*Career Cluster: Agriculture, Food, & Natural Resources*

*PROGRAM OF STUDY: Veterinary and Animal Science*

**Agriscience 5957 Credit(s): 1 Year 1**

Agriscience is an introductory laboratory science course that prepares students for biology,

subsequent science and agriculture courses, and postsecondary study. This course helps students understand the important role that agricultural science and technology plays in the twenty-first century. In addition, it serves as the first course for all programs of study in the Agriculture, Food, & Natural Resources cluster. Upon completion of this course, proficient students will be prepared for success in more advanced agriculture and science coursework. This course counts as a lab science credit toward graduation requirements.

**Small Animal Science 5958 Credit(s): 2 Year 2**

Small Animal Scienceis an intermediatecourse in animal science and care for students interested in learning more about becoming a veterinarian, vet tech, vet assistant, or pursuing a variety of scientific, health, or agriculture professions. This course covers anatomy and physiological systems of different groups of small animals, as well as careers, leadership, and history of the industry. Upon completion of this course, proficient students will be prepared for more advanced coursework in veterinary and animal science.

**Large Animal Science 6116 Credit(s): 1 Year 3**

Large Animal Scienceis an applied course in veterinary and animal science for students interested in learning more about becoming a veterinarian, vet tech, vet assistant, or pursuing a variety of scientific, health, or agriculture professions. This course covers anatomy and physiological systems of different groups of large animals, as well as careers, leadership, and history of the industry. Upon completion of this course, proficient students will be prepared for success in the level-four Veterinary Science course and further postsecondary training.

**Career Practicum 6105 Credit(s): 1 Year 4**

*Work-Based Learning: Career* Practicum is a capstone course intended to provide students with opportunities to apply the skills and knowledge learned in previous CTE and general education courses within a professional work environment. The course allows students to earn high school credit for select models of work-based learning, which allow students to interact with industry professionals in order to extend and deepen classroom work and support the development of postsecondary and career readiness knowledge and skills.

*Career Cluster: Agriculture, Food, & Natural Resources*

*PROGRAM OF STUDY: Horticulture Science*

**Agriscience 5957 Credit(s): 1 Year 1**

Agriscience is an introductory laboratory science course that prepares students for biology, subsequent science and agriculture courses, and postsecondary study. This course helps students understand the important role that agricultural science and technology plays in the twenty-first century. In addition, it serves as the first course for all programs of study in the Agriculture, Food, & Natural Resources cluster. Upon completion of this course, proficient students will be prepared for success in more advanced agriculture and science coursework. This course counts as a lab science credit toward graduation requirements.

**Principles of Plant Science and Hydroculture 6119 Credit(s): 1 Year 2**

Principles of Plant Science and Hydroculture focuses on essential knowledge and skills related to the science of plant growth. This course covers principles of plant health, growth, reproduction, and biotechnology, as well as fundamental principles of hydroponics and aquaponics. Upon completion of this course, proficient students will be prepared for more advanced coursework in horticulture science.

**Greenhouse Management 5954 Credit(s): 1 Year 3**

Greenhouse Management is an applied-knowledge course designed to prepare students to manage greenhouse operations. This course covers principles of greenhouse structures, plant health and growth, growing media, greenhouse crop selection and propagation, and management techniques. Upon completion of this course, proficient students will be equipped with the technical knowledge and skills needed to prepare for further education and careers in horticulture production. Greenhouse Management is a dual credit course with statewide articulation.

**Career Practicum 6105 Credit(s): 1 Year 4**

*Work-Based Learning: Career Practicum* is a capstone course intended to provide students with opportunities to apply the skills and knowledge learned in previous CTE and general education courses within a professional work environment. The course allows students to earn high school credit for select models of work-based learning, which allows students to interact with industry professionals in order to extend and deepen classroom work and support the development of postsecondary and career readiness knowledge and skills.

*Career Cluster: Architecture & Construction*

*PROGRAM OF STUDY: Structural Systems*

**Fundamentals of Construction 6073 Credit(S): 1 Year 1**

Fundamentals of Construction is a foundational course in the Architecture & Construction cluster covering essential knowledge, skills, and concepts required for careers in construction.

Up on completion of this course, proficient students will be able to describe various construction fields and outline the steps necessary to advance in specific construction careers.

Students will be able to employ tools safely and interpret construction drawings to complete projects demonstrating proper measurement and application of mathematical concepts.

Standards in this course also include an overview of the construction industry and an introduction to building systems and materials. Students will begin compiling artifacts for inclusion in their portfolios, which they will carry with them throughout the full sequence of courses in their selected program of study.

**Structural Systems I 6164 Credit(s): 1 Year 2**

Structural Systems I prepares students for careers in residential and commercial carpentry.

Up on completion of this course, proficient students will be able to demonstrate knowledge and skill in framing buildings. Students will be able to frame floors, walls, ceilings, roofs, and stairs while safely employing tools and interpreting construction drawings to complete projects. Emphasis is placed on demonstrating proper measurement and application of mathematical concepts. Standards in this course also include principles of the construction industry and

business and project management. Students will continue compiling artifacts for inclusion in their portfolios, which they will carry with them throughout the full sequence of courses in this program of study.

**Structural Systems II 6165 Credit(s): 2 Year 3**

Structural Systems II is an advanced-level course that builds on the introductory skills learned in the Fundamentals of Construction and Structural Systems I courses. This course will explore advanced framing, the physics of structural loads, and the coverings and finishes of structural systems. Upon completion of this course, proficient students will be able to install interior and exterior finishing, including roofing, siding, thermal and moisture protection components, drywall, doors, and trim. Throughout the course, students will interpret construction drawings to complete projects, implementing material estimating procedures and safe working practices. Standards in this course also expand on principles of the construction industry and delve deeper into business and project management strategies. Students will continue compiling artifacts for inclusion in their portfolios, which they will carry with them

throughout the full sequence of courses in this program of study.

**Career Practicum 6105 Credit(s): 2 Year 4**

*Work-Based Learning: Career Practicum* is a capstone course intended to provide students with opportunities to apply the skills and knowledge learned in previous CTE and general education courses within a professional work environment. The course allows students to earn high school credit for select models of work-based learning, which allow students to interact with industry professionals in order to extend and deepen classroom work and support the development of postsecondary and career readiness knowledge and skills.

*Career Cluster: Business Management & Administration*

*PROGRAM OF STUDY: Office Management*

**Computer Applications 5891 Credit(s): 1 Year 1**

Computer Applications is a foundational course intended to teach students the computing fundamentals and concepts involved in the use of common software applications. Upon completion of this course, students will gain basic proficiency in word processing, spreadsheets, databases, and presentations. In addition, students will have engaged in key critical thinking skills and will have practiced ethical and appropriate behavior required for the responsible use of technology.

**Business Communications 5888 Credit(s): 1 Year 2**

Business Communications is a course designed to develop students’ effective oral and electronic business communications skills. This course develops skills in multiple methods of communications, including social media, as well as electronic publishing, design, layout, composition, and video conferencing. Upon completion of this course, proficient students will be able to demonstrate successful styles and methods for professional business communications using the proper tools to deliver effective publications and presentations.

**Business Management 5889 Credit(s): 1 Year 3**

Business Management focuses on the development of the planning, organizing, leading, and

controlling functions required for the production and delivery of goods and services. This applied knowledge course addresses the management role of utilizing the businesses’ resources of employees, equipment, and capital to achieve an organization’s goals. Students will participate in a continuing project throughout the course in which, individually or in teams,

they will present recommendations to improve an existing business. Local business partnerships are encouraged to provide resources for faculty and students. Upon completion of this course, proficient students will be able to complete a full review of an existing business and offer recommendations for improvement as would a management consultant.

**Advanced Computer Applications 5904 Credit(s): 1 Year 4**

Advanced Computer Applications prepares students to continue postsecondary training in business-related programs, provides advanced training for students pursuing a career in administrative and information support, and supports obtaining an industry certification in specific software applications (such as the Microsoft Office Suite). Course content and projects are meant to simulate workplace scenarios and draw on skills related to communications, operations, management, and teamwork in order to accomplish information management goals. Upon completion of this course, proficient students will be fluent in a variety of information management software applications and will be prepared to sit for the Microsoft Office Specialist (MOS).

*Career Cluster: Health Science*

*PROGRAM OF STUDY: Nursing Services*

**Health Science Education 5998 Credit(s): 1 Year 1**

Health Science Education is an introductory course designed to prepare students to pursue careers in the fields of public health, therapeutics, health informatics, diagnostics, and support services. Upon completion of this course, a proficient student will be able to identify careers in these fields, compare and contrast the features of healthcare systems, explain the legal and ethical ramifications of the healthcare setting, and begin to perform foundational healthcare skills. This course will serve as a strong foundation for all of the Health Science programs of study.

**Anatomy and Physiology 5991 Credit(s): 1 Year 2**

Anatomy and Physiology is an upper level course designed to develop an understanding of the structures and functions of the human body, while relating those to knowledge and skills associated with pathophysiology. Upon completion of this course, proficient students will be able to (1) apply the gross anatomy from earlier courses to a deeper understanding of all body systems, (2) identify the organs and structures of the support and movement systems, (3)

relate the structure and function of the communication, control, and integration system, and (4) demonstrate a professional, working understanding of the transportation, respiration, excretory, and reproduction systems.

**Medical Therapeutics 5999 Credit(s): 1 Year 3**

Medical Therapeutics is an applied course designed to prepare students to pursue careers in

therapeutic and nursing services. Upon completion of this course, a proficient student will be able to identify careers in therapeutics services; assess, monitor, evaluate, and report patient/client health status; and identify the purpose and components of treatments.

**Nursing Education 6000 Credit(s): 1 Year 4**

Nursing Education is a capstone course designed to prepare students to pursue careers in the field of nursing. Upon completion of this course, a proficient student will be able to implement communication and interpersonal skills, maintain residents’ rights and independence, provide care safely prevent emergency situations, prevent infection through infection control and perform the skills required of a nursing assistant. At the conclusion of this course, if students have logged 40 hours of classroom instruction and 20 hours of classroom clinical instruction, and if they have completed 40 hours of site-based clinical with at least 24 of those hours

Spent in a long-term care facility, then they are eligible to take the certification examination as a Certified Nursing Assistant (CNA).

Prior to beginning work at a clinical site, students must be certified in Basic Life Support (BLS) Cardiopulmonary Resuscitation (CPR), and deemed competent in basic first aid, body mechanics, Standard Precaution guidelines, and confidentiality.

Note: In order for students to qualify for the nursing assistant certification examination, the training program must be approved at least 30 days before the first day of class by the Tennessee Department of Health Nurse Aide Training program staff.

**Clinical Internship 5993 Credit(s): 1 Year 4**

Clinical Internship is a capstone course and work-based learning experience designed to provide students with real-world application of skills and knowledge obtained in a pre-requisite Health Science course. Upon completion of this course, proficient students will be able to pursue certification in the pre-requisite course of Cardiovascular Services or Pharmacological Science once they have graduated and reached 18 years of age. Prior to beginning work at a clinical site, students must be certified in Basic Life Support (BLS), Cardiopulmonary Resuscitation (CPR), and deemed competent in basic first aid, body mechanics, Standard Precaution guidelines, and confidentiality. Business Management & Administration concentrators may also take this course as part of a career practicum/work-based learning placement within the Health Services Administration program of study. Note: Student to teacher ratio for this course is 15:1 in a clinical setting.

*Career Cluster: Human Services*

*PROGRAM OF STUDY: Early Childhood Education Careers*

**Early Childhood Careers I Credit(s): 1 Year 1**

Early Childhood Education Careers I (ECEC I) is a foundational course in the Education and Training career cluster intended to prepare students for careers as childcare providers, nannies, preschool teachers, and more. Course content covers the foundation of childhood development services, careers, provider responsibilities and aptitudes, and fundamentals of child development. Upon completion of this course, students will have created artifacts for inclusion in a course portfolio, which will continue with them throughout the program of study.

**Early Childhood Careers II Credit(s): 1 Year 2**

Early Childhood Education Careers II (ECEC II) is an intermediate course for students interested in learning more about becoming an early childhood teacher, nanny, or childcare provider. This course covers the components of curriculum planning, learning, screening and assessing, special populations, and educational technology. Students will observe educators in action, practice specific skills, and add personal work products to a course portfolio. Upon completion of this course, proficient students will be able to pursue more advanced coursework in the ECEC program of study.

**Early Childhood Careers III Credit(s): 1 Year 3**

Early Childhood Education Careers III (ECEC III) is an applied-knowledge course for students interested in becoming an early childhood teacher, nanny, or childcare provider. This course covers the components of the learning environment, planning age appropriate activities, using activities for learning, and developing communication skills. If available, students may participate in a work-based learning component of instruction and add work products to a course portfolio. Upon completion of this course, proficient students will be prepared to participate in the capstone ECEC IV course and/or continue their studies at the postsecondary level.

**Early Childhood Careers IV Credit(s): 1 Year 4**

Early Childhood Education Careers IV (ECEC IV) is capstone course for students who intend to pursue advanced training as an early childhood teacher, nanny, or childcare provider. The course standards

cover understanding of the components of professionalism, policies, regulations, and teaching and learning. Students will participate in a work-based learning component of instruction and add work products to a course portfolio. Upon completion of this course, proficient students will be prepared to continue their studies at the postsecondary level.