



VIRGINIA BEACH CITY PUBLIC SCHOOLS
CHARTING THE COURSE

Department of Teaching & Learning
Parent/Student Course Information

Technical Design and Illustration Program
Architectural Drawing
(TE 8437)
Grades 10 - 12
One Credit, One Year

Counselors are available to assist parents and students with course selections and career planning. Parents may arrange to meet with the counselor by calling the school's guidance department.

COURSE DESCRIPTION

The courses in engineering and technology provide opportunities for students to acquire skills and knowledge necessary for technological literacy, entry-level careers, and lifelong learning. Students learn Virginia's 21 Workplace Readiness Skills within the content area. Those who are completing a two-year sequence have the opportunity to verify their knowledge of the workplace readiness skills through an industry assessment. This course provides students with the opportunity to learn more about the principles of architecture and related drafting practices and techniques. It provides helpful information for the homeowner and is beneficial to the future architect, interior designer, or homebuilder. Students use resource materials, standard books, and computers as they learn the general principles, practices and techniques of architectural drawing. The course includes designing residential structures and drawing plot plans, elevations, schedules and renderings.

PREREQUISITE

Basic Technical Drawing

CERTIFICATION

Students successfully completing the Technical Design and Illustration Program of Study will be prepared for the AutoCAD REVIT and or AutoCAD Architecture industry credential.

STUDENT ORGANIZATION

Technology Student Association (TSA) is a co-curricular organization for all students enrolled in engineering and technology courses. Students are encouraged to be active members of their youth organization to develop leadership and teamwork skills and to receive recognition for their participation in local, regional, state and national activities.

OPTIONS FOR NEXT COURSE

Engineering Drawing

Enrollment for the next Technical and Career Education course should be based on student performance, teacher recommendation, and parent input. The courses available are Engineering Drawing.

REQUIRED STUDENT TEXTBOOK

Architectural Design

COMPETENCIES FOR ARCHITECTURAL DRAWING

Demonstrating Workplace Readiness Skills: Personal Qualities and People Skills

- 1 Demonstrate positive work ethic.
- 2 Demonstrate integrity.
- 3 Demonstrate teamwork skills.
- 4 Demonstrate self-representation skills.
- 5 Demonstrate diversity awareness.
- 6 Demonstrate conflict-resolution skills.
- 7 Demonstrate creativity and resourcefulness.

Demonstrating Workplace Readiness Skills: Professional Knowledge and Skills

- 8 Demonstrate effective speaking and listening skills.
- 9 Demonstrate effective reading and writing skills.
- 10 Demonstrate critical-thinking and problem-solving skills.
- 11 Demonstrate healthy behaviors and safety skills.
- 12 Demonstrate an understanding of workplace organizations, systems, and climates.
- 13 Demonstrate lifelong-learning skills.
- 14 Demonstrate job-acquisition and advancement skills.
- 15 Demonstrate time-, task- and resource-management skills.
- 16 Demonstrate job-specific mathematics skills.
- 17 Demonstrate customer-service skills.

Demonstrating Workplace Readiness Skills: Technology Knowledge and Skills

- 18 Demonstrate proficiency with technologies common to a specific occupation.
- 19 Demonstrate information technology skills.
- 20 Demonstrate an understanding of Internet use and security issues.
- 21 Demonstrate telecommunications skills.

Examining All Aspects of an Industry

- 22 Examine aspects of planning within an industry/organization.
- 23 Examine aspects of management within an industry/organization.
- 24 Examine aspects of financial responsibility within an industry/organization.
- 25 Examine technical and production skills required of workers within an industry/organization.
- 26 Examine principles of technology that underlie an industry/organization.
- 27 Examine labor issues related to an industry/organization.
- 28 Examine community issues related to an industry/organization.
- 29 Examine health, safety and environmental issues related to an industry/organization.

Addressing Elements of Student Life

- 30 Identify the purposes and goals of the student organization.
- 31 Explain the benefits and responsibilities of membership in the student organization as a student and in professional/civic organizations as an adult.
- 32 Demonstrate leadership skills through participation in student organization activities, such as meetings, programs and projects.
- 33 Identify Internet safety issues and procedures for complying with acceptable use standards.

Exploring Architectural Design Foundations

- 34 Define architectural design.
- 35 Analyze architectural styles.

- 36 Maintain a reference library of architectural data.
- 37 Estimate construction costs.
- 38 Calculate square footage.
- 39 Research building and zoning code information.
- 40 Apply architectural principles of annotation and dimensioning.
- 41 Identify the components in a complete set of architectural drawings.
- 42 Create an architectural title block.

Introducing the Design Process

- 43 Define the architectural design process.
- 44 Apply the elements and principles of design in the architectural design process to create a solution.
- 45 Build presentation models.
- 46 Incorporate green technology into architectural design.
- 47 Design a functional floor plan.
- 48 Identify ADA (Americans with Disabilities Act) regulations.

Producing Illustrations

- 49 Develop a site analysis.
- 50 Prepare design sketches.
- 51 Draw a functional floor plan.
- 52 Design a foundation plan, based on a floor plan.
- 53 Draw an electrical plan, based on a floor plan.
- 54 Create sectional views.
- 55 Create perspective views.
- 56 Render design drawings.
- 57 Design exterior elevations.
- 58 Design interior elevations.
- 59 Create door and window schedules.
- 60 Create architectural design solutions using CADD (computer aided drafting and design).
- 61 Create a walk-through presentation of a section of a building.

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Produced by the Department of Media and Communications for the
Department of Teaching and Learning.
For further information please call (757) 263-1070.

Notice of Non-Discrimination Policy

Virginia Beach City Public Schools does not discriminate on the basis of race, color, religion, national origin, sex, sexual orientation/gender identity, pregnancy, childbirth or related medical condition, disability, marital status, age, genetic information or veteran status in its programs and activities and provides equal access to the Boy Scouts and other designated youth groups. School Board policies and regulations (including, but not limited to, Policies 2-33.4-4, 5-7, 5-19, 5-20, 5-44, 6-7, 6-33, 7-48, 7-49, 7-57 and Regulations 2-33.1, 4-4.1, 4-4.2, 4-4.3, 4-6.1, 5-44.1, 7-11.1, 7-17.1 and 7-57.1) provide equal access to courses, programs, counseling services, physical education and athletic, vocational education, instructional materials and extracurricular activities.

To seek resolution of grievances resulting from alleged discrimination or to report violations of these policies, please contact the Title VI/Title IX Coordinator/Director of Student Leadership at (757) 263-2020, 1413 Laskin Road, Virginia Beach, Virginia, 23451 (for student complaints) or the Section 504/ADA Coordinator/Chief Human Resources Officer at (757) 263-1133, 2512 George Mason Drive, Municipal Center, Building 6, Virginia Beach, Virginia, 23456 (for employees or other citizens). Concerns about the application of Section 504 of the Rehabilitation Act should be addressed to the Section 504 Coordinator/ Executive Director of Student Support Services at (757) 263-1980,

2512 George Mason Drive, Virginia Beach, Virginia, 23456 or the Section 504 Coordinator at the student's school. For students who are eligible or suspected of being eligible for special education or related services under IDEA, please contact the Office of Programs for Exceptional Children at (757) 263-2400, Laskin Road Annex, 1413 Laskin Road, Virginia Beach, Virginia, 23451.

Alternative formats of this publication which may include taped, Braille, or large print materials are available upon request for individuals with disabilities. Call or write The Department of Teaching and Learning, Virginia Beach City Public Schools, 2512 George Mason Drive, P.O. Box 6038, Virginia Beach, VA 23456-0038. Telephone 263-1070 (voice); fax 263-1424; 263-1240 (TDD) or email at Charles.Hurd@vbschools.com.

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(Revised August 2018)