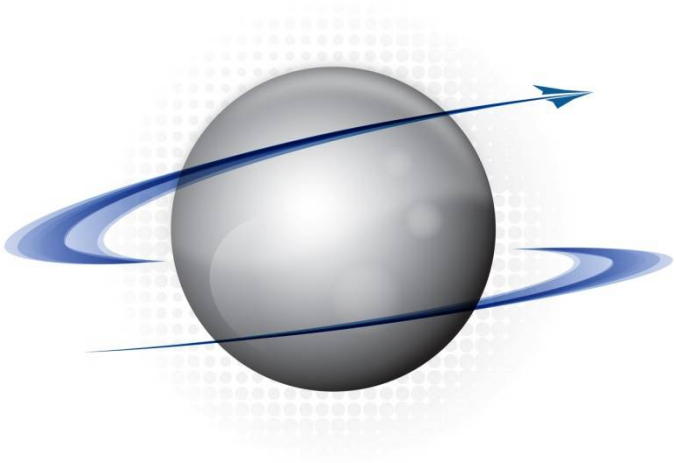
OAKLAND AVIATION HIGH SCHOOL
LAUNCH YOUR FUTURE!



2009-2010
COURSE CATALOG

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OAKLAND, CA 94621
510) 633-6375
www.aviationhighschool.org

Welcome!

We are a comprehensive high school that prepares students for success in college and a career in aviation or business. Students who graduate from our program will be able to choose to continue their studies at a four-year university or to enter the workforce directly after graduation.

We have small classes (20 or less), and a developed advisory program. Our courses will be taught according to accepted best practices and we only hire the highest quality professional educators. Students will choose one of three major areas of concentration: Aviation Maintenance Technology; preparation for a career in business or international trade; or a personalized business internship program.

Enrollment

As a California Public Charter School we do not charge tuition and do not have admission requirements. Oakland Aviation High School does not discriminate on the basis of race, religion, gender, sexual orientation, socio-economic class or disability
Now Serving 9th, 10th, 11th, & 12th Grades
We began enrolling our first 9th grade cohort in September 2006. In 2007 we added a second 9th grade class, and in 2008 we added a third.

Transferability

With the exception of aviation, art, and some electives, all courses have received UC/CSU approval and are transferable. Courses that have not received UC/CSU approval will be identified with an (*).

Academic Standards

OAHS bases its core curricular choices on California State Standards, Federal Aviation Administration (FAA) requirements, and college preparedness. The curriculum is aligned with the College of Alameda Aviation Technician program and the UC A-G requirements. Interim assessments, every four to six weeks, will provide a barometer for how aligned curriculum is to the standards.

OAHS CURRICULUM AND CALIFORNIA STATE STANDARDS

At OAHS, curriculum mapping begins with California State Standards, but expands to include FAA and college entrance requirements. The frameworks are assessed to identify the essential content and skills required for mastery. This process is called "identifying power standards." Once the power standards are identified, we ask the question, "What do students need to know and be able to do to meet this standard?" This begins the scaffolding process, which entails defining the learning activities required to prepare students to master each standard, developing lesson plans that provide all students entry, and scaffolding student learning to attain the standard.

OAHS GRADUATION RECOMMENDATIONS

Content Area	UC (a-g Coursework)	OAHS
History/Social Science	2 years required	4 years
English	4 years required	4 years
Mathematics	3 years required, 4 years recommended	4 years
Laboratory Science	2 years required, 3 years recommended	3 years
Language Other than English	2 years required, 3 years recommended	3 years
Visual and Performing Arts (VPA)	1 year required	1 year
College Preparatory Electives	1 year required	3 years
Advisory	0	4 years
Aviation Maintenance Technician	0	3 years with FAA certification
Business	0	3 years

INSTRUCTIONAL PROGRAM OVERVIEW

9th Grade Required Courses

- World History
- English I
- Geometry
- Biological Science
- Art
- Introduction to Aviation
- Advisory
- Seminar

10th Grade Required Courses

- World History
- English II
- Algebra II
- Chemistry
- Aviation (Air Traffic Control, Private Pilot, Aircraft Maintenance) OR Business
- Art
- Advisory
- Seminar

11th Grade Required Courses

- American Government/Economics
- English III
- Pre-Calc/Trig
- Chemistry
- Aviation (Air Traffic Control, Private Pilot, Aircraft Maintenance) OR Business
- Advisory
- Art
- Seminar
- Success
- Spanish I

12th Grade Required Courses

- American Government/Economics
- English IV
- Pre-Calc/Trig
- Chemistry
- Aviation (Air Traffic Control, Private Pilot, Aircraft Maintenance) OR Business
- Advisory
- Art
- Seminar
- Success
- Spanish I

SCIENCE

BIOLOGY

Biology is a course that will focus on living organisms and living systems. In addition to classroom lecture, the course has a laboratory requirement that includes hands-on scientific activities that are directly related to and support the other class work, and that involve inquiry, observation, analysis, and write-up. These hands-on activities should account for at least 20% of class time, and should be listed and described in detail. Student will also participate in periodic field projects focusing on ecological relationships as well as on animal and plant kingdoms.

CHEMISTRY

The intent of the Chemistry requirement is to ensure one year of scientific education specific to understanding chemical principles and understanding the use of math as a problem solving tool. There will also be a heavy emphasis on methods for conducting and implementing the scientific method and numerous other laboratory techniques. In addition, the course has a laboratory requirement that include real life observation of chemistry and other hands-on scientific activities that are directly related to and support the other class work, and that involve inquiry, observation, analysis, and write-up. Students will also participate in periodic field projects focusing on the structure of atoms and periodic properties as well as bonding and common reactions, quantum mechanics, and acid-base reactions.

MATH

GEOMETRY

The objective of this course is to complete the study of geometric concepts and facts in a math-applied format. The course content includes all Euclidean facts regarding points, lines, angles, triangles, circles, polygons, solids, classical construction, transformations, and some work including space. It includes deductive reasoning (two- or three-column proofs, and proofs by contradiction) as well as an introduction to inductive reasoning. It also includes an introduction to trigonometry and analytic geometry.

ALGEBRA II

This is a second course in algebra. The content is organized around families of functions including linear, quadratic, exponential, logarithmic, radical and rational functions. Students will learn to represent functions in multiple ways such as verbal descriptions, equations, tables and graphs. Students will also learn to model real-world situations using functions in order to solve problems arising from those situations.

PRE-CALCULUS

This course studies the elementary functions -- their common properties, their individual attributes, and many of their real-life applications. The elementary functions studied in this course include the following algebraic functions: linear, quadratic, absolute value, polynomial, and rational. In addition the following transcendental functions will be taught: exponential and logarithmic.

SOCIAL SCIENCE

WORLD HISTORY

The primary purpose of this 10th grade course is to give students an opportunity to learn about the economic, political, and social developments that created the western civilization of which they are a part.

US HISTORY

US History is a rigorous course designed to prepare students for entrance into college and for their futures as active citizens in a democratic society. This course will examine the major turning points in American history during the 20th century. These events will be studied with a focus on both the government and the general population, with an analysis of how various groups and individuals have contributed to the course of our nation's history. Course themes will include: struggles for expanded individual rights and the rights of minority groups, the changing roles of the federal government and courts, the growth of the United States as a world power, the emergence of the modern corporate economy, major innovations in technology and their impact on society and culture, and the changing ethnic composition of American society. Students will also examine major developments in American cultures over time.
This course will further develop students' key academic skills, including critical thinking, analytical reading, persuasive writing, inquiry-guided research, and note taking.

AMERICAN GOVERNMENT

American Government is a rigorous course designed to prepare students for entrance into college and for their participation as active members of the American Government. This course will examine development and structure of the US Government, focusing on the local, state, and federal level. Course themes will include: The documents of Democracy, the US Court System, Amendments, Executive Power, Natural Rights, Civil Rights, and Political Parties. Students will also examine major developments in the American Government over time. This course will further develop students' key academic skills, including critical thinking, analytical reading, persuasive writing, inquiry-guided research, and note taking.

ECONOMICS

Economics is a rigorous course designed to prepare students for entrance into college and for their futures as active participants in the economy as citizens, consumers, workers, and future business owners. This course will examine basic economic principles, broadly focusing on both macro and micro economics. This focus will enable students to gain an understanding of the complexities of the US economy and well as economies around the world. Course themes will include: the effects of supply and demand, Domestic and International Competition, the changing role of the US in the global economy, and government fiscal policies. This course will further develop students' key academic skills, including critical thinking, analytical reading, persuasive writing, inquiry-guided research, and note taking.

AVIATION

*INTRODUCTION TO AVIATION

An introductory course in Aeronautical Science designed to provide the student with a broad-based aviation orientation in flight related areas. Subjects include historical developments in aviation and the airline industry, theory of flight, airport operations, aircraft systems and performance, elements of air navigation, basic meteorology theory, air traffic principles, flight physiology and aviation regulations and safety.

*AERONAUTICAL SCIENCE, AIR TRAFFIC CONTROL

This course provides an analysis of Air Traffic Control (ATC) functions and studies the history, development, and structure of the National Airspace System; explores navigation aids, ATC radar systems, terminal and en route control, flight service and weather facilities, instrument flight rules, airspace, and FAA regulations.

*AERONAUTICAL SCIENCE, PRIVATE PILOT

This course examines the basics of pilot certification, aircraft systems and instrumentation, aerodynamics, aircraft performance, VFR cross-country navigation techniques as it applies to single-engine operations and weather reports and forecasts. This course includes the Federal Aviation Regulations, the NTSB, elements of resource management, hazardous attitudes and aviation physiology.

The following aviation courses are taught by College of Alameda professor's on OAHS's campus and students receive college credit in addition to fulfilling some high school graduation requirements. The following course descriptions are provided by the College of Alameda in their 2007-2009 course catalog.

*AMT 81, Aircraft Component Inspection II

3 units, 2 hours lecture, 3 hours laboratory (GR)
Continuation of AMT 80: Orientation and shop safety,
plastic and bonded structures, aircraft structures, wood structures, welding, and fabric structures.

*AMT 82, Aircraft Component Inspection III

3 units, 2 hours lecture, 3 hours laboratory
Continuation of AMT 81: Orientation and shop safety,
FAR 65, FAR's, aircraft drawings, maintenance forms
and records, electrical circuits, electrical meters, batteries, aircraft electrical systems, and electrical schematics.

*AMT 83, Aircraft Component Repair I

5.5 units, 3.5 hours lecture, 6 hours laboratory
Intermediate airframe principles and practices: Orientation and shop safety, advanced electrical, aircraft instruments, cabin environmental systems, ice and rain protection, landing gear warning systems, takeoff warning systems, and materials and processes.

*AMT 84, Aircraft Component Repair II

5.5 units, 3.5 hours lecture, 6 hours laboratory
Continuation of AMT 83: Orientation and shop safety, ice and rain protection, landing gear warning systems, takeoff warning systems, and materials and processes.

BUSINESS

The following business courses are taught by College of Alameda professor's on OAHS's campus and students receive college credit in addition to fulfilling some high school graduation requirements. The following course descriptions are provided by the College of Alameda in their 2007-2009 course catalog.

BUS 225, THE PROFESSIONAL OFFICE ENVIRONMENT

3 units, 2 hours lecture, 3 hours laboratory
Recommended preparation: BUS 230DEF
Development of employable entry-level office skills: Using office equipment and software, word processing, e-mail, electronic records management; business communications including decision-making, time management, producing quality reports, teamwork, and interpersonal communication; and preparation for the job-application.

BUS 238A, WORD PROCESSING I

3 units, 2 hours lecture, 3 hours laboratory
Also offered as CIS 238A. Not open for credit to students who have completed or are currently enrolled in CIS 238A. Introduction to word processing concepts and basic computer operations: File management; creating, editing and printing documents; spell checker, thesaurus, and grammar tools; graphics; text formatting and manipulation; tables; and basic desktop publishing.

ENGLISH LANGUAGE ARTS

ENGLISH I

This 9th grade ELA course develops reading, writing, listening and speaking skills with a special focus on expository discourse, research methods, argumentation/ persuasion and the application of technological learning tools to improve communication. Students will study the following rhetorical modes: Narrative, Description, Exposition, Classification and Division, Definition, Analysis of Process, Analysis of Cause and Effect, and Persuasion. Students will gain proficiency in the use of the Internet, MS Word, and competence using Adobe CS to design quality products.

ENGLISH II

This 10th grade ELA course develops reading, writing, listening, and speaking skills with a special focus on responding to literature. Students will study literary modes including: drama, poetry, short stories, and novels. Students will also continue to develop the skills they acquired in English 1 by giving more complex oral presentations and developing their business and technical writing skills.

ENGLISH III

This 11th grade ELA course develops reading, writing, listening, and speaking skills with a special focus on responding to literature. Students will expand their study of literary modes to generate sophisticated analysis of literary devices and figurative language. Students will build on the skills they acquired in English I and II by delivering oral presentations and developing their persuasive writing skills in response to informational materials, media, and literature.

ENGLISH IV

This is a year-long course divided into two semesters. In this class we examine issues such as individual responses to group pressure including the Salem Witch Trial era, the role that Determinism plays in the lives of individuals, the role of civil rights and women's rights in the current US democracy, as well as issues of racial and gender identity in the past and today. To support these topics, students write numerous expository paragraphs, 5-paragraph essays, narrative and autobiographical stories, research papers, and self-reflections through both poetry and prose.

ART

*INTRODUCTION TO DRAWING

This course provides an excellent base for all art electives. In this class, students explore a variety of drawing and design situations including life drawing, still life, design and environmental themes. Various materials may include pencil, colored pencils, markers, inks, and pastels.

ELECTIVES

*SEMINAR

The purpose of this course is to increase student knowledge and ability in skills necessary for everyday living. Topics included will be self-assessment relating to others, post secondary education, careers, employment, consumerism, money management, housing, food, marketing and preparation, clothing choices, and care. In addition, this course will include an individualized support component that will focus on the unique needs of each student.

*SUCCESS

This course provides individual academic guidance and support to a variety of students. Students who participate in this course will have demonstrated a need for additional instruction, support, or structure in their studies, and report to the Study Center.

Each student who uses the Study Center will receive instruction from the director of instruction and the OAHS tutoring staff. Although the ultimate goal is to foster independent study habits, students will also strive to maintain communication with teachers and parents.

MISSION:

To provide a rigorous educational program that prepares students for success in college and develops the technical skills and personal qualities necessary for a successful career in aviation and business.

VISION:

To hold high expectations for students and staff focused on our common interest in developing highly successful learners, educators, aviators and business people. We personalize the educational experience to develop character, intrinsic motivation and technical proficiency in our consistent movement toward attaining our personal best in every situation.