

Leonard High School

2021-2022 Elective Course Description

AG Sciences

*indicates CTE (Career Technical Education)

Principles of Agriculture, Food, and Natural Resources*

Principles of Agriculture, Food and Natural Resources will allow students to develop knowledge and skills regarding career and educational opportunities, personal development, globalization, industrial standards, details, practices and expectations. To prepare for careers in agriculture. To prepare success, students need opportunities to learn, reinforce, experience, apply, and transfer their knowledge and skills in a variety of settings.

Livestock Production*

In livestock production, students will acquire knowledge and skills related to livestock and the livestock production industry. Livestock Production may address topics related to beef cattle, dairy cattle, swine, sheep, goats, and poultry.

Small Animal Management* *(One semester only)*

In small animal management, students will acquire knowledge and skills related to small animals and the small animal management industry. Small Animal Management may address topics related to small mammals such as dogs and cats, amphibians, reptiles, and birds.

Equine Management* *(One Semester only)*

In Equine Science, students will acquire knowledge and skills related to equine animal systems and the equine industry. Equine science may address topics related to horses, donkeys and mules.

Advanced Animal Science*

Prerequisites include: Biology and Chemistry or IPC (Integrated Physics and Chemistry; Algebra I and Geometry; and either Small animal management, Equine science, or Livestock production.

Advanced Animal Science examines the interrelatedness of human, scientific, and technological dimensions of livestock production. Instruction is designed to allow for the application of scientific and technological aspects of animal science through field and laboratory experiences.

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Agricultural Mechanics and Metal Technologies*

Prerequisites include: Principles of Agriculture, food, and natural resources

Agricultural mechanics and metal technologies is designed to develop an understanding of agricultural mechanics as it relates to safety and skills in tool operation, electrical wiring, plumbing, carpentry, fencing, concrete, and metalworking techniques. To prepare for careers in agricultural power, structural, and technical systems, students must attain academic skills and knowledge, acquire technical knowledge and skills related to power, structural, and technical agricultural systems and the industry; and develop knowledge and skills regarding career opportunities, entry requirements, industry certifications, and industry expectations.

Agricultural Structures Design and Fabrication*

Prerequisites Include: Agricultural Mechanics and Metal Technologies

In Agricultural Structures Design and Fabrication, students will explore career opportunities, entry requirements, and industry expectations. To prepare for careers in mechanical agricultural and technical systems, students must attain knowledge and skills related to agricultural structures design and fabrication.

Agricultural Power Systems*

Prerequisites include: Principles of Agriculture, Food, and Natural Resources

Agricultural Power Systems is designed to develop an understanding of power and control systems as related to energy sources, small and large power systems, and agricultural machinery. To prepare for careers in agricultural power, structural, and technical systems, students must attain academic skills and knowledge, acquire technical knowledge and skills related to power, structural and technical agricultural systems and the workplace; and develop knowledge and skills regarding career opportunities, entry requirements, industry certifications and industry expectations.

Agricultural Equipment Design and Fabrication*

In Agricultural Equipment Design and Fabrication, students will acquire knowledge and skills related to the design and fabrication of agricultural equipment.

Plant Sciences

*indicates CTE (Career Technical Education)

Horticulture*

This course is recommended for students in grades 10-12. Students shall be awarded one credit for successful completion of this course. Horticulture Science is designed to

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develop an understanding of common horticulture management practices as they relate to food and ornamental plant production. To prepare for careers in horticultural systems, students must attain academic skills and knowledge, acquire technical knowledge and skills related to horticulture and the workplace, and develop knowledge and skills regarding career opportunities, entry requirements, and industry expectations. To prepare for success, students need opportunities to learn, reinforce, apply, and transfer knowledge and skills in a variety of settings.

Greenhouse Operation and Production*

Greenhouse Operation and production is designed to develop an understanding of greenhouse production techniques and practices. To prepare for careers in horticultural systems, students must attain academic skills and knowledge, acquire technical knowledge and skills related to horticultural systems and the workplace, and develop knowledge and skills regarding career opportunities, entry requirements, and industry expectations.

Floral Design*

This course is designed to develop students' ability to identify and demonstrate the principles and techniques related to floral design as well as develop an understanding of the management of the floral enterprises. Through the analysis of artistic floral styles and historical periods, students will develop respect for the traditions and contributions of diverse cultures. Students will respond to and analyze floral designs, thus contributing to the development of lifelong skills of making informed judgements and evaluations.

Advanced Plant Science* (6.0 Honors Class)

Plant and Soil Science provides a way of learning about the natural world. Students should know how plant and soil science has influenced a vast body of knowledge, that there are still applications to be discovered, and that plant and soil science is the basis for many other fields of science.

Scientific Research and Design* I/II/III (6.0 Honors Class)

Prerequisite: Biology, Chemistry, Integrated Physics and Chemistry (IPC), or Physics.

The course has the components of any rigorous scientific or engineering program of study from the problem identification, investigation design, data collection, data analysis, formulation, and the presentation of the conclusions. These components are integrated with the career and technical education emphasis of helping students gain

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entry-level employment in high-skill, high wage jobs and/or continue their education. Students must meet the 40% laboratory and fieldwork requirement. This course satisfies a high school science graduation requirement. Students may take this course with different course content for a maximum of three credits.

Computer Sciences

*indicates CTE (Career Technical Education)

Business Information Management*

In Business Information Management 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.

Digital Media*

In digital media, students will analyze and assess current and emerging technologies, while designing and creating multimedia projects that address customer needs and resolve a problem. Students will 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 will enhance reading, writing, computing, communication, and critical thinking and apply them to the IT environment.

Principles of Arts, Audio/Video Technology, and Communications*

The goal of this course is for the student to understand arts, audio/video technology, and communications systems. 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 the opportunities.

Video Game Design

Prerequisite: Principles of Art, Audio/Video Technology, and Communications

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Video Game Design will allow students to explore one of the largest industries in the global marketplace and the new emerging careers it provides in the field of technology. Students will learn gaming, computerized gaming, evolution of gaming, artistic aspects of perspective, design, animation, technical concepts of collision theory, and programming logic. Students will participate in the simulation of a real video game design team while developing technical proficiency in constructing an original game design.

Animation I/II*

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.

Audio Video Production*

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 products.

Commercial Photography*

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 commercial photography industry with a focus on creating quality photographs.

Education and Training

Principles of Education and Training*

Principles of Education and Training is designed to introduce learners to the various careers available within the Education and Training Career Cluster. Students use self-knowledge as well as education and career information to analyze various careers within the Education and Training Career Cluster. Students will develop a graduation plan that leads to a specific career choice in the student's interest area.

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Health Sciences

Principles of Health Science*

The Principles of Health Science course is designed to provide an overview of the therapeutic, diagnostic, health informatics, support services, and biotechnology research and development systems of the healthcare industry.

Medical Terminology*

The medical terminology course is designed to introduce students to the structure of medical terms, including prefixes, suffixes, word roots, singular and plural forms, and medical abbreviations. The course allows student to achieve comprehension of medical vocabulary appropriate to medical procedures, human anatomy and physiology, and pathophysiology.

Human Services

Principles of Human Services*

Principles of Human Services is a laboratory course that will enable students to investigate careers in the Human Services Career Cluster, including counseling and mental health, early childhood development, family and community, personal care, and consumer services. Each student is expected to complete the knowledge and skills essential for success in high-skill, high-wage, or high-demand human services careers.

Principles of Law, Public Safety, Corrections and Security*

This course introduces students to professions in law enforcement, protective services, corrections, firefighting, and emergency management. Students will examine the roles and responsibilities of police, courts, corrections, private security and protective agencies of fire and emergency services. The course provides students with an overview of the skills necessary for careers in law enforcement, fire service, protective services, and corrections.

Criminal Investigations*

Prerequisite - Principles of Law, Public Safety, Corrections, and Security

This is a course that introduces students to the profession of criminal investigations. Students will understand basic functions of criminal investigations and procedures and will learn how to investigate or follow up during investigations. Students will learn terminology and investigative procedures related to criminal investigation, crime scene processing, evidence collection, fingerprinting and courtroom presentation. Through case studies and simulated crime scenes, students will collect and analyze evidence such as fingerprint analysis, body fluids, hairs, fibers, shoes and tire impressions, bite

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marks, drugs, tool marks, firearms and ammunition, blood spatter, digital evidence, and other types of evidence.

Engineering and Mathematics

*indicates CTE (Career Technical Education)

Principles of Applied Engineering (Robotics)*

Principles of Engineering is an engineering survey course designed to expose students to some of the major concepts that they will encounter in a postsecondary engineering course of study. Students have an opportunity to investigate engineering and high-tech careers. In Principles of Engineering, students will employ engineering and scientific concepts in the solution of engineering design problems. Students will develop problem-solving skills and apply their knowledge of research and design to create solutions to various challenges. Students will also learn how to document their work and communicate their solutions to their peers and members of the professional community.

Financial Mathematics*

This course is recommended for students in Grades 10-12.

Prerequisite: Algebra I

Financial mathematics is a course about personal money management. Students will apply critical-thinking skills to analyze personal financial decisions based on current and projected economic factors.

Mathematics College Preparatory Course* (TSI)

Mathematics College Preparatory Course is intended to prepare students to successfully complete entry-level college work. Students in this course will study relations and functions, inequalities as well as algebraic expressions and equations. Expressions and equations will include absolute value, polynomial, radical and rational, with an emphasis on linear and quadratic. Mathematics College Preparatory Course is not offered for STAAR EOC remediation.

Anatomy and Physiology*(6.0 Honors Class)

Prerequisites: Biology and a second science credit.

The Anatomy and Physiology course is designed for students to conduct laboratory and field investigations, use scientific methods during investigations, and make informed decisions using critical thinking and scientific problem solving. Students in Anatomy and

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Physiology will study a variety of topics, including the structure and function of the human body and the interaction of body systems for maintaining homeostasis.

Scientific Research and Design* I/II/III (6.0 Honors Class)

Prerequisite: Biology, Chemistry, Integrated Physics and Chemistry (IPC), or Physics.

The course has the components of any rigorous scientific or engineering program of study from the problem identification, investigation design, data collection, data analysis, formulation, and the presentation of the conclusions. These components are integrated with the career and technical education emphasis of helping students gain entry-level employment in high-skill, high wage jobs and/or continue their education. Students must meet the 40% laboratory and fieldwork requirement. This course satisfies a high school science graduation requirement. Students may take this course with different course content for a maximum of three credits.

English Electives

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Journalism I/II

In Journalism, students are expected to write in a variety of forms and for a variety of audiences and purposes. Students will become analytical consumers of media and technology to enhance their communication skills. Published work of professional journalists, technology, and visual and electronic media are used as tools for learning as students create, clarify, critique, write, and produce effective communications. Students enrolled in journalism will learn journalistic traditions, research self-selected topics, write journalistic texts, and learn the principles of publishing.

Professional Communications

** Graduation Requirement**

Professional communications blends written, oral, and graphic communication in a career-based environment. Careers in the global economy require individuals to be creative and have a strong background in computer and technology applications, a strong and solid academic foundation, and a proficiency in professional oral and written communication. Within this context, students will be expected to develop and expand the ability to write, read, edit, speak, listen, apply software applications, manipulate computer graphics, and conduct internet research.

Social Studies

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Psychology

In psychology, an elective social studies course, students will study the science of behavior and mental processes. Students examine the full scope of the science of psychology such as the historical framework, methodologies, human development, motivation, emotion, sensation, perception, personality development, cognition, learning, intelligence, biological foundations, mental health, and social psychology.

Sociology

Sociology, an elective social studies course, is an introductory study in social behavior and organization of human society. This course will describe the development of the field as a social science by identifying methods and strategies of research leading to an understanding of how the individual relates to society and the ever changing world. Students will also learn the importance and role of culture, social structure, socialization, and social change in today's society.