

MUSCLE SHOALS CAREER
ACADEMY **MS**
CA

Every Student College and Career Ready



**EVERY STUDENT
COLLEGE & CAREER READY**



Muscle Shoals Career Academy

321 Jim Holland Drive Muscle Shoals, AL 35661

phone 256.389.2660

fax 256.389.2662

www.muscleshoalscareeracademy.com

Caryn Hairell, Ed.S.

Director - Career & Technical Education

Muscle Shoals City Schools

Principal - Muscle Shoals Career Academy

#1

in Alabama

MSCA certifies the highest number of students in these programs.

PROGRAMS



Dual Enrollment is offered in:

- Automotive Technology
- Building Science
- Welding
- Medical Science
- Industrial Systems

COLLEGE AND CAREER READY

Students earn employable skills and credentials

ADDITIONAL PROGRAMS OF STUDY

Students can take courses in any of these fields



- Architecture and Construction
- Business, Management and Administration
- Medical Science
- Human Services
- Information Technology
- Manufacturing
- Science, Technology, Engineering and Mathematics
- Transportation, Distribution, and Logistics

www.muscleshoalscareeracademy.com

Great cost savings for students and parents in the overlap of high school and college curriculum. The MSCA serves Muscle Shoals, Deshler and Sheffield High Schools.

STUDENT PLANNING GUIDE

It is the official policy of the Muscle Shoals Career Academy and the Muscle Shoals City School District that no person will be discriminated against on the grounds of race, color, sex, disability, religion, national origin, or age, nor be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program, activity or employment. (Board Policy GAAA)

Inquiries or complaints regarding compliance with state or federal regulations may be directed to:

Title IX Coordinator,
Dr. Dennis Conner

Section 504/ADA Coordinator,
Dr. Dennis Conner

Muscle Shoals Career Academy Principal/
Director of Career and Technical Education for Muscle Shoals City Schools,
Caryn Hairell, Ed.S.

Muscle Shoals City Schools Career Technical Education

Muscle Shoals City Schools provides Career and Technical Education programs that follow the National Career and Technical Education Model. The Career Clusters include courses that identify academic, technical knowledge and skills needed for students to pursue a wide range of career opportunities. Courses provide rigor and relevance for students by linking school-based learning with career-related experiences.

10 Career Clusters are offered in the Muscle Shoals City System.

- Architecture and Construction
- Business, Management and Administration
- Finance
- Health Science
- Human Services
- Information Technology
- Manufacturing
- Marketing
- Science, Technology, Engineering and Mathematics
- Transportation, Distribution, and Logistics

This Planning Guide contains descriptions of the coursework for each of the ten career clusters offered for student in grades 9 – 12 at Muscle Shoals High School and at the Muscle Shoals Career Academy.

For more information about Career Clusters and Pathways, log on to <http://www.altechprep.org>.

What are your interests?



NEW Courses at MSCA



CollegeBoard

Advanced Placement
Program

Advanced Placement (AP) Computer Science

AP Computer Science Principles introduces students to the foundational concepts of computer science and challenges them to explore how computing and technology can impact the world. With a unique focus on creative problem solving and real-world applications, AP Computer Science Principles prepares students for both college and career. Students who earn a qualifying score on the AP Exam may be awarded college credit.

See Mrs. Stonecipher for more information.

University of North Alabama Dual Enrollment Course Computer Information Services 125



- Course:** CIS 125 (Required in General Studies for ALL degrees.)
- Content:** Microsoft Word, Excel, Access, & PowerPoint
- Requirements:** Must be in 11th or 12th grade during the 2017-2018 school year.
- Sign Up:** Sign up during registration with counselors.

Course will transfer to other colleges including Alabama & Auburn

NEW Courses at MSCA

Dual Enrollment Northwest Shoals Community College

Emergency Medical Technician

This course is required to apply for certification as an Emergency Medical Technician. This course provides students with insights into the theory and application of concepts related to the profession of emergency medical services. Specific topics include: EMS preparatory, airway maintenance, patient assessment, management of trauma patients, management of medical patients, treating infants and children, and various EMS operations. This course is based on the NHTSA National Emergency Medical Services Education Standards.





Construction



Building Construction Courses

Dual Enrollment/College Credit is available through

ARCHITECTURE,
CONSTRUCTION, AND
MANUFACTURING

Great class for students interested careers leading to:

- Construction
- Design and Preconstruction
- Maintenance and Operations

Students will learn to use basic hand and power tools, read blueprints, learn basic rigging skills, and gain employability skills.

Students will be able to obtain a NCCER Certification.

CARPENTRY I NCCER

Class provides an introduction to the field of carpentry. Students will learn basic carpentry skills including job safety, using power tools, creating construction concrete forms, blue print reading and designing floor systems. *Students will be able to obtain a*

NCCER certification.

CARPENTRY II NCCER

This class places an emphasis on wall, ceiling, and roof framing. Students will also learn how to layout windows, entrance doors, and stairs.

Students will be able to obtain a

NCCER certification.

CARPENTRY III NCCER

This is an advanced class for students Interested in the field of construction. Students will continue their study of framing along with installation of roofing.

Students will be able to obtain a

NCCER certification.



NATIONAL CENTER FOR
CONSTRUCTION EDUCATION
AND RESEARCH

ONE SEMESTER COURSE
LAB FEE: \$30.00

GRADE 9TH - 12TH

*College credit is available through
NWSCC's Workforce
Development Grant.*



Construction Maintenance, Installation, and Repair

Welding Courses

Introduction to Welding:

- Shield Metal Arc

Applied Welding I:

- Applied Shield Metal Arc



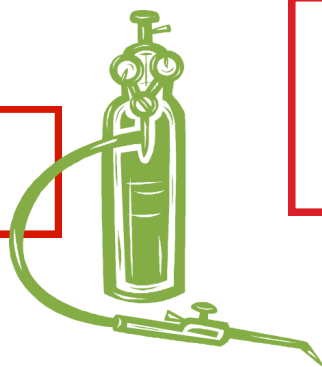
Applied Welding II:

- Applied Shield Metal Arc
- Carbon Arc Cutting

Gas Metal Arc

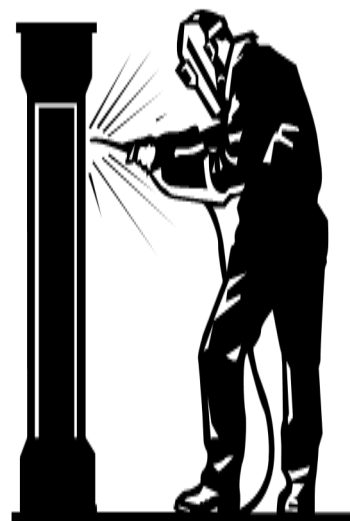


Flux Cored



Applied Welding III:

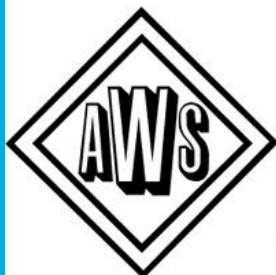
- Groove Welds



Welding IV:

- Advance Groove Welds

*College credit is available
through NWSCC's Workforce
Development Grant.*



*Students have the
opportunity to earn American
Welding Society
Certifications.*

ONE SEMESTER
COURSE LAB FEE:
\$ 30.00
GRADE 9TH - 12TH

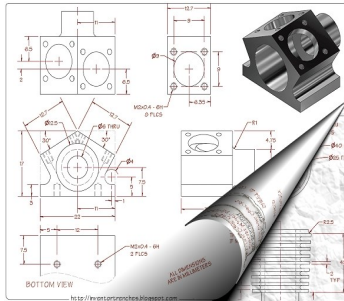


Pre-Design

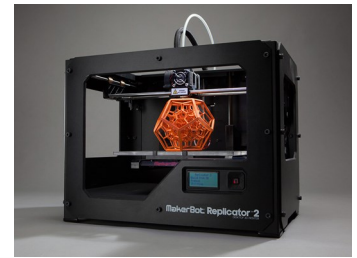
Engineering Graphics



Introduction to Drafting: For students interested in pursuing a career in engineering, architectural design, interior design or drafting, this course is essential. The course introduces students to AutoCAD Software. Students will be able to demonstrate multi-view drawings, including visualizing principle views, creating third angle projections, selecting proper drawing scale, and organizing layout of primary views.

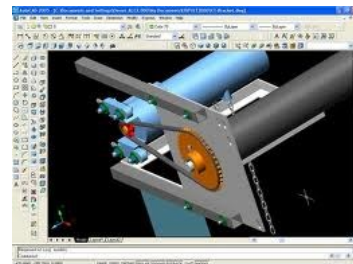


ONE SEMESTER COURSES
LAB FEE: \$30.00
GRADE: 9TH - 12TH



Intermediate Drafting: Students expand their ability to illustrate more complex objects using the computer-aided drafting (CAD) systems. Topics include sectioning, auxiliary views, threads and fasteners, pictorials, and the continuation of conventional dimensioning practices. **Prerequisite for course is Introduction to Drafting.**

Three-Dimensional Solid Model Design I: Students are introduced to 3-D capabilities using CADD software. Emphasis is placed on working planes, profile creation, protrusions, extrusions, and rendering techniques. **Prerequisite for course is Intermediate Drafting.**



Students may obtain a certification in



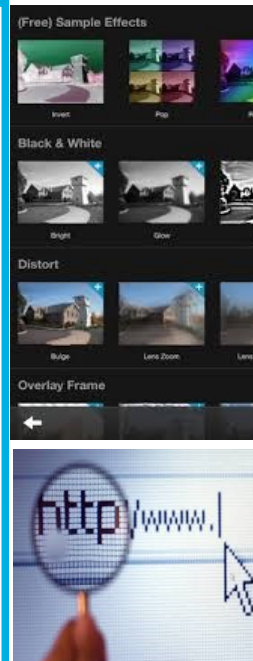


Multimedia

Multimedia Publications

Multimedia Publications provides students with skills to create digital publication items such as a company logos, magazine covers, and publication layouts.

Software taught in this course includes: Adobe Illustrator, Adobe Photoshop, and Adobe InDesign. Various hardware peripherals as well as the Internet will be used for integrating skills to create a variety of assignments.



Web Design

This computer class focuses on Website Design. Students learn to create websites using HTML, and Adobe Dreamweaver. Students are also introduced to Animation by learning Adobe Animate which allows for variety and movement in web design.

Advanced Photoshop

This class completes the Multimedia Cluster and should be taken after Multimedia Publications. Digital Photography and Advanced Photoshop Skills will be the focus in this course. *Students will also have an opportunity to take the Adobe Photoshop*



One Semester Course
Lab Fee: \$30.00
Grades: 9th- 12th



Business Education

BANKING SERVICES



Career Preparedness

This is a required course for all freshmen. Students will focus on three areas to prepare for career and college readiness standards.

- Academic and Career Development
- Finance
- Technology Applications



Advanced Business Technology Application

This course prepares students for IC3 Certification. Students will focus on enhancing computer skills needed in the workplace. In Advanced BTA, students will strengthen work processing skills and develop advanced spreadsheets

Other topics will include
Database software

Banking and Financial Services*

Money, Money, Money!!!! If you are interested in a banking or a finance career, this is the class for you. The focus of the class is to increase students knowledge and skills needed to be successful when working in a career dealing with finances.

Topics will include:

- Analyze marketing strategies
- Credit and loans
- Demonstrate accounting knowledge
- Career and entrepreneurial opportunities
- Investment banking and commercial banking

***This is a required course to be considered for employment as a Trojan Teller at the First Metro Shoals High School Bank**

Accounting

Students will use technologies needed to perform job functions in the field of accounting.

Topic will include:

- Accounting software
- Computer numeric keypad
- Spreadsheets
- Income tax software

Students may obtain certifications in the finance pathway:



One Semester Courses
Lab Fees: \$30.00 Grade 9th – 12th



**One Semester
Courses
\$30.00**

Students may obtain a certification in:



Foundations of Health

Medical Science COURSES

Foundations of Health Science is a required one-credit course that introduces students to a wide range of health careers. Integrated academics combined with health care knowledge and skills provide the framework for a strong health care delivery system in the twenty-first century. This course is the prerequisite for all the health science courses. It is recommended for students who want to prepare for further study in an array of health-related fields at the postsecondary

Medical Terminology

Medical Terminology provides students with an opportunity to gain high school credit and college credit. The course allows students to learn medical terminology as they explore the medical field.

Health Science Internship

Health Science Internship is a one credit course designed for students in Grade 12. This course provides students with the knowledge and skills necessary for becoming a health care worker or for preparing students for postsecondary health care education programs. Theory and laboratory components comprise at least ten percent of the course. Health Science Internship is designed to be completed in a hospital, extended care facility, rehabilitation center, medical office, imagery laboratory, or other health care facility. The prerequisite for the course is Foundations of Health Science and Therapeutic Services.

Other Opportunities

Students have opportunities to participate in the CNA and EMT programs at NWSCC and the Pharmacy Assistant programs at UNA. Contact MSCA Guidance Counselor for more information.



COSMETOLOGY COURSES

Introduction to Cosmetology:

This course provides students with a study of hair-styling. Students gain practical experiences in shampooing, hair shaping, hairstyling, and job ethics. Upon successful completion, students will be able to perform basic procedures in hairstyling.

This is a prerequisite for Hair Coloring and Salon Practice and Management.

Introduction to Nail Care and Applications:

The course provides students with knowledge regarding nail and skin care services. Students will be able to apply artificial nails, perform manicures and pedicures.

Students may obtain a certification in:



Chemical Services:

Students will learn procedures to mix chemicals and to apply permanent waving, soft curls and chemical hair relaxing.

Introduction to Spa Techniques:

Discover how your physical health effects your appearance. The focus of this class is to increase students knowledge of services and techniques used in a spa and how they improve not only physical beauty but your physical wellbeing. Students will learn massage techniques and be able to demonstrate skin care to prevent aging, acne and increase relaxation.

Salon Practice and Management:

Students will be introduced to the day to day operations of a salon. Students will actively perform hairstyles and nail care, learn to schedule and manage a salon business, and design a layout of their own salon. Salon Practice and Management is a course for students who are seeking cosmetology as a career.

One Semester Course s
Lab Fees: \$30.00 Grade 9th - 12th



Education Training & FACS

Entrepreneurship in Family and Consumer Sciences

This course teaches the necessary knowledge and skills to own and operate a business. The course content focuses on business and financial planning, personnel management, marketing principles, business and labor laws, legal rights and responsibilities of ownership and communication. Other topics to be taught are market research, purchasing process system, distribution systems, warehouse and inventory control, salesmanship, sales promotion and theft control that influence the flow of goods and services from producer to consumer. Students are prepared to create and manage their own Family and Consumer Science business or embark on a career related to business development. The family and consumer sciences laboratories will be used to provide activity-oriented experiences for developing entrepreneurial skills, manufacturing products, and providing services.

Education and Training

Education and Training is a one-credit course. This course is the prerequisite for all pathways included in the Education and Training cluster. The course is designed for students who are interested in pursuing careers in education. Course content includes the organizational structure of education, careers, the role of the teacher, characteristics of effective teachers, communication skills, the teaching and learning processes, learning styles, research, characteristics of positive classroom environments, human growth and development, curriculum development, student characteristics, teaching techniques, learning activities, educational initiatives, technology, and careers. Observational experiences are a required component of this course.

Teaching I

Teaching I is a one-credit course. The prerequisite for this course is Education and Training. Content includes information to help students implement the teaching and learning processes. Major topics are funding sources, budget preparations, legal aspects, research, teaching and learning theories, curriculum development, positive learning environments, creative teaching techniques, appropriate learning activities, instructional resources, community resources and services, scope and sequence charts, course outlines, lesson plans, testing, grading, developing partnerships, technology, and careers. School-based laboratory experiences are essential for students to develop skills in teaching. Observational experiences are a required component of this course.

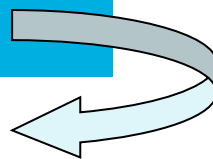
Food and Nutrition

Topics include the impact of daily nutrition and wellness practices on long-term health and wellness; physical, social, and psychological aspects of healthy nutrition and wellness choices; selection and preparation of nutritious meals and snacks based on United States Department of Agriculture (USDA) Dietary Guidelines and Food Guide Pyramid; safety, sanitation, storage, and recycling processes and issues associated with nutrition and wellness; impacts of science and technology on nutrition and wellness issues; and nutrition and wellness career paths.

*One Semester Course
Lab Fees: \$30.00
Grade 9th - 12th*



IT Academy



Programming and Software Development

Information Technology Fundamentals

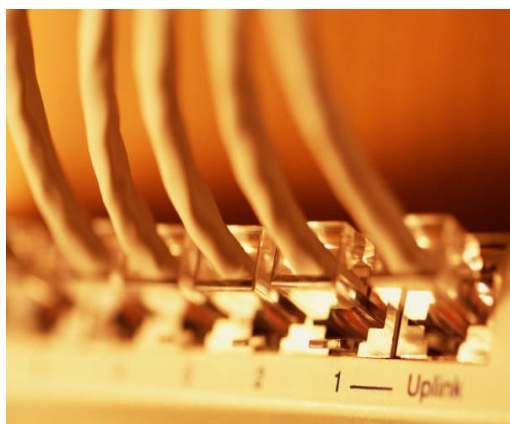
This hands-on class provides students with the knowledge to perform computer maintenance, upgrading of computer components and portable devices. Students will also practice basic procedures of installing configuring, optimizing, and upgrading printers and scanners. Students will learn the fundamentals of networking and internet security.



AP Computer Science

AP Computer Science Principles introduces students to the foundational concepts of computer science and challenges them to explore how computing and technology can impact the world. With a unique focus on creative problem solving and real-world applications, AP Computer Science Principles prepares students for college and career.

See Mrs. Stonecipher for more information.



Students may obtain a certification in:

Microsoft
Technology Associate



Learn

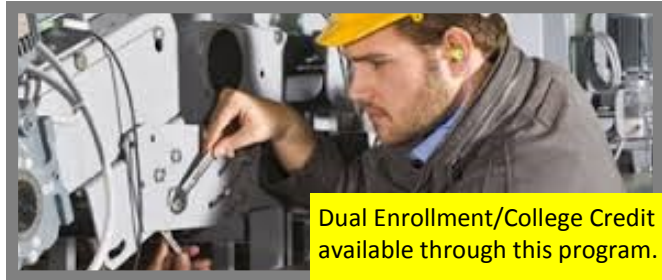
CODE

Software Development

This project based class will focus on designing, programming and analyzing software. Students will have an opportunity to develop video game software and apps. Other topics will include:

- C++ , C#, and C
- Minecraft Programming
- Analyze quality assurance tasks
- Evaluate maintenance and customer support

ONE SEMESTER COURSS
LAB FEE: \$30.00
GRADE 9TH - 12TH



Dual Enrollment/College Credit is available through this program.

Industrial Maintenance

One Semester Course: \$30.00
Must be 16 years of Age

The Manufacturing cluster is a new comprehensive curriculum that provides students with meaningful instruction for and about working in the field of industrial manufacturing. It encompasses business skills and techniques, an understanding of basic economics, and business attitudes essential to participate in the international marketplace. Through this curriculum, students will be able to consider different careers, learn about secondary educational opportunities and well as career-based education options, learn workplace behavior, develop industry-specific skills, and apply academic skills to the real world of career opportunities.

Industrial Systems & Maintenance Level I:

Coursework will provide student s with basic knowledge and understanding in the areas of:

- Mechanical Theory
- Lubrication related to industrial systems
- Introduction to Bearings (ball, roller, thrust, guide, flanged, and take-up)
- Piping Practices and Systems
- Pneumatics
- Circuit Design

Industrial Systems & Maintenance Level II:

The curriculum emphasis is place on:

- Mechanical Seals
- Gaskets and Packing
- Belts and Chains Drives
- Pumps
- Pipe Systems

Industrial Systems and Maintenance Level III:

Students will perform basic task related to industry with emphasis in:

- Values
- Hydraulic Systems
- Conventional alignments
- Pneumatics

Industrial Systems & Maintenance Level IV:

At the end of coursework, students will have a working knowledge of:

- Preventive and Predictive Maintenance
- Trouble shooting and Repairing Pneumatic Equipment

Students may obtain a certification in:





Marketing, Communication and Promotion

Students may obtain a certification in:



Career Preparedness

This is a required course for all freshmen. Students will focus on three areas to prepare for career and college readiness standards.

- Academic and Career Development
- Finance
- Technology Applications

Advanced Business Technology Application

Course prepares you for IC3 Certification. Students will focus on enhancing computer skills needed in the workplace. In Advanced BTA, students will strengthen work processing skills and develop advanced spreadsheets. Other topics will include:

- Database software
- Presentation software

Marketing Principles

Students develop a foundational knowledge of marketing and its functions, including marketing information management, pricing, service management, entrepreneurship, and promotion and selling. Students examine the need for sales and marketing strategies. Students practice customer relationship skills, ethics, technology applications, and communicating in the workplace.

Sports and Entertainment Marketing

This course helps students to develop promotional knowledge in the sports and entertainment industry. Students develop skills related to advertising, publicity, special events, visual merchandising, displays, and advertisements to aid in promotional planning.

ONE YEAR
SEMESTER
LAB \$30.00



**One Semester Courses:
\$30.00 Course Fee**

IGNITING IMAGINATION AND INNOVATION THROUGH LEARNING.

PLTW Engineering is about applying engineering, science, math, and technology to solve complex, open-ended problems in a real-world context. Students learn how to apply STEM knowledge, skills, and habits of mind to make the world a better place through innovation. Even for students who do not plan to pursue engineering after high school, the PLTW Engineering program provides opportunities to develop highly transferable skills in collaboration, communication, and critical thinking, which are relevant for any coursework or career.

Introduction to Engineering Design (IED)

Students dig deep into the engineering design process, applying math, science, and engineering standards to hands-on projects. They work both individually and in teams to design solutions to a variety of problems using 3D modeling software, and use an engineering notebook to document their work.

Students may obtain a certification in:



Principles Of Engineering (POE)

Through problems that engage and challenge, students explore a broad range of engineering using C+ and VEX robots.

Topics will include mechanisms, the strength of structures and materials, and automation.

Students will develop skills in problem solving, research and design while learning strategies for design process documentation, collaboration, and

Computer Integrated Manufacturing (CIM)

Manufactured items are part of everyday life, yet most students have not been introduced to the high-tech, innovative nature of modern manufacturing. This course illuminates the opportunities related to understanding manufacturing. At the same time, it teaches students about manufacturing processes, product design, robotics, and automation. Students can earn a virtual manufacturing badge recognized by the National *Manufacturing Badge system*.

Prerequisites are Introduction to Engineering and Principles of Engineering

Capstone Course - Engineering Design and Development (EDD)

The knowledge and skills students acquire throughout PLTW Engineering come together in EDD as they identify an issue and then research, design, and test a solution, ultimately presenting their solution to a panel of engineers. Students apply the professional skills they have developed to document a design process to standards, completing EDD ready to take on any post-secondary program or career.

Prerequisites are IED, POE, & CIM



Mobile Equipment Maintenance

Auto Collision Courses

Dual Enrollment/College Credit is available through this program.

PAINTING AND REFINISHING I

If you've ever wanted to learn how to make your car special, this is the class for you. This elective provides training in painting, repairing, or customizing. You will learn the basics to automotive refinishing and safety procedures while working in group or on your own.

PAINTING AND REFINISHING II

By the end of the semester you will be able to repair surface defects and apply automotive paints. Prerequisite for this course is Automotive Painting and Refinishing I.

Mechanical and Electrical Components I

This class provides students with classroom and laboratory instruction in collision-related and mechanical repairs. Emphasis of the class is placed on diagnosis and repair of suspension, steering, brakes, and hydraulic systems.

Mechanical and Electrical Components II

This class provides students with classroom and laboratory instruction in mechanical and collision related repairs. Students will be able to diagnosis and repair electrical heating, air-conditioning, and cooling of vehicles. Prerequisite is Mechanical and Electrical Components I.

**ONE SEMESTER
COURSE LAB FEE:
\$ 30.00**

Students may obtain a certification in:



Work-Based Learning

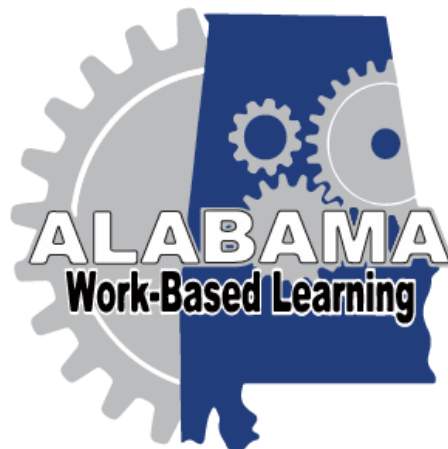
Work-Based Learning

Students will be employed in a local business for work-based experience in a position related to the student's career objective. The WBL course will also assist students in updating career portfolios and understanding workplace ethics. Students must have had two courses in one career pathway related to student's career goals to participate in the Work-Based Learning Program.

Students accepted into the Work-Based Learning Program will leave school early each day in order to go to the workplace. One and two block placements are available.

Students are required to work a minimum of 140 hours per semester to earn credit for work based learning. Work-based applications are accepted each spring for the following school year.

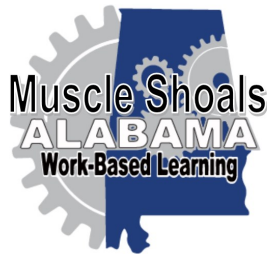
ONE
SEMESTER
COURSE LAB
FEE:
\$ 30.00



MSCA's Pathfinder Alabama Program

The Muscle Shoals Career Academy has partnered with Lyons HR to establish the Pathfinder Alabama program. This innovative work-based learning program places some of the best and brightest students at MSCA in paid internships that reflect their career interests and skills training. The Pathfinder Program has been recognized by the Alabama State Department of Education as a model for all high schools in the state.

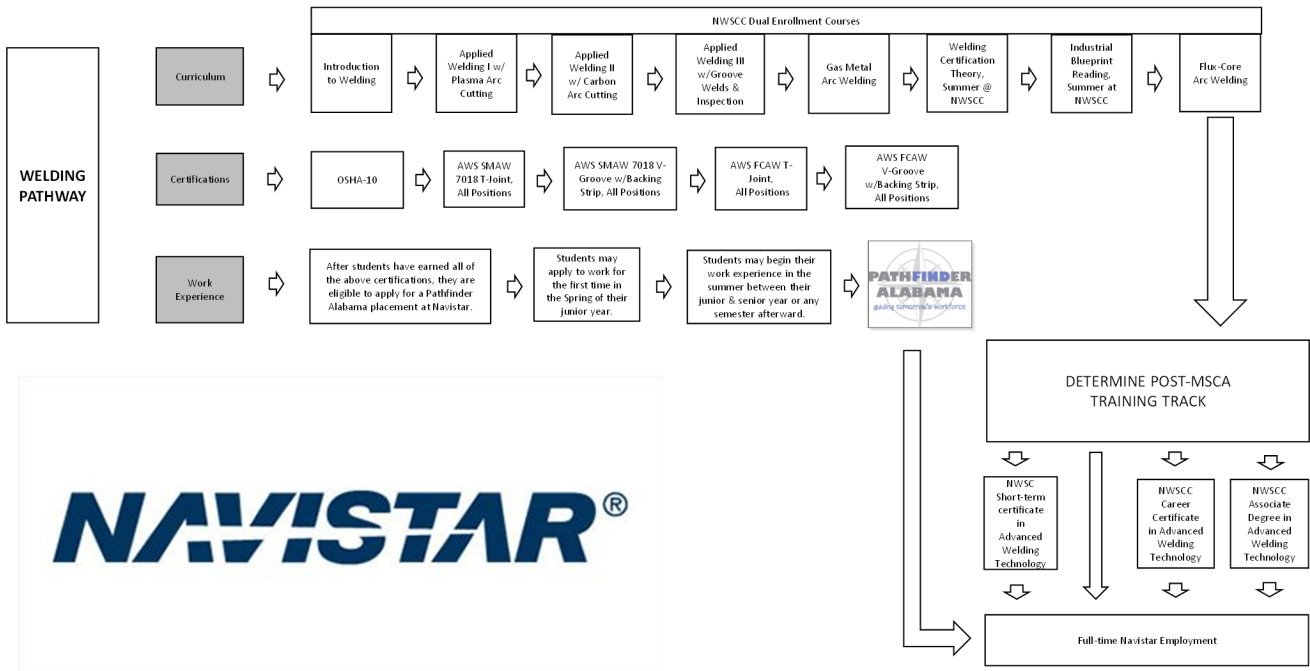
Several local companies have partnered with the school including Helen Keller Hospital, ECM Hospital, Shoals Hospital, G & G Steel, MS Metal Solutions, Navistar, North American Lighting, Shoals Hospital, and Tasus. Current job titles of these students include industrial engineering technicians, equipment engineering technicians, assembly technicians, patient care technicians, and welders. Students typically work 4 to 5 days per week during the semester, earn a paycheck, and receive a high school credit for their efforts. Lyons HR provides liability insurance for these students.



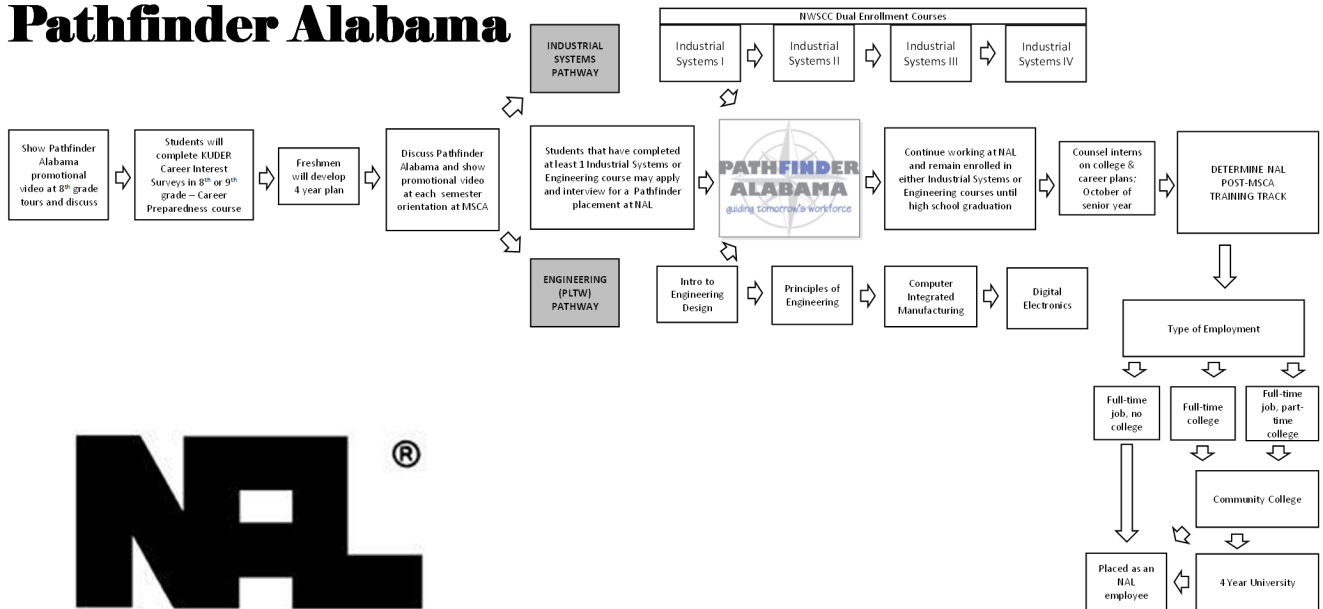
ONE SEMESTER
COURSES
LAB FEE: \$30.00
GRADE: 9TH - 12TH



Pathfinder Alabama

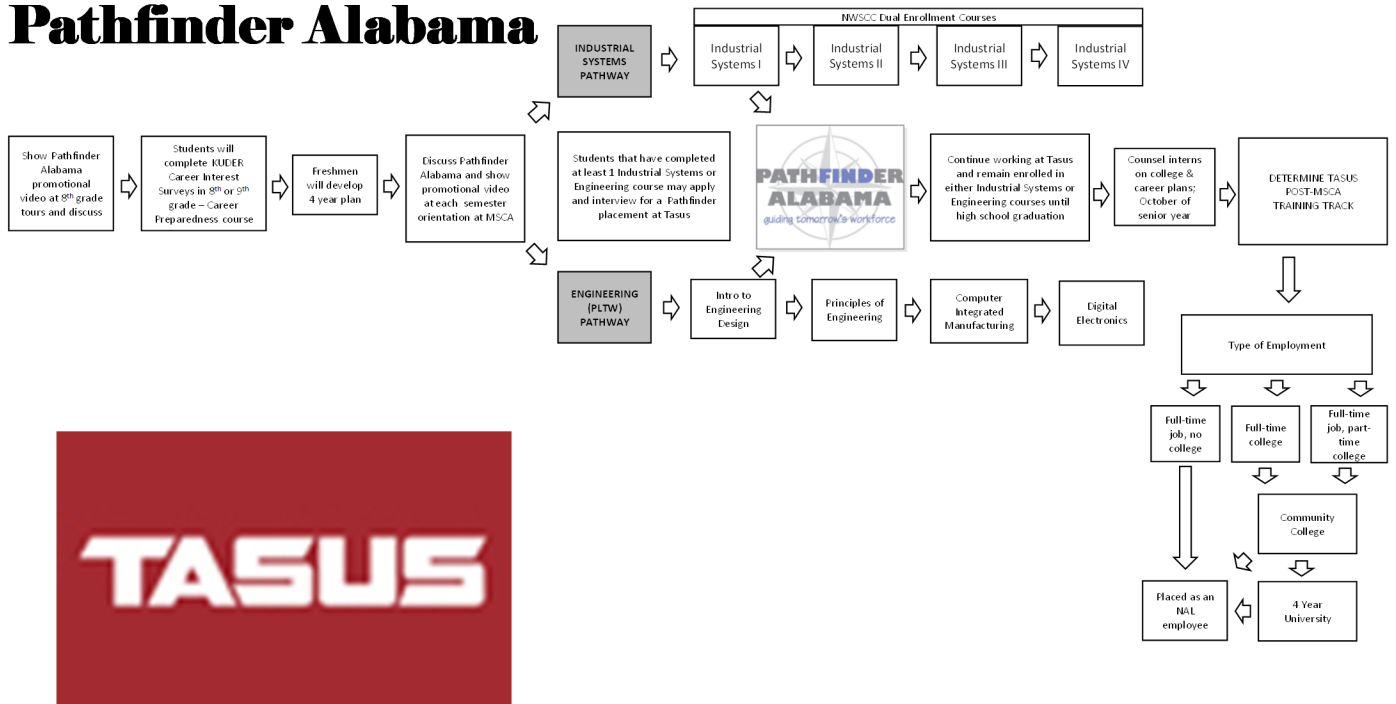


Pathfinder Alabama

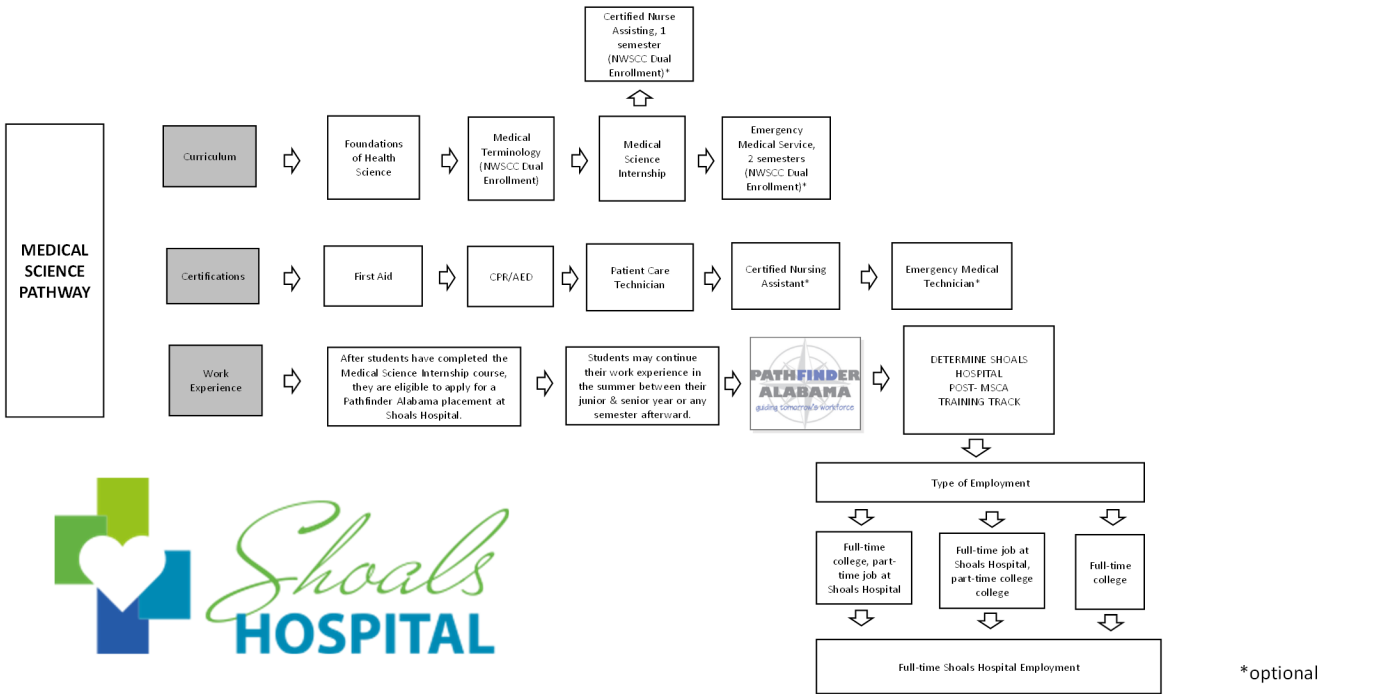


North American Lighting, Inc.

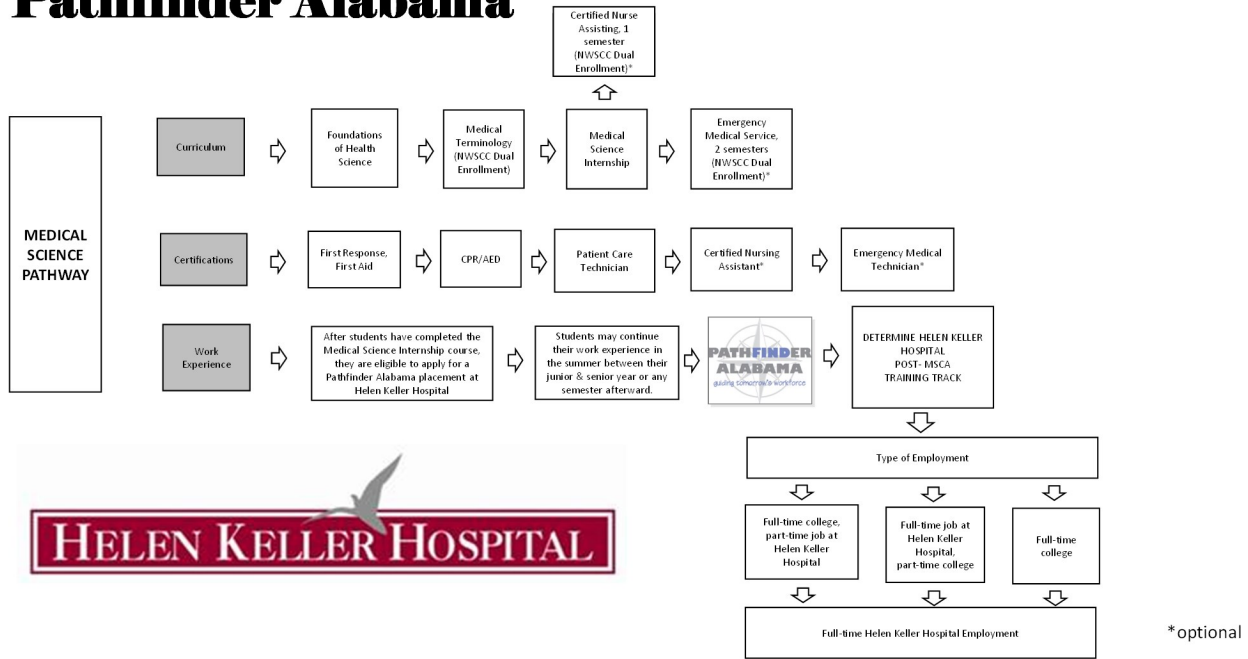
Pathfinder Alabama



Pathfinder Alabama



Pathfinder Alabama



Pathfinder Alabama

