



**Lakeland Highlands Middle School**

**Career & Technology Education  
Pre-Academies**

**Electives Course Guide**

**2018 - 2019**



# **A.E.R. Aviation - Engineering - Robotics**

## EXPLORATION OF PRODUCTION TECHNOLOGY I

In this yearlong course, students study many introductory aspects of technology including Simple Machines, Structures, and Bridge Design. Some of the projects or problem solvers include building Straw Towers, Balloons, and Powered Cars. This course emphasizes hands-on activities transforming ideas into practical solutions.

## EXPLORATION: AEROSPACE & TECHNOLOGY TRANSPORTATION

This yearlong course continues to build and expand on technology education. The students study many aspects of technology including Aerodynamics and Flight, as well as Bridge Design and Transportation. Some of the projects or problem solvers may include building Bridges, File Folder Cars, Hot Air Balloons, Balsa Gliders and Mouse Trap, Powered Cars, and 2-Liter Bottle Rockets.

## FOUNDATIONS OF ROBOTICS

This yearlong high school course provides a foundation in skills associated with robotics and automation to include artificial intelligence, electronics, physics, and principles of engineering. Course instruction incorporates lab experiments and students work in teams to build and test increasingly more complex mobile robots. Concepts include path planning using both geometry and multiple sensor feedback, interpreting sensor feedback, calculating threshold values, understanding conditional statements, and systems analysis.

# **ARTS & ENTERTAINMENT**

## ***TV PRODUCTIONS***

### INTRODUCTION TO A/V TECH (TV PRODUCTION)

This yearlong TV and Film class provides students the foundational knowledge of developing video productions for inclusion in the morning television show. In addition, students make short films, documentaries, commercials, and music videos. The class requires responsible students capable of working independently and creatively with other students.

### FUNDAMENTALS OF A/V TECHNOLOGIES & ART

This yearlong course is the 2<sup>nd</sup> course in TV and Film. Students build on skills developing video productions, utilizing appropriate tools and equipment to design projects related to visual and performing arts along with Journalism and Broadcasting. Students participate in hands on experiences to develop skills required to manage, operate, calibrate and troubleshoot equipment and tools used to make visual/audio productions. The class requires responsible students capable of working independently and creatively with other students.

## DIGITAL VIDEO TECHNOLOGY

In this yearlong high school class, students learn technical skills related to the Arts, A/V Technology, and Communications to include broadcast speaking, voice over, production writing, and digital production. Students develop video presentations and productions broadcasted through the LHMS close circuit television show in the Cougar Vision Television lab. This class requires responsible students capable of working independently and creatively with other students.

## ***BAND & ORCHESTRA***

### BAND 1

In this yearlong course, students learn how to read music and perform music on an instrument. No musical experience, application, or auditions necessary. During the school year, band students perform in three concerts after school and three rehearsals before school; all other activities occur during the school day. Payment plans and scholarships of need are available to cover the cost of instrument rentals for qualifying students and an optional summer band is available for students interested in a head start.

### BAND 2 (CONCERT)

In this yearlong course, students build on skills learned in Band 1. During the school year, band students perform in various concerts after school and rehearsals take place before school. Payment plans and scholarships of need are available to cover the cost of instrument rentals for qualifying students.

### BAND 3 (SYMPHONIC)

In this yearlong course, Students with previous band experience expand on their instrumental technique, music literacy, and aesthetic response through rehearsal, performance, and study of a variety of intermediate-level, high-quality band literature as well as extend their knowledge of music notation and theory, sound production, and personal and group rehearsal strategies. During the school year, band students perform in various concerts after school and rehearsals take place before school.

### ENSEMBLE

Students study a variety of styles of music literature emphasizing full band, solo, and ensemble performance. Students develop good tone, intonation, articulation, and style. The Symphonic Band participates in school concerts and local, district, and regional festivals. During the school year, band students perform in various concerts after school and rehearsals take place before school.

### ORCHESTRA

In this yearlong course, students learn to play, perform, and read music via string instruments including the violin, viola, cello, and string bass. The students perform two after school concerts each year.

## ***CHORUS & DRAMA***

### **CHORUS I**

This yearlong course provides basic training in choral singing and musicianship. Emphasis is placed on correct posture, tone production, basic musical terms and symbols, note reading, and beginning sight-reading skills. In addition, music enrichment and music appreciation units are incorporated into the curriculum. Performance opportunities include School Concerts, All County Chorus, and Disney Magic Music Days.

### **CHORUS II AND III**

This yearlong course requires students sing music in two or three part harmony and learn the basics of reading choral sheet music. Music varies in genre from popular to classical. Teamwork, cooperation, and self-confidence through performance is emphasized, as well as individual and group vocal techniques. Student evaluation includes expectations of cooperation, self-discipline, participation, and attendance at concerts. These courses require successful completion of previous years of chorus.

### **DRAMA**

This yearlong course is an introduction to effective communication. Special interest is placed on the individual learning how to handle speech anxiety, developing a personal style of presentation, and understanding audience reactions. The course explores the theatre experience from a variety of perspectives including the audience, the playwright, the actor, the designer, and the director.

### **MUSICAL THEATER**

In this yearlong class, students develop fundamental skills in stagecraft and apply them through practical experiences. Students create and participate in various performances including a musical learning the various responsibilities of the stage crew in a full production. Special note: This course requires student participation in extra rehearsals and performances beyond the school day and auditions are required to participate in course.

## ***VISUAL ARTS***

### **ART 2 DIMENSIONAL II**

Art 2D is a yearlong course that provides students with a two-dimensional experience in visual art. Lessons are designed to develop basic drawing and design skills that will lay the foundation for subsequent problem-solving projects in painting. Slide presentations and visual references to artists and their work are incorporated into lessons to provide students with exposure to varying art designs.

### ART 3 DIMENSIONAL I

In this yearlong course, students explore different approaches to drawing while applying the elements and principles of three-dimensional design to develop skills and sensitivity to line, shape, color, value, texture and composition. A variety of mixed media and drawing techniques are explored providing students various opportunities to develop technical skills and their own styles of drawing.

### ART 3 DIMENSIONAL II

In this yearlong course, students explore different approaches to drawing while applying the elements and principles of three-dimensional design and develop a personal and visual concentration with their work. They analyze and apply issues related to form and subject matter while they explore art works created by contemporary and professional artists emphasizing the development of original ideas and expressing those ideas visually in a three-dimensional form.

## **CULINARY ARTS**

### HOSPITALITY, CULINARY, and FAMILY/CONSUMER SCIENCE

In this yearlong course, students learn foundational knowledge in restaurant, food/beverage service, lodging, travel, and other family and consumer sciences. Students develop skills in resource management, culinary food safety and sanitation, safe and proper use of culinary tools, interpreting recipes, developing menus, artist presentation of food, and use of technology in the culinary field.

### FUNDAMENTALS OF CULINARY

In this yearlong course, students learn the fundamentals of culinary arts to include food and safety, sanitation, proper use of culinary equipment, interpreting recipes, developing menus, basic food preparation skills, front-of-house and back-of-house responsibilities, artistic presentation, and the use of technology in the culinary field.

### CULINARY I

This yearlong high school course provides content aligned to prepare for further education and careers in the culinary industry. Course content includes the history of the food service industry including safety in the workplace, employability skills, culinary leadership/teamwork skills, care and use of commercial culinary equipment, basic food science, nutrition, and following recipes in food prep labs. Activities focus on student practice and understanding of higher order reasoning and problem solving skills, work attitudes, teaming and cooperation, and knowledge of all aspects of the Hospitality and Culinary career cluster.

# HEALTH & FITNESS

## COMPREHENSIVE PHYSICAL EDUCATION

LHMS offers a semester long Physical Education course that include a focus on physical fitness and team sports. Daily activities include running, stretching, and fun physical fitness activities. Comprehensive P.E. classes includes fitness exercises of running, pushups, sit-ups, and stretching with games and sports of flag football and soccer.

## FITNESS

The 6<sup>th</sup> grade Fitness class is a semester long class that includes games to promote fitness, but the major focus is on fitness and health related topics. Students maintain a journal in this class.

## TEAM SPORTS

The Team Sports class is a semester long class that develops the physical skills necessary to be competent in many forms of movement, knowledge of team sports concepts such as offensive and defensive strategies and tactics, and appropriate social behaviors within a team or group setting. The integration of fitness concepts throughout the content is critical to the success of this course.

## OUTDOOR PURSUITS

The Outdoor Pursuits course is a semester long class providing skills, knowledge, and motivation necessary for participation in non-traditional forms of physical activity. The integration of fitness concepts throughout the content is critical to student success in this course and in the development of a physically active lifestyle.

## INDIVIDUAL/DUAL SPORTS

The Individual/Dual Sports course is a semester long class that provides skills, competencies, and techniques necessary for participation in a variety of team and individual sports. The integration of physical activities throughout the content of this course promotes the participation outside of the school setting that contribute to personal enjoyment and the attainment or maintenance of a healthy lifestyle.

# MEDIA DESIGN

## INFORMATIONAL COMMUNICATIONS I

This yearlong course exposes students to an understanding of core concepts associated with computers and their use. The content includes hands-on opportuni-

ties to explore various software applications including the creation of a template-based webpages and basic computer programs. The content includes digital technologies associated with digital and web development, multimedia, word processing, spreadsheet, database, Internet communications, cybersecurity, and computer programming.

### INFORMATIONAL COMMUNICATIONS II

This yearlong course provides students hands-on opportunities to explore various software applications including the creation of a template-based webpage and a basic computer program. This course builds on the previous course and provides greater depth and complex concepts using learned skills/knowledge to master these concepts. Students extend their skills with various software applications by creating complex documents and use more complex functions in addition to structured programming and the creation of a more complex computer program.

### DIGITAL DESIGN I

This yearlong course builds on the previous two courses and requires students work with network concepts. Students further extend their skills with various software applications by creating complex documents and using more complex functions and technologies. Students continue their exposure to computer programming and the creation of more complex computer programs.

### YEARBOOK

This year long course offers a mixture of digital design, photography, and journalism. In yearbook, students report on school activities and news producing the quarterly Cougars' Mark newspaper. They are also responsible for the design of the school yearbook. Students who are imaginative, self-motivated, and responsible are encouraged to apply. Yearbook staff members must meet deadlines with stories and photographs, sell ads, cover before and after school events, and exhibit creativity in their page designs.

## **MEDICAL**

### EXPLORATION OF HEALTH OCCUPATIONS/CAREER PLANNING

In this year-long course, students will explore various careers and gain insight to basic skills needed across the vast array of medical professions. Students will learn vital signs, first aid/CPR, basic medical terminology and gain insight into the development and history of medicine.

### INTRODUCTION TO HEALTH SCIENCE/ORIENTATION TO NURSING

In this year-long course (Introduction to Health Science 1<sup>st</sup> semester and Ori-

entation to Nursing 2<sup>nd</sup> semester), students will develop knowledge of various health science career clusters and skills related to each cluster, basic medical terminology, anatomy and physiology of the body systems (the focal point of the Orientation to Nursing course). This course builds upon the knowledge gained in the Exploration course. Therefore, Exploration to Health Occupations is a pre-requisite for this 2<sup>nd</sup> level course.

### MEDICAL SKILLS

This is yearlong, high school credit course provides students an opportunity to apply the skills and knowledge gained throughout the pre-medical academy sequence. Students at this level develop a deeper practical application of their medical skills and knowledge. Students' knowledge and skills are brought to an advanced level of higher-order thinking as they utilize scenarios and accountable talk to discuss the many facets of health care. Students must have taken and proficiently completed the previous two, yearlong courses to be eligible to take Medical Skills in the LHMS Pre-Medical Academy.

## VIDEO GAME DESIGN

### INFORMATIONAL COMMUNICATIONS I

This yearlong course provides students an opportunity to develop a better understanding of core concepts associated with computers and their use with a focus on video game design. The content includes hands-on opportunities to explore various software applications, including the creation of a template-based webpage and a basic computer program. The content also incorporates digital technologies associated with web development, multimedia, word processing, spreadsheet, database, Internet communications, cybersecurity, and computer programming.

### FUNDAMENTALS OF SOFTWARE & WEB DEVELOPMENT

This yearlong course introduces students to the foundational knowledge and skills related to web and software development in the information technology industry. The content includes hands-on opportunities using html, webpage design software, programming language, and common software applications.

### FOUNDATIONS OF GAMING & SIMULATION

This yearlong high school course provides an introduction to game and simulation concepts and careers, the impact games and simulations have on society and industry along with design concepts, play mechanics, and media integration. This course also covers strategies, process, and methods for conceptualizing a game or simulation application using entry-level game development tools and activities integrated into the curriculum. The content instruction progresses through game design and development.

# WORLD LANGUAGES

## BEGINNING SPANISH

This yearlong course emphasizes the audio perspective of Spanish to include familiarizing students with hearing and understanding the varying sounds of the language, as well as the pronunciation when speaking the language. Students will also learn to read and write basic Spanish. This course is the first course in the progression to Spanish 1 Honors for high school credit.

## SPANISH I

This yearlong high school course focuses on the belief that the purpose of learning Spanish is to communicate with the people who speak it and to understand their culture. Students will gain practice with new vocabulary, speaking and listening, reading and grammar basics equivalent to a first year language class.

## SPANISH 2

This yearlong high school course reinforces the fundamental skills acquired by the students in Spanish 1. The course develops increased listening, speaking, reading, and writing skills as well as cultural awareness. Specific content covered in this course includes a continuation of listening and oral skills acquired in Spanish 1. Reading and writing receive more emphasis, while oral communication remains the primary objective. The cultural survey of the target language-speaking people is continued.



