

CTAE PATHWAY GUIDE

LAMBERT HIGH SCHOOL

805 Nichols Rd, Suwanee, GA 30024 | www.forsyth.k12.ga.us/lhs



A/V Technology and Film



A/V TECHNOLOGY AND FILM students will design, manufacture, operate and/or repair audio visual equipment, create presentations of sound, video, and data in a variety of formats, gather information, prepare broadcasts, build sets, and operate equipment used to record and transmit programs and/or motion pictures, and operate sound mixing and/or video editing equipment.

PATHWAY COURSES

Audio and Video Technology and Film I
Audio and Video Technology and Film II
Audio and Video Technology and Film III

CAREER CHOICES

Audio and Video Equipment Technician
Broadcast News Analyst
Broadcast Technician
Camera Operator
Control Room Technician
Editor
Journalist
Radio and Television Announcer
Reporter
Sound Technician
Station Manager

INDUSTRY CREDENTIAL (Credential of Value): Adobe Certified Associate

Business Accounting



BUSINESS ACCOUNTING will experience strong growth in accounting jobs throughout the next decade is expected to occur due to the increased growth in the number of new businesses and stricter accounting and auditing regulations.

PATHWAY COURSES

Introduction to Business and Technology
Financial Literacy
Principles of Accounting I

CAREER CHOICES

Auditing Clerk
Auditor
Bookkeeper
Budget Analyst
Certified Public Accountant
Corporate Accountant
Financial Advisor or Analyst
Forensic Accountant
Government Accountant
Income Tax Professional
Non-Profit Accountant

INDUSTRY CREDENTIAL (Credential of Value): NOCTI Accounting-Basics

Cloud Computing



CLOUD COMPUTING students will develop an overall understanding of cloud computing, cloud concepts, core services, security, architecture, and support. Technical content includes designing, developing, and deploying a virtual private network, creating a cloud environment that is scalable, and demonstrating safe use of big data. Students will also dive deeply into cloud computing best practices and learn how cloud computing helps users develop a global infrastructure.

PATHWAY COURSES

Introduction to Software Technology
Computer Science Principles or AP CS Principles
Cloud Computing

CAREER CHOICES

Software Engineer
Cloud Engineer
Data Engineer
System Engineer
Full Stack Developer
Java Developer
Data Scientist
Systems Administrator
.NET Developer
Front-end Developer

INDUSTRY CREDENTIAL (Credential of Value): Not Yet Approved by the Georgia Department of Education

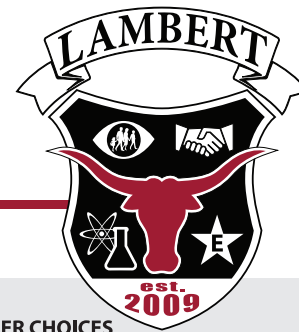
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Computer Science



COMPUTER SCIENCE students will prepare for entry-level, technical, and professional IT careers, including the design, development, implementation, and maintenance of computer systems and software, as well as knowledge of computer operating systems, programming languages, and software development required of cutting-edge technologies. Students will build a solid understanding and foundation of computer science which emphasis on computational thinking practices: connecting computing, developing computational artifacts, abstracting, analyzing problems and artifacts, communicating, and collaborating.

PATHWAY COURSES

Introduction to Software Technology
Computer Science Principles or AP CS Principles
AP Computer Science

CAREER CHOICES

Computer Hardware Engineers
Computer Network Architects
Computer Programmers
Computer System Analysts
Database Administrators
Information Security Analysts
Information Systems Managers
Network Administrators
Software Developers
Software Engineers
Video Game Designers

INDUSTRY CREDENTIAL (Credential of Value): Microsoft Technology Associate (MTA): Software Development Fundamentals

Culinary Arts



CULINARY ARTS students will complete a variety of skills required by the restaurant and food industry such as knife skills, cooking techniques, menu planning, food purchasing and costing, food safety and sanitation, and front of the house service. The pathway allows students to develop in-depth knowledge and hands-on skill mastery of culinary arts and allows them to refine hands-on production of the classic fundamentals in the commercial kitchen.

PATHWAY COURSES

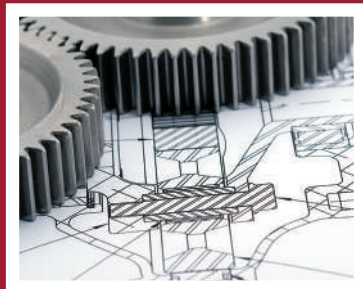
Introduction to Culinary Arts
Culinary Arts I
Culinary Arts II

CAREER CHOICES

Cake Designer
Caterer
Chef and Head Cook
Dining Room Management
Food and Beverage Director
Food Services Manager
Food Stylist and Photographer
Food Writer and Critic
Kitchen Manager
Pastry Chef
Personal Chef
Restaurant Entrepreneur

INDUSTRY CREDENTIAL (Credential of Value): American Culinary Federation (ACFEF) Secondary Culinary Graduate

Engineering and Technology



ENGINEERING AND TECHNOLOGY students will combine hands-on projects and rigorous curriculum to be prepared for challenging postsecondary engineering and technology problems; and build solid technical writing, comprehension, calculation, problem-solving, and technical skills. Students are encouraged to take relevant math and science courses, such as advanced algebra, chemistry, calculus, geometry, trigonometry, physics, design, and engineering concepts.

PATHWAY COURSES

Foundations of Engineering and Technology
Engineering Concepts
Engineering Applications

CAREER CHOICES

Civil Engineer
Designer
Drafter
Electrical Engineer
Industrial Engineer
Machinist
Manufacturing
Materials Engineer
Mechanical Engineer
Quality Control Inspector

INDUSTRY CREDENTIAL (Credential of Value): NOCTI Engineering and OSHA 10

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Financial Services



FINANCIAL SERVICES students will focus on recognizing a business opportunity, starting a business, operating and maintaining a business. Students will align business goals that focus on planning, organizing, coordinating, and controlling the resources needed to produce and provide goods and/or services that lead to owning and operating a small business. Methods for measuring the financial performance of financial institutions and investments are also analyzed.

PATHWAY COURSES

Introduction to Business and Technology
Financial Literacy
Banking, Investing and Insurance

CAREER CHOICES

Accountant
Auditor
Business Teacher
Claims Adjuster
Financial Project Specialist
Financial Planner
Insurance Sales Agent
Research
Sales and Service

INDUSTRY CREDENTIAL (Credential of Value): NOCTI Financial & Investment Planning

Healthcare-Biotechnology



HEALTHCARE - BIOTECHNOLOGY students will gain a broad understanding of the fundamentals of biotechnology and the impact on society. The knowledge and skills in this pathway provide a basic overview of current trends and careers in biotechnology, with an emphasis on basic laboratory skills, along with the business, regulatory, and ethical aspects of biotechnology. Additional applications and techniques in biotechnology that expand and increase the student's comprehension of how biotechnology utilizes living systems to create products and enhance lives are also an important part of the pathway.

PATHWAY COURSES

Introduction to Healthcare Science
Essentials of Biotechnology
Applications of Biotechnology

CAREER CHOICES

Biological or Medical Illustrator
Crime Lab Technician
Emergency Medical Technician
Field Biologist or Ecologist
Forensic Service Technician
Laboratory Technician
Licensed Practical Nurse
Medical Writer
Mortician
Nutritionist
Pediatric Nurse
Phlebotomist
Radiology Technician

INDUSTRY CREDENTIAL (Credential of Value): Precision Biotechnology

Healthcare-Phlebotomy



HEALTHCARE - PHLEBOTOMY students will learn medical-focused anatomy addressing the physiology of each body system, along with the investigation of common diseases, disorders and emerging diseases. Students also become prepared for the phlebotomy technician certification exam upon completion of all required components. Topics covered in this pathway include employability skills, careers, terminology and equipment, safety and compliance, quality assurance, site-specific anatomy, patient preparation for venipuncture, performing of venipuncture, and special processing and transport.

PATHWAY COURSES

Introduction to Healthcare Science
Essentials of Healthcare
Diagnostics Phlebotomy

CAREER CHOICES

Information Nurse Specialists
Medical Lab Assistants
Nuclear Techs
Patient Service Techs (PST)
Physicians
Phlebotomists
Phlebotomy Supervisors
Radiologic Technologists
Registered Nurses
Respiratory Technicians
Other Related Health Science Occupations

INDUSTRY CREDENTIAL (Credential of Value): National Healthcareer Association (NHA) Certified Phlebotomy Technician

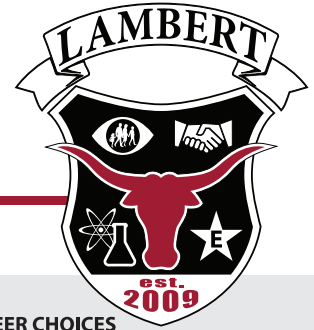
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Healthcare- Sports Medicine



HEALTHCARE - SPORTS MEDICINE students will learn about the musculoskeletal system, injury assessment, injury prevention, or rehabilitation for careers in sports medicine and rehabilitative services. This pathway enables students to receive initial exposure to therapeutic services skills and attitudes applicable to the healthcare industry. The concepts of anatomy and physiology, assessment, preventative and rehabilitative care are also introduced. Fundamental healthcare skills development is initiated, including medical terminology, kinesiology, patient assessment, record keeping, and basic life support.

PATHWAY COURSES

Introduction to Healthcare Science
Essentials of Healthcare
Sports Medicine

CAREER CHOICES

Athletic Trainer
Chiropractor
Doctor of Osteopathic Medicine
Doctor of Podiatric Medicine
Massage Therapist
Occupational Therapist
Orthopedic Doctor
Physical Therapy Assistant
Physician's Assistant
Radiologist
Radiologist Technician

INDUSTRY CREDENTIAL (Credential of Value): Athletic Training Student Aide

Marketing and Management



MARKETING AND MANAGEMENT students will focus on managing the processes responsible for identifying, anticipating, and satisfying customer requirements in a manner that is profitable for the business. Student skills include management and entrepreneurship, marketing, buying and merchandising, marketing communications and promotion, professional sales, marketing information management and research, channel management, global marketing, and internet/online marketing.

PATHWAY COURSES

Marketing Principles
Marketing and Entrepreneurship
Marketing Management

CAREER CHOICES

Advertising Account Executive
Communications Specialist
Customer Service Representative
Entertainment Marketer
Insurance Agent
Logistics Specialist
Market Research Analyst
Marketing Specialist
Media Buyer
Product Development Management
Public Relations Specialist

INDUSTRY CREDENTIAL (Credential of Value): MBA Standard Marketing Program of Study/End of Program HS Exam

Nutrition and Food



NUTRITION AND FOOD students focus of the pathway is centered on healthy food and lifestyle choices. Students will investigate the interrelationship of food, nutrition and wellness to promote good health. The most common nutritional concerns, their relationship to food choices and health status and strategies to enhance well-being at each stage of the lifecycle are also emphasized, and students will evaluate the effects of processing, preparation, and storage on the quality, safety, wholesomeness, and nutritive value of foods.

PATHWAY COURSES

Food, Nutrition, and Wellness
Food for Life
Food Science

CAREER CHOICES

Chef and Head Cook
Dietician/Nutritionist
Food Inspector
Food Scientist and Technologist
Food Services Manager
Geriatric Food Designer
Health Educator

INDUSTRY CREDENTIAL (Credential of Value): ServSafe Food Safety Handler Certification

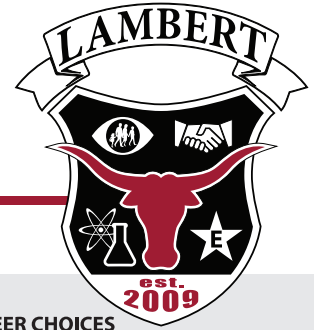
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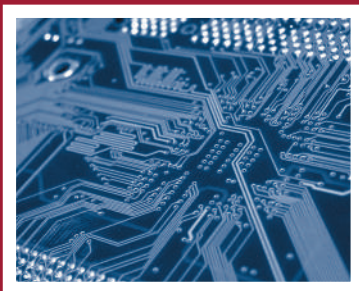
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Programming



PROGRAMMING students will learn essential skills involved in the design, development, implementation, and maintenance of computer systems and software, requiring knowledge of computer operating systems, programming languages, and software development. Students are able to strategize, design, and develop games and mobile and desktop applications that can be produced in the real world and learn about life-cycles of project development and use models to develop applications. Attention will be placed on how user interfaces affect the usability and effectiveness of a game or an application.

PATHWAY COURSES

Introduction to Software Technology
Computer Science Principles or AP Computer Science Principles
Programming, Apps, Games and Society

CAREER CHOICES

Actuaries
Computer Programmers
Computer Scientist
Computer Systems Analyst
Computing Systems Manager
Computer Software Engineer
Database Administrator
Information Systems Manager
Mathematician

INDUSTRY CREDENTIAL (Credential of Value): Microsoft Technology Associate (MTA): Software Development Fundamentals

Sports and Entertainment Marketing



SPORTS AND ENTERTAINMENT MARKETING students will learn about the major segments of the sports and entertainment industry and the social and economic impact the industry has on the local, state, national, and global economies. The products and services offered to consumers and the impact of marketing on these products and services are examined. Students will also have opportunities to develop managerial and analytical skills and deepen their knowledge in sports/entertainment marketing.

PATHWAY COURSES

Marketing Principles
Introduction to Sports and Entertainment Marketing
Advanced Sports and Entertainment Marketing

CAREER CHOICES

Agent
Communications Specialist
Customer Service Representative
Demonstrator and Product Promoter
Entertainment Marketer
Entrepreneur
Market Research Analyst
Marketing Specialist
Media Buyer
Product Development Management
Public Relations Specialist

INDUSTRY CREDENTIAL (Credential of Value): MBA Standard Marketing Program of Study/End of Program HS Exam

Teaching as a Profession



TEACHING AS A PROFESSION students will learn to plan, manage, and provide education and training services, and related learning support services such as administration, teaching/training, administrative support, and professional support services. They will be engaged in observations, interactions, and analyses of critical and contemporary educational issues and investigate issues influencing the social and political contexts of educational settings in Georgia and the United States and actively examines the teaching profession from multiple vantage points both within and outside of the school.

PATHWAY COURSES

Examining the Teaching Profession
Contemporary Issues in Education
Teaching as a Profession Internship

CAREER CHOICES

Adult Educator
After-School Program Supervisor
Coach
Education Evaluator
Educational and Teacher Aide
K-12 School Teacher
Media Specialist
Post-Secondary Vocational Education
Recreation Attendant
School Administration
Special Education Teacher

INDUSTRY CREDENTIAL (Credential of Value): NOCTI Teaching as a Profession (College EDUC 2110 Credit in Georgia)

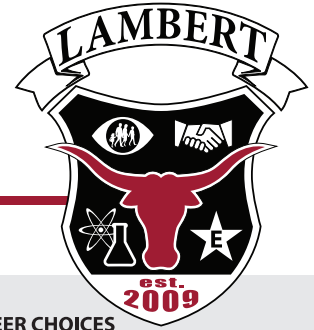
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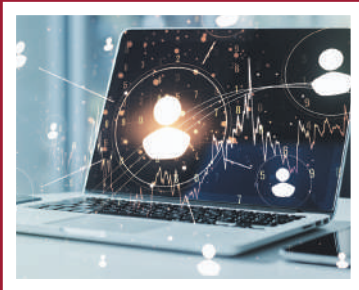
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Workforce Ready



WORKFORCE READY provides students with heavy exposure to all aspects of workplace readiness and employability skills development through integration of course content into hands-on class activities as applications of the concepts; not to be treated as a unit or separate body of knowledge. Also included is project-based learning, frequent interaction with business and industry; community as subject matter experts, virtual industry tours, job shadowing, internships and jobs.

PATHWAY COURSES

- Introduction to Career Competencies
- Career Competencies
- Advanced Career Competencies

CAREER CHOICES

All Careers

INDUSTRY CREDENTIAL (Credential of Value): OSHA 10, GeorgiaBEST

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