CAREER AND TECHNICAL EDUCATION

The mission of Career and Technical Education (CTE) is to empower students to be successful citizens, workers, and leaders in a global economy. CTE programs are designed to contribute to the broad educational achievement of students, including basic skills, as well as their ability to work independently and as part of a team, think creatively and solve problems, and utilize technology in the thinking and problem-solving process.

Career and Technical Education fulfills an increasingly significant role in school reform efforts. Students who concentrate in a CTE area, earning at least four related technical credits and meeting other criteria, are better prepared for the further education and advanced training required to be successful in 21st century careers.

In the Onslow County School System, competency-based courses are offered in the following program areas:

Agricultural Education provides students with the opportunity to participate in an integrated educational model that focuses students on careers in the food, fiber and environmental systems.

Business and Information Technology Education plays a major role in preparing a competent, business-literate, and skilled workforce. This program is designed to integrate business and information technology skills into the middle and high school curriculum.

Career Development Education is a process that involves students, parents, teachers, counselors, and the community. The goal is to help students make good decisions about themselves and their future.

Family and Consumer Sciences Education prepares students for careers working with individuals and families, as well as for competence in the work of their own families. The concept of work, whether in a family or career, is central to the program area.

Health Occupations Education program seeks to meet present and predicted needs for health care workers within a health care delivery system that is characterized by diversity and changing technologies. It is a program that recruits qualified and motivated students and prepares them for pursuit of appropriate health careers.

Marketing Education prepares students for advancement in marketing and management careers and future studies in community and technical colleges or four-year colleges or universities. It encompasses activities within production, as well as aspects of consumption.

Technology Education helps students develop an appreciation and fundamental understanding of technology through the study and application of materials, tools, processes, inventions, structures and artifacts of the past and present.

Trade and Industrial Education is a secondary program that provides students the opportunity to advance in a wide range of trade and industrial occupations. They are prepared for initial employment, further education at the community college or university lever, and/or business ownership.

CTE ADVANCED STUDIES

Course Code: CS952X0C **Fee (if applicable):** n/a

Offered at: All High Schools **Grade(s):** 12

Prerequisite: Two technical credits in one Career Cluster

This culminating course is for seniors who have earned two technical credits, one of which is a completer course, in one Career Cluster. The Advanced Studies course must augment the content of the completer course and prepare students for success in transitioning to postsecondary education and future careers. Students work under the guidance of a teacher with expertise in the content of the completer course in collaboration with community members, business representatives, and other school-based personnel. The four parts of the course include writing a research paper, producing a product, developing a portfolio, and delivering a presentation. Students demonstrate their abilities to use 21st century skills. DECA (an association for Marketing Education students), Future Business Leaders of America (FBLA), FFA, Family, Career and Community Leaders of America (FCCLA), Health Occupations Students of America (HOSA), SkillsUSA, and Technology Student Association (TSA) competitive events, community service, and leadership activities provide the opportunity to apply essential standards and workplace readiness skills through authentic experiences. This course meets the requirements for the Graduation Project.

CAREER MANAGEMENT

Course Code: CC452X0C **Fee (if applicable):** n/a

Offered at: DHS, JHS, NHS, SWHS, WOHS **Grade(s):** 9,10,11,12

Prerequisite: None

This course prepares students to locate, secure, keep, and change careers. Emphasis is placed on self-assessment of characteristics, interests, and values; education and career exploration; evaluation of career information and creation of a career plan. Based on the National Career Development Guidelines, skills learned in this course include, but are not

limited to communications, interpersonal skills, problem solving, personal management and teamwork. English language arts are reinforced. Work-based learning strategies appropriate for this course include business/industry field trips, internships, job shadowing, and service learning. Student participation in Career and Technical Student Organization, (CTSO) competitive events, community service, and leadership activities provide the opportunity to apply essential standards and workplace readiness skills through authentic experiences.

CTE INTERNSHIP

Course Code: CS972X0C **Fee (if applicable):** n/a

Offered at: All High Schools **Grade(s):** 12

Prerequisite: Application, teacher recommendation, and parental approval. Transportation is student's responsibility. Background check/drug screening may be required at student cost. TB screening required for childcare and most medical placements.

A CTE Internship allows for additional development of career and technical competencies within a general career field. Internships allow students to observe and participate in daily operations, develop direct contact with job personnel, investigate particular careers, and perform certain job tasks. This activity is exploratory and allows the student to get hands-on experience in a number of related activities. The Career Development Facilitator, intern, and the business community jointly plan the organization, implementation, and evaluation of an internship, regardless of whether it is an unpaid or paid internship. Required activities include 15 hours of classroom instruction, online assignments, and 100 hours of documented on the job work experience and journal. Internships may be eligible for CTE concentration credit.

***(Applications must be submitted to the Career Development Facilitator (CDF) during the registration process)

PROJECT MANAGEMENT I

Course Code: CS112X0C **Fee (if applicable):** n/a

Offered at: JHS, SWHS **Grade(s):** 9,10,11,12

Prerequisite: None

This course will introduce students to the principles, concepts, and software applications used in the management of projects. Through project-based learning, students will understand how to use the framework of initiating, planning, executing, monitoring and controlling, and closing a project in authentic situations. Art, English language arts, and mathematics are reinforced. Work-based learning strategies appropriate for this course include cooperative education, This course will introduce students to the principles, concepts, and software applications used in the management of projects. Through project-based learning, students will understand how to use the framework of initiating, planning, executing, monitoring and controlling, and closing a project in authentic situations. Art, English language arts, and mathematics are reinforced. Work-based learning strategies appropriate for this course include cooperative education, entrepreneurship, internship, mentorship, school-based enterprise, service learning, and job shadowing. Apprenticeship is not available for this course. DECA (an association for Marketing Education students), Future Business Leaders of America (FBLA), FFA, Family, Career and Community Leaders of America (FCCLA), SkillsUSA, and Technology Student Association (TSA) competitive events, community service, and leadership activities provide the opportunity entrepreneurship, internship, mentorship, school-based enterprise, service learning, and job shadowing. Apprenticeship is not available for this course. DECA (an association for Marketing Education students), Future Business Leaders of America (FBLA), FFA, Family, Career and Community Leaders of America (FCCLA), SkillsUSA, and Technology Student Association (TSA) competitive events, community service, and leadership activities provide the opportunity to apply essential standards and workplace readiness skills through authentic experiences.

AGRICULTURAL EDUCATION

AGRICULTURAL MECHANICS I

Course Code: AS312X0C **Fee (if applicable):** $5

Offered at: RHS **Grade(s):** 10,11,12

Prerequisite: None

This course develops knowledge and technical skills in the broad field of agricultural machinery, equipment, and structures. The primary purpose of this course is to prepare students to handle the day-to-day problems, accidents, and repair needs they will encounter in their chosen agricultural career. Topics include agricultural mechanics safety, agricultural engineering career opportunities, hand/power tool use and selection, electrical wiring, basic metal working, basic agricultural construction skills related to plumbing, concrete, carpentry, welding, and leadership development. Skills in physics, geometry, and algebra are reinforced in this course. Work-based learning strategies appropriate for this course are agriscience projects, field trips, job shadowing, and supervised agricultural experience. Supervised agricultural experience programs and FFA leadership activities are integral components of the course and provide many opportunities for practical application.

AGRICULTURAL MECHANICS II–SMALL ENGINES

Course Code: AS332X0C **Fee (if applicable):** $5

Offered at: RHS **Grade(s):** 11,12

Prerequisite: Agricultural Mechanics I

This course provides hands-on instruction in small engine systems including the compression, fuel, electrical, cooling and lubrication systems. Troubleshooting methods are emphasized. In addition, students learn how to select engines for specific applications. Materials will be covered to prepare students for the Master Service Technician Exam.

Opportunities exist for students to conduct internships or apprenticeships as small engine technicians.

AGRISCIENCE APPLICATIONS

Course Code: AU102X0C **Fee (if applicable):** $5

Offered at: RHS, WOHS **Grade(s):** 9,10,11,12

Prerequisite: None

This course focuses on integrating biological/physical sciences with technology as related to the environment, natural resources, food production, science, and agribusiness. Topics of instruction include agricultural awareness and literacy, employability skills and introduction to all aspects of the total agricultural industry. English language arts, mathematics, and science are reinforced. Work-based learning strategies appropriate for this course are apprenticeship, cooperative education, mentorship, school-based enterprise, service learning, job shadowing, and supervised agricultural experience. FFA competitive events, community service, and leadership activities provide the opportunity to apply essential standards and workplace readiness skills through authentic experiences.

ANIMAL SCIENCE I

Course Code: AA212X0C **Fee (if applicable):** $5

Offered at: JHS, RHS, WOHS **Grade(s):** 10,11,12

Prerequisite: None

This course focuses on the basic scientific principles and processes that are involved in animal physiology, breeding, nutrition, and care in preparation for an animal science career major. Topics include animal diseases, introduction to animal science, animal nutrition, animal science issues, career opportunities, and animal evaluation. Skills in biology, chemistry, and algebra are reinforced in this course. Work-based learning strategies are agriscience projects, internships, and supervised agricultural experience. FFA leadership activities provide many opportunities for practical application of instructional competencies.

*Course enrollment limited to 20 to ensure safety in laboratory settings.

ANIMAL SCIENCE II-SMALL ANIMAL

Course Code: AA232X0C **Fee (if applicable):** $5

Offered at: JHS, RHS, WOHS **Grade(s):** 11,12

Prerequisite: Animal Science I

Honors credit is available-AA235X0C

This course provides instruction on animal husbandry topics related to small animals that are served by a veterinarian. Content related to the breeding, grooming, care and marketing of animals that fit into this category will be covered through this course. Opportunities for students to gain hands-on experience will be included in the course and reinforced through work-based learning and leadership experiences.

HORTICULTURE I

Course Code: AP412X0C **Fee (if applicable):** $5

Offered at: JHS, RHS **Grade(s):** 10,11,12

Prerequisite: None

This course provides instruction in the broad field of horticulture with emphasis on the scientific and technical knowledge required for a career in horticulture. Topics include plant growth and development, plant nutrition, media selection, basic plant identification, pest management, chemical disposal, customer relations, career opportunities, and leadership development. Skills in biology, chemistry, and algebra are reinforced in this course. Work-based learning strategies include agriscience projects, internships, and supervised agricultural experience. FFA leadership activities provide many opportunities for practical application of instructional competencies.

HORTICULTURE II

Course Code: AP422X0C **Fee (if applicable):** $5

Offered at: JHS, RHS **Grade(s):** 11,12

Prerequisite: Horticulture I

Honors credit is available-AP425X0C

This course emphasizes advanced scientific computations and communication skills needed in the horticulture industry. Topics include greenhouse plant production and management, bedding plant production, watering systems, light effects, basic landscape design, installation and maintenance, lawn and turf grass management, career planning, and leadership/personal development. Skills in biology, chemistry, and algebra are reinforced in this class. Work-based learning strategies include agriscience projects, cooperative education, apprenticeships, and supervised agricultural experience. FFA leadership activities provide many opportunities for practical application of instructional competencies.

VETERINARIAN ASSISTING

Course Code: AA415X0C **Fee (if applicable):** $5

Offered at: JHS **Grade(s):** 11,12

Prerequisite: Animal Science I, Animal Science II-Small Animal

Recommendation: Student must have recommendation of Agriculture Teacher.

This course focuses on instruction for students desiring a career in animal medicine. Topics include proper veterinary practice management and client relations, pharmacy and laboratory procedure, enhancement of animal care learned in previous animal courses, and surgical/radiological procedures. Advanced FFA leadership will be infused throughout the curriculum to develop the student's ability to work with the public. All aspects of this course will have hands-on skill sets that will be enforced with a total of 500 (200 laboratory/classroom hands-on hours and 300 under the supervision of a licensed veterinarian or certified veterinary technician) working in animal medicine throughout all animal

courses in high school. The students will complete the skills and have them checked off during the 1-3 year(s) of high school. Applied mathematics, science, writing, and skill sets are integrated throughout the curriculum.

Students will learn the material in order to be prepared for the Veterinary Assisting exam developed by the Texas Veterinary Medical Association. With successful completion of the exam and hours, students will be able to be a Certified Veterinary Assistant (CVA) Level 1.

BUSINESS EDUCATION

ACCOUNTING I

Course Code: BA102X0C **Fee (if applicable):** $15

Offered at: JHS **Grade(s):** 10,11,12

Prerequisite: None

This course is designed to help students understand the basic principles of the accounting cycle. Emphasis is placed on the analysis and recording of business transaction, preparation and interpretation of financial statements, accounting systems, banking and payroll activities, basic types of business ownership, and an accounting career orientation. Mathematics skills and critical thinking are reinforced. Work-based learning strategies are school-based enterprises, internships, cooperative education, and apprenticeship. In addition to simulations, projects, and teamwork, FBLA leadership activities, meetings, conferences, and competitions provide opportunities for application of instructional competencies.

ACCOUNTING II

Course Code: BA205X0C **Fee (if applicable):** $15

Offered at: JHS **Grade(s):** 11,12

Prerequisite: Accounting I

Honors credit is available-BA205X0C

This course is designed to provide students with an opportunity to develop in-depth knowledge of accounting procedures and techniques utilized in solving business problems and making financial decisions. Emphasis includes partnership accounting, adjustments and inventory control systems, budgetary control systems, cost accounting, and further enhancement of accounting skills. Mathematics skills and critical thinking are reinforced. Work-based learning strategies are school-based enterprise, internships, cooperative education, and apprenticeships. Simulations, projects, teamwork, and FBLA leadership activities, meetings, conferences, and competitions provide opportunities for application of instructional competencies.

BUSINESS FINANCIAL PLANNING

Course Code: BF202X0C **Fee (if applicable):** $15

Offered at: JHS **Grade(s):** 10,11,12

Prerequisite: Principles of Business and Finance

This course expands student understanding of finance as it is impacted by globalization, convergence and consolidation, technological innovation, and increased regulation. Accounting and financial services including banking, insurance, and securities and investments are emphasized throughout the course. English language arts and mathematics are reinforced. Work-based learning strategies appropriate for this course include cooperative education, entrepreneurship, internship, mentorship, school-based enterprise, service learning, and job shadowing. Apprenticeship is not available for this course. Future Business Leaders of America (FBLA) competitive events, community service, and leadership activities provide the opportunity to apply essential standards and workplace readiness skills through authentic experiences.

BUSINESS LAW

Course Code: BB302X0C **Fee (if applicable):** $15

Offered at: JHS, SBHS **Grade(s):** 10,11,12

Prerequisite: Principles of Business and Finance

This course is designed to acquaint students with the basic legal principles common to all aspects of business and personal law. Business topics include contract law, business ownership including intellectual property, financial law, and national and international laws. Personal topics include marriage and divorce law, purchasing appropriate insurance, renting and owning real estate, employment law, and consumer protection laws. Social studies and English language arts are reinforced. Work-based learning strategies appropriate for this course include apprenticeship, internship, and job shadowing. Apprenticeship and cooperative education are not available for this course. Future Business Leaders of America (FBLA) competitive events, community service, and leadership activities provide the opportunity to apply essential standards and workplace readiness skills through authentic experiences.

BUSINESS MANAGEMENT

Course Code: BB402X0C **Fee (if applicable):** $15

Offered at: SBHS **Grade(s):** 10,11,12

Prerequisite: Principles of Business and Finance

This course expands student understanding of management, including customer relationship management, human resources management, information management, knowledge management, product-development management, project management, quality management, and strategic management. Economics, finance, and professional development are also stressed throughout the course. English language arts are reinforced. Work-based learning strategies appropriate for this course include cooperative education, entrepreneurship, internship,

mentorship, school-based enterprise, service learning, and job shadowing. Apprenticeship is not available for this course. Future Business Leaders of America (FBLA) competitive events, community service, and leadership activities provide the opportunity to apply essential standards and workplace readiness skills through authentic experiences.

ENTREPRENEURSHIP I

Course Code: ME112X0C **Fee (if applicable):** $15

Offered at: DHS, JHS, NHS, RHS, SBHS, SWHS **Grade(s):** 11,12

Prerequisite: Marketing or Personal Finance or Principles of Business and Finance

In this course students evaluate the concepts of going into business for themselves and working for or operating a small business. Emphasis is on the exploration of feasible ideas of products/services, research procedures, business financing, marketing strategies, and access to resources for starting a small business. Students develop components of a business plan and evaluate startup requirements. English language arts and social studies are reinforced. Work-based learning strategies appropriate include cooperative education, entrepreneurship, internship, mentorship, school-based enterprise, service learning, and job shadowing. Apprenticeship is not available for this course. DECA (an association for Marketing Education students) and Future Business Leaders of America (FBLA) competitive events, community service, and leadership activities provide the opportunity to apply essential standards and workplace readiness skills through authentic experiences.

ENTREPRENEURSHIP II

Course Code: ME122X0C **Fee (if applicable):** $15

Offered at: JHS, NHS, SBHS **Grade(s):** 12

Prerequisite: Entrepreneurship I

In this course students develop an understanding of pertinent decisions to be made after obtaining financing to open a small business. Students acquire in-depth understanding of business regulations, risks, management, and marketing. Students develop a small-business management handbook. English language arts and social studies are reinforced. Work-based learning strategies appropriate include cooperative education, entrepreneurship, internship, mentorship, school-based enterprise, service learning, and job shadowing. Apprenticeship is not available for this course. DECA (an association for Marketing Education students) and Future Business Leaders of America (FBLA) competitive events, community service, and leadership activities provide the opportunity to apply essential standards and workplace readiness skills through authentic experiences.

MICROSOFT EXCEL AND ACCESS

Course Code: BM202X0C **Fee (if applicable):** $15

Offered at: All High Schools **Grade(s):** 9,10,11,12

Prerequisite: None

Recommendation: Keyboarding Skill - defined as a minimum of 35 words per minute with errors corrected; format from rough draft copy of an announcement, memorandum, personal business letter, and unbound report; and exhibit proper keyboarding techniques.

Students in Microsoft IT Academies benefit from world-class Microsoft curriculum and cutting-edge software tools to tackle real-world challenges in the classroom environment. The first part of the class is designed to help you use the newest version of Microsoft Excel interface, commands, and features to present, analyze, and manipulate various types of data. Students will learn to manage workbooks as well as how to manage, manipulate, and format data. In the second part of the class students will learn how to create and work with a database and its objects by using the new and improved features in the newest version of Microsoft Access. Students will learn how to create, modify, and locate information as well as how to create programmable elements and share and distribute database information. Work-based learning strategies appropriate for this course include cooperative education, internship, service learning, and job shadowing. FBLA competitive events, community service, and leadership activities provide the opportunity to apply essential standards and workplace readiness skills through authentic experiences. This course can help prepare students for the Microsoft Office Specialist (MOS) in Excel and/or Access.

MICROSOFT WORD AND POWERPOINT

Course Code: BM102X0C **Fee (if applicable):** $15

Offered at: All High Schools **Grade(s):** 9,10,11,12

Prerequisite: None

Recommendation: Keyboarding Skill - defined as a minimum of 35 words per minute with errors corrected; format from rough draft copy of an announcement, memorandum, personal business letter, and unbound report; and exhibit proper keyboarding techniques.

Students in Microsoft IT Academies benefit from world-class Microsoft curriculum and cutting-edge software tools to tackle real-world challenges in the classroom environment. In the first part, students will learn to use the newest version of Microsoft Word interface, commands, and features to create, enhance, customize and share documents as well as create complex documents and publish them. In the second part, students will learn to use the newest version of Microsoft PowerPoint interface, commands, and features to create, enhance, customize and deliver presentations. In the last part, students will learn to use the basic features of the newest version of Publisher to create, customize, and publish a publication. Work-based learning strategies appropriate for this course include cooperative education, internship, service learning, and job shadowing. FBLA competitive events, community service, and leadership activities provide the

opportunity to apply essential standards and workplace readiness skills through authentic experiences. This course can help prepare students for the Microsoft Office Specialist (MOS) in Word and/or PowerPoint.

MULTIMEDIA AND WEBPAGE DESIGN

Course Code: BD102X0C **Fee (if applicable):** $15

Offered at: All High Schools **Grade(s):** 9,10,11,12

Prerequisite: Microsoft Word and PowerPoint

This revised course focuses on desktop publishing, graphic image design, computer animation, virtual reality, multimedia production, and webpage design. Communication skills and critical thinking are reinforced through software applications. Work-based learning strategies appropriate for this course include cooperative education, internship, school-based enterprise, service learning, and job shadowing. FBLA competitive events, community service, and leadership activities provide the opportunity to apply essential standards and workplace readiness skills through authentic experiences.

PERSONAL FINANCE

Course Code: BF052X0C **Fee (if applicable):** $5

Offered at: All High Schools **Grade(s):** 9,10,11,12

Prerequisite: None

This course prepares students to understand economic activities and challenges of individuals and families, the role of lifestyle goals in education and career choices, procedures in a successful job search, financial forms used in independent living, and shopping options and practices for meeting consumer needs. The course also prepares students to understand consumer rights, responsibilities, and information, protect personal and family resources, and apply procedures for managing personal finances. English language arts and mathematics are reinforced. Work-based learning strategies appropriate for this course include mentorship, school-based enterprise, service learning, and job shadowing. Apprenticeship and cooperative education are not available for this course. DECA (an association for Marketing Education students), Future Business Leaders of America (FBLA) and Family, Career and Community Leaders of America (FCCLA) competitive events, community service, and leadership activities provide the opportunity to apply essential standards and workplace readiness skills through authentic experiences.

PRINCIPLES OF BUSINESS AND FINANCE

Course Code: BF102X0C **Fee (if applicable):** n/a

Offered at: All High Schools **Grade(s):** 9,10,11,12

Recommendation: Math I

Honors credit is available-BF105X0C

This course introduces students to topics related to business, finance, management, and marketing to cover business in the global economy, functions of business organization and management, marketing basics, and significance of business financial and risk management. English language arts, social studies, and mathematics are reinforced. Work-based learning strategies appropriate for this course include mentorship, school-based enterprise, service learning, and job shadowing. Cooperative education is not available for this course. Apprenticeship is not available for this course. DECA (an association for Marketing Education students) and Future Business Leaders of America (FBLA) competitive events, community service, and leadership activities provide the opportunity to apply essential standards and workplace readiness skills through authentic experiences.

FAMILY AND CONSUMER SCIENCE

APPAREL AND TEXTILE PRODUCTION I

Course Code: FA312X0C **Fee (if applicable):** $5

Offered at: NHS, SBHS **Grade(s):** 9,10,11,12

Prerequisite: None

In this course students are introduced to clothing production in the areas of preparation for clothing construction, basic clothing construction techniques, consumer decisions, textiles, historical perspectives and design, and career opportunities. Emphasis is placed on students applying these construction and design skills to apparel and home fashion. Art, mathematics, and science are reinforced. Work-based learning strategies appropriate for this course include service learning and job shadowing. Apprenticeship and Cooperative education are not available for this course. Family, Career and Community Leaders of America (FCCLA) competitive events, community service, and leadership activities provide the opportunity to apply essential standards and workplace readiness skills through authentic experiences.

APPAREL AND TEXTILE PRODUCTION II - ENTERPRISE

Course Code: FA322X0C **Fee (if applicable):** $5

Offered at: NHS, SBHS **Grade(s):** 10,11,12

Prerequisite: Apparel and Textile Production I

In this course students are introduced to advanced clothing and housing apparel development skills. The use of fibers and fabrics is combined with design and construction techniques to develop and produce clothing or housing apparel products. A real or simulated apparel business enterprise and FCCLA activities allow students to apply instructional strategies and workplace readiness skills to an authentic experience and to develop a portfolio. Mathematics and science are reinforced. Work-based learning strategies appropriate for this course include cooperative education, entrepreneurship, internship, mentorship, school-based enterprise, service learning and job shadowing. Apprenticeship is not available for this course. Family, Career and Community Leaders of America (FCCLA) competitive events, community service, and leadership activities provide the opportunity to apply essential standards

and workplace readiness skills through authentic experiences.

CULINARY ARTS AND HOSPITALITY – INTRODUCTION

Course Code: FH202X0C **Fee (if applicable):** $5

Offered at: NHS **Grade(s):** 9,10,11,12

Prerequisite: Foods I

In this course, basic safety and sanitation practices leading to a national industry-recognized food safety credential are introduced. Commercial equipment, smallwares, culinary math, and basic knife skills in a commercial foodservice facility are taught. Art, mathematics, and science are reinforced. Work-based learning strategies appropriate for this course include service learning and job shadowing. Apprenticeship and cooperative education are not available for this course. Family, Career and Community Leaders of America (FCCLA) competitive events, community service, and leadership activities provide the opportunity to apply essential standards and workplace readiness skills through authentic experiences.

CULINARY ARTS AND HOSPITALITY I

Course Code: FH212X0C **Fee (if applicable):** $5

Offered at: NHS **Grade(s):** 10,11,12

Prerequisite: Culinary Arts and Hospitality - Introduction

This course focuses on basic skills in cold and hot food production, baking and pastry, and service skills. Art, English language arts, mathematics, and science are reinforced. Work-based learning strategies appropriate for this course include service learning and job shadowing. Apprenticeship and cooperative education are not available for this course. Family, Career and Community Leaders of America (FCCLA) leadership activities provide the opportunity to apply instructional competencies and workplace readiness skills to authentic experiences.

CULINARY ARTS AND HOSPITALITY II

Course Code: FH222X0C **Fee (if applicable):** $5

Offered at: NHS **Grade(s):** 11,12

Prerequisite: Culinary Arts and Hospitality I

Honors credit is available-FH225X0C

This two-period block course provides advanced experiences in cold and hot and food production, management (front and back of the house), and service skills. Topics include menu planning, business management, and guest relations. Art, English language arts, mathematics, and science are reinforced. Work-based learning strategies appropriate for this course include apprenticeship, cooperative education, entrepreneurship, internship, mentorship, school-based enterprise, service learning and job shadowing. Family, Career and Community leaders of America (FCCLA) competitive events, community service, and leadership activities provide the opportunity to apply essential standards and workplace readiness skills through authentic experiences.

EARLY CHILDHOOD EDUCATION I

Course Code: FE112X0G **Fee (if applicable):** $5

Offered at: JHS, SBHS **Grade(s):** 11,12

Prerequisite: Students must be 16 by October 1

This two-period block course prepares students to work with children in early education and child care settings. Areas of study include personal and professional preparation, child development from birth to age 12, techniques and procedures for working with young children, and history, trends and opportunities in this field. An internship makes up 50 percent of instructional time. Work-based learning strategies appropriate for this course include internship, mentorship, service learning, and job shadowing. Cooperative education and apprenticeship are not available for this course. Family, Career and Community Leaders of America (FCCLA) competitive events, community service, and leadership activities provide the opportunity to apply essential standards and workplace readiness skills through authentic experiences. Parenting and Child Development is recommended as preparation for this course.

EARLY CHILDHOOD EDUCATION II

Course Code: FE122X0G **Fee (if applicable):** $5

Offered at: JHS, SBHS **Grade(s):** 12

Prerequisite: Early Childhood Education I

Honors credit is available-FE125X0G (Honors Only at SBHS)

This two-period block course prepares students to work with children birth to twelve years of age in child care, preschool, and/or after school programs. Students are encouraged to continue their education at a community college or university. Students receive instruction in child care pertaining to teaching methods, career development, program planning and management, health and safety issues, entrepreneurship skills, and technology. This course is a two-credit course with work-based learning comprising over 50 percent of the required coursework. Students who successfully complete this course and are 18 years of age will be eligible to apply for the North Carolina Early Childhood Credential (NCECC) through the Division of Child Development. The work-based learning strategies appropriate for this course include school-based enterprises, internships, cooperative education, field trips, job shadowing, and apprenticeships. SCAN (industry) skill development and FCCLA leadership activities provide the opportunity to apply instructional competencies and career management skills to authentic experiences. Students participating in work-based learning will need to have an up-to-date TB Test on file.

FOODS I

Course Code: FN412X0C **Fee (if applicable):** $5

Offered at: All High Schools **Grade(s):** 9,10,11,12

Prerequisite: None

Honors credit is available-FN415X0C

This course examines the nutritional needs of the individual. Emphasis is placed on the relationship of diet to health, kitchen and meal management, and food preparation. Skills in science and mathematics are reinforced in this course. Work-based learning strategies appropriate for this course include field trips and service learning. FCCLA leadership activities provide the opportunity to apply instructional competencies and workplace readiness skills to authentic experiences.

FOODS II-ENTERPRISE

Course Code: FN422X0C **Fee (if applicable):** $5

Offered at: All High Schools **Grade(s):** 10,11,12

Prerequisite: Foods I

This course focuses on advanced food preparation techniques while applying nutrition, food science, and test kitchen concepts using new technology. Food safety and sanitation receive special emphasis, with students taking the exam for the ServSafe® credential from the National Restaurant Association. Students develop skills in preparing foods such yeast breads, and cake fillings and frostings. Students will develop specialty food preparation skills used in food service operations. A real or simulated in-school food business component allows students to apply instructional strategies and workplace readiness skills to an authentic experience to develop a portfolio and to enhance FCCLA activities. Skills in science, math, management, and communication are reinforced in this course. Work-based learning strategies appropriate for this course include school-based enterprises, field trips, job shadowing, and service learning.

INTERIOR DESIGN I

Course Code: FI512X0C **Fee (if applicable):** $5

Offered at: SBHS, SWHS **Grade(s):** 10,11,12

Prerequisite: None

This course focuses on housing needs and options of individuals and families at various stages of the life cycle. Emphasis is placed on selecting goods and services and creating functional, pleasing living environments using sound financial decisions and principles of design. Topics of study include elements and principles of design, backgrounds and furnishings, architectural styles and features, and functional room design. Art and mathematics are reinforced. Work-based learning strategies appropriate for this course include cooperative education, entrepreneurship, internship, mentorship, school-based enterprise, service learning, and job shadowing. Apprenticeship is not available for this course. Family, Career Community Leaders of America (FCCLA) competitive events, community service, and leadership activities provide the opportunity to apply essential standards and workplace readiness skills through authentic experiences.

INTERIOR DESIGN II

Course Code: FI522X0C **Fee (if applicable):** $5

Offered at: SBHS, SWHS **Grade(s):** 11,12

Prerequisite: Interior Design I

This course prepares students for entry-level and technical work opportunities in the residential and non-residential interior design fields. Students deepen their understanding of design fundamentals and theory by designing interior plans to meet living space needs of specific individuals or families. Topics include application of design theory to interior plans and production, selection of materials, and examination of business procedures. Art and mathematics are reinforced. Work-based learning strategies appropriate for this course include cooperative education, entrepreneurship, internship, mentorship, school-based enterprise, service learning, and job shadowing. Apprenticeship is not available for this course. Family, Career and Community Leaders of America (FCCLA) competitive events, community service, and leadership activities provide the opportunity to apply essential standards and workplace readiness skills through authentic experiences.

PARENTING AND CHILD DEVELOPMENT

Course Code: FE602X0C **Fee (if applicable):** $5

Offered at: DHS, JHS, WOHS **Grade(s):** 9,10,11,12

Prerequisite: None

This course introduces students to responsible nurturing and basic applications of child development theory. Emphasis is on the parents' responsibilities and the influences they have on children while providing care and guidance. Skills in communication, resource management, and problem solving are reinforced in this course. Work-based learning strategies appropriate for this course include field trips and service learning. FCCLA leadership activities provide the opportunity to apply instructional competencies and workplace readiness skills to authentic experiences.

PERSONAL FINANCE

Course Code: BF052X0C **Fee (if applicable):** $5

Offered at: All High Schools **Grade(s):** 9,10,11,12

Prerequisite: None

This course prepares students to understand economic activities and challenges of individuals and families, the role of lifestyle goals in education and career choices, procedures in a successful job search, financial forms used in independent living, and shopping options and practices for meeting consumer needs. The course also prepares students to understand consumer rights, responsibilities, and information, protect personal and family resources, and apply procedures for managing personal finances. English language arts and mathematics are reinforced. Work-based learning strategies appropriate for this course include mentorship,

school-based enterprise, service learning, and job shadowing. Apprenticeship and cooperative education are not available for this course. DECA (an association for Marketing Education students), Future Business Leaders of America (FBLA) and Family, Career and Community Leaders of America (FCCLA) competitive events, community service, and leadership activities provide the opportunity to apply essential standards and workplace readiness skills through authentic experiences.

PROSTART I®

Course Code: FH712X0C **Fee (if applicable):** $5

Offered at: SBHS **Grade(s):** 11,12

Prerequisite: None

Recommendation: Foods I and Foods II

This fundamental food service course allows students to study the hospitality industry, including tourism, retail and the lodging industries. In addition, a heavy emphasis is placed on safety and sanitation, including preparing and serving food safely and preventing accidents and injuries. Service skills are further refined through the art of service and communication with customers. Food service skills include stocks, soups, sauces, potatoes, grains, fruits and vegetables. Students are taught successful customer relations, business math, and controlling foodservice costs. A one-credit paid or unpaid 200 hour internship will count toward the National ProStart® Certificate of Achievement at the conclusion of ProStart® II. A National Credentialing Exam will be given to all students. Students are encouraged to compete at the state and national levels of FCCLA and/or ProStart® for the management and skills competitions each year. English, Langauge Arts and Mathematics are reinforced throughout the course.

PROSTART II®

Course Code: FH722X0C **Fee (if applicable):** $5

Offered at: SBHS **Grade(s):** 12

Prerequisite: ProStart I

Recommendation: Foods I and Foods II

This second level fundamental food service course allows students to continue their study of the hospitality industry. Advanced food service skills include breakfast foods, meat, poultry, seafood, salads, garnishes, desserts and baked goods. Students learn purchasing and industry control, standard accounting practices, how to build restaurant sales through marketing and the menu. Students will learn about sustainability in the foodservice industry and global cuisines. Students will complete the remainder of a 400 hour paid or unpaid one credit internship, which will count toward their National ProStart® Certificate of Achievement and one unit of credit for each 200 hours. A National Credentialing Exam will be given to all ProStart® II students. Students are encouraged to compete at the state and national levels of the ProStart management and culinary competitive events and/or FCCLA culinary event. English, Langauge Arts and Mathematics are reinforced throughout the course.

PRINCIPLES OF FAMILY AND HUMAN SERVICES

Course Code: FC112X0C **Fee (if applicable):** $5

Offered at: All High Schools **Grade(s):** 9,10,11,12

Prerequisite: None

This course examines life management skills in the areas of personal and family living; wellness, nutrition, and foods; financial management; living environments; appropriate child development practices; fashion and clothing; and job readiness. Through simulated experiences, students learn to fulfill responsibilities associated with the work of the family and community. Skills in mathematics, communication, science, technology, and personal and interpersonal relationships are reinforced in this course. Work-based learning strategies appropriate for this course include field trips and service learning. FCCLA leadership activities provide the opportunity to apply instructional competencies and workplace readiness skills to authentic experiences.

HEALTH OCCUPATIONS EDUCATION

BIOMEDICAL TECHNOLOGY I

Course Code: HB112X0C **Fee (if applicable):** $5

Offered at: DHS, JHS, NHS, SBHS, SWHS, WOHS **Grade(s):** 9,10,11,12

Prerequisite: None

This survey course challenges students to investigate current and 21st century medical and health care practices using computerized databases, the Internet, media, and visiting health team professionals. Topics include the world of biomedical technology, the language of medicine, present and evolving biomedical specialties, and biomedical ethics: crises and alternatives, and health career development. Work-based learning strategies include service learning, field trips, and job shadowing. Skills in science, mathematics, communications, health, and social studies are reinforced in this course. HOSA membership provides opportunities for personal and experiential growth.

BIOMEDICAL TECHNOLOGY II

Course Code: HB122X0C **Fee (if applicable):** $5

Offered at: DHS, NHS, SBHS, SWHS, WOHS **Grade(s):** 10,11,12

Prerequisite: Biomedical Technology I

This course focuses on genetics, neurobiology, sleep disorder and biological rhythms, bioethics, the evolution of medicine, and use of technology to study cellular and molecular biology. The curriculum was developed by the National Institutes of Health (NIH). Students will learn about careers in biotechnology within the context of the course content. Projects, teamwork, and demonstrations serve as instructional strategies that reinforce the curriculum content. English language arts and science are reinforced in this course. Work-based learning strategies appropriate for this

courseinclude service learning, and job shadowing. Apprenticeship and cooperative education are not available for this course. Health Occupations Students of America (HOSA) competitive events, community service, and leadership activities provide the opportunity to apply essential standards and workplace readiness skills through authentic experiences. Biology is recommended as good preparation for this course.

HEALTH TEAM RELATIONS

Course Code: HU102X0C **Fee (if applicable):** $5

Offered at: DHS, NHS, RHS, SWHS, WOHS **Grade(s):** 9,10,11,12

Prerequisite: None

This course will assist potential health care workers in their role as health team members. Topics include terminology, the history of health care, health care agencies, ethics, legal responsibilities, careers, holistic health, human needs, change, cultural awareness, communication, medical math, leadership and career decision-making. Work based learning strategies include service learning, field trips and job shadowing. Basic academic skills, employability skills, critical thinking skills, teamwork and the use of technology are reinforced in this course. HOSA leadership activities provide opprtunities for practical application of instructional competencies.

HEALTH SCIENCE I

Course Code: HU402X0C **Fee (if applicable):** $5

Offered at: DHS, JHS, NHS, RHS, SBHS, SWHS **Grade(s):** 10,11,12

Prerequisite: None

Honors credit is available-HU405X0C

This course focuses on human anatomy, physiology and human body diseases and disorders, and biomedical therapies. Students will learn about health care careers within the context of human body systems. Projects, teamwork, and demonstrations serve as instructional strategies that reinforce the curriculum content. English language arts and science are reinforced in this course. Work-based learning strategies appropriate for this course include service learning and job shadowing. Apprenticeship and cooperative education are not available for this course. Health Occupations Students of America (HOSA) competitive events, community service, and leadership activities provide the opportunity to apply essential standards and workplace readiness skills through authentic experiences. Biology is recommended as preparation for this course.

HEALTH SCIENCE II

Course Code: HU422X0C **Fee (if applicable):** $5

Offered at: DHS, JHS, NHS, RHS, SBHS, SWHS **Grade(s):** 11,12

Prerequisite: Health Science I

Honors credit is available-HU425X0C

This course is designed to help students expand their understanding of financing and trends of health care agencies, fundamentals of wellness, legal and ethical issues, concepts of teamwork, and effective communication. Students will learn health care skills, including current CPR and first aid training. English language arts and science are reinforced in this course. Work-based learning strategies appropriate for this course include internship, mentorship, service learning, and job shadowing. Apprenticeship and cooperative education are not available for this course. Health Occupations Students of America (HOSA) competitive events, community service, and leadership activities provide the opportunity to apply essential standards and workplace readiness skills through authentic experiences.

NURSING FUNDAMENTALS

Course Code: HN432X0G **Fee (if applicable):** $5

Offered at: JHS (Maximum Enrollment: 10) **Grade(s):** 12

Prerequisite: Health Science II

This two-block course is designed for students interested in medical careers where personal care and basic nursing skills are used. This course is an enhanced adaptation of the North Carolina Division of Health Service Regulation (DHSR) Nurse Aide I (NAI) curriculum and helps prepare students for the National Nurse Aide Assessment (NNAAP). Students who pass the NNAAP become listed on the NC NAI Registry. English language arts, mathematics, and science are reinforced. Work-based learning strategies appropriate for this course include a required clinical internship in a long-term care agency. Healthcare agencies may require testing for tuberculosis and/or other diseases and a criminal record check for felonies related to drugs. Cooperative education is not available for this course. HOSA competitive events, community service, and leadership activities provide the opportunity to apply essential standards and workplace readiness skills through authentic experiences. Transportation will need to be provided by the student for clinical hours.

MARKETING

HOSPITALITY AND TOURISM

Course Code: MH422X0C **Fee (if applicable):** $5

Offered at: NHS **Grade(s):** 10,11,12

Prerequisite: Marketing or Sports and Entertainment Marketing I

In this course, students are introduced to the industry of travel, tourism, and recreational marketing. Students acquire knowledge and skills on the impact of tourism, marketing strategies of the major hospitality and tourism segments, destinations, and customer relations. Emphasis is on career development, customer relations, economics, hospitality and tourism, travel destinations, and tourism promotion. Mathematics and social studies are reinforced. Work-based learning strategies appropriate include cooperative education, entrepreneurship, internship, mentorship, school-based enterprise, service learning, and job shadowing. Apprenticeship is not available for this course. DECA (an association for Marketing Education students) competitive events, community service, and leadership activities provide the opportunity to apply essential standards and workplace readiness skills through authentic experiences.

MARKETING

Course Code: MM512X0C **Fee (if applicable):** $15

Offered at: JHS, SBHS, SWHS **Grade(s):** 9,10,11,12

Prerequisite: None

This course is designed to help students develop basic knowledge, skills, and attitudes that will prepare them to enter the field of marketing. The course, which focuses on the National Marketing Education Standards and the National Curriculum Framework, emphasizes the foundations of business, management, and entrepreneurship; economics; professional development; and communication and interpersonal skills. Included in these foundations are concepts such as distribution, financing, selling, pricing, promotion, marketing-information management, and product/service management. Skills in communications, mathematics, and psychology are reinforced in this course. Work-based learning strategies appropriate for this course include job shadowing, paid/unpaid internships, school-based enterprises, field trips, and/or cooperative education. Marketing simulations, projects, teamwork, DECA leadership activities, meetings, conferences, and competitions provide many opportunities for application of instructional competencies.

SPORTS AND ENTERTAINMENT MARKETING I

Course Code: MH312X0C **Fee (if applicable):** $15

Offered at: DHS, JHS, NHS, SBHS, SWHS **Grade(s):** 10,11,12

Prerequisite: None

This course is designed for students interested in sports, entertainment, and event marketing. Emphasis is placed on the following principles as they apply to the industry: branding, licensing, and naming rights; business foundations; concessions and on-site merchandising; economic foundations; promotion; safety and security; and human relations. Skills in communications, human relations, psychology, and mathematics are reinforced in this course. Work-based learning strategies appropriate for this course include cooperative education, paid/unpaid internships, or school-based enterprises. Marketing simulations, projects, teamwork, DECA leadership activities, meetings, conferences, and competitions provide many opportunities for application of instructional competencies.

SPORTS AND ENTERTAINMENT MARKETING II

Course Code: MH322X0C **Fee (if applicable):** $15

Offered at: JHS, NHS, SBHS, SWHS **Grade(s):** 11,12

Prerequisite: Sports and Entertainment Marketing I

This course is designed for students interested in an advanced study of sports, entertainment, and event marketing. Emphasis is placed on the following principles as they apply to the industry: Business management, career development options, client relations, ethics, events management, facilities management, legal issues and contracts, promotion, and sponsorships. Skills in communications, human relations, mathematics, psychology, and technical writing are reinforced in this course. Work-based learning strategies appropriate for this course include cooperative education, paid/unpaid internships, or school-based enterprises. Marketing simulations, projects, teamwork, DECA leadership activities, meetings, conferences, and competitions provide many opportunities for application of instructional competencies.

TECHNOLOGY EDUCATION

COMPUTER SCIENCE PRINCIPLES-ADVANCED PLACEMENT

Course Code: TBD **Fee (if applicable):** $15

Offered at: RHS **Grade(s):** 11,12

Prerequisite: Math II

AP Computer Science Principles offers a multidisciplinary approach to teaching the underlying principles of computation. The course will introduce students to the creative aspects of programming, abstractions, algorithms, large data sets, the Internet, cybersecurity concerns, and computing impacts. AP Computer Science Principles will give

students the opportunity to use technology to address real-world problems and build relevant solutions. Together, these aspects of the course make up a rigorous and rich curriculum that aims to broaden participation in computer science.

GAME ART & DESIGN

Course Code: TS312X0C **Fee (if applicable):** $15

Offered at: NHS, SBHS, WOHS **Grade(s):** 10,11,12

Prerequisite: Scientific Visualization I

This course introduces the student to techniques used in the electronic game industry. Students will focus on the principles used in game design, including mathematical and virtual modeling. Emphasis is placed on areas related to art, history, ethics, plot development, storyboarding, programming, 2D visual theory, and interactive play technologies. Students develop physical and virtual games, using hands-on experiences and a variety of software

GAME ART & DESIGN-ADVANCED

Course Code: TS322X0C **Fee (if applicable):** $15

Offered at: NHS, SBHS, WOHS **Grade(s):** 11,12

Prerequisite: Game Art and Design

This course is a continuation in the study of game design and interactivity. Emphasis is placed on visual design, evaluating, scripting and networking protocols, and legal issues as well as 3D visual theory. Students compile a game portfolio. Advanced topics include the use of audio and visual effects, rendering, modeling, and animation techniques. Students work in collaborative teams to develop a final 3D game project. Art, English language arts, mathematics and science are reinforced. Work-based learning strategies appropriate for this course include mentorship, school-based enterprise, service learning, and job shadowing. Cooperative education is not available for this course. Apprenticeship is not available for this course. Technology Student Association (TSA) competitive events, community service, and leadership activities provide the opportunity to apply essential standards and workplace readiness skills through authentic experiences.

PLTW INTRO TO ENGINEERING DESIGN-ADVANCED PLACEMENT

Course Code: TP117X0CAP **Fee (if applicable):** $15

Offered at: RHS, SBHS, WOHS **Grade(s):** 9,10,11,12

Prerequisite: None

Recommendation: Math I

This Project Lead the Way pre-engineering course emphasizes the development of a design. Students use computer software to produce, analyze and evaluate models of projects solutions. They study the design concepts of form and function and use state-of-the art technology to translate conceptual design into reproducible products. This course teaches students to understand and apply the design process to solve problems in a team setting. Students will also explore career opportunities in design engineering and understand the skills and education required for these careers.

PLTW PRINCIPLES OF ENGINEERING-ADVANCED PLACEMENT

Course Code: TP127X0CAP **Fee (if applicable):** $15

Offered at: JHS, RHS, SBHS, WOHS **Grade(s):** 10,11,12

Prerequisite: Intro To Engineering

Recommendation: Math II

This course provides an overview of engineering and engineering technology. Students develop problem-solving skills by addressing real-world engineering problems. Students explore technology systems and manufacturing processes to find out how math, science, and technology impact society. This project-based course introduces students to the key elements and skills of engineering and technology-based careers.

PLTW DIGITAL ELECTRONICS-ADVANCED PLACEMENT

Course Code: TP217X0CAP **Fee (if applicable):** $15

Offered at: RHS, SBHS, WOHS **Grade(s):** 10,11,12

Prerequisite: Principles of Engineering

This Project Lead the Way pre-engineering course introduces students to applied digital logic, a key element of careers in engineering and engineering technology. This course explores the smart circuits found in watches, calculators, video games and computers. Students use industry-standard computer software in testing and analyzing digital circuitry. They design circuits to solve problems, export their designs to a printed circuit auto-routing program that generates printed circuit boards, and use appropriate components to build their designs. Students use mathematics and science in solving real-world engineering problems.

PLTW ENGINEERING DESIGN AND DEVELOPMENT-HONORS

Course Code: TP315X0C **Fee (if applicable):** $15

Offered at: RHS, SBHS, WOHS **Grade(s):** 11,12

Prerequisite: Completion of 3 Project Lead the Way courses

This is a research course that requires students to formulate the solution to an open-ended engineering question. With a community mentor and skills gained in the previous Project Lead the Way (PLTW) courses (Principles of Engineering, Introduction to Engineering Design, and Digital Electronics), students create written reports on their applications, defend the reports, and submit them to a panel of outside reviewers at the end of the school year.

PLTW CIVIL ENGINEERING AND ARCHITECTURE-ADVANCED PLACEMENT

Course Code: TP237X0CAP **Fee (if applicable):** $15

Offered at: RHS **Grade(s):** 11,12

Prerequisite: Drafting I & II and/or PLTW IE & POE

Students learn important aspects of building and site design and development. They apply math, science, and standard engineering practices to design both residential and commercial projects and document their work using 3D architecture design software. The course includes an introduction to many of the varied factors involved in building design and construction including building components and systems, structural design, storm water management, site design, utilities and services, cost estimation, energy efficiency, and careers in the design and construction industry.

SCIENTIFIC & TECHNICAL VISUALIZATION I

Course Code: TS212X0C **Fee (if applicable):** $15

Offered at: NHS, SBHS, WOHS **Grade(s):** 9,10,11,12

Prerequisite: None

This state-of-the-art course introduces students to the use of complex graphic software. Visualization activities include creation of 2D and 3D computer generated imagery (CGI) for use in science, crime solving, video entertainment, gaming, and commercial web design. Computer, communication, mathematics and scientific concepts are reinforced in this course. Job shadowing is an appropriate work-based learning strategy for this course. Hands-on work experiences and SkillsUSA leadership activities provide many opportunities to enhance classroom instruction and career development.

SCIENTIFIC & TECHNICAL VISUALIZATION II

Course Code: TS225X0C **Fee (if applicable):** $15

Offered at: NHS, SBHS, WOHS **Grade(s):** 10,11,12

Prerequisite: Scientific & Technical Visualization I

This course provides students with advanced skills in the use of visualization tools for the study of computer generated imagery concepts for gaming and animation. Students design and develop 3D complex data and concept driven visualization models. Students learn how to communicate concepts and ideas using graphic visualization computer applications for gaming and real world digital simulation used in the gaming and entertainment industry. Communication, computer, technical, mathematics, and science skills are reinforced in this course. Work-based learning strategies appropriate for this course are apprenticeship, internships, and cooperative education.

TECHNOLOGY ENGINEERING AND DESIGN

Course Code: TE112X0C **Fee (if applicable):** $15

Offered at: NHS, SBHS **Grade(s):** 9,10,11,12

Prerequisite: None

This course focuses on the nature and core concepts of technology, engineering, and design. Through engaging activities and hands-on project-based activities, students are introduced to the following concepts: elements and principles of design, basic engineering, problem-solving, and teaming. Students apply research and development skills and produce physical and virtual models. Activities are structured to integrate physical and social sciences, mathematics, English language arts, and art. Work-based learning strategies appropriate for this course include mentorship, school-based enterprise, service learning, and job shadowing. Apprenticeship and cooperative education are not available for this course. Technology Student Association (TSA) competitive events, community service, and leadership activities provide the opportunity to apply essential standards and workplace readiness skills through authentic experiences.

TECHNOLOGICAL DESIGN

Course Code: TE122X0C **Fee (if applicable):** $15

Offered at: NHS, SBHS **Grade(s):** 11,12

Prerequisite: Technology Engineering and Design

This course continues to apply the skills, concepts, and principles of design. The design fields of graphics, industrial design, and architecture receive major emphasis. Engineering content and professional practices are presented through practical application. Working in design teams, students apply technology, science, and mathematics concepts and skills to solve engineering and design problems. Students research, develop, test, and analyze engineering designs using criteria such as design effectiveness, public safety, human factors, and ethics. Art, English language arts, mathematics and science are reinforced. Work-based learning strategies appropriate for this course include mentorship, school-based enterprise, service learning, and job shadowing. Apprenticeship and cooperative education are not available for this course. Technology Student Association (TSA) competitive events, community service, and leadership activities provide the opportunity to apply essential standards and workplace readiness skills through authentic experiences.

TRADES AND INDUSTRIAL EDUCATION

INTRODUCTION TO AUTOMOTIVE SERVICE

Course Code: IT112X0C **Fee (if applicable):** $5

Offered at: SWHS **Grade(s):** 9,10,11,12

Prerequisite: None

This course introduces automotive safety, basic automotive terminology, system & component identification, knowledge and introductory skills in hand tools, shop equipment, basic servicing, and use of service information. Also careers and various job opportunities in the automotive repair industry will be discussed. As part of the NATEF accreditation, topics are aligned to the Maintenance and Light Repair (MLR) requirements. English language arts are reinforced. Workbased learning strategies appropriate for this course include job shadowing. Apprenticeship and cooperative education are not available for this course. SkillsUSA competitive events, community service, and leadership activities provide the opportunity to apply essential standards and workplace readiness skills through authentic experiences.

*Due to potentially hazardous processes and equipment a maximum enrollment of 20 is recommended.

AUTOMOTIVE SERVICE I

Course Code: IT162X0C **Fee (if applicable):** $5

Offered at: SWHS **Grade(s):** 9,10,11,12

Prerequisite: Introduction to Automotive Service

This course develops automotive knowledge and skills in performing scheduled automotive maintenance, servicing and basic testing of brakes, electrical systems, drivetrain, engine, HVAC and steering & suspension systems, emphasizing hands-on experience. As part of the NATEF accreditation, topics are aligned to the Maintenance and Light Repair (MLR) requirements. English language arts are reinforced. Work-based learning strategies appropriate for this course include job shadowing. Work-based learning strategies appropriate for this course include apprenticeship, cooperative education, entrepreneurship, internship, and job shadowing. SkillsUSA competitive events, community service, and leadership activities provide the opportunity to apply essential standards and workplace readiness skills through authentic experiences.

*Due to potentially hazardous processes and equipment a maximum enrollment of 20 is recommended.

AUTOMOTIVE SERVICE II

Course Code: IT172X0C **Fee (if applicable):** $5

Offered at: SWHS **Grade(s):** 10,11,12

Prerequisite: Automotive Service I

This course builds on the knowledge and skills introduced in automotive servicing I and develops advanced knowledge and skills in vehicle system repair and/or replacement of components in the brakes, electrical systems, drivetrain, engine, HVAC and steering & suspension systems, emphasizing hands-on experience. As part of the NATEF accreditation, topics are aligned to the Maintenance and Light Repair (MLR) requirements. English language arts are reinforced. Work-based learning strategies appropriate for this course include job shadowing. Work-based learning strategies appropriate for this course include apprenticeship, cooperative education, entrepreneurship, internship, and job shadowing. This course helps prepare students for the Automotive Service Excellence (ASE) certification in Maintenance and Light Repair (MLR- G1). SkillsUSA competitive events, community service, and leadership activities provide the opportunity to apply essential standards and workplace readiness skills through authentic experiences.

*Due to potentially hazardous processes and equipment a maximum enrollment of 20 is recommended.

AUTOMOTIVE SERVICE III

Course Code: IT182X0C **Fee (if applicable):** $5

Offered at: SWHS **Grade(s):** 11,12

Prerequisite: Automotive Service II

This course builds on the skills and knowledge introduced in Automotive Service I & II. Building advanced automotive skills and knowledge in vehicle servicing, testing, repair, and diagnosis of brakes, electrical systems, drivetrain, engine, HVAC and steering & suspension systems, while emphasizing hands-on experience. As part of the NATEF accreditation, topics are aligned to the Maintenance and Light Repair (MLR) requirements. English language arts and mathematics are reinforced. Work-based learning strategies appropriate for this course include apprenticeship, cooperative education, entrepreneurship, internship, and job shadowing. This course helps prepare students for the Automotive Service Excellence (ASE) certification in Maintenance and Light Repair (MLR- G1). SkillsUSA competitive events, community service, and leadership activities provide the opportunity to apply essential standards and workplace readiness skills through authentic experiences.

*Due to potentially hazardous processes and equipment a maximum enrollment of 20 is recommended.

INTRODUCTION TO COLLISION REPAIR

Course Code: IT302X0C **Fee (if applicable):** $5

Offered at: SWHS **Grade(s):** 9,10,11,12

Prerequisite: None

This course introduces safety, basic collision repair terminology, system & component identification, knowledge and introductory skills in hand tools, shop equipment, basic servicing, and use of service information. Also careers and various job opportunities in the collision repair industry will be discussed. English language arts are reinforced. Workbased learning strategies appropriate for this course include job shadowing. Apprenticeship and cooperative education are not available for this course. SkillsUSA

competitive events, community service, and leadership activities provide the opportunity to apply essential standards and workplace readiness skills through authentic experiences.

*Due to potentially hazardous processes and equipment a maximum enrollment of 20 is recommended.

CORE AND SUSTAINABLE CONSTRUCTION

Course Code: IC002X0C **Fee (if applicable):** $5

Offered at: DHS, JHS, RHS, SBHS, SWHS, WOHS **Grade(s):** 9,10,11,12

Prerequisite: None

This course covers the National Center for Construction Education and Research (NCCER) Core certification modules required for all of the NCCER curriculum-area programs, and an additional Green module. The course content includes: basic safety, introduction to construction math, introduction to hand tools, introduction to power tools, introduction to blueprints, material handling, basic communication skills, and basic employability skills, and "Your Role in the Green Environment". The additional Green module has been added to provide students with instruction in the green environment, green construction practices, and green building rating systems. Also it will help students better understand their personal impacts on the environment and make them more aware of how to reduce their carbon footprint. English Language Arts and Mathematics are reinforced. Work-based learning strategies appropriate for this course include apprenticeship, cooperative education, internship, and job shadowing. This course helps prepare students for additional National Center for Construction Education and Research (NCCER) Core certification. SkillsUSA competitive events, community service, and leadership activities provide the opportunity to apply essential standards and workplace readiness skills through authentic experiences.

CARPENTRY I

Course Code: IC212X0C **Fee (if applicable):** $5

Offered at: DHS, JHS, SBHS, SWHS, WOHS **Grade(s):** 9,10,11,12

Prerequisite: Core and Sustainable Construction

This course covers basic carpentry terminology and develops technical aspects of carpentry with emphasis on development of introductory skills. English language arts and mathematics are reinforced. Work-based learning strategies appropriate for this course include apprenticeship, cooperative education, internship, and job shadowing. This course helps prepare students for National Center for Construction Education and Research (NCCER) certification. SkillsUSA competitive events, community service, and leadership activities provide the opportunity to apply essential standards and workplace readiness skills through authentic experiences. Math II is recommended as preparation for this course.

CARPENTRY II

Course Code: IC222X0C **Fee (if applicable):** $5

Offered at: DHS, JHS, SBHS, SWHS, WOHS **Grade(s):** 10,11,12

Prerequisite: Carpentry I

Honors credit is available-IC225X0C

This course covers additional technical aspects of carpentry with emphasis on development of intermediate skills. The course content includes floor systems, wall and ceiling framing, roof framing, introductions to concrete, reinforcing materials and forms, windows and exterior doors, and basic stair layout. English language arts and mathematics are reinforced. Work-based learning strategies appropriate for this course include apprenticeship, cooperative education, internship, and job shadowing. This course helps prepare students for National Center for Construction Education and Research (NCCER) certification. SkillsUSA competitive events, community service, and leadership activities provide the opportunity to apply essential standards and workplace readiness skills through authentic experiences. Math II is recommended as preparation for this course.

CARPENTRY III

Course Code: IC232X0C **Fee (if applicable):** $5

Offered at: DHS, JHS, SBHS, SWHS, WOHS **Grade(s):** 11,12

Prerequisite: Carpentry II

This course develops advanced technical aspects of carpentry with emphasis on development of skills. The course content includes roofing applications, thermal and moisture protection, exterior finishing, cold formed steel framing and drywall installations. English language arts and mathematics are reinforced. Work-based learning strategies appropriate for this course include apprenticeship, cooperative education, internship, and job shadowing. This course helps prepare students for National Center for Construction Education and Research (NCCER) certification. SkillsUSA competitive events, community service, and leadership activities provide the opportunity to apply essential standards and workplace readiness skills through authentic experiences. Math III is recommended as preparation for this course.

DIGITAL MEDIA I

Course Code: IA312X0C **Fee (if applicable):** $5

Offered at: NHS, SBHS **Grade(s):** 9,10,11,12

Prerequisite: None

This course provides a broad-based foundation in the digital media field. An emphasis is placed on the fundamental concepts of audio and video design, various digital media technologies, non-linear editing, product development and design, and career development. Communications, mathematical, and critical thinking skills are strengthened throughout the course. Work-based learning strategies appropriate for this course are field trips and job shadowing.

Local projects and SkillsUSA leadership activities, conferences, and competitions provide opportunities for the application of instructional competencies. There is an emphasis on digital and physical safety.

DIGITAL MEDIA-ADVANCED

Course Code: IA322X0C **Fee (if applicable):** $5

Offered at: NHS, SBHS **Grade(s):** 10,11,12

Prerequisite: Digital Media I

Honors credit is available-IA325X0C

This course provides students with industry knowledge and skills in the overall digital media design field. Areas covered in these two courses include graphics, animation, video, and web design. An emphasis is placed on the fundamental concepts of graphic design, various digital media technologies, non-linear editing, product development and design, and career development. Art, English language arts, and mathematics are reinforced. Work-based learning strategies appropriate for this course include apprenticeship, cooperative education, internship, and job shadowing. SkillsUSA competitive events, community service, and leadership activities provide the opportunity to apply essential standards and workplace readiness skills through authentic experiences. There is an emphasis on digital and physical safety. Creation of an eportfolio is required for this course.

ADOBE VISUAL DESIGN

Course Code: TBD **Fee (if applicable):** $5

Offered at: NHS, RHS, SBHS **Grade(s):** 9,10,11,12

Prerequisite: None

This course is a project-based course that develops ICT, career, and communication skills in print and graphic design using Adobe tools. This course is aligned to Adobe Photoshop, Indesign, and Illustrator certification. English language arts are reinforced. Work-based learning strategies appropriate for this course include job shadowing. Apprenticeship and cooperative education are possible for this course. SkillsUSA competitive events, community service, and leadership activities provide the opportunity to apply essential standards and workplace readiness skills through authentic experiences.

DRAFTING I

Course Code: IC612X0C **Fee (if applicable):** $5

Offered at: JHS, NHS, RHS **Grade(s):** 9,10,11,12

Prerequisite: None

This course introduces students to the use of simple and complex graphic tools used to communicate and understand ideas and concepts found in the areas of architecture, manufacturing, engineering, science, and mathematics. Topics include problem-solving strategies, classical representation methods such as sketching, geometric construction techniques, as well as CAD (computer assisted design), orthographic projection, and 3-D modeling. Skills in communication, mathematics, science, leadership, and problem-solving are reinforced in this course. Job shadowing is an appropriate work-based learning strategy for this course. Hands-on work experiences and SkillsUSA leadership activities provide many opportunities to enhance classroom instruction and career development.

DRAFTING II-ARCHITECTURAL

Course Code: IC622X0C **Fee (if applicable):** $5

Offered at: JHS, NHS, RHS **Grade(s):** 10,11,12

Prerequisite: Drafting I

Honors credit is available-IC625X0C

This course is focused on the principles, concepts, and use of complex graphic tools used in the field of architecture, structural systems, and construction trades. Emphasis is placed on the use of CAD tools in the creation of floor plans, wall sections, and elevation drawings. Mathematics, science, and visual design concepts are reinforced. Work-based learning strategies appropriate for this course are apprenticeship and cooperative education. Hands-on work experiences and SkillsUSA leadership activities provide many opportunities to enhance classroom instruction and career development.

DRAFTING II-ENGINEERING

Course Code: IV222X0C **Fee (if applicable):** $5

Offered at: JHS, NHS **Grade(s):** 10,11,12

Prerequisite: Drafting I

Recommendation: Math II

Honors credit is available-IV225X0C

This course focuses on engineering graphics introducing the student to symbol libraries, industry standards, and sectioning techniques. Topics include coordinate systems, principles of machine processes and gearing, and the construction of 3-D wire frame models using CAD. Mathematics, science, and mechanical engineering concepts involving the working principles and design of cams and gears are reinforced in this course. Work-based learning strategies appropriate for this course are apprenticeship, internships, and cooperative education. Hands-on work experiences and SkillsUSA leadership activities provide many opportunities to enhance classroom instruction and career development.

DRAFTING III-ARCHITECTURAL

Course Code: IC635X0C **Fee (if applicable):** $5

Offered at: JHS, NHS **Grade(s):** 11,12

Prerequisite: Drafting II Architectural

Recommendation: Math II

Honors credit is available-IC635X0C

This course introduces students to advanced architectural design concepts. Emphasis is placed on the use of CAD and BIM tools in the design and execution of site and foundation

plans as well as topographical information and detail drawings of stairs and wall sections. Teaming and problem-solving skills are reinforced in this course. Work-based learning strategies appropriate for this course are apprenticeship, internship, and cooperative education.

DRAFTING III-ENGINEERING

Course Code: IV235X0C **Fee (if applicable):** $5

Offered at: JHS, NHS **Grade(s):** 11,12

Prerequisite: Drafting Engineering II

Recommendation: Math II

Honors credit is available-IV235X0C

This course introduces the student to advanced engineering concepts using CAD tools. Topics studied include descriptive geometry, geometric tolerancing, and advanced engineering design concepts such as surface and solid modeling. Science and mathematics concepts are reinforced in this course. Work-based learning strategies appropriate for this course are apprenticeship, internships, and cooperative education. Hands-on work experiences and SkillsUSA leadership activities provide many opportunities to enhance classroom instruction and career development.

ELECTRICAL TRADES I

Course Code: IC412X0C **Fee (if applicable):** $5

Offered at: JHS, RHS **Grade(s):** 10,11,12

Prerequisite: Core and Sustainable Construction

This course covers basic electrical trades terminology and develops technical aspects of electrical trades with emphasis on development of introductory skills such as residential wiring, electrical installation, and service. Topics include basic electricity, electrical construction codes and practices, the National Electrical Code, the use of test equipment, and electrical hand and power tools. English language arts, mathematics, and science are reinforced. Work-based learning strategies appropriate for this course include apprenticeship, cooperative education, internship, and job shadowing. This course helps prepare students for National Center for Construction Education and Research (NCCER) certification. SkillsUSA competitive events, community service, and leadership activities provide the opportunity to apply essential standards and workplace readiness skills through authentic experiences.

ELECTRICAL TRADES II

Course Code: IC422X0C **Fee (if applicable):** $5

Offered at: JHS, RHS **Grade(s):** 11,12

Prerequisite: Electrical Trades I

Recommendation: Math II

This course builds on skills mastered in Electrical Trades I and provides an introduction to the National Electric Code, devices boxes, hand bending, raceways and fittings, conductors and cables, construction drawings, residential services, test equipment, alternating circuits, grounding and bonding. English language arts, mathematics, and science are reinforced. Work-based learning strategies appropriate for this course include apprenticeship, cooperative education, internship, and job shadowing. This course helps prepare students for National Center for Construction Education and Research (NCCER) certification. SkillsUSA competitive events, community service, and leadership activities provide the opportunity to apply essential standards and workplace readiness skills through authentic experiences.

FIRE FIGHTER TECHNOLOGY I

Course Code: IP312X0C **Fee (if applicable):** $5

Offered at: SWHS **Grade(s):** 10,11,12

Prerequisite: None

Recommendation: Public Safety

This course covers part of the NC Fire Fighter I/II combination certification modules required for all fire fighters in North Carolina. The modules include: Fire Department Orientation and Safety; Fire Prevention, Education, and Cause; Fire Alarms and Communications; Fire Behavior; Personal Protective Equipment; Portable Fire Extinguishers; and Fire Hose, Streams, and Appliances. English language arts are reinforced. Work-based learning strategies appropriate for this course including job shadowing. Apprenticeship and cooperative education are not available for this course. This course prepares students for the North Carolina Fire Fighter I/II certification modules. SkillsUSA competitive events, community service, and leadership activities provide the opportunity to apply essential standards and workplace readiness skills through authentic experiences.

FIRE FIGHTER TECHNOLOGY II

Course Code: IP322X0C **Fee (if applicable):** $5

Offered at: SWHS **Grade(s):** 11,12

Prerequisite: Fire Fighter Technology I

This course covers additional NC Fire Fighter I/II combination certification modules required for all fire fighters in North Carolina. The modules include: Ropes; Ladders; Forcible Entry; Ventilation; Water Supply; Sprinklers; and Foam Fire Stream. English language arts are reinforced. Work-based learning strategies appropriate for this course including job shadowing. Apprenticeship and cooperative education are not available for this course. This course prepares students for the North Carolina Fire Fighter I/II certification modules. SkillsUSA competitive events, community service, and leadership activities provide the opportunity to apply essential standards and workplace readiness skills through authentic experiences.

FIRE FIGHTER TECHNOLOGY III

Course Code: TBD **Fee (if applicable):** $5

Offered at: SWHS **Grade(s):** 11,12

Prerequisite: Fire Fighter Technology II

In this course, students select one specific occupation in the Career Cluster and conduct research to include the nature of the work, work environment, training, education, and advancement, and job prospects. Work-based learning strategies appropriate for this course including job shadowing and internship. Apprenticeship and cooperative training are not available for this course. SkillsUSA competitive events, community service, and leadership activities provide the opportunity to apply essential standards and workplace readiness skills through authentic experiences

FOUNDATIONS OF ENGINEERING AND TECHNOLOGY A

Course Code: TL082X0C **Fee (if applicable):** $15

Offered at: NHS **Grade(s):** 9,10,11,12

Prerequisite: None

Honors credit is available-TL085X0C

This course is an exploratory course featuring design based problem solving and academic concepts in modules including Alternative Energy, Environmental Technology, Robotics and Transportation. A high-energy multimedia format takes student involvement to an even higher level. Students will use Paxton/Patterson's CAREERplus Integrated Instructional Units to explore open-ended problems and imagine solutions. Additional whole class learning experiences focus on learning the basic characteristics of technology and design. Students will use this course as a foundation before moving on to the more rigorous, upper-level technology and engineering courses. This course is designed specifically for students entering the Advanced Applied STEM Academy Initiative at Northside High School. Students are better prepared for post-secondary success because they have identified their strongest skill set and pathway. Even students who do not plan to pursue engineering after high school have highly transferable problem-solving, communication and collaboration skills that are relevant for any career or coursework.

FOUNDATIONS OF ENGINEERING AND TECHNOLOGY B

Course Code: TL092X0C **Fee (if applicable):** $5

Offered at: NHS **Grade(s):** 9,10,11,12

Prerequisite: Foundations of Engineering and Technology A

Honors credit is available-TL095X0C

This course continues and expands on technology concepts from Foundations of Technology and Engineering A. Technology labs in this course increase in difficulty and are foundational for preparing students to succeed in Applications of Engineering and Technology, a more rigorous, upper-level technology and engineering course. Labs and activities in Foundations B explore the technologies related to current fields of engineering, including: Architectural Design, Construction Technology, Manufacturing, and Material Science. Emphasis will be placed on learning to research and present information directly related to their technology based studies through capstone projects, authentic design briefs, and Solidworks® 3-D Training. This course and SkillsUSA technical and leadership activities enhance the skills of students interested in pursuing technical, engineering, or science related careers. This course is designed specifically for students entering the Advanced Applied STEM Academy Initiative at Northside High School.

APPLICATIONS OF ENGINEERING AND TECHNOLOGY

Course Code: TL032X0C **Fee (if applicable):** $15

Offered at: NHS **Grade(s):** 11,12

Prerequisite: Foundations of Engineering and Technology A & B

Engineering design, inquiry, and learning-by-doing help students connect the STEM dots -- changing the way students see the world and helping them find their pathways in it. This course places collaborative teams of students in a virtual internship, working for an engineering consulting firm. Student teams are engaged in authentic engineering work, solving real-world problems and competing to win professional contracts. Student teams gain spatial reasoning through work-themed authentic engineering practicum in four rigorous modules: Alternative Energy & Environment, Architecture & Construction, Manufacturing & Materials, and Robotics. Additional capstone projects incorporating case studies and SOLIDWORKS® 3-D Training prepare students to sit for the SOLIDWORKS® Associate-Academic (CSWA-Academic) Certification. This course is designed specifically for students currently participating in the Advanced Applied STEM Academy Initiative at Northside High School. Students are better prepared for post-secondary success because they have identified their strongest skill set and pathway. Even students who do not plan to pursue engineering after high school have highly transferable problem-solving, communication and collaboration skills that are relevant for any career or coursework. Students will need to complete Foundations A and B with a C or higher before moving on to this course.

MARINE OCCUPATIONS I

Course Code: IL532X0C **Fee (if applicable):** $5

Offered at: DHS **Grade(s):** 10,11

Prerequisite: Core and Sustainable Constructionteen

This course offers students the opportunity to learn about basic technologies currently being used in the marine industry. Students will learn how to weld, use fiberglass, and repair two and four stroke outboard engines. During the course, students will be exposed to a variety of careers that are available in the marine industry.

MARINE OCCUPATIONS II

Course Code: IL542X0C **Fee (if applicable):** $5

Offered at: DHS **Grade(s):** 11,12

Prerequisite: Marine Occupations I

This course will provide an opportunity for students to expand their knowledge of technologies used in the marine industry. Students will learn about navigation and how to properly handle and maintain a vessel. Appropriate work-based strategies are co-operative education, internships, and apprenticeships. Hands-on work experiences and SkillsUSA leadership activities provide many opportunities to enhance classroom instruction and career development.

MARINE OCCUPATIONS III

Course Code: IL732X0C **Fee (if applicable):** $5

Offered at: DHS **Grade(s):** 11,12

Prerequisite: Marine Occupations II

This course will provide an opportunity for students to expand their knowledge of technologies used in the marine industry. Students will learn about navigation and how to properly handle and maintain a vessel. Appropriate work-based strategies are co-operative education, internships, and apprenticeships. Hands-on work experiences and SkillsUSA leadership activities provide many opportunities to enhance classroom instruction and career development.

MASONRY I

Course Code: IC112X0C **Fee (if applicable):** $5

Offered at: SBHS, WOHS **Grade(s):** 9,10,11,12

Prerequisite: Core and Sustainable Construction

This course introduces the nature of masonry technology, materials and supplies, and employability skills. Topics include safety, layout, tools, leveling, plumbing, use of straight-edge, and joining brick and block in wall construction. Reading, mathematics, problem solving, and principles of technology are reinforced in this course. Job shadowing is an appropriate work-based learning strategy for this course. Hands-on work experiences and SkillsUSA leadership activities provide many opportunities to enhance classroom instruction and career development.

MASONRY II

Course Code: IC122X0C **Fee (if applicable):** $5

Offered at: SBHS, WOHS **Grade(s):** 9,10,11,12

Prerequisite: Masonry I

This course builds on skills mastered in Masonry I and provides advanced masonry skills including measurements, drawing and specifications, mortar, masonry units, and installation techniques. English language arts and mathematics are reinforced. Work-based learning strategies appropriate for this course include apprenticeship, cooperative education, internship, and job shadowing. Math II is recommended as preparation for this course. This course helps prepare students for National Center for Construction Education and Research (NCCER) certification. SkillsUSA competitive events, community service, and leadership activities provide the opportunity to apply essential standards and workplace readiness skills through authentic experiencesexperiences.

MASONRY III

Course Code: IC132X0C **Fee (if applicable):** $5

Offered at: SBHS, WOHS **Grade(s):** 11,12

Prerequisite: Masonry II

Recommendation: Math II

This course develops advanced technical aspects of Masonry with emphasis on development of skills introduced in Masonry II. The course content includes residential plans and drawing interpretation, residential masonry, grout and other reinforcement, and metalwork in masonry. Introductory skills for the Crew Leader are also introduced in this course. English language arts and mathematics are reinforced. Work-based learning strategies appropriate for this course include apprenticeship, cooperative education, internship, and job shadowing. This course helps prepare students for National Center for Construction Education and Research (NCCER) certification. SkillsUSA competitive events, community service, and leadership activities provide the opportunity to apply essential standards and workplace readiness skills through authentic experiences. Math II is recommended as preparation for this course.

PLUMBING I

Course Code: IL582X0C **Fee (if applicable):** $5

Offered at: JHS **Grade(s):** 10

Prerequisite: Core & Sustainable Construction

This course introduces students to the use of simple and complex tools used in the plumbing trade to install and repair system found in the area of commercial and residential plumbing. Topics include leadership, safety, identification, and use of tools, blueprint reading, troubleshooting, and materials of the plumbing trade. Skills in communications, mathematics, science, leadership, and problem solving are reinforced in experience and SkillsUSA membership and involvement as well as leadership activities provide many opportunities to enhance classroom instruction and career development. National Center for Construction Education Research Certificate issued upon successful module testing.

PLUMBING II

Course Code: IL592X0C **Fee (if applicable):** $5

Offered at: JHS **Grade(s):** 11

Prerequisite: Plumbing I

This course is a continuation of the skills learned in Plumbing I with an emphasis on the complex tools used in the plumbing trade to install and repair systems found in commercial and residential plumbing. Topics include leadership, safety,

blueprint reading, troubleshooting and design of plumbing systems. Skills in communication, mathematics, science, leadership and problem solving are reinforced. The work-based learning strategies appropriate to this course are cooperative education and apprenticeship training. Leadership activities in SKILLSUSA provide many opportunities to enhance classroom instruction and career development. Must complete both semesters to receive credit. No partial credit will be given. National Center for Construction Education Research Certificate issued upon successful module testing.

EMERGENCY MANAGEMENT I

Course Code: TBD **Fee (if applicable):** $5

Offered at: SWHS **Grade(s):** 10,11,12

Prerequisite: Public Safety II or Fire Fighter Technology II

This course is aligned to the Emergency Management certifications from FEMA and are recommended by the North Carolina Emergency Management Office at the NC Department of Public Safety as appropriate for high school students. These certifications are those required by professional in this field. The course includes skills in each area, using resources from the community to help deliver instruction to the students. English language arts are reinforced. Work-based learning strategies appropriate for this course include job shadowing. Apprenticeship and cooperative education are not possible for this course. SkillsUSA competitive events, community service, and leadership activities provide the opportunity to apply essential standards and workplace readiness skills through authentic experiences.

EMERGENCY MANAGEMENT II

Course Code: TBD **Fee (if applicable):** $5

Offered at: SWHS **Grade(s):** 10,11,12

Prerequisite: Emergency Management I

This course is aligned to the Emergency Management certifications from FEMA and are recommended by the North Carolina Emergency Management Office at the NC Department of Public Safety as appropriate for high school students. These certifications are those required by professional in this field. The course includes skills in each area, using resources from the community to help deliver instruction to the students. English language arts are reinforced. Work-based learning strategies appropriate for this course include job shadowing. Apprenticeship and cooperative education are possible for this course (age limits may apply). SkillsUSA competitive events, community service, and leadership activities provide the opportunity to apply essential standards and workplace readiness skills through authentic experiences.

PUBLIC SAFETY I

Course Code: IP112X0C **Fee (if applicable):** $5

Offered at: SWHS **Grade(s):** 9,10,11,12

Prerequisite: None

Introduction to Public Safety course is a recommended first level course for all Public Safety course sequences. This course will offer the student the opportunity to learn basic skills in four major public safety areas: Criminal Justice, Firefighting, Emergency Medical Technician, and Emergency Management Systems. The course will include approximately four weeks of skill training in each area, using resources from the community to help deliver instruction to the students. Work-based learning strategies appropriate for this course are field trips and job shadowing. Local projects and SkillsUSA leadership activities, conferences, and competitions provide opportunities for the application of instruction competencies.

PUBLIC SAFETY II

Course Code: IP122X0C **Fee (if applicable):** $5

Offered at: SWHS **Grade(s):** 9,10,11,12

Prerequisite: Public Safety I

This course provides a deeper level of understanding of career information in public safety including emergency management, criminal justice, emergency medical technician, and fire fighter. Additionally students will further the development a personal plan for a career in public safety. The course includes skills in each area, using resources from the community to help deliver instruction to the students. English language arts are reinforced. Work-based learning strategies appropriate for this course include job shadowing. Apprenticeship and cooperative education are possible for this course (age limits may apply). SkillsUSA competitive events, community service, and leadership activities provide the opportunity to apply essential standards and workplace readiness skills through authentic experiences.

WELDING TECHNOLOGY I

Course Code: IM612X0C **Fee (if applicable):** $5

Offered at: SBHS **Grade(s):** 9,10,11,12

Prerequisite: Core and Sustainable Construction

This course covers basic industrial and construction welding practices, occupation characteristics, and employment opportunities. Topics include safety, tools, print reading, measurement, torch cutting processes, base metal preparation and shielded metal arc welding (SMAW). Science, thinking skills, mathematics, leadership skills, and principles of technology are reinforced in this course. Job shadowing is an appropriate work-based learning strategy for this course. Hands-on work experiences and SkillsUSA leadership activities provide many opportunities to enhance classroom instruction and career development.

WELDING TECHNOLOGY II

Course Code: IM622X0C **Fee (if applicable):** $5

Offered at: SBHS **Grade(s):** 10,11,12

Prerequisite: Welding Technology I

Recommendation: Math II

This course introduces advanced welding and cutting practices used in industry and construction and emphasizes hands-on experience. Topics include weld fit-up and testing, metal properties, gas metal (GMAW), flux cored (FCAW), and shielded metal (SMAW) arc welding. Arts, English language arts, mathematics, and science are reinforced. Work-based learning strategies appropriate for this course include apprenticeship, cooperative education, entrepreneurship, internship, and job shadowing. SkillsUSA competitive events, community service, and leadership activities provide the opportunity to apply essential standards and workplace readiness skills through authentic experiences. Math II is recommended as preparation for this course.

WELDING TECHNOLOGY III

Course Code: IM632X0C **Fee (if applicable):** $5

Offered at: SBHS **Grade(s):** 10,11,12

Prerequisite: Welding Technology II

This course is designed to continue the development of advanced welding and cutting practices used in industry and construction and emphasizes hands-on experience. Further emphasis is placed on topics covered in Welding Technology II such as weld fit-up and testing, metal properties, gas metal (GMAW), flux cored (FCAW), and shielded metal (SMAW) arc welding. Arts, English language arts, mathematics, and science are reinforced. Work-based learning strategies appropriate for this course include apprenticeship, cooperative education, entrepreneurship, internship, and job shadowing. SkillsUSA competitive events, community service, and leadership activities provide the opportunity to apply essential standards and workplace readiness skills through authentic experiences. Math II is recommended as preparation for this course.