

Courses Offered at High Schools 20-21

AGA-114 Principles of Agronomy (3 s.h.)

Topics covered include: plant anatomy and physiology; plant classification and ID; pest classification and ID; and pesticides, pest management, application equipment, calibration, laws/regulations.

Students will take the Iowa Core Manual examination as a requirement for this course. (38-15) *Equivalent to 90-160, AGAS-701.*

AGB-133 Introduction to Ag Business (3 s.h.)

This course is designed for students seeking an Associate of Applied Science Degree in Agriculture. Basic economic concepts, principles, and practice reflected in agriculture will be outlined. Students will also reflect on the major components of an agricultural business organization, and the economic fundamentals involved in organizing, operating, and managing an agricultural business.

(45-0-0-0) *Equivalent to 90-170, AGBS-701*

AGS-109 Animal Science I (3 s.h.)

This course is designed to provide students with a general overview of the livestock industry. It identifies the ways in which domestic animals serve the basic needs of humans for food, fiber, shelter, protection, fuel and emotional well-being. Students will develop an understanding of and be able to apply the basic principles of animal selection, breeding, genetics, feeding, health, and husbandry practices.

As a student, you will become familiar with the economic and social issues that confront the livestock industry. (45-0) *Equivalent to 70-112, AGSS-701.*

AUT-113 Transportation Fundamentals (3 s.h.)

This course will require many of the basic elements required to be successful in transportation courses. The concepts covered include basic electronics and an introduction to basic shop equipment. Emphasis will be placed on problem solving, proper use and application of equipment, study of electrical and mechanical diagrams, and ability to identify equipment needed in repair situations. Coursework will include many hands-on exercises with industrial grade equipment. (30-30-0-0)

BCA-215 Computer Business Applications (3 s.h.)

Emphasis on business applications of computer software. Students complete business problems using word processing, electronic spreadsheet, and database management software. Students are also exposed to Windows operating systems, presentation software, and the internet.

BIO-102 Introductory Biology (3 s.h.)

Study of organismic biology including organization, metabolism, and reproduction of living systems. Includes evolutionary patterns, inheritance, ecosystems, and structure-function relationships among organisms. (45-0) *Equivalent to BIOL-101, 70-101.*

BIO-103 Introductory Biology Lab (1 s.h.)

Corequisite: Credit for or current enrollment in BIO-102, Introductory Biology. This is a lab component intended to supplement Introductory Biology. (0-30) *Equivalent to BIOL-102, 70-102.*

BUS-122 Emerging Business Practices & Technologies (3 s.h.)

This is an introductory course designed to assist students in creating

a simple, inexpensive technologies including a webpage for a new business or concept while applying basic marketing, advertising, and sales techniques that are targeted to Internet or electronic information and sales. (15-60)

BUS-130 Intro to Entrepreneurship (3 s.h.)

This course introduces the concept of Entrepreneurship beginning with identifying characteristics of the Entrepreneur, evaluating opportunities, feasibility, financing, and planning for success. Students will also understand the need for a contingency plan as well as an exit strategy.

Equivalent to 15-171, ENT-101

BUS-152 Creating a Company (3 s.h.)

You will learn about entrepreneurship by being one. This course will give participants the opportunity to experience the activities, emotions and tensions that are part of founding and/or joining a start-up company. While the course materials will provide initial guidance, your success will be determined by your own initiative, perseverance, imagination and energy. This is neither a “game” nor a “simulation”. Students are required to identify real business customers and clients and to take steps to deliver real services or products. This is a real-world experience, supplemented by classroom activities and sharing of lessons learned. (45-0-0-0)

BUS-161 Human Relations (3 s.h.)

Human Relations is a course designed to improve the student’s ability to function in the workplace. This class will work on increasing the student’s self-awareness and improving their ability to get along with customers, coworkers, and supervisors

Equivalent to 15-241, BUSN-105

BUS-225A-E Business Internships (1-5 s.h.)

Prerequisites: 1. Students must enroll in and pass BUS-107, Business Careers. 2. Students must have completed and filed an Application for Employment with their Internship Coordinator. 3. Students must have their proposed experience approved by the Internship Coordinator before they may register and begin. Business Internships is a learning experience which is: 1. based on practical work experience, 2. related directly to the student’s program of study, 3. individualized to enable the student to gain valuable work experience and help determine career choices, and 4. geared to the student’s academic knowledge, personal development and professional preparation. Instructor’s consent required. Course is repeatable for a maximum of 15 credit hours. (0-60 to 300)

CIS-125 Intro to Programming Logic w/Language

A fundamental requirement for people in the information technology field is the ability to organize a solution to a problem. This, in and of itself, is a difficult task. Often, however, this skill takes a backseat to learning code or is lost in the complexity of the task. Introduction to Programming Logic w/Language concentrates on the process of developing a logical algorithmic solution to a problem.

CON-121 Carpentry Fundamentals I

General skills instruction covers safety, basic hand tools, basic power tools, jobsite Safety, print reading, construction materials and systems, construction fasteners and Processes, residential and commercial construction practices.

CON-123 Carpentry Fundamentals II

General skills instruction covers safety, basic hand tools, basic power tools, jobsite safety, print reading, construction materials and systems, construction fasteners and processes, residential and commercial construction practices.

CON-305 Cabinetry and Millwork (3 s.h.)

This competency-based course prepares students for entry-level positions in the cabinetmaking and millwork, furniture-making, and woodworking industries. (30-30-0-0)

ELT-115 Electronic Concepts (3 s.h.)

Electronic Concepts is an introductory survey of electricity and electronics suitable for students interested in pursuing a career in such technical fields as electronics, automotive, HVAC, and other fields that require knowledge of basic electrical/electronic concepts. Topics include safety, shop and lab practices, motors and controls, direct and alternating current, and semiconductor and digital electronics. Course work consists of problem solving, computer-assisted instruction, computer simulation, and hands-on exercises with industrial grade equipment. (30-30) *Equivalent to 96-132, INDU-701.*

ELT-190 Introduction to Tech Computing & CAD (3 s.h.)

Prerequisite/Corequisite: Ability to key-enter the equivalent of 25 words/minute at a computer keyboard. Introduction to Technical Computing and CAD is designed to familiarize the student with microcomputer basics relating to occupations in the industrial/technical area. Topics include computer hardware, operating systems, commands and tasks, disk organization and access, word processing, spreadsheets, and two-dimensional computer-aided drafting (CAD). The student should expect to spend 5-6 hours per week in the Electromechanical Systems Technology lab to accomplish the required modular learning labs. (15-60) *Equivalent to EMST-701, 91-104.*

ELT-745 Maintenance Shop Operations (3 s.h.)

The student is introduced to shop equipment generally found in the industrial maintenance environment. The student uses safe setup and produces parts with metal saws, drills, grinders, basic welding and cutting, thread repair, anchors and fasteners. The student use of mechanical prints to identify parts in assembly and repair situations is practiced, along with the use of catalogs to find and order repair parts, study of bearings and seals, applications, and failure analysis. (15-61) *Equivalent to 96-156, EMST-805.*

EMS-114 Emergency Medical Responder (2 s.h.)

Prerequisites: Be at least 17 years of age at the time of enrollment; be proficient in writing, reading, and speaking English; hold or be eligible to obtain a current driver's license; be physically and emotionally capable of performing basic emergency care skills; and provide evidence of current certification in the BLS Healthcare Provider course. This 45-hour emergency care course emphasizes life threatening emergencies, wounds and fractures, medical and environmental emergencies, and patient access and handling. Students will receive hands-on practice in preparation for state written and practical Emergency Medical Responder certification examinations. An additional 6 hours is required to complete the

state practical and written examinations. (25-20)

EMS-201 Emergency Medical Technician (7 s.h.)

Prerequisites: Be at least 17 years of age at the time of enrollment; be able to speak, write, and read English proficiently; be physically and emotionally capable of performing all functions and skills of an EMR; possess maturity of judgment and sound moral character; provide documentation of current certification in BLS for Healthcare Providers. A physical examination, immunization record, and background check are required prior to beginning the hospital or field clinical portion of the course. This course provides the student with the necessary knowledge and skills to perform emergency care and transport. Course modules include preparatory, function and development of the human body, pharmacology, airway management, patient assessment, medical emergencies, shock, trauma, special patient populations, and EMS operations. An additional 18 hours of hospital-based clinical and 12 hours of ambulance ride time is required. (70-60-30-0)

ENG-105 Composition I (3 s.h.)

Improvement of skills in reading, writing, and listening with an emphasis on expository methods of development and personal experience as supporting material. Students may be requested to use word processors and the Writer's Workbench analyses programs, the Writer's Workbench STEPS programs, and the structuring sentences video series. Students must meet minimum competency requirements in writing to receive a grade of C or higher. (45-0) *Equivalent to ENGL-104, ENGL-101, 30-101, ENG-102.*

ENG-106 Composition II (3 s.h.)

Prerequisite: ENG-105, Composition I, or ENG-102, Composition & Speech I. Students must have earned a C or higher grade in Composition I or Composition & Speech I before enrolling in Composition II. A continuation of ENG-105 Composition I, with an emphasis on argumentative and persuasive writing, on research methods, and on language. Students may be requested to use word processors, Writer's Workbench analyses, Writer's Workbench STEPS, and sentence structuring videos. (45-0) *Equivalent to ENGL-102, ENGL-105, 30-102, ENG-103.*

HIS-151 US History to 1877 (3 s.h.)

A survey course covering the social, political, and economic history of American civilization from the Age of Discovery through Reconstruction. (45-0-0-0)

HIS-152 US History from 1877 (3 s.h.)

A survey course covering the social, political, and economic history of the United States since 1877.

HSC-120 Medical Terminology I (3 s.h.)

Introduction of basic medical terminology utilizing a programmed, word-building system to learn word parts to construct and analyze new terms. Emphasis is placed on spelling, definition, usage, and pronunciation. (45-0) *Equivalent to 15-251, HEAL-110.*

HSC-121 Medical Terminology II (3 s.h.)

Prerequisite: HSC-120 Medical Terminology I is highly desirable. This course offers a brief review of basic medical terminology followed by

a systems approach to learning terms associated with anatomical, physiological, and pathological aspects of the body.

(45-0-0-0) Equivalent to 15-252, HEAL-111

HSC-130 Nurse Aide Theory (2.5 s.h.)

Corequisite: HSC-174, Nurse Aide Clinical. This 75-hour nurse aide course has been designed to meet the training requirements of The Omnibus Budget Reconciliation Act of 1987 (OBRA) for aides working in nursing facilities (NF) and skilled nursing facilities (SNF). Emphasis in the course is on students achieving a basic level of knowledge and demonstrating skills to provide safe, effective resident care. The course has been developed in six units of study. The theory portion includes 30 hours of classroom time and 15 hours of laboratory practice. (30-0) *Equivalent to CNAS-101, 89-164.*

HSC-174 Nurse Aide Clinical (1 s.h.)

Corequisite: HSC-171, Nurse Aide Theory. The clinical experience includes 30 hours in a nursing facility. (0-45) *Equivalent to CNAS-102, 89-165.*

IND-190 Skills & Safety in Industry (1 s.h.)

This course is designed to acquaint the student with the proper personal and shop safety procedures needed to function in an industrial lab setting. In addition to the safety, students will also receive instruction on first aid in an emergency situation, as well as computing skills needed to be successful in an industrial setting.

(7.5-15-0-0)

MAT-110 Math for Liberal Arts (3 s.h.)

Prerequisite: MAT-089, Survey of Math, with a grade of C or higher; COMPASS Algebra score of at least 56 OR ACT Math score of at least 21. Math for Liberal Arts provides a survey of mathematics topics that includes sets, logic, statistics, number theory, geometry, critical thinking skills, the metric system, and consumer math. This course will fulfill 3 hours of Natural Science requirement for the A.A. Degree. (45-0) *Equivalent to MATH-101, 40-121.*

MAT-121 College Algebra (4 s.h.)

Prerequisite: MAT-102, Intermediate Algebra with a C or better, OR Math ACT score of at least 21, or Compass Algebra score of 76 or better. This course is intended for students majoring in business, social science, biological sciences, liberal arts, and those mathematics students with insufficient background to begin the study of calculus. The course is a study of various classes of functions, their graphs, and applications. These include linear, polynomial, rational, root, inverse, exponential and logarithmic functions. Also included are systems of equations and inequalities, matrices, sequences and series, and the Binomial Theorem. (60-0) *Equivalent to MATH-121.*

MAT-134 Trigonometry & Analytic Geometry (3 s.h.)

Prerequisite: MAT-121 College Algebra with a grade of C or higher, or ALEKS score of at least 50.

This course is a preparation course intended for students majoring in engineering, mathematics, physics, chemistry or certain vocational fields. The course is a study of both trigonometric and conic functions and equations. Both rectangular and

polar coordinate systems are studied.
(45-0-0) Equivalent to 40-140, STAT-104

MAT-156 Introduction to Statistics

Prerequisite: MAT-092 Intermediate Algebra, with a grade of C or higher; or a COMPASS Algebra score of at least 76; or an ACT Math score of at least 21. This course is intended to introduce students to basic statistical concepts. It covers descriptive and inferential statistical methods, probability, hypothesis testing on the mean and proportion, and linear regression. Students are also introduced to technology as it applies to introductory statistical methods. A graphing calculator is required.

MAT-801 Applied Math A (1 s.h.)

Prerequisite: COMPASS Pre-Algebra score of at least 49; or ACT math score of at least 16; or MAT-063, Pre-Algebra, with a grade of C or higher. This course covers essential topics in algebra, including ratio and proportion, as well as unit conversions, and order of operations.
(15-0-0-0)

MAT-802 Applied Math B (1 s.h.)

Prerequisite: COMPASS Pre-Algebra score of at least 49; or ACT math score of at least 16; or MAT-063, Pre-Algebra, with a grade of C or higher. This course covers essential topics in algebra, including solving equations and word problems, and basic statistics.
(15-0-0-0)

MAT-803 Applied Math C (1 s.h.)

Prerequisite: MAT-801 Applied Math A with a grade of C or higher and MAT-802 Applied Math B, with a grade of C or higher. This course covers essential topics in plane and solid geometry.

MAT-804 Applied Math D (1 s.h.)

Prerequisite: MAT-801 Applied Math A with a grade of C or higher and MAT-802 Applied Math B, with a grade of C or higher. This course covers essential topics in trigonometry.

PEH-140 First Aid (1 s.h.)

Lecture-type course designed to give the layperson adequate first aid knowledge and skills with emphasis on accident prevention and recognition and treatment of common medical emergencies. (15-0)
Equivalent to PHYE-117, 60-232.

PSY-111 Introduction to Psychology (3 s.h.)

An introduction to the scientific study of behavior; a brief history of psychology as a science, and topics fundamental to human behavior including developmental issues, sensory abilities, cognitive performance, social and emotional factors in behavior, and abnormal behavior and therapies. (45-0) *Equivalent to 80-101, PSYC-101.*

PSY-121 Developmental Psychology (3 s.h.)

A topical approach to studying the physical, cognitive, social, and emotional domains of human development from conception to death. Examining the research in these areas allows the student to construct real-world applications to different contexts in life including culture, ethnicity, and gender. Learning activities reflect discussions

on a variety of psychological issues including learning, personality, moral behavior, and psychological well-being and life satisfaction across the lifespan. (45-0) *Equivalent to PSYC-110, 80-230.*

PSY-223 Child and Adolescent Psychology (3 s.h.)

This course covers information relevant to the development of humans from the prenatal stages through adolescence providing an introduction to and survey of behavioral characteristics of individual development. Interwoven into each stage of development (infancy/toddlerhood, early childhood, middle childhood, and adolescence) are the effects of community, family, and school and the development of children and adolescence. (45-0-0-0) *Equivalent to 80-104, PSYC-204*

SOC-110 Introduction to Sociology (3 s.h.)

An introductory survey course, sociology is the scientific study of society. Inquiries into what holds societies together, what causes societies to change, and how social forces affect our daily lives. Topics covered include: culture and society, socialization, social research, groups, organizations, institutions, deviance, gender, race, and ethnicity. An emphasis is placed on cultural diversity.

SOC-115 Social Problems (3 s.h.)

An introduction to the study of contemporary social problems. The course examines how social problems are identified, explores underlying conditions and causes of social problems, and considers possible solutions and policy implications. Emphasis is on sociological and critical thinking frameworks. Topics of exploration include: mental illness, substance abuse, crime, prejudice and discrimination, prostitution, poverty, and more.

SPC-112 Public Speaking (3 s.h.)

Students will study the theory and practice of public speaking as an intellectual tool for use in argumentation and persuasion in a democratic society. This course prepares the student for a variety of speaking situations, both formal and informal, with an emphasis on speech preparation, organization, support, delivery, and audience analysis. (45-0-0-0)

WEL-335 Ag & Industry Welding (2 s.h.)

This is a basic arc/oxy-fuel welding and cutting course. The students will perform introductory skills in SMAW, GTAW, and GMAW welding, oxy-acetylene welding, and oxy-fuel cutting. The student learns safety procedures relating to welding subjects and general shop safety. (15-30-0-0)