Texas CTE: Architecture and Construction

Practicum in Architectural Design

Knowledge and skills. PRAC-ARCH

1 **The student relates communication, mathematics, and science to the requirements of the student's chosen field. The student is expected to:** PRAC-ARCH.1

- A demonstrate effective verbal and written communication skills with individuals from varied cultures, including fellow workers, managers, and customers; PRAC-ARCH.1.A
- B apply mathematics principles and practices; PRAC-ARCH.1.B
- C apply and identify scientific principles used in projects; and PRAC-ARCH.1.C
- D read and interpret appropriate schematics, charts, graphs, drawings, construction documents, directions, manuals, bulletins, and regulations. PRAC-ARCH.1.D

2 **The student knows the function and application of the tools, equipment, technologies, and materials used in the student's chosen field. The student is expected to:** PRAC-ARCH.2

- A identify and select basic materials and processes used in the student's chosen field; PRAC-ARCH.2.A
- B use the tools and equipment commonly employed in the student's chosen field in a safe manner; PRAC-ARCH.2.B
- C handle and dispose of environmentally hazardous materials used in the student's chosen field in a proper manner; and PRAC-ARCH.2.C
- D demonstrate knowledge of new and emerging technologies in the student's chosen field. PRAC-ARCH.2.D

3 **The student selects and uses multimedia communication and rendering technology to meet specific architectural design needs. The student is expected to:** PRAC-ARCH.3

- A apply multimedia communication and rendering technology to individual or community problems; PRAC-ARCH.3.A
- B describe the factors that affect the use and interpretation of communication products; and PRAC-ARCH.3.B
- C identify and describe the roles of communication such as informing, persuading, and educating. PRAC-ARCH.3.C

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4 **The student designs multimedia communication and rendering products using appropriate architectural design processes and techniques. The student is expected to:** PRAC-ARCH.4

A develop or improve communication products that meet specified needs; and PRAC-ARCH.4.A

B maintain a project portfolio that documents architectural projects using a variety of multimedia techniques. PRAC-ARCH.4.B

5 **The student produces multimedia communication and rendering products using the appropriate tools, equipment, machines, materials, and processes. The student is expected to:** PRAC-ARCH.5

A use a variety of tools, equipment, and machines; and PRAC-ARCH.5.A

B produce an architectural project using multimedia communication techniques. PRAC-ARCH.5.B

6 **The student follows appropriate codes, laws, standards, or regulations. The student is expected to:** PRAC-ARCH.6

A identify areas where codes, laws, standards, or regulations may be required; PRAC-ARCH.6.A

B locate the appropriate codes, laws, standards, or regulations; and PRAC-ARCH.6.B

C comply with the appropriate codes, laws, standards, or regulations. PRAC-ARCH.6.C

7 **The student demonstrates the ability to solve problems, think critically, and make decisions. The student is expected to:** PRAC-ARCH.7

A develop or improve a product by following a problem-solving strategy; PRAC-ARCH.7.A

B apply critical-thinking strategies to the analysis and evaluation of proposed technological solutions; and PRAC-ARCH.7.B

C apply decision-making techniques. PRAC-ARCH.7.C

8 **The student applies communication, mathematics, and science knowledge and skills to job-related activities. The student is expected to:** PRAC-ARCH.8

A apply written, verbal, and visual communication techniques consistent with industry standards; PRAC-ARCH.8.A

B use mathematics concepts in communication technology; and PRAC-ARCH.8.B

C identify and apply scientific principles. PRAC-ARCH.8.C

9 **The student determines employment opportunities and preparation requirements for careers in the field of architecture. The student is expected to:** PRAC-ARCH.9

A determine preparation requirements for various levels of employment in a variety of careers; PRAC-ARCH.9.A

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B analyze the future employment outlook; PRAC-ARCH.9.B

C describe entrepreneurial opportunities in architecture and related fields; PRAC-ARCH.9.C

D determine how interests, abilities, personal priorities, and family responsibilities affect career choice; PRAC-ARCH.9.D

E compare rewards and demands for various levels of employment in a variety of careers; and PRAC-ARCH.9.E

F determine continuing education opportunities that enhance career advancement and promote lifelong learning. PRAC-ARCH.9.F

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10 The student demonstrates ethical and legal practices for careers in the architectural-related workplace. The student is expected to: PRAC-ARCH.10

A summarize the rights and responsibilities of employers and employees; PRAC-ARCH.10.A

B exhibit ethical practices as defined by the architectural industry; PRAC-ARCH.10.B

C analyze legal aspects of the architectural-related workplace; PRAC-ARCH.10.C

D develop a school-based learning activity in collaboration with the teacher and at least one related mentor that provides an in-depth study of at least one aspect of a selected business, industry, and labor independent study; PRAC-ARCH.10.D

E present the project in at least two formats such as model, graphic, verbal, or written to a panel of students, teachers, and practitioners in the career concentration; PRAC-ARCH.10.E

F maintain a project portfolio that documents experience by using graphic or written documentation of architectural-related projects; and PRAC-ARCH.10.F

G develop and update a professional resume that includes appropriate education history, work history, professional references, letters of recommendation, and all relevant information for any licenses, certifications, and credentials. PRAC-ARCH.10.G