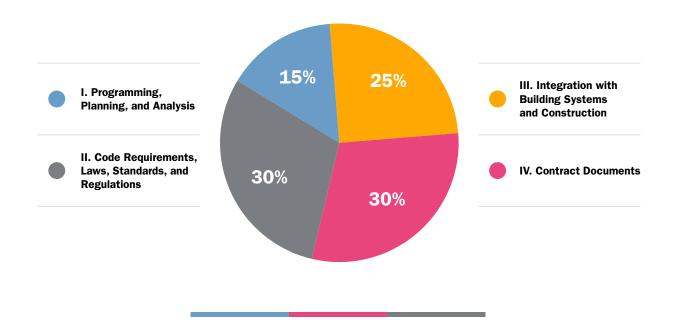


- 4 hours
- 120 questions
- Fill in the Blank, Hot Spot, Drag and Place

The **Practicum Exam (PRAC)** utilizes three case studies (large commercial, small commercial, and multi-family residential) to assess the ability to apply, synthesize, and integrate information related to the design process using resources provided with an emphasis on Health, Safety and Welfare. The PRAC covers competencies in: programming, planning and analysis; code requirements, laws, standards, and regulations; integration with building systems and construction; and contract documents.



## I. Programming, Planning, and Analysis 15%

### Demonstrate understanding and appropriate use of:

- analysis tools (e.g., spreadsheets, site photographs, matrices, bubble diagrams, graphs, behavioral based analytics)
- planning diagrams (e.g., stacking/zoning diagrams, block plans/square footage allocations)

### **Demonstrate understanding of:**

square footage standards (e.g., building codes, BOMA calculations and terminology)

- existing conditions analysis (e.g., hazardous materials, seismic, accessibility, construction type, occupancy type)
- **universal design** (e.g., accessibility, ability level, inclusivity, special needs, aging population, bariatric, pediatric)
- life safety codes and standards (e.g., flammability, toxicity, slip resistance, accessibility and egress clearances, fixed and loose furniture, Indoor air quality, code compliance)

### **Assess the:**

 human factors related to the interior space (e.g., ergonomics, anthropometrics, proxemics, psychological, physiological, social)



# II. Code Requirements, Laws, Standards, and Regulations 30%

#### **Ability to integrate:**

· life safety elements (e.g., egress, fire separation)

### **Demonstrate understanding of:**

- reference standards and guidelines (e.g., BIFMA, ASHRAE, OSHA, NFPA, IBC)
- · zoning and building use requirements
- permit requirements (e.g., processes, timing, awareness of regional differences)
- universal design (e.g., inclusive design, accessible design)

## III. Integration with Building Systems and Construction 25%

### Demonstrate knowledge and application of relevant:

- plumbing systems (e.g., low flow, waterless, filtration, water metering, gray water)
- fire protection systems (e.g., sprinklers, strobes, alarms, extinguishers, smoke and heat detectors)
- mechanical systems (e.g., types of systems, coordination with ceiling plans, indoor air quality)
- building construction types (e.g., wood, steel, concrete)
- building components (e.g., doors, windows, wall assemblies, hardware, glazing assemblies)
- vertical and horizontal systems of transport (e.g., stairs, elevators)
- electrical systems (e.g., outlet placement, switching, GFI, occupancy sensors)
- acoustical systems (e.g., sound masking, NRC, STC, CAC, AC, sound batting, wall types and ceiling elements)

### **Determine appropriate:**

 lighting systems (e.g., fixtures, zoning, sensors, daylighting, circadian rhythms, calculations, distribution, energy efficiency)

### IV. Contract Documents 30%

### **Demonstrate understanding of:**

- light fixture selection and specification (e.g., general, accent and task lighting; color temperature, color rendering, lamp types)
- equipment integration (e.g., appliances or specialty equipment within the design, accessibility and code compliance)
- allied professionals' drawings (e.g., mechanical, electrical, and structural engineering, architecture, security, specialty consultants)

### Ability to develop, analyze, and/or review:

- · phased construction plans
- code required information (e.g., egress, accessibility, specialty codes, fire/life safety, occupancy, plumbing calculations)
- general information sheets (e.g., general conditions and notes, drawing index, legend, symbols, location, consultant, contact information)
- · demolition plans
- floor plans (e.g., partition plan, construction plan, dimension plan)
- reflected ceiling and/or lighting plans (e.g., supplies, returns, ceiling types, heights, monitoring and detection devices, switch patterns, controls)
- · furniture plans
- · finish plans
- elevations, sections, and details (e.g., partition types, enlarged plans, custom details and assemblies)
- · power, data, and communication plans
- schedules (e.g., finish, equipment, plumbing, lighting, accessories, door, hardware, window)
- millwork (e.g., construction techniques, coordination with Furniture, Fixtures, & Equipment, and utilities, substrates, shop drawings, material selection, accessibility)

### Ability to analyze, and/or review:

- measuring conventions (e.g., scale, unit of measure, dimensioning)
- construction drawing standards (e.g., annotations, hatch patterns, line types, symbols, north arrow, section cuts, cross referencing)

