Transportation, Distribution & Logistics Cluster

The planning, management, and movement of people, materials, and goods by road, pipeline, air, rail and water and related professional and technical support services such as transportation infrastructure planning and management, logistics services, mobile equipment and facility maintenance.

Automobile Maintenance and Light Repair Pathway

Maintenance and Light Repair (MLR) is one of eleven pathways in the Transportation, Distribution & Logistics Cluster. In this pathway students will learn how to research applicable vehicle and service information, service history, precautions and technical service bulletins. Many basic tasks will be covered such as fluid changes, belt replacement, brake, and tire service. This pathway culminates with the opportunity for students to take the end of pathway assessment in Maintenance and Light Repair offered by the National Institute for Automotive Service Excellence (ASE) in collaboration with NATEF/AYES/SkillsUSA.

Course 1 – Basic Maintenance and Light Repair 47.53100
Course Description: This course is designed as the foundational course for the Automobile Maintenance and Light Repair pathway. Students in this course will learn the basic skills needed to gain employment as a maintenance and light repair technician. Students will be exposed to courses in automotive preventative maintenance and servicing and replacing brakes, and steering and suspension components. In addition, student will learn how to do general electrical system diagnosis, learn electrical theory, perform basic tests and determine necessary action. In addition, students will learn how to evacuate and recharge air-conditioning systems using the proper refrigerant. The hours completed in this course are aligned with ASE/NATEF standards and are a base for the entry-level technician.

Proposed Course 2 – Intermediate Maintenance and Light Repair

Proposed Course 3 – Advanced Maintenance and Light Repair

Automotive Service Technician Pathway

Automotive Service Technician (AST) is one of eleven pathways in the Transportation, Distribution & Logistics Cluster. Students will learn intermediate tasks such as servicing transmissions, drive trains and axles, power steering and electrical systems. This pathway culminates with the opportunity for students to take the end of pathway assessment in Automotive Service Technology offered by the National Institute for Automotive Service Excellence (ASE) in collaboration with NATEF/AYES/SkillsUSA.

Proposed Course 1 – Advanced Maintenance and Light Repair

Proposed Course 2 – Intermediate Automobile Service Technology

Proposed Course 3 – Advanced Automobile Service Technology

Master Automotive Service Technician Pathway

Master Automotive Service Technician (MAST) is one of eleven pathways in the Transportation, Distribution & Logistics Cluster. Students will demonstrate an understanding of the components within automobile sub-systems as well as perform more advanced tasks related to automobile service. This pathway culminates with the opportunity

for students to take the end of pathway assessment in Master Automotive Service Technician offered by the National Institute for Automotive Service Excellence (ASE) in collaboration with NATEF/AYES/SkillsUSA.

Proposed Course 1 – Advanced Automobile Service Technology

Proposed Course 2 – Intermediate Master Automobile Service Technology

Proposed Course 3 – Advanced Master Automobile Service Technology

Collision Repair - Painting and Refinishing Pathway

Painting and Refinishing is one of eleven pathways in the Transportation, Distribution & Logistics Cluster. These courses teach the student skills and knowledge that will help him or her obtain a career in the automotive refinish industry. The student will learn theory as well as hands-on application in a project based setting. This training will give successful completers basic skills and knowledge to obtain an entry level job in the automotive refinish field. This pathway culminates with the opportunity for students to take the end of pathway assessment in Collision Repair offered by the National Institute for Automotive Service Excellence (ASE) in collaboration with NATEF/AYES/SkillsUSA.

Course 1 – Introduction to Collision Repair 47.56500
Course Description: Introduction to Collision Repair is the prerequisite course in all of the collision repair pathways. Employment opportunities in the collision repair field will be explored in this course. Students will be exposed to all areas of collision repair and automotive refinish, such as safety, refinishing, metal repair, plastic repair, automotive construction, and estimate reading and writing. Basic skills in all of the above mentioned areas will be taught.

Proposed Course 2 – Painting and Refinishing I

Proposed Course 3 – Painting and Refinishing II

Collision Repair - Non Structural Analysis and Damage Repair Pathway

Non Structural Analysis and Damage Repair is one of eleven pathways in the Transportation, Distribution & Logistics Cluster. These courses will teach the student skills and knowledge that will help them obtain a career in the automotive body repair industry. The student will learn theory as well as hands on application in a project based setting. This training will give successful completers basic skills and knowledge to obtain an entry level job in the field of Non-Structural damage repair. This pathway culminates with the opportunity for students to take the end of pathway assessment in Collision Repair offered by the National Institute for Automotive Service Excellence (ASE) in collaboration with NATEF/AYES/SkillsUSA.

Course 1 – Introduction to Collision Repair 47.56500
Course Description: Introduction to Collision Repair is the prerequisite course in all of the collision repair pathways. Employment opportunities in the collision repair field will be explored in this course. Students will be exposed to all areas of collision repair and automotive refinish, such as safety, refinishing, metal repair, plastic repair, automotive construction, and estimate reading and writing. Basic skills in all of the above mentioned areas will be taught.

Proposed Course 2 – Nonstructural Analysis and Damage Repair I

Proposed Course 3 – Nonstructural Analysis and Damage Repair II

Collision Repair - Mechanical and Electrical Components Pathway

Mechanical and Electrical Components is one of eleven pathways in the Transportation, Distribution & Logistics Cluster. The student will learn how mechanical and electrical components are affected in a collision and how to repair or replace them after a collision. This pathway culminates with the opportunity for students to take the end of pathway assessment in Collision Repair offered by the National Institute for Automotive Service Excellence (ASE) in collaboration with NATEF/AYES/SkillsUSA.

Course 1 – Introduction to Collision Repair 47.56500

Course Description: Introduction to Collision Repair is the prerequisite course in all of the collision repair pathways. Employment opportunities in the collision repair field will be explored in this course. Students will be exposed to all areas of collision repair and automotive refinish, such as safety, refinishing, metal repair, plastic repair, automotive construction, and estimate reading and writing. Basic skills in all of the above mentioned areas will be taught.

Proposed Course 2 – Mechanical and Electrical Components I

Proposed Course 3 – Mechanical and Electrical Components II

Collision Repair - Structural Analysis and Damage Repair Pathway

Structural Analysis and Damage Repair is one of eleven pathways in the Transportation, Distribution & Logistics Cluster. These courses will prepare the student for an entry level position in a specialized area of Collision Repair. The student will learn through theoretical and practical applications to analyze and restore vehicle structural damage to factory specifications. This pathway culminates with the opportunity for students to take the end of pathway assessment in Collision Repair offered by the National Institute for Automotive Service Excellence (ASE) in collaboration with NATEF/AYES/SkillsUSA.

Course 1 – Introduction to Collision Repair 47.56500

Course Description: Introduction to Collision Repair is the prerequisite course in all of the collision repair pathways. Employment opportunities in the collision repair field will be explored in this course. Students will be exposed to all areas of collision repair and automotive refinish, such as safety, refinishing, metal repair, plastic repair, automotive construction, and estimate reading and writing. Basic skills in all of the above mentioned areas will be taught.

Proposed Course 2 – Mechanical and Electrical Components I

Proposed Course 3 – Mechanical and Electrical Components II

Flight Operations Pathway

Flight Operations is one of eleven pathways in the Transportation, Distribution and Logistics Cluster. Completion of this pathway prepares students for employment in the aerospace industry. They may build, maintain, repair and service aircraft of any type. People in this pathway keep equipment and machinery running while looking for more

efficient, safe and cost-effective ways to do so. This pathway culminates with the opportunity for students to take the end of pathway assessment offered by the FAA in Flight Operations.

Course 1 – Fundamentals of Aerospace 47.46000
Course Description: This course is designed as the foundational course for both the Aviation Maintenance and the Flight Operations pathways. Students will gain a fundamental knowledge base in aviation history and regulations, the basic principles of flight, aerospace careers, and factors influencing work systems, aerospace technologies, and basic aviation meteorology. These concepts can later be applied to various aerospace occupations. Classroom and lab activities will assure students a thorough understanding of the aerospace environment.

Proposed Course 2 – Flight Operations I

Proposed Course 3 – Flight Operations II

Aviation Maintenance Pathway
Aviation Maintenance is one of eleven pathways in the Transportation, Distribution and Logistics Cluster. Students learn weight and balance, tube bending and flaring, hose fabrication, hard ware identification, safety wiring, budgeting, ordering parts, tools, precision measurements, instruments, electrical symbols and troubleshooting. FAA regulations and other FAA forms are reviewed. Students learn how to become aircraft maintenance workers and are prepared with entry-level skills. This pathway culminates with the opportunity for students to take the end of pathway assessment offered by the SkillsUSA in Aviation Maintenance.

Course 1 – Fundamentals of Aerospace 47.46000
Course Description: This course is designed as the foundational course for both the Aviation Maintenance and the Flight Operations pathways. Students will gain a fundamental knowledge base in aviation history and regulations, the basic principles of flight, aerospace careers, and factors influencing work systems, aerospace technologies, and basic aviation meteorology. These concepts can later be applied to various aerospace occupations. Classroom and lab activities will assure students a thorough understanding of the aerospace environment.

Proposed Course 2 – Aviation Maintenance I

Proposed Course 3 – Aviation Maintenance II

Distribution and Logistics Pathway
Distribution and Logistics is one of the eleven pathways in the Transportation, Distribution and Logistics cluster. Completion of this pathway will prepare students for employment in the field of logistics and supply chain management. In this pathway, students can acquire a fundamental understanding of the logistics and supply chain industry. Students learn employability skills needed to make them marketable in the global economy. Students will become familiar with regulatory agencies such as OSHA, EPA, NRC, DOT, and FAA. Logistics and supply chain management topics will include the motor carrier industry, railroad industry, air freight industry and ocean carrier industry as it relates to the movement of materials around the world. This is an in-depth study of the warehousing industry. Topics will include material handling equipment and information technology tools used in warehouse facilities. Even though the logistics industry is huge in Georgia, this is a new pathway to CTAE. An end of pathway assessment has not been identified for this particular pathway.

Georgia Department of Education
Career Pathway Descriptions

Course 1 – Logistics Fundamentals 47.47000
Course Description: The Logistics Fundamentals course is the foundational course for the Distribution and Logistics pathway. Employment opportunities in the transportation, distribution, and logistics fields will be explored. In this course the student will be exposed to all areas of distribution and logistics. Basic skills in all of the above mentioned areas will be taught.

Proposed Course 2 – Logistics Operations

Proposed Course 3 – Materials Management

Marine Engine Technology Pathway
Marine Engine Technology is one of the eleven pathways in the Transportation, Distribution and Logistics cluster. This course introduces students to basic principles and skills associated with the field of marine engine service and repair. Students learn and apply basic skills including shop and boat safety, safe and appropriate use of tools and measuring devices, technical writing and shop management skills, and marine engine computer applications. Mastery of these standards through project-based learning and leadership development activities of SkillsUSA will help prepare students with a competitive edge for the marketplace. This pathway culminates with the opportunity for students to take the end of pathway assessment offered by the SkillsUSA in Marine Engine Service Technology.

Course 1 – Foundations of Marine Engine Technology 47.58000
Course Description: The Foundations of Marine Engine Technology is the foundational course for the Marine Engine Pathway. Students will be introduced to basic principles and skills associated with the field of marine engine service and repair. Students learn and apply basic skills including shop and boat safety, safe and appropriate use of tools and measuring devices, technical writing, shop management skills, and marine engine computer applications. Mastery of these standards through project-based learning and leadership development activities of SkillsUSA will help prepare students with a competitive edge for the marketplace. The pre- requisite for this course is advisor approval.

Proposed Course 2 – Marine Electrical Systems

Proposed Course 3 – Marine Engine Drive Systems

For more information, please contact Carol Burke at cburke@doe.k12.ga.us