

# SPOKANE FALLS COMMUNITY COLLEGE

## Course Learning Objectives Student Learning Outcomes

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**Course Title:** Building Systems/ Lighting  
**Prefix and Course Number:** INTDS 185

**Last Modified:** F17

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### Course Learning Objectives

- I. Introduction to Building Systems
  - A. Basic definitions and explanation of systems
  - B. Discussion on how they relate to the work of interior designers
  - C. Introduction to industry standard terminology pertaining to building systems
  - D. Discussion on sustainable design practices and how building system design can influence the carbon footprint of the building
- II. Structural System
  - A. Foundations/ Floors – terminology, examples, type of materials
  - B. Load bearing walls/ Columns – terminology, type of materials, spans and load capacity, examples
  - C. Trusses and Beams – terminology, materials, spans, examples
- III. Building Envelope
  - A. Wall Systems – terminology, materials, examples
  - B. Windows/ Doors – terminology, materials, examples
  - C. Roof structures – terminology, systems/ materials, life span, examples
- IV. Mechanical System
  - A. Water supply system – terminology
  - B. Sewage removal system – terminology
  - C. HVAC systems – terminology, basic introduction to different methods
  - D. Sustainable design practices with mechanical systems
- V. Electrical Systems/ Lighting
  - a. Electrical System/ Power supply – terminology, general principle
  - b. Lighting Design
    - i. Psychology of light and it's effect on interior spaces/ occupants
    - ii. Three elements of light: ambient, focal glow, sparkle
    - iii. Light sources: filament sources, discharge sources, LED sources
    - iv. Light fixture types and uses
    - v. Lighting calculations
    - vi. Lighting design strategies for residential design
- VI. Building Codes
  - . Introduction to building codes, why we have them and how they affect the work of interior designers
  - A. Introduction to the International Building Code – what it contains, how to use it
  - B. Overview of other codes that regulate the work of interior designers including: NREC, DOH regulations, WAC compliance, ADA compliance, local and state codes, etc.
  - C. Specific codes that pertain to interior design – building egress, flammability of materials, limitations of materials, dead end corridors, minimum clearances, etc.

## **Student Learning Outcomes**

**By the end of this course, a student should be able to:**

1. Explain industry specific terminology as it pertains to building systems and lighting design.
2. Demonstrate the correct use of industry specific terminology to communicate with other design professionals in the work place.
3. To recognize a variety of different building components and systems in the field, by applying learned knowledge.
4. To formulate design solutions based on an understanding of construction, building systems, and lighting design.
5. To be able to interpret the work of other design team members, specifically engineers, by applying knowledge of common graphic symbols pertaining to building systems with an emphasis on lighting and electrical plans.
6. Analyze design solutions based on knowledge of building codes and their application.
7. Practice interior design in a way that is integral to the design team, by solving problems through analysis and applied knowledge of building systems, lighting design and codes.
8. Evaluate design decisions and ask relevant questions about the design, the building systems, lighting design, building codes, and construction design solutions.