

Year	Course Description
Junior	Zoo and Aquarium (010940)- WebXams Students will apply responsible animal science principles and routine husbandry practices to captive animal populations. Learners will apply knowledge of animal behavior, welfare, and husbandry principles to enhance exhibit design, animal enrichment and training plans, and educational engagement programs. Emphasis will be given to data collection and research techniques. Students will apply principles of responsible population control, disease risk and management, and problem-solving/action planning techniques.
Junior	Plant and Horticulture (010155) 6 pt credential and CCP possible , WebXams, (REQUIRED FOR 12 pt Credential) Students will apply principles of plant physiology and anatomy, plant protection and health, reproductive biology in plants, plant nutrition and disorders to the management of soils and plants. Throughout the course, students will learn communication, leadership, and business management skills reflective of the industry.
Junior	Engineering (010115) 6 pt credential with NCCER exam Students will apply principles and demonstrate competencies in: Basic Safety, Construction Math, Hand Tools, Power Tools, Construction Drawings, Basic Rigging, Communication Skills and Employability Skills. This includes a National Credentialing exam.
Junior	Pre-Apprentice- Lab Experience (010115) (12 pt credential with pre apprentice hours combined with senior year) Learners demonstrate on the job training of professional skills during rotations within divisions of the Cincinnati Zoo and Botanical Garden.
Senior	Intro to Veterinary Science (010930)) 6 pt credential, CCP possible at UCBlue Ash , WebXams Students will learn causes, symptoms, and treatment of common diseases with special emphasis on developing preventative health management plans and breeding programs. Topics include veterinary pharmacology, radiology and imaging techniques, principles of surgery, safe laboratory skills, and the concepts of ethics and professionalism in the workplace. Students will develop skills in inquiry and statistical methods. Throughout the course, learners will utilize principles of technology to manage information systems, and research issues affecting the industry.
Senior	Environmental Science for Agriculture & Natural Resources (010720) 6 pt credential, CCP possible , WebXams(REQUIRED FOR 12 pt Credential) Students will study relationships between organisms and their environment. Principles of biogeochemical cycles, air-water-land relationships, non-point pollution, and wetlands will be applied. Students will examine fundamentals of resource development, agriculture sustainability, energy needs and pollution control. They will analyze and interpret data gathered from studies on the ecosystem. Throughout this course, students will develop responses to environmental problems and develop management strategies for responsible conservation and resource development.
Senior	Animal Anatomy and Physiology (010945)) CCP possible , WebXams Students will examine the structure and function of the major organ systems as well as the function and principle of blood flow in animals. Students will study internal and external anatomical parts, their functions, and will investigate the relationship among these parts and systems within the body of animal. Throughout the course, students will apply the internal functions of anatomical structures to the business and industry principles of the animal industry.
Senior	Agriculture and Environmental Systems Capstone (010190) (REQUIRED FOR 12 pt Credential) Students will examine elements of business, identify organizational structures and apply management skills while developing business plans, financial reports and strategic goals for new ventures or existing businesses. Learners will use marketing concepts to evaluate the marketing environment and develop a marketing plan with marketing channels, product approaches, promotion and pricing strategies. Throughout the course, students will apply concepts of ethics and professionalism while implications of business regulations will be identified.
Senior	Pre-Apprentice- Lab Experience (010115) (12 pt credential with pre apprentice hours combined with junior year) Learners demonstrate on the job training of professional skills during rotations within divisions of the Cincinnati Zoo.
Odd Years	Technical Math- Students develop these habits of mind through orchestrated, intentional experiences of reading, writing, talking, listening and reasoning that connect mathematics to daily life and career situations.