ARCHITECTURAL DRAFTING NYS

PURPOSE

To evaluate each contestant's preparation for employment and to recognize outstanding students for excellence and professionalism in the field of architectural drafting.

ELIGIBILITY

Open to active SkillsUSA members enrolled in programs with architectural drafting as the occupational objective

CLOTHING REQUIREMENT

Men: Black dress slacks; white dress shirt; plain black tie with no pattern or a SkillsUSA black tie. Black socks and black shoes.

Women: Black dress slacks or skirt, with businesslike white, collarless blouse or white blouse with small, plain collar that may not extend onto the lapels of the blazer; black sheer or skin-tone hose and black shoes, that are not backless or open toe.

Note: **Contestants must wear their contest clothing to the contest orientation meeting.**

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EQUIPMENT AND MATERIALS

1. Supplied by the NY Chair/ committee:
    a. The architectural drafting work station will be equipped with a standard table, a work area for reference material, a space for a personal computer, personal printer and a chair.
    b. 110-volt electrical outlet
    c. One formatted IBM-compatible diskette
    d. Drafting paper/vellum
    e. All necessary information and furnishings for judges.
2. Supplied by the contestant:
    a. PC-type computer, monitor and input devices, including all power cords. Computers may be obtained from any source. To have access to the most current technology, contestants and their schools are encouraged to develop a relationship with a hometown computer/software dealer who can serve as a contestant sponsor. It is advisable to have active virus-protection software on the contestant's computer.
    b. Contestants need to provide a color printer, ink, paper and all connectivity cables/power sources.
    c. Removable data storage device (flash drive) or recordable CD
    d. Architectural software of choice. Proof of licensing for every software program installed on the contestant's computer must be provided to the technical committee at the contestant orientation meeting. School-owed computers must be set up to operate the software of choice independent of the school's network.
    e. Students may bring published reference books, tables and software manuals. Reference materials must not take up more than 1 cubic foot of space and may be shared between contestants. Legal PDF copies of textbooks may be allowed if resident to the student's computer hard drive and approved by the NY chair/committee.
    f. Typical personal drafting supplies desired for board drafting and freehand sketching subject to the approval of the NY chair/committee.
    g. Battery-operated calculator
    h. Multi-receptacle power strip
    i. Students choosing to use board drafting equipment must bring their own drawing board, equipment and drafting supplies.
    j. All competitors must create a one-page résumé using a word processor. Resume to be handed in at the orientation meeting. Failure to do so will result in a 10-point penalty.

***Note*: Your contest may also require a hard copy of your résumé as part of the actual contest. Check the Contest Guidelines and/or the updates page on the NYS**

SkillsUSA Web site:
http://www.nysskillsusa.org/

Note: The setup configuration and the teardown of all contestant-provided equipment will be the responsibility of the contestant.

SCOPE OF THE CONTEST

Knowledge Performance

The contest will include a written knowledge test assessing general knowledge of architecture and drafting. Written portions may also exist during the skills portion of the contest. Knowledge of terms and principles used in the architecture profession will be required for the skill demonstration portion of the contest.

Skill Performance

The contest will assess skill performance by providing a hand sketch and computer-generated problem that may be solved using either board drafting or CAD.

Contest Guidelines

1. Preparation of drawings will include proper dimensions and line type selection according to current drafting standards.
2. During the contest, the contestants will work independently; no assistance from other contestants, instructors or observers is allowed.
3. Limited technical assistance for computer or software malfunction may be given by appropriate manufacturers' representatives or members of the NY chair/committee.
4. Contestants will each be given the same amount of time to accomplish the problem. Everyone will begin at the same time and take the required lunch break, and no one will be allowed to work past the contest conclusion **(additional time may be granted for equipment malfunction)**.
5. Each contestant will be responsible for establishing plotting procedures at the computer and for plotting his or her work to a plot file on a USB flash drive. Students must have a program on their computer to allow them to plot to a PDF if the program of choice does not allow this plotting option.
6. Criteria to evaluate skill performance are general in nature and will be done from plotted drawings, manual drawings and sketches. Specific criteria will be based on the demonstration of competency in those elements of accuracy and productivity included in the contest problem.
7. Competencies to be demonstrated may be selected from the Standards and Competencies below.

Standards and Competencies

AD 1.0 — Demonstrate understanding of terms and principles used in the architectural profession

1.1 Define and use terms commonly used in the architectural profession

1.2 Explain the application of geometric objects to building materials

- 1.2.1 Define the characteristics of an equilateral triangle and its application to architecture
- 1.2.2 Define the characteristics of an isosceles triangle and its application to architecture
- 1.2.3 Define the characteristics of a square and its application to architecture
- 1.2.4 Define the characteristics of a parallelogram and its application to architecture
- 1.2.5 Define the characteristics of an equilateral triangle and its application to architecture
- 1.2.6 Define the characteristics of a hexagon and its application to architecture
- 1.2.7 Define the characteristics of an octagon and its application to architecture
- 1.2.8 Define the characteristics of a circle and its application to architecture

AD 2.0 — Interpret and apply conventional General Drafting Standards to architectural drafting situations

2.1 Define function of each line in the Alphabet of Lines

2.2 Explain the graphical characteristics of each line

- 2.2.1 Visible/Object Lines: Thick solid lines that represent visible edges or contours of the part. Visible

lines of floor plans are medium thickness (0.6mm)

2.2.2 Hidden Lines: Hidden lines should always touch where the visible feature starts or ends (0.3mm). Hidden lines may be omitted from drawings for clarity purposes

2.2.3 Section Lines: Section lines represent the area of the part that would be cut in a section view (0.3mm)

2.3 Explain orthographic elevation projection

2.3.1 Architecturally, views are referred to as elevations

2.3.2 Roof plan is the top view and front elevation is the front view, etc.

2.3.3 Elevations are oriented on site with reference to true north or building north

2.4 Explain the terms and definitions used in detail drawings, working drawings and drafting

2.5 Define and describe the components that comprise architectural drawings

2.5.1 Necessary multiviews

2.5.2-Dimensional information

2.5.3 Specified materials

2.5.4 Revision block, title block and sheet size

2.5.5 Drafter/reviewer names

2.5.6 Enlarged views and sections showing detail

2.5.7 General notes with construction information

2.5.8 Schedules: doors, windows and room finishes

2.6 Define and describe the components that comprise architectural construction (working) drawings

AD 3.0 — Develop a set of working drawings from a provided scenario with provided materials using competencies identified for drafting certification by the American Design Drafting Association

3.1 Produce multiview drawings with lines, curves, surfaces, holes, fillets, rounds, chamfers, run outs and ellipses

3.2 Use standard drafting techniques to create section views to improve the visualization of new designs

3.3 Clarify multiview drawings and facilitate the dimensioning of drawings

3.4 Summarize and apply the principles and procedures for adding size information to a drawing according to standard dimensioning practices

3.5 Draw and label site plans, floor plans, foundation plans, plumbing plans, mechanical plans, electrical plans and landscaping plans with elevations sections, details, schedules and necessary multiviews.