

§130.54. Architectural Design II (Two Credits), Adopted 2015.

DOMAIN 1 – PROFESSIONAL PRACTICE

(1B) demonstrate an understanding of group participation and leadership related to citizenship and career preparation

(1C) identify employers' expectations and appropriate work habits

(1E) demonstrate knowledge of the concepts and skills related to health and safety in the workplace, as specified by appropriate governmental regulations

(5C) strive for accuracy and precision

(5D) work independently

(5E) work collaboratively

(7A) describe how teams function

(7B) use teamwork to solve problems

(7C) distinguish between the roles of team leaders and team members

(7D) identify characteristics of good leaders

(7E) identify employers' expectations and appropriate work habits

(7F) define discrimination, harassment, and inequality

(7H) complete work according to established criteria

(12B) demonstrate effective methods to secure, maintain, and terminate employment

(12C) demonstrate positive interpersonal skills, including conflict resolution, negotiation, teamwork, and leadership

(12D) evaluate the relationship of good physical and mental health to job success and achievement

(12E) demonstrate appropriate grooming and appearance for the workplace

(12F) demonstrate appropriate business and personal etiquette in the workplace

(12G) exhibit productive work habits and attitudes

DOMAIN 2 – OFFICE PRACTICE

(1D) apply the competencies related to resources, information, systems, and technology in appropriate settings and situations

(2A) demonstrate effective verbal and written communication skills with individuals from varied cultures, including fellow workers, managers, and customers

(2B) complete work orders and related paperwork

(2C) estimate jobs, schedules, and standard industry practices related to legal restrictions

(6A) customize screen menus to fit specific problems or needs

(6F) use a computer system to create a bill of materials

(7G) use time-management techniques to develop and maintain work schedules and meet deadlines

(12A) demonstrate effective verbal, nonverbal, written, and electronic communication skills

DOMAIN 3 – CAREER RESEARCH

(1A) identify employment opportunities, including entrepreneurship and preparation requirements, in the field of architecture

(10C) compare and contrast career opportunities in architecture

DOMAIN 4 – PROJECT ORGANIZATION

(5A) use problem-solving skills to analyze a situation to identify a problem to be solved

(5B) break a complex problem into component parts that can be analyzed and solved separately

(5G) design and present an effective architectural product

(5H) present a final architectural product for critique

(5J) develop preliminary sketches of a residential plan or nonresidential plan

(5K) demonstrate through drawings the development of maximum efficiency of circulation within areas or rooms

(5L) develop a site plan using maximum orientation of the building relative to views, sun, and wind direction

(5M) draw building designs and styles to ensure compatibility between interior and exterior to enhance overall appearance

(5N) draw schematic site plans, floor plans, roof plans, building elevations, sections, perspectives, and character sketches using design development techniques

(5O) draw scaled wall thickness plans, interior elevations, and sections

(5P) develop details, sections, floor and wall sections, ceiling and roof sections, door and window sections, and other sections as required

(5Q) assemble an architectural design in three dimensions

(5S) create a project demonstrating sustainable design as it relates to architectural design as defined by the U.S. Green Building Council

(6B) construct architectural drawings using advanced computer-aided design drafting skills

(6C) create two- or three-point perspectives

(6D) create three-dimensional solid models

(6E) view three-dimensional objects in several different positions

(6G) use a computer-aided drafting system to create and modify nonresidential or residential architectural drawings

(6H) plot architectural drawings for presentation

(6I) render three-dimensional objects with applied materials

(8A) use advanced skills to illustrate ideas for architectural projects from direct observation, experiences, and imagination

(9A) create, using advanced skills, visual solutions by elaborating on direct observation, experiences, and imagination

(9B) create, using advanced skills, designs for practical applications

(9C) demonstrate, using advanced skills, effective use of architectural media and tools in design, drawing, painting, printmaking, and sculpture such as advanced model building

(11A) interpret, evaluate, and justify architectural artistic decisions in personal architectural artworks

(11B) select and analyze original architectural artworks, portfolios, and exhibitions by peers and others to form precise conclusions about formal qualities, historical and cultural contexts, intents, and meanings

(12H) maintain a project portfolio that documents architectural projects using a variety of multimedia techniques

DOMAIN 5 – INDUSTRY MATERIALS & METHODS

(2D) read and interpret architectural symbols, schematics, blueprints, work drawings, manuals, and bulletins

(3A) demonstrate knowledge of architectural design principles

(3B) determine building code and zoning requirements for building types in a selected area

(3C) demonstrate knowledge of the various grades and types of construction materials

(4A) use the tools, materials, and equipment commonly employed in the field of architectural computer-aided design in a safe manner

(4B) handle and dispose of environmentally hazardous materials used in the field of architecture in accordance with the material safety data sheet (MSDS), the Occupational Safety and Health Administration (OSHA), and the Environmental Protection Agency (EPA) regulations

(4C) demonstrate knowledge of new and emerging technologies that may affect the field of Architecture

(5F) research an architectural project

(5I) apply architectural lettering techniques

(5R) research the Green Building Rating System as defined by the U.S. Green Building Council

(8B) use advanced skills comparing and contrasting the use of architectural elements such as color, texture, form, line, space, and value and architectural principles

such as emphasis, pattern, rhythm, balance, proportion, and unity in personal architectural projects

and those of others using vocabulary accurately

(10A) compare and contrast historical and contemporary styles by identifying general themes and trends

(10B) describe general characteristics in architectural artworks from a variety of cultures

DOMAIN 6 – MATHEMATICS & PHYSICS PRINCIPLES

(2E) apply descriptive geometry related to auxiliary views, revolutions, and intersections