

Career & Technology - Architecture, Construction and Manufacturing Cluster

Course: **ADVANCED ARCHITECTURAL DESIGN**

Course Description: Students gain advanced knowledge and skills specific to those needed to enter a career in architecture and construction or prepare a foundation toward a postsecondary degree in architecture, construction science, drafting, interior design, and landscape architecture. The course includes the advanced knowledge of the design, design history, techniques, and tools related to the production of drawings, renderings, and scaled models for commercial or residential architectural purposes. Student must pass safety test with 100% mastery.

NEISD # **8246**

Credit: 2.0

Term: Full Year

Grade Placement: 11-12

Prerequisites: Architectural Design

Special Notes:

Course: **ADVANCED CONSTRUCTION MANAGEMENT**

Course Description: Students gain knowledge and skills specific to those needed to enter the workforce as carpenters or building maintenance supervisors or build a foundation toward a postsecondary degree in architecture, construction science, drafting, or engineering. This course includes the knowledge of the design, techniques, and tools related to the management of architectural and engineering projects. Student must pass safety test with 100% mastery.

NEISD # **8240** Credit: 2.0 Term: Full Year Grade Placement: 11-12

Prerequisites: Construction Management

Special Notes:

Course: **ADVANCED CONSTRUCTION TECHNOLOGIES**

Course Description: Students gain knowledge and skills specific to those needed to enter the workforce as carpenters or building maintenance supervisors or build a foundation toward a postsecondary degree in architecture, construction science, drafting, or engineering. This course includes the knowledge of the design, techniques, and tools related to the management of architectural and engineering projects. Student must pass safety test with 100% mastery.

NEISD # **8244** Credit: 2.0 Term: Full Year Grade Placement: 11-12

Prerequisites: Construction Management

Special Notes:

Course: **ADVANCED ELECTRICAL TECHNOLOGY**

Course Description: Students gain advanced knowledge and skills specific to those needed to enter the work force as an electrician or building maintenance technician or supervisor or prepare for a postsecondary degree in construction. Students acquire knowledge and skills in safety, electrical theory, tools, codes, installation of electrical equipment, alternating current and direct current motors, conductor installation, installation of electrical services, and electric lighting installation. Student must pass safety test with 100% mastery.

NEISD # **8155** Credit: 2.0 Term: Full Year Grade Placement: 11-12

Prerequisites: Electrical Technology

Special Notes:

Course: **ADVANCED INTERIOR DESIGN**

Course Description: This is a technical laboratory course that includes the knowledge of the employability characteristics, principles, processes, technologies, communication, tools, equipment and materials related to interior spatial design. Student must pass safety test with 100% mastery.

NEISD # **8045** Credit: 1.0 Term: Full Year Grade Placement: 11-12

Prerequisites: Interior Design

Special Notes:

Course: **ADVANCED PIPING AND PLUMBING TECHNOLOGY**

Course Description: Students gain advanced knowledge and skills specific to those needed to enter the industry as a plumber, pipe fitter, or building maintenance technician or supervisor or prepare for a postsecondary degree in mechanical engineering. Students acquire knowledge and skills in industrial pipe fitting, motorized equipment, oxy-fuel cutting, and water, chemical, steam, compressed air, and oil pipe systems. Student must pass safety test with 100% mastery.

NEISD # **8242** Credit: 2.0 Term: Full Year Grade Placement: 11-12

Prerequisites: Piping and Plumbing Technology

Special Notes:

Course: **ADVANCED WELDING**

Course Description: This course builds on knowledge and skills developed in Welding. Students will develop advanced welding concepts and skills as they relate to personal and career development. This course integrates academic and technical knowledge and skills. Students will have opportunities to reinforce, apply, and transfer knowledge and skills to a variety of settings and problems. Student must pass safety test with 100% mastery.

NEISD # **8175** Credit: 2.0 Term: Full Year Grade Placement: 11-12

Prerequisites: Welding

Special Notes:

Course: **ARCHITECTURAL DESIGN**

Course Description: Students gain knowledge and skills specific to those needed to enter a career in architecture and construction or prepare a foundation toward a postsecondary degree in architecture, construction science, drafting, interior design, and landscape architecture. This course includes the knowledge of the design, design history, techniques, and tools related to the production of drawings, renderings, and scaled models for commercial or residential architectural purposes. Student must pass safety test with 100% mastery.

NEISD # **8245** Credit: 1.0 Term: Full Year Grade Placement: 10-12

Prerequisites:

Special Notes:

Course: **CONSTRUCTION MANAGEMENT**

Course Description: Students gain knowledge and skills specific to those needed to enter the work force as carpenters or building maintenance supervisors or build a foundation toward a postsecondary degree in architecture, construction science, drafting, or engineering. This course includes the knowledge of the design techniques and tools related to the management of architectural and engineering projects. Student must pass safety test with 100% mastery.

NEISD # **8239** Credit: 1.0 Term: Full Year Grade Placement: 10-12

Prerequisites:

Special Notes:

Course: **CONSTRUCTION TECHNOLOGY**

Course Description: Students gain knowledge and skills specific to those needed to enter the work force as carpenters or building maintenance supervisors or prepare for a postsecondary degree in construction management, architecture, or engineering. Students acquire knowledge and skills in safety, tool usage, building materials, codes, and framing. Student must pass safety test with 100% mastery.

NEISD # **8243** Credit: 1.0 Term: Full Year Grade Placement: 10-12

Prerequisites:

Special Notes:

Course: **ELECTRICAL TECHNOLOGY**

Course Description: Students gain knowledge and skills specific to those needed to enter the work force as an electrician or building maintenance supervisor or prepare for a postsecondary degree in construction. Students acquire knowledge and skills in safety, electrical theory, tools, codes, installation of electrical equipment, and the reading of electrical drawings, schematics, and specifications. Student must pass safety test with 100% mastery.

NEISD # **8154** Credit: 2.0 Term: Full Year Grade Placement: 10-12

Prerequisites:

Special Notes:

Course: **INTERIOR DESIGN**

Course Description: This is a technical course that addresses psychological, physiological and sociological needs of individuals by enhancing the environments in which they live and work. Individuals use knowledge and skills related to interior and exterior environments, construction and furnishings to make wise consumer decisions, increase productivity and compete in industry. Student must pass safety test with 100% mastery.

NEISD # **8044** Credit: 1.0 Term: Full Year Grade Placement: 10-12

Prerequisites:

Special Notes:

NEISD # **8047** Credit: 0.5 Term: Semester Grade Placement: 9-12

Prerequisites:

Special Notes: *Student must pass safety test with 100% mastery.*

Course: **MANUFACTURING ENGINEERING**

Course Description: Students gain knowledge and skills in the application, design, production, and assessment of products, services, and systems and how those knowledge and skills are applied to manufacturing. These knowledge and skills prepare students for success in the global economy. This course allows students to reinforce, apply, and transfer academic knowledge and skills to a variety of interesting and relevant activities, problems, and settings in a manufacturing setting. Student must pass safety test with 100% mastery.

NEISD # **8257** Credit: 2.0 Term: Full Year Grade Placement: 11-12

Prerequisites:

Special Notes:

Course: **MILL AND CABINETMAKING TECHNOLOGY**

Course Description: Students gain knowledge and skills specific to those needed to enter the work force in the area of mill work and cabinet manufacturing and installation. Students acquire knowledge and skills in cabinet design, tool usage, jointing methods, finishes, and numerical and computer control production methods. Student must pass safety test with 100% mastery.

NEISD # **8236** Credit: 2.0 Term: Full Year Grade Placement: 10-12

Prerequisites:

Special Notes:

Course: **PIPING AND PLUMBING TECHNOLOGY**

Course Description: Students gain knowledge and skills needed to enter industry as a plumber, pipe fitter, or building maintenance technician or supervisor or prepare for a postsecondary degree in construction management, architecture, or engineering. Students acquire knowledge and skills in tool usage, safety, pipefitting, drainage, building codes, and water supply. Student must pass safety test with 100% mastery.

NEISD # **8241** Credit: 2.0 Term: Full Year Grade Placement: 10-12

Prerequisites:

Special Notes:

Course: **PRACTICUM IN ARCHITECTURAL DESIGN**

Course Description: Practicum in Construction Management is an occupationally specific course designed to provide classroom technical instruction or on-the-job training experiences. Safety and career opportunities are included in addition to work ethics and job-related study in the classroom. Student must pass safety test with 100% mastery.

NEISD # **8247** Credit: 2.0 Term: Full Year Grade Placement: 12

Prerequisites: Completion of a coherent sequence in a program area related to the field of Construction Management.

Special Notes:

Course: **PRACTICUM IN INTERIOR DESIGN**

Course Description: This is an occupationally-specific course designed to provide classroom technical instruction. Job-specific skilled training is provided through the use of laboratory training or training plans by local training sponsors in areas compatible with identified career goals in interior design. In addition, students are expected to develop knowledge and skills in housing, furnishings, and equipment construction/management and services. The practicum course is a paid or unpaid capstone experience or independent study course for students participating in a coherent sequence of career and technical education courses in the field of interior design. Instruction may be delivered through laboratory training or through career preparation delivery arrangements. Student must pass safety test with 100% mastery.

NEISD # **8046** Credit: 2.0 Term: Full Year Grade Placement: 12

Prerequisites:

Special Notes: *Student must provide their own transportation.*

Course: **PRINCIPLES OF ARCHITECTURE AND CONSTRUCTION**

Course Description: This course provides an overview of the various fields of architecture, interior design, construction science and construction technology. Student must pass safety test with 100% mastery.

NEISD # **6647** Credit: 1.0 Term: Full Year Grade Placement: 9-12

Prerequisites:

Special Notes:

NEISD # **6648** Credit: .05 Term: Semester Grade Placement: 9-12

Prerequisites:

Special Notes:

Course: **PRINCIPLES OF MANUFACTURING**

Course Description: Students gain knowledge and skills in manufacturing technology in the modern world. Students gain an understanding of career opportunities available in manufacturing and what employers require to gain and maintain employment in these careers. The study of manufacturing technology allows students to reinforce, apply and transfer academic knowledge and skills to a variety of interesting and relevant activities, problems and settings in a manufacturing setting. Student must pass safety test with 100% mastery.

NEISD # **6629** Credit: 1.0 Term: Full Year Grade Placement: 9-12

Prerequisites:

Special Notes:

Course: **WELDING**

Course Description: This course provides the knowledge, skills, and technologies required for employment in metal technology systems. Students develop knowledge and skills related to this system and apply them to personal career development. This course supports integration of academic and technical knowledge and skills. Students will reinforce, apply, and transfer knowledge and skills to a variety of settings and problems. Knowledge about career opportunities, requirements, and expectations and the development of workplace skills prepare students for future success. Student must pass safety test with 100% mastery.

NEISD # **8174** Credit: 2.0 Term: Full Year Grade Placement: 10-12

Prerequisites:

Special Notes: