

Edgewood High School



CTE Programs of Study 2016-2017

*Advanced CTE courses

ELECTIVES

DIM FOR YEARBOOK, P&S I, II

1 Credit Grades 10-12

Prerequisites: *Yearbook sponsor recommendation. (limited to 12 students)*

This course offers practical experience in public relations, advertising, layout design, photography, writing copy, and other basic journalistic techniques required in yearbook production.

ROBOTICS

1 Credit Grades

Prerequisites:

Students enrolled in this course will demonstrate knowledge and skills necessary for the robotic and automation industry. Through implementation of the design process, students will transfer advanced academic skills to component designs in a project-based environment. Students will build prototypes or use simulation software to test their designs. Additionally, students explore career opportunities, employer expectations, and educational needs in the robotic and automation industry.

CTE Courses

STEM ENDORSEMENT COURSE DESCRIPTIONS

Math POS

ALGEBRA I

1 Credit Grades 9-10

Algebra I develops the study of real numbers as mathematical system. It develops basic concepts of logic and includes such topics as open sentences, linear equations and inequalities, polynomials, quadratic relations, and an in depth study of functions.

GEOMETRY

1 Credit Grades 10-12

Prerequisites: Algebra I

Geometry develops deductive, inductive, and creative thinking. It develops geometric concepts using undefined terms, postulates, and theorems. Included are solid, plane, and coordinate geometry.

Financial Mathematics

1 Credit Grades 10-11

Prerequisite: Algebra I

The mathematical process standards describe ways in which students are expected to engage in the content. The placement of the process standards at the beginning of the knowledge and skills listed for each grade and course is intentional. The process standards weave the other knowledge and skills together so that students may be successful problem solvers and use mathematics efficiently and effectively in daily life. The process standards are integrated at every grade level and course. When possible, students will apply mathematics to problems arising in everyday life, society, and the workplace. Students will use a problem-solving model that incorporates analyzing given information, formulating a plan or strategy, determining a solution, justifying the solution, and evaluating the problem-solving process and the reasonableness of the solution. Students will select appropriate tools such as real objects, manipulatives, paper and pencil, and technology and techniques such as mental math, estimation, and number sense to solve problems. Students will effectively communicate mathematical ideas, reasoning, and their implications using multiple representations such as symbols, diagrams, graphs, and language. Students will use mathematical relationships to generate solutions and make connections and predictions. Students will analyze mathematical relationships to connect and communicate mathematical ideas. Students will display, explain, or justify mathematical ideas and arguments using precise mathematical language in written or oral communication.

PRE-AP GEOMETRY1 Credit Grades 9-10****Prerequisites: Algebra I****Students must have an 80 average in the previous math class.*

This course contains all of the concepts presented in the regular Geometry course with more emphasis on the proofs of theorems and higher mathematical rigor.

ALGEBRA II*1 Credit Grades 10-12****Prerequisites: Algebra I and Geometry***

Algebra II extends the basic study of algebraic concepts to include the complex number system, relation, function, coordinate geometry, quadratic relations, sequences, and series.

PRE-AP ALGEBRA II1 Credit Grades 10-11****Prerequisites: Algebra I and Geometry****Students must have a 90 average in the previous math class.*

This course addresses all of the concepts presented in the regular Algebra II class described above. Many of the topics are extended and more complex examples are presented, including proof of more properties and relations studied. This course will require more attention to the mathematical structure underlying the topics and algorithms presented.

PRECALCULUS1 credit Grades 11-12****Prerequisites: Algebra I, Geometry, and Algebra II.***

Designed for students who have completed Algebra II. Students will extend their level of mathematical skills and reasoning beyond the topics covered in Algebra II. Some topics include functions (linear, quadratic, polynomial, exponential, logarithmic, etc.), and basic trigonometry. This course should be effective in preparing students for taking a basic College Algebra course and preparing students for ACT, SAT, THEA and other standardized tests.

AP Calculus AB*1 Credit****Prerequisites: Pre-Calculus***

Content requirements for Advanced Placement (AP) Calculus AB are prescribed in the College Board Publication Advanced Placement Course Description Mathematics: Calculus AB, Calculus BC, published by The College Board. This publication may be obtained from the College Board Advanced Placement Program.

INDEPENDENT STUDY (COLLEGE ALGEBRA).5 Credit Dual Credit Course (3 college hours)****Prerequisites: Successful completion of Algebra II and a minimum score of 250 on***

THEA test or approved score on mathematics section of 10th or 11th grade TAKS test.

Topics in this course may include linear and quadratic equations, complex numbers, graphing lines and curves, higher degree equations, logarithmic and exponential functions, matrices and systems of equations, etc. as time permits. Either a programmable or nonprogrammable calculator is required.

***INDEPENDENT STUDY (COLLEGE PRECALCULUS)**

.5 Credit Dual Credit Course (3 college hours)

Prerequisites: *Math 1314 (College Algebra)*

Begins with topics from plane trigonometry including circular functions, solutions of right triangles, graphs, identities, solving trigonometric equations and the use of scientific calculators. Either a programmable or a non-programmable calculator is required. The course will include topics from analytical geometry.

Science POS

BIOLOGY I

1 Credit Grade 9

Prerequisites: *None.*

In Biology, students conduct laboratory and field investigations, use scientific methods during investigations, and make informed decisions using critical thinking and scientific problem solving. Students in Biology study a variety of topics that include: structures and functions of cells and viruses; growth and development of organisms; cells, tissues, and organs; nucleic acids and genetics; biological evolution; taxonomy; metabolism and energy transfers in living organisms; living systems; homeostasis; and ecosystems and the environment.

***PRE-AP BIOLOGY I**

1 Credit Grade 9

Prerequisites: *90 average in 8th grade science.*

Pre-Advanced Placement Biology is an accelerated academic course that covers the same objectives as Biology in more depth and complexity

PRINCIPLE TECHNOLOGY

1 Credit Grades 11-12

Prerequisites: *Biology I, Algebra I, must be taken concurrently or after Geometry.*

In Physics, students conduct laboratory and field investigations, use scientific methods during investigations, and make informed decisions using critical thinking and scientific problem solving. Students study a variety of topics that include: laws of motion; changes within physical systems and conservation of energy and momentum; forces; thermodynamics; characteristics and behavior of waves; and atomic, nuclear, and quantum physics. Students who successfully complete Physics will acquire factual knowledge within a conceptual framework, practice experimental design and interpretation, work collaboratively with colleagues, and develop critical thinking skills.

***PRE-AP PHYSICS**

1 Credit Grade 11-12

Prerequisites: *90 average in Biology/ Pre-AP Biology.*

Pre-Advanced Placement Physics is an accelerated academic class that covers the same objectives as Physics in more depth and complexity.

CHEMISTRY

1 Credit Grades 10-11

Prerequisites: *Algebra I, Biology, and must be taken concurrently or after Algebra II.*

In Chemistry, students conduct laboratory and field investigations, use scientific methods during investigations, and make informed decisions using critical thinking and scientific problem solving. Students study a variety of topics that include characteristics of matter, use of the Periodic Table, development of atomic theory and chemical bonding, chemical stoichiometry, gas laws, solution chemistry, thermochemistry, and nuclear chemistry. Students will investigate how chemistry is an integral part of our daily lives.

***PRE-AP CHEMISTRY**

1 Credit Grade 10-11

Prerequisites: *90 average in Physic/Pre-AP Physic.*

Pre-Advanced Placement Chemistry is an accelerated academic class that covers the same objectives as Chemistry in more depth and complexity

***ANATOMY/PHYSIOLOGY**

1 Credit Grades 11-12 (May count as a 4th science credit)

Prerequisites: *Biology*

Anatomy and Physiology is an in-depth study of all major systems and the functions of these systems in humans. Also included are health related concepts, characteristics of cells, cell division, genetics, life cycles, and other life processes. Laboratory work is correlated with the topics.

***GENERAL BIOLOGY I AND II (Dual Credit)**

STUDENTS MUST TAKE BOTH SEMESTERS FOR THIS TO BE ACCEPTED AS THE FOURTH SCIENCE

Prerequisites: Biology, Physics, Chemistry

****** Fee required for Dual Credit ******

A study of the fundamental principles, of living organisms, their chemical and physical nature, genetics, function, organization, classification, and ecology with an emphasis on viruses, bacteria, algae, fungi, and plants. General Biology II a study of the fundamental principles of living organisms, their classification, adaptation, reproduction, ecology, and behavior with an emphasis on unicellular organisms, invertebrates, and vertebrate animals.

ARTS AND HUMANITIES COURSE DESCRIPTIONS

Fine Art POS

ART I-IV

1 Credit Grades 9-12

Prerequisites: None

Students will learn to appreciate art and practice artistic skills throughout the year. Students will be exposed to terminology that will enhance their ability to discuss artistic form. Many different art projects will be completed during the course. Some of the areas of skill will include drawing, painting, design and sculpture. Students will gain valuable insight and experience in the world of art.

MARCHING BAND I, II, III, IV

.5 Fine Arts Credit – .5 P.E. Credit

Prerequisites: None

Marching band is the featured performance ensemble for instrumental music in the fall. This group performs at all football games and pep rallies throughout the season as well as competes in UIL and invitational marching contest. The group participates in local parades and concerts. Members of the group specialize in wind instruments, drumline, pit percussion, or color guard. Special rehearsal times are scheduled for various groups within the organization. Students are encouraged to participate in All-State band auditions as well as auditions for leadership positions within the organization.

THEATRE ARTS I-IV

1 Credit Grades 9-12

Prerequisites: None

This course is opened to all interested students and is an introductory course to the world of theatre. Please note, this is a participation course and students will be expected to fully take part in all class activities every day. Speaking, acting, rehearsing, memorization, and performing in front of others are all key components of this course. Students will improvise, practice physical and vocal warm up drills, explore dramatic structure, technical theatre, and develop an appreciation of theatre. Students will be provided with opportunities to participate in school productions.

Foreign Language POS

SPANISH I

1 Credit Grades 9-11

Prerequisites: None

Spanish I is designed to develop the student's ability to read, write, and speak Spanish. Conversational expressions and basic grammar will be stressed. The course will also include a basic study of composition, reading and Hispanic cultures. This course is a prerequisite to Spanish II.

SPANISH II

1 Credit Grades 10-12

Prerequisites: Spanish I credit

Spanish II is a continuation of the language skills introduced in Spanish I. Basic grammar and additional vocabulary are added to the fundamentals of speaking, reading, and writing a second language. Spanish II is required for all transcripts excluding Minimum.

SPANISH III

1 Credit Grade 11-12

Prerequisites: Spanish I & II

Spanish III is a continuation of Spanish II. The class builds on vocabulary and grammar taught in Spanish I & II with special emphasis on listening comprehension, speaking proficiency, and reading comprehension. Advanced grammar will be covered along with an in-depth study of Hispanic cultures, customs, literature and geography. Successful completion of Spanish I & II are prerequisites for this course.

***SPANISH IV**

1 Credit Grade 12

Prerequisites: Spanish I-III

Spanish IV is a continuation of Spanish III. The class builds on vocabulary, grammar and writing skills. This will result in the understanding and ability to respond to most routine questions, statements and commands, to speak intelligibly and use vocabulary sufficient to express oneself simply.

PUBLIC SERVICE COURSE DESCRIPTIONS

Health Science POS

Principles of Health Science
<i>.5 Credit Grade 9</i>
This course provides an overview of the therapeutic, diagnostic, health informatics, support services, and biotechnology research and development systems of the health care industry.
*Medical Terminology
<i>.5 Credit Grade 9</i>
This course is designed to introduce students to the structure of medical terms, including prefixes, suffixes, word roots, combining forms, and singular and plural forms, plus medical abbreviations and acronyms. Course allows students to achieve comprehension of medical vocabulary appropriate to medical procedures human anatomy and physiology and path physiology.
Health Science
<i>1 Credit Grade 10</i>
*Prerequisites: Principles of Health Science
This course provides for the development of advanced knowledge and skills related to a wide variety of health careers. Students will have hands-on experiences and exposure to different methodologies such as clinical rotation and career preparation learning.
Human Growth and Development
<i>1 Credit Grade 10-12</i>
*Prerequisites: Recommended Principles of Education and Training
Human Growth and Development is an examination of human development across the lifespan with emphasis upon research, theoretical perspectives, and common physical, cognitive, emotional, and social developmental milestones. The course covers material that is generally taught in a postsecondary, one-semester introductory course in developmental psychology or human development.
*Antatomy and Physiology of Human Systems
<i>1 Credit wc Grade 11</i>
*Prerequisites: Biology, Chemistry
Students study a variety of topics, including the structure and function of the human body and the interaction of body systems in the laboratory and field investigation course.

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*World Health
<i>1 Credit Grades 11-12</i>
Recommended prerequisites: Biology and Chemistry.
This course examines major world health problems and emerging technologies as solutions to these medical concerns. The course is designed to improve students' understanding of the cultural, infrastructural, political, educational, and technological constraints and inspire ideas for appropriate technological solutions to global medical care issues.

*Medical Microbiology/Pathophysiology
<i>½ to 1Credit Grade 11-12</i>
Recommended prerequisites: three credits of science.
This course is recommended for students in Grades 10-12. Recommended prerequisites: three credits of science. To receive credit in science, students must meet the 40% laboratory and fieldwork requirement identified in §74.3(b)(2)(C) of this title (relating to Description of a Required Secondary Curriculum). Students in Medical Microbiology explore the microbial world, studying topics such as pathogenic and non-pathogenic microorganisms, laboratory procedures, identifying microorganisms, drug resistant organisms, and emerging diseases.

Human Services POS

Principles of Human Services
<i>1 Credit Grade 9</i>
This laboratory course allows students use principles of lifetime wellness and nutrition to help make informed choices as well as pursue careers related to hospitality and tourism, education and training, human services and health sciences.

Child Development
<i>1 Credit Grade 10</i>
This technical laboratory course addresses knowledge and skills related to child growth and development from prenatal through school-age children, equipping students with child development skills. Students use these skills to promote the well-being and healthy development of children and investigate careers related to the care and education of children. Students are encouraged to participate in extended learning experiences such as career and technical student organizations and other leadership or extra curricular organizations.

*Child Guidance
<i>1 Credit Grade 11</i>
This technical laboratory course addresses the knowledge and skills related to child growth and guidance equipping students to develop positive relationships with children and effective caregiver skills. Students use these skills to promote the well-being and healthy development of children, strengthen a culturally diverse society, and pursue careers related to the care, guidance, and education of children, including those with special needs. Students are encouraged to participate in extended learning experience such as career and technical student organizations and other leadership or extracurricular organizations. .

*Human Growth and Development
<i>1 Credit Grade 10</i>
Human Growth and Development is an examination of human development across the lifespan with emphasis upon research, theoretical perspectives, and common physical, cognitive, emotional, and social developmental milestones. The course covers material that is generally taught in a postsecondary, one-semester introductory course in developmental psychology or human development.

*Family Community Service
<i>1 Credit Grades 11-12</i>
<i>*Prerequisites: Principles Human Services</i>
This laboratory-based course is designed to involve students in realistic and meaningful community-based activities through direct service experiences. Students are provided opportunities to interact and provide services to individuals, families, and the community through community or volunteer services. Emphasis is placed on developing and enhancing organizational and leadership skills and characteristics.

*Advanced CTE courses

BUSINESS AND INDUSTRY COURSE DESCRIPTIONS

Agriculture POS

<u>Principles of Ag, Food, and Natural Resources</u>
<i>1 Credit Grade 9</i>
This course prepares students for careers in agriculture, food, and natural resources by developing knowledge and skills in personal development, globalization, industry standards, practices and expectations.
<u>Principles and Elements of Floral Design</u>
<i>1 Credit Grade 10</i>
Students will develop knowledge and skills that enable them to identify and demonstrate the principles and techniques related to floral design as well as an understanding of the management of floral enterprises.
<u>*Landscape Design and Turfgrass MGT</u>
<i>.5 Credit: Grade 11</i>
Students will develop knowledge and skill regarding career opportunities, entry requirements, and transfer their knowledge and skills. This course is designed to develop an understanding of landscape and turf grass management techniques and practices.
<u>Horticulture Science</u>
<i>.5 Credit Grade 11</i>
Students develop knowledge and skills related to horticulture and the workplace as well as common horticultural management practices as they related to food and ornamental plant production.
<u>*Advanced Plant and Soil Science</u>
<i>2 Credit Grade 12</i>
Prerequisite: Minimum of 1 credit from Agriculture Mechanics related course.
This is a capstone experience for students participating in a coherent sequence of courses on Agricultural Mechanics. Practicum experiences are designed to give students supervised practical application appropriate to the level and nature of skills acquired in their chosen sequence.

*Advanced CTE courses

Animal Science POS

Principles of Ag, Food, and Natural Resources
<i>1 Credit Grade 9</i>
This course prepares students for careers in agriculture, food, and natural resources by developing knowledge and skills in personal development, globalization, industry standards, practices and expectations.
Wildlife, Fisheries
<i>1 Credit Grade 10</i>
This course examines the management of game and non-game wildlife species, fish, and aquacrops and their ecological needs as related to current agricultural practices.
Livestock Productions
<i>.5 Credit Grade 11</i>
This course prepares students to learn, reinforce, apply and transfer their knowledge and skills in a variety of settings. Animal species to be addressed in this course may include, but are not limited to, beef cattle, dairy cattle, swine, sheep, goats, and poultry.
Small Animal Management
<i>.5 Credit Grade 11</i>
This course provides knowledge and skills related to animal systems and the career opportunities, entry requirement and industry expectations in this field. Small animals included in the course of study, but not limited to small mammals, reptiles, avian, dogs and cats.
*Advanced Animal Science
1 Credit Grade 11-12
This laboratory course examines the interrelatedness of human, scientific, and technological dimensions of livestock production. Students will be provided knowledge and skills regarding career opportunities and industry standards.

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Ag Mechanics and Small Engine POS

PRINCIPLES OF AG, FOOD, AND NATURAL RESOURCES
1 Credit Grade 9
This course prepares students for careers in agriculture, food, and natural resources by developing knowledge and skills in personal development, globalization, industry standards, practices and expectations.
AGRICULTURE MECHANICS AND METAL TECHNOLOGIES
1 Credit Grade 10
This course prepares students for careers in agriculture power, structural, and technical systems by developing skills and understanding as it relates to safety in tool operation, electrical wiring, plumbing, carpentry, fencing, concrete, and metal techniques.
*AGRICULTURE FACILITIES DESIGN AND FABRICATION
1 Credit Grade 11
This course prepares students for careers in mechanized agriculture and technical systems by developing knowledge and skills related to agricultural facilities design and fabrication.
*PRACTICUM IN AG, FOOD, AND NATURAL RESOURCES
1 or 2 Credits Grade 12
Prerequisite: Minimum of 1 credit from Agriculture Mechanics related course.
This is a capstone experience for students participating in a coherent sequence of courses on Agricultural Mechanics. Practicum experiences are designed to give students supervised practical application appropriate to the level and nature of skills acquired in their chosen sequence.
*BUILDING MAINTENANCE
2 – 3 Credits Grades 10-12
Prerequisite: Building Maintenance Technology.
In Advanced Building Maintenance Technology, students continue to gain advanced knowledge and skills specific to those needed to enter the work force as a building maintenance technician or supervisor and construction project manager or secure a foundation for a postsecondary degree in construction management, architecture, or engineering. Students acquire knowledge and skills in safety, Occupational Safety and Health Administration (OSHA) standards, safety devices in electrical circuits, maintenance of electrical and heating, ventilation, and air conditioning (HVAC) systems, and concepts of historic preservation.

*Advanced CTE courses

Business Management and Administration POS

Principals of Business, Marketing, and Finance
<i>1 Credit Grade 9</i>
Students gain knowledge and skills in economies and private enterprise systems, the impact of global business, marketing of goods and services, advertising, product pricing and college and career readiness skills. This course allows students to reinforce, apply, and transfer academic knowledge and skills to a variety of interesting and relevant activities, problems and settings in business.
*Business Information Management I
<i>1 Credit Grade 9</i>
Students implement personal and interpersonal skills to strengthen individual performance in the workplace and in society and make a successful transition to the workforce and postsecondary education. Students apply technical skills to address business applications of emerging technologies, create word-processing documents, develop a spreadsheet, formulate a database, and make an electronic presentation using appropriate software.
*Business Information Management II
<i>1 Credit Grade 10</i>
Prerequisite: Business Information Management I
Students apply technical skills to address business applications of emerging technologies. Students implement personal and interpersonal skills to strengthen performance in the workplace and in society and make a successful transition to the workforce or post secondary education.
*Web Technologies
<i>.5 to 1 Credit Grades 10-12</i>
Prerequisite: Principles of Information Technology
Through the study of web technologies and design, students learn to make informed decisions and apply the decisions to the field of information technology. Students implement personal and interpersonal skills to prepare for a rapidly evolving workplace environment. The knowledge and skills acquired and practiced will enable students to successfully perform and interact in a technology-driven society. Students enhance reading, writing, computing, communication, and critical thinking and apply them to the information technology environment.

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Business Management1 Credit Grade 10-12*

Students recognize, evaluate, and prepare for a rapidly evolving global business environment that requires flexibility and adaptability. Students analyze the primary functions of management and leadership, which are planning, organizing, staffing, directing or leading, and controlling. Topics will incorporate social responsibility of business and industry. Students develop a foundation in the economical, financial, technological, international, social, and ethical aspects of business to become competent managers, employees, and entrepreneurs. Students incorporate a broad base of knowledge that includes the legal, managerial, marketing, financial, ethical, and international dimensions of business to make appropriate management decisions.

Business Financial Management and Accounting POS

Principals of Business, Marketing, and Finance*1 Credit Grade 9*

Students gain knowledge and skills in economies and private enterprise systems, the impact of global business, marketing of goods and services, advertising, product pricing and college and career readiness skills. This course allows students to reinforce, apply, and transfer academic knowledge and skills to a variety of interesting and relevant activities, problems and settings in business.

Money Matters*.5 to 1 Credit Grades 9-12*

Prerequisite: Principles of Business, Marketing, and Finance

Students will investigate global economics with emphasis on the free enterprise system and its impact on consumers and businesses. Students apply critical-thinking skills to analyze financial options based on current and projected economic factors. Students will gain knowledge and skills necessary to set long-term financial goals based on those options. Students will determine methods of achieving long-term financial goals through investment, tax planning, asset allocation, risk management, retirement planning, and estate planning.

Business Management1 to 2 Credits Grades 10-12*

Students recognize, evaluate, and prepare for a rapidly evolving global business environment that requires flexibility and adaptability. Students analyze the primary functions of management and leadership, which are planning, organizing, staffing, directing or leading, and controlling. Topics will incorporate social responsibility of business and industry. Students develop a foundation in the economical, financial, technological, international, social, and ethical aspects of business to become competent managers, employees, and entrepreneurs. Students incorporate a broad base of knowledge that includes the legal, managerial, marketing, financial, ethical, and international dimensions of business to make

*Advanced CTE courses

appropriate management decisions.

Accounting I

1 Credit Grade 11

This is a technical preparation program that allows students to earn college credit for articulated HS classes.

Students investigate the field of accounting, including how it is impacted by economic, financial, technological, international, legal and ethical factors.

Financial Mathematics

1 Credit Grades 10-11

Prerequisite: Algebra I

The mathematical process standards describe ways in which students are expected to engage in the content. The placement of the process standards at the beginning of the knowledge and skills listed for each grade and course is intentional. The process standards weave the other knowledge and skills together so that students may be successful problem solvers and use mathematics efficiently and effectively in daily life. The process standards are integrated at every grade level and course. When possible, students will apply mathematics to problems arising in everyday life, society, and the workplace. Students will use a problem-solving model that incorporates analyzing given information, formulating a plan or strategy, determining a solution, justifying the solution, and evaluating the problem-solving process and the reasonableness of the solution. Students will select appropriate tools such as real objects, manipulatives, paper and pencil, and technology and techniques such as mental math, estimation, and number sense to solve problems. Students will effectively communicate mathematical ideas, reasoning, and their implications using multiple representations such as symbols, diagrams, graphs, and language. Students will use mathematical relationships to generate solutions and make connections and predictions. Students will analyze mathematical relationships to connect and communicate mathematical ideas. Students will display, explain, or justify mathematical ideas and arguments using precise mathematical language in written or oral communication.

Hospitality and Tourism POS

Lifetime Nutrition and Wellness
<i>1 Credit Grade 9</i>
This laboratory course allows students use principles of lifetime wellness and nutrition to help make informed choices as well as pursue careers related to hospitality and tourism, education and training, human services and health sciences.

Hotel/Restaurant Management
<i>½ to 1 credit Grades 10-12</i>
Prerequisite: Principles of Hospitality and Tourism
This course focuses on the knowledge and skills needed to pursue staff and management positions available in the hotel industry. This in-depth study of the lodging industry includes departments within a hotel such as front desk, food and beverage, housekeeping, maintenance, human resources, and accounting. This course will focus on, but not be limited to, professional communication, leadership, management, human resources, technology, and accounting. Students are encouraged to participate in extended learning experiences such as career and technical student organizations and other leadership or extracurricular organizations.

*Culinary Arts
<i>1 Credit Grade 11</i>
The class begins with Safety and Sanitation in the professional kitchen. Other major focuses will be fundamentals and principles of the art of cooking, science of baking, and includes management and production skills and techniques.

*Food Science
<i>1 Credit Grades 11-12</i>
Recommended: Principles of Hospitality and Tourism
In Food Science students conduct laboratory and field investigations, use scientific methods during investigations, and make informed decisions using critical thinking and scientific problem solving. Food Science is the study of the nature of foods, the causes of deterioration, the principles underlying food processing, and the improvement of foods for the consuming public. To receive credit in science, students must meet the 40% laboratory and fieldwork requirement identified in §74.3(b)(2)(C) of this title (relating to Description of a Required Secondary Curriculum).

Arts, A/V Technology & Communications

Principles of Arts & AV Technology & Communications

½ to 1 credit Grades 9

Careers in the Arts, Audio/Video Technology, and Communications career cluster require, in addition to creative aptitude, a strong background in computer and technology applications, a strong academic foundation, and a proficiency in oral and written communication. Within this context, students will be expected to develop an understanding of the various and multifaceted career opportunities in this cluster and the knowledge, skills, and educational requirements for those opportunities.

Graphic Design & Illustrations

1 to 2 credits Grades 10-12

Prerequisite: Principles Arts & AV Technology

Careers in graphic design and illustration span all aspects of the advertising and visual communications industries. Within this context, in addition to developing knowledge and skills needed for success in the Arts, Audio/Video Technology, and Communications career cluster, students will be expected to develop an understanding of the industry with a focus on fundamental elements and principles of visual art and design.

Audio/Video Production

1 to 2 credits Grades 9-12

Prerequisite: Principles Arts & AV Technology

Careers in audio and video technology and film production span all aspects of the audio/video communications industry. Within this context, in addition to developing technical knowledge and skills needed for success in the Arts, Audio/Video Technology, and Communications career cluster, students will be expected to develop an understanding of the industry with a focus on pre-production, production, and post-production audio and video activities.

*Animation

1 to 2 credits Grades 10-12

Prerequisite: Principles Arts & AV Technology

Careers in animation span all aspects of motion graphics. Within this context, in addition to developing technical knowledge and skills needed for success in the Arts, Audio/Video Technology, and Communications career cluster, students will be expected to develop an understanding of the history and techniques of the animation industry.

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Problem & Solutions
<i>.5 to 1 credit Grades 11-12</i>
<p>Problems and Solutions is a project-based research course for students who have the ability to research a real-world problem. Students develop a project on a topic related to career interests, use scientific methods of investigation to conduct in-depth research, are matched with a mentor from the business or professional community, compile findings, and present their findings to an audience that includes experts in the field. To attain academic success, students must have opportunities to learn, reinforce, apply, and transfer their knowledge, skills, and technologies in a variety of settings. This course is designed to provide students an opportunity to earn one advanced measure for the Distinguished Achievement Program.</p>