration
1. Human Resources
  2. Project Documentation
- E. Project Closeout
1. Punch Lists, Substantial Completion, Occupancy
  2. Documentation Turnover
  3. Final Payment/Completion
- F. Environmental Controls
1. Sustainability
  2. Storm Water
  3. Hazardous Materials

## **Level II (CPC) Examination Specifications**

Specification Categories with Percentages of Questions on Examination

APPLICATION & ANALYSIS CONTENT AREA

2022

- D. Cost Analysis Design Phases
  - 1. Value Engineering
  - 2. Value Analysis
  - 3. Life Cycle Costing
  - 4. Variance Analysis
  - 5. Constructability
  - 6. Feasibility
  
- E. Site Analysis
  - 1. Environmental Conditions
  - 2. Site Conditions, Site Survey and Geological Conditions
  - 3. Regulatory Agencies
  
- F. Bid Scope Development
  - 1. Trade Bid Packages
  - 2. Bid Breakdown and Proposal Form Requests
  
- G. Bid Document Development
  - 1. Notice to Bidders, Instruction to Bidders, Addenda, General Requirements
  - 2. Pre-qualification of Bidders
  - 3. Pre-bid Meetings
  - 4. Public versus Private Bids
  
- H. Bid Analysis and Selection/Recommendations
  - 1. Construction Bid Scope Analysis
  - 2. Subcontractor and Vendor Evaluation
  
- I. Construction Contracts and Schedule
  - 1. Construction Contracts
  - 2. Construction Project Schedule with Lead Times, Inspections

## II. EMPLOYMENT PRACTICES

- A. Employment Law
  - 1. Equal Employment Opportunity
  - 2. American with Disabilities Act
  - 3. Immigration Act
  
- B. Discrimination Law
  - 1. Hiring Discrimination
  - 2. Employment Discrimination
  - 3. Sexual Harassment







- B. Change Control and Cost Impact
  - 1. Changes and Cost Impact
  - 2. Crashing and Schedule Impact
- C. Contract Interpretation
  - 1. Changes
  - 2. Notification
- D. Progress Payment Terms
  - 1. Subcontractor and Vendor Evaluation
  - 2. Partial Lien Releases
  - 3. Title/Ownership
- E. Financial Statements
  - 1. Financial Calculations and Ratios

## VII. PROJECT CLOSEOUT

- A. Closeout Process
  - 1. Punch Lists
  - 2. Substantial Completion
  - 3. Final Completion
  - 4. Occupancy
  - 5. Commissioning Start-up and Owner Personnel Training
  - 6. Demobilize Site
- B. Claims Closeout Procedures
  - 1. Resolution
- C. Documentation Turnover
  - 1. Warranty Protocol
  - 2. Owner and Operating Manuals
  - 3. Project Record Documents (As Builts)
- D. Final Payment Procedures
  - 1. Retainage
  - 2. Lien Releases
  - 3. Final Draw

## VIII. CONSTRUCTION RISK MANAGEMENT

- A. Risk Assessment

1. Accident and Injury Statistics and Costs
  2. Project Uncertainty and Risk Allocation
  3. Loss Ratio and Risk
  4. Financial Risk
- B. Workers Compensation Costs and Liability
1. Workers Compensation and Experience Modification Rating
  2. Criminal Liability and Due Diligence
  3. Project Management Safety Liability
- C. Safety Process and Culture
1. Behavior-Based Safety
  2. Safety Management Techniques
  3. Safety Orientation
  4. Pre-task Safety Planning
  5. Workplace Focused Safety (Drugs)
- D. Safety Procedures and Documentation
1. General Duty Clause
  2. Multi-employer Work Sites
  3. Written Documentation Requirements
  4. Confined Space Requirements
  5. Scaffolds
  6. Lock-out, Tag-out Requirements
  7. Hazardous Communication and MSDS
  8. Fall Protection and PPE