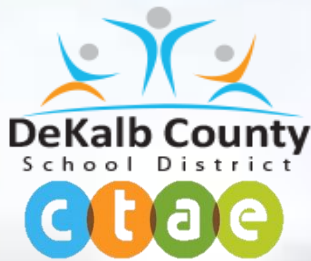**DeKalb County School District**
Career Technical and Agricultural Education

Career Clusters

Pathways to College and Career Readiness

CURRICULUM GUIDE

DeKalb County
School District
ctae

Introduction

DeKalb School's Career Clusters allow students to choose an area of interest in high school from the 17 clusters listed below. Students take classes tailored to their cluster, which helps them navigate their way to greater success – no matter what they choose to do after high school graduation. Each cluster includes multiple career pathways. The aim of the program is to show students the relevance of what they're learning in the classroom, whether they want to attend a two-year college, a four-year university or go straight into the world of work. Students will begin to learn about potential careers in elementary and middle school so that they are ready to choose a pathway once they reach high school.

Overview

Career Clusters
Career Clusters are broad occupational groupings based on a set of common knowledge and skills required for a specific career. Career Clusters provide opportunities for all students regardless of their career goals and interests.

Career Pathways
Career Pathways are a sub-grouping of occupations and career specialties used as an organizing tool for curriculum design and instruction. Career pathways are grouped based on their requirements for a set of common knowledge and skills for career success.

Program of Study
A Program of Study is a sequence of instruction (based on recommended standards, and knowledge and skills) This sequence of instruction provides preparation for a career.

Individualized Graduation Plan
An IGP includes a program of study and learning that represents a mapped academic plan reflecting a student's unique set of interests, needs, learning goals, and graduation requirements. It goes beyond the "four-year plan" by recording the student's connections to the larger community including examples of community service and volunteerism; membership in community organizations, participation in leadership activities outside of school; involvement in job shadowing, mentorships, and/or apprenticeships; and the pursuit of skill development through hobbies, athletics, and fine arts.

Career Pathway Benefits
- Provide a framework for seamless education. They are the core of workforce and economic development in our state.
- Promote the connection between education and workforce/economic development
- Provide a seamless transition from high school to college
- Focus on high skill, high demand, and high wage careers
- Increase emphasis on attainment of a technical skill proficiency, degree/credential

Options for Students
DeKalb School's comprehensive grades K-12 career development includes three levels:
1. **Career Awareness in Grades K–5:** grade-level specific career activities (5th grade portfolio)
2. **Career Exploration in Grades 6–8**: career-related assessments and inventories (individual graduation plan by the end of the 8th grade)
3. **Career Management in Grades 9–12**: ongoing review and advisement of each student's individual graduation plan to ensure successful implementation.

Cluster Description

The Agriculture, Food, & Natural Resources Career Cluster includes the production, processing, marketing, financing, distribution, and development of agricultural commodities and resources. These commodities include food, fiber, wood products, natural resources, horticulture, and other plant and animal products/resources.

Pathways

Forestry/Natural Resources Management

02.47100 Basic Ag Science
03.45100 Forest Science
03.41100 Natural Resources Management

Plant and Floral Design Systems

02.47100 Basic Ag Science
01.46100 General Horticulture
01.46600 Floral Design

Plant and Floriculture Systems

02.47100 Basic Ag Science
01.46100 General Horticulture
01.46200 Floriculture Production and Mgmt

Plant and Landscape Systems

02.47100 Basic Ag Science
01.46100 General Horticulture
01.47000 Nursery & Landscape

Horticulture and Forest Science

02.47100 Basic Ag Science
01.46100 General Horticulture
03.45100 Forest Science

Career and Technical Student Organization (CTSO)

FFA   **http://www.ffa.org**
The FFA is a national organization dedicated to preparing members for leadership and careers in the science, business and technology of agriculture. Local, state and national activities and award programs provide opportunities to apply knowledge and skills acquired through agriculture education.

Forestry/Natural Resources Management

The agricultural education pathway is built on the three core areas of classroom/laboratory instruction, supervised agricultural experience programs and FFA student organization activities/opportunities. Students enrolled in this pathway will receive instruction in and about establishing forests, maintaining and surveying forests, identifying and protecting trees, measuring, mapping, preparing for timber sales and harvest while utilizes a "learning by doing" philosophy.

Level	Course Name	Course Code	Course Abbreviation
Level 1	Basic Ag Science	02.471	AFNR-BAS
Level 2	Forest Science	03.451	AFNR-FS-1
Level 3	Natural Resources Management	03.411	AFNR-NRM-1

*Levels 1, 2, and 3 are required for pathway completion.

Course Descriptions

02.47100   Basic Agriculture Science   Grades 9-11
This course is designed as the foundational course for all Agriculture, Food & Natural Resources Pathways. The course introduces the major areas of scientific agricultural production and research; presents problem solving lessons and introductory skills and knowledge in agricultural science and agri-related technologies. Classroom and laboratory activities are supplemented through supervised agricultural experiences and leadership programs and activities. This course is the prerequisite for all AFNR pathways and is intended for students in grades 9-10.

03.45100   Forest Science   Grades 9--12
This course provides entry-level skills for employment in the forest industry and for further study. The course covers establishing forests by natural and artificial means, maintaining and surveying forests, identifying and protecting trees, practicing silviculture, measuring trees and land, mapping, preparing for timber sales and harvest, employing multiple-use resource management, keeping records, and figuring taxes. Classroom and laboratory activities are supplemented through supervised agricultural experiences and leadership programs and activities.

03.45200   Natural Resources Management   Grades 10-12
This course introduces conservation management and maintenance of natural resources and good stewardship of air, soil, water, land, fish, and wildlife resources for economic, recreation, and health purposes. Classroom and laboratory activities are supplemented through supervised agricultural experiences and leadership programs and activities.

End of Pathway Assessment and/or Pathway Credentialing Opportunity:
Forestry-Natural Resources Pathway/NOCTI

Plant and Floral Design Systems

The agricultural education pathway is built on the three core areas of classroom/laboratory instruction, supervised agricultural experience programs and FFA student organization activities/opportunities. Students enrolled in this pathway will receive instruction in and about establishing forests, maintaining and surveying forests, identifying and protecting trees, measuring, mapping, preparing for timber sales and harvest while utilizes a "learning by doing" philosophy.

Level	Course Name	Course Code	Course Abbreviation
Level 1	Basic Ag Science	02.47100	AFNR-BAS
Level 2	General Horticulture and Plant Science	01.46100	AFNR-GHPS
Level 3	Floral Design and Management	01.46600	AFNR-FDM

*Levels 1, 2, and 3 are required for pathway completion.

Course Descriptions

02.47100   Basic Agriculture Science   Grades 9-11
This course is designed as the foundational course for all Agriculture, Food & Natural Resources Pathways. The course introduces the major areas of scientific agricultural production and research; presents problem solving lessons and introductory skills and knowledge in agricultural science and agri-related technologies. Classroom and laboratory activities are supplemented through supervised agricultural experiences and leadership programs and activities. This course is the prerequisite for all AFNR pathways and is intended for students in grades 9-10.

01.46100   General Horticulture and Plant Science   Grades 9--12
This course is designed as an introduction for the Horticulture-Plant Science Pathway Program of Study. The course introduces the major concepts of plant and horticulture science. Classroom and laboratory activities are supplemented through supervised agricultural experiences and leadership programs and activities.

01.46600   Floral Design and Management   Grades 10-12
This laboratory course is designed to prepare students to apply systematic business procedures and design principles in the operation of a retail or wholesale floral business. Students will learn about the cut flower industry, the history of floral design, identification of flowers and foliage, design shapes, mechanics of design, everlasting flowers, and use knowledge and skills to create custom design work for special occasions.

End of Pathway Assessment and/or Pathway Credentialing Opportunity:
NOCTI- Plant Systems

Plant and Floriculture Systems

The agricultural education pathway is built on the three core areas of classroom/laboratory instruction, supervised agricultural experience programs and FFA student organization activities/opportunities. Students enrolled in this pathway will receive instruction in and about establishing forests, maintaining and surveying forests, identifying and protecting trees, measuring, mapping, preparing for timber sales and harvest while utilizes a "learning by doing" philosophy.

Level	Course Name	Course Code	Course Abbreviation
Level 1	Basic Ag Science	02.47100	AFNR-BAS
Level 2	General Horticulture and Plant Science	01.46100	AFNR-GHPS
Level 3	**Floriculture Production and Management**	01.46200	AFNR-FPM

*Levels 1, 2, and 3 are required for pathway completion.

Course Descriptions

02.47100   Basic Agriculture Science   Grades 9-11
This course is designed as the foundational course for all Agriculture, Food & Natural Resources Pathways. The course introduces the major areas of scientific agricultural production and research; presents problem solving lessons and introductory skills and knowledge in agricultural science and agri-related technologies. Classroom and laboratory activities are supplemented through supervised agricultural experiences and leadership programs and activities. This course is the prerequisite for all AFNR pathways and is intended for students in grades 9-10.

01.46100   General Horticulture and Plant Science   Grades 9--12
This course is designed as an introduction for the Horticulture-Plant Science Pathway Program of Study. The course introduces the major concepts of plant and horticulture science. Classroom and laboratory activities are supplemented through supervised agricultural experiences and leadership programs and activities.

01.46200   Floriculture Production and Management   Grades 10-12
This course is designed to introduce students to the principles and practices of floriculture production. Students will develop floriculture skills and the basic understanding necessary to be successful in entry-level positions in the floriculture industry. Classroom and laboratory activities are supplemented through supervised agricultural experiences and leadership programs and activities.

End of Pathway Assessment and/or Pathway Credentialing Opportunity:
NOCTI- Plant Systems

Plant and Landscape Systems

The agricultural education pathway is built on the three core areas of classroom/laboratory instruction, supervised agricultural experience programs and FFA student organization activities/opportunities. Students enrolled in this pathway will receive instruction in and about establishing forests, maintaining and surveying forests, identifying and protecting trees, measuring, mapping, preparing for timber sales and harvest while utilizes a "learning by doing" philosophy.

Level	Course Name	Course Code	Course Abbreviation
Level 1	Basic Ag Science	02.47100	AFNR-BAS
Level 2	General Horticulture	01.46100	AFNR-GHPS
Level 3	Nursery & Landscape	01.47000	AFNR-NL

*Levels 1, 2, and 3 are required for pathway completion.

Course Descriptions

02.47100   Basic Agriculture Science   Grades 9-11
This course is designed as the foundational course for all Agriculture, Food & Natural Resources Pathways. The course introduces the major areas of scientific agricultural production and research; presents problem solving lessons and introductory skills and knowledge in agricultural science and agri-related technologies. Classroom and laboratory activities are supplemented through supervised agricultural experiences and leadership programs and activities. This course is the prerequisite for all AFNR pathways and is intended for students in grades 9-10.

01.46100   General Horticulture and Plant Science   Grades 9--12
This course is designed as an introduction for the Horticulture-Plant Science Pathway Program of Study. The course introduces the major concepts of plant and horticulture science. Classroom and laboratory activities are supplemented through supervised agricultural experiences and leadership programs and activities.

01.47000   Nursery and Landscape   Grades 10-12
This course is designed to provide students with the basic skills and knowledge utilized by the green industry in nursery production and management and landscape design and management. Classroom and laboratory activities are supplemented through supervised agricultural experiences and leadership programs and activities.

End of Pathway Assessment and/or Pathway Credentialing Opportunity:
NOCTI- Plant Systems

The agricultural education pathway is built on the three core areas of classroom/laboratory instruction, supervised agricultural experience programs and FFA student organization activities/opportunities. Students enrolled in this pathway will receive instruction in and about establishing forests, maintaining and surveying forests, identifying and protecting trees, measuring, mapping, preparing for timber sales and harvest while utilizes a "learning by doing" philosophy.

Level	Course Name	Course Code	Course Abbreviation
Level 1	Basic Ag Science	02.47100	AFNR-BAS
Level 2	General Horticulture	01.46100	AFNR-GHPS
Level 3	Forest Science	03.45100	AFNR-FS

*Levels 1, 2, and 3 are required for pathway completion.

Course Descriptions

02.47100   Basic Agriculture Science   Grades 9-11
This course is designed as the foundational course for all Agriculture, Food & Natural Resources Pathways. The course introduces the major areas of scientific agricultural production and research; presents problem solving lessons and introductory skills and knowledge in agricultural science and agri-related technologies. Classroom and laboratory activities are supplemented through supervised agricultural experiences and leadership programs and activities. This course is the prerequisite for all AFNR pathways and is intended for students in grades 9-10.

01.46100   General Horticulture and Plant Science   Grades 9--12
This course is designed as an introduction for the Horticulture-Plant Science Pathway Program of Study. The course introduces the major concepts of plant and horticulture science. Classroom and laboratory activities are supplemented through supervised agricultural experiences and leadership programs and activities.

03.45100   Forest Science   Grades 9--12
This course provides entry-level skills for employment in the forest industry and for further study. The course covers establishing forests by natural and artificial means, maintaining and surveying forests, identifying and protecting trees, practicing silviculture, measuring trees and land, mapping, preparing for timber sales and harvest, employing multiple-use resource management, keeping records, and figuring taxes. Classroom and laboratory activities are supplemented through supervised agricultural experiences and leadership programs and activities.

End of Pathway Assessment and/or Pathway Credentialing Opportunity:
NOCTI- Plant Systems

Georgia Performance Standards

Cluster Description

The Architecture and Construction Career Cluster includes careers in designing, planning, managing, and building structures.

Pathways

Architectural Drafting Pathway

48.54100 Introduction to Drafting and Design
48.54500 Architectural Drawing and Design I
48.54600 Architectural Drawing and Design II

Carpentry Pathway

46.54500 Industry Fundamentals and Occupational Safety
46.54600 Introduction to Construction
46.55000 Carpentry I

Electrical Pathway

46.54500 Industry Fundamentals and Occupational Safety
46.54600 Introduction to Construction
46.56000 Electrical I

Masonry Pathway

46.54500 Industry Fundamentals and Occupational Safety
46.54600 Introduction to Construction
46.57000 Masonry I

Plumbing Pathway

46.54500 Industry Fundamentals and Occupational Safety
46.54600 Introduction to Construction
46.58000 Plumbing I

Career and Technical Student Organization (CTSO)

SkillsUSA   http://www.skillsusa.org

SkillsUSA is national organization that provides quality education experiences for students in leadership, teamwork, citizenship and character development. It builds and reinforces self-confidence, work attitudes and communications skills. It emphasizes total quality at work, high ethical standards, superior work skills, life-long education and pride in the dignity of work. SkillsUSA also promotes understanding of the free enterprise system and involvement in community service activities.

Architectural Drafting Pathway

The Architecture and Construction pathways offer hands-on projects, lab experiences and challenging classroom curriculum that includes relevant math, communications, and technical courses that enable students to gain technical and academic skills that simulate the business or industry work environment for their area of interest, such as drafting, plumbing, carpentry, masonry or electrical. In addition to the classroom and laboratory experiences, students participate in SkillsUSA, a co-curricular student organization that promotes leadership skills as well as high standards of craft quality, scholarship, and safety.

Level	Course Name	Course Code	Course Abbreviation
Level 1	Introduction to Drafting and Design	48.54100	AC-IDD
Level 2	Architectural Drawing and Design I	48.54500	AC-ADDI
Level 3	Architectural Drawing and Design II	48.54600	AC-ADDII

*Levels 1, 2, and 3 are required for pathway completion.

Course Descriptions

48.54100   Introduction to Drafting and Design   Grades 9-11
The Introduction to Drafting and Design course is the foundational course under the Architectural Drawing and Design pathway and prepares students for a pursuit of any career in the field of construction. The course provides the basic knowledge to function safely on or around a construction site and in industry in general. Students will have the option for an Industry Certification in the Construction Core. Pre-requisite for this course is advisor approval.

48.54500   Architectural Drawing and Design I   Grades 9--12
Architectural Drawing and Design I is the second course in the Architectural Drawing and Design pathway and introduces students to the basic terminology, concepts, and principles of architectural design. Emphasis is placed on house designs, floor plans, roof designs, elevations (interior and exterior), schedules, and foundations. The prerequisite for the course is Introduction to Drafting and Design.

48.54600   Architectural Drawing and Design II   Grades 10-12
Architectural Drawing and Design II is the third course in the Architectural Drawing and Design pathway and builds on the skills developed in Architectural Drawing and Design I. Emphasis is placed on the design process, site plans, electrical plans, plumbing plans, sections and details, project presentations, and a course portfolio. The prerequisite for this course is Introduction to Drafting and Design and Architectural Drawing and Design I.

End of Pathway Assessment and/or Pathway Credentialing Opportunity:
SkillsUSA Work Force Ready Exam in Architectural Drawing

Carpentry Pathway

The Architecture and Construction pathways offer hands-on projects, lab experiences and challenging classroom curriculum that includes relevant math, communications, and technical courses that enable students to gain technical and academic skills that simulate the business or industry work environment for their area of interest, such as drafting, plumbing, carpentry, masonry or electrical. In addition to the classroom and laboratory experiences, students participate in SkillsUSA, a co-curricular student organization that promotes leadership skills as well as high standards of craft quality, scholarship, and safety.

Level	Course Name	Course Code	Course Abbreviation
Level 1	Industry Fundamentals and Occupational Safety	46.54500	AC-IFOS
Level 2	Introduction to Construction	46.54600	AC-IC
Level 3	Carpentry I	46.55000	AC-C1

*Levels 1, 2, and 3 are required for pathway completion.

Course Descriptions

46.54500   Industry Fundamentals and Occupational Safety   Grades 9-11
This course is designed as the foundational course in the Carpentry, Plumbing, Electrical, and Masonry pathways to prepare students for pursuit of any career in construction. The course prepares the trainee for the basic knowledge to function safely on or around a construction site and in the industry in general and will provide the trainee with the option for an Industry Certification in the Construction Core. Pre-requisite for this course is advisor approval.

46.54600   Introduction to Construction   Grades 9--12
This course introduces students to four construction craft areas. The goal of this course is to introduce students to the history and traditions of the carpentry, masonry, plumbing, and electrical craft trades. Students will explore how the various crafts have influenced and been influenced by history. The student will also learn and apply knowledge of the care and safe use of hand and power tools as related to each trade. In addition, students will be introduced to and develop skills to differentiate between blueprints related to each individual craft area.

46.55000   Carpentry 1   Grades 10-12
This course provides the student a solid foundation in carpentry skills and knowledge. This course provides an overview of the building materials used in the carpentry craft, as well as teaching techniques for reading and using blueprints and specifications related to the carpentry craft. The course provides specific knowledge and skills in site layout and floor and wall framing systems, and includes basic industry terminology for a carpentry craftsperson.

End of Pathway Assessment and/or Pathway Credentialing Opportunity:
SkillsUSA Work Force Ready Exam in Carpentry

Electrical Pathway

The Architecture and Construction pathways offer hands-on projects, lab experiences and challenging classroom curriculum that includes relevant math, communications, and technical courses that enable students to gain technical and academic skills that simulate the business or industry work environment for their area of interest, such as drafting, plumbing, carpentry, masonry or electrical. In addition to the classroom and laboratory experiences, students participate in SkillsUSA, a co-curricular student organization that promotes leadership skills as well as high standards of craft quality, scholarship, and safety.

Level	Course Name	Course Code	Course Abbreviation
Level 1	Industry Fundamentals and Occupational Safety	46.54500	AC-IFOS
Level 2	Introduction to Construction	46.54600	AC-IC
Level 3	Electrical I	46.56000	AC-E1

*Levels 1, 2, and 3 are required for pathway completion.
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Course Descriptions

46.54500   Industry Fundamentals and Occupational Safety   Grades 9-11
This course is designed as the foundational course in the Carpentry, Plumbing, Electrical, and Masonry pathways to prepare students for pursuit of any career in construction. The course prepares the trainee for the basic knowledge to function safely on or around a construction site and in the industry in general and will provide the trainee with the option for an Industry Certification in the Construction Core. Pre-requisite for this course is advisor approval.

46.54600   Introduction to Construction   Grades 9--12
This course introduces students to four construction craft areas. The goal of this course is to introduce students to the history and traditions of the carpentry, masonry, plumbing, and electrical craft trades. Students will explore how the various crafts have influenced and been influenced by history. The student will also learn and apply knowledge of the care and safe use of hand and power tools as related to each trade. In addition, students will be introduced to and develop skills to differentiate between blueprints related to each individual craft area.

46.56000   Electrical 1   Grades 10-12
This course builds on the concepts of electrical safety introduced in Occupational Safety and provides knowledge and basic skills of the hardware and systems used by an electrician. The course incorporates general knowledge of the National Electrical Code and electrical systems, including series, parallel, and series-parallel circuits. In additional, students will be provided an introduction to the skills and knowledge of conduit bending and installation.

End of Pathway Assessment and/or Pathway Credentialing Opportunity:
Residential Wiring Skills Connect Assessment by SkillsUSA

Masonry Pathway

The Architecture and Construction pathways offer hands-on projects, lab experiences and challenging classroom curriculum that includes relevant math, communications, and technical courses that enable students to gain technical and academic skills that simulate the business or industry work environment for their area of interest, such as drafting, plumbing, carpentry, masonry or electrical. In addition to the classroom and laboratory experiences, students participate in SkillsUSA, a co-curricular student organization that promotes leadership skills as well as high standards of craft quality, scholarship, and safety.

Level	Course Name	Course Code	Course Abbreviation
Level 1	Industry Fundamentals and Occupational Safety	46.54500	AC-IFOS
Level 2	Introduction to Construction	46.54600	AC-IC
Level 3	Masonry I	46.57000	AC-M1

*Levels 1, 2, and 3 are required for pathway completion.

Course Descriptions

46.54500   Industry Fundamentals and Occupational Safety   Grades 9-11
This course is designed as the foundational course in the Carpentry, Plumbing, Electrical, and Masonry pathways to prepare students for pursuit of any career in construction. The course prepares the trainee for the basic knowledge to function safely on or around a construction site and in the industry in general and will provide the trainee with the option for an Industry Certification in the Construction Core. Pre-requisite for this course is advisor approval.

46.54600   Introduction to Construction   Grades 9--12
This course introduces students to four construction craft areas. The goal of this course is to introduce students to the history and traditions of the carpentry, masonry, plumbing, and electrical craft trades. Students will explore how the various crafts have influenced and been influenced by history. The student will also learn and apply knowledge of the care and safe use of hand and power tools as related to each trade. In addition, students will be introduced to and develop skills to differentiate between blueprints related to each individual craft area.

46.57000   Masonry 1   Grades 10-12
This course provides knowledge and skills related to types and properties of mortar and concrete mixtures, as well as skills needed to operate hand tools, power tools, and equipment used in mixing mortar. Additional course components include knowledge and skills related to cutting, laying, and finishing of masonry units. The prerequisite for this course is Introduction to Construction.

End of Pathway Assessment and/or Pathway Credentialing Opportunity:
Masonry Skills Connect Assessment by SkillsUSA

Plumbing Pathway

The Architecture and Construction pathways offer hands-on projects, lab experiences and challenging classroom curriculum that includes relevant math, communications, and technical courses that enable students to gain technical and academic skills that simulate the business or industry work environment for their area of interest, such as drafting, plumbing, carpentry, masonry or electrical. In addition to the classroom and laboratory experiences, students participate in SkillsUSA, a co-curricular student organization that promotes leadership skills as well as high standards of craft quality, scholarship, and safety.

Level	Course Name	Course Code	Course Abbreviation
Level 1	Industry Fundamentals and Occupational Safety	46.54500	AC-IFOS
Level 2	Introduction to Construction	46.54600	AC-IC
Level 3	Plumbing I	46.58000	AC-P1

*Levels 1, 2, and 3 are required for pathway completion.

Course Descriptions

46.54500   Industry Fundamentals and Occupational Safety   Grades 9-11
This course is designed as the foundational course in the Carpentry, Plumbing, Electrical, and Masonry pathways to prepare students for pursuit of any career in construction. The course prepares the trainee for the basic knowledge to function safely on or around a construction site and in the industry in general and will provide the trainee with the option for an Industry Certification in the Construction Core. Pre-requisite for this course is advisor approval.

46.54600   Introduction to Construction   Grades 9--12
This course introduces students to four construction craft areas. The goal of this course is to introduce students to the history and traditions of the carpentry, masonry, plumbing, and electrical craft trades. Students will explore how the various crafts have influenced and been influenced by history. The student will also learn and apply knowledge of the care and safe use of hand and power tools as related to each trade. In addition, students will be introduced to and develop skills to differentiate between blueprints related to each individual craft area.

46.58000   Plumbing 1   Grades 10-12
This course provides basic skills and knowledge needed to apply Occupational Safety and Health Administration (OSHA) and Environmental Protection Agency (EPA) safety concepts and practices relating to the plumbing trade. The student is introduced to the basic knowledge and application of plumbing codes, as well as the handling, estimating, and storing of materials used in the plumbing trade. The prerequisite for this course is Introduction to Construction.

End of Pathway Assessment and/or Pathway Credentialing Opportunity:
Plumbing Skills Connect Assessment by SkillsUSA

Georgia Performance Standards

Cluster Description
The Arts, A/V Technology, & Communications Career Cluster includes designing, producing, exhibiting, performing, writing, and publishing multimedia content.

Pathways
Audio/Video Technology and Film Pathway
10.51810 Audio Video Technology and Film I
10.51910 Audio Video Technology and Film II
10.52010 Audio Video Technology and Film III

Graphics Communications Pathway
48.56100 Introduction to Graphics and Design
48.56200 Graphic Design and Production
48.57000 Advanced Graphic Output Processes

Graphics Design Pathway
48.56100 Introduction to Graphics and Design
48.56200 Graphic Design and Production
48.52800 Advanced Graphic Design

Career and Technical Student Organization (CTSO)

SkillsUSA   http://www.skillsusa.org
SkillsUSA is national organization that provides quality education experiences for students in leadership, teamwork, citizenship and character development. It builds and reinforces self-confidence, work attitudes and communications skills. It emphasizes total quality at work, high ethical standards, superior work skills, life-long education and pride in the dignity of work. SkillsUSA also promotes understanding of the free enterprise system and involvement in community service activities.

Audio/Video Technology and Film Pathway

In the Audio/Video Technology and Film Pathway you learn studio and field production for video and television. Through hands-on experience with cutting edge digital equipment, students create video projects and edit in linear and non-linear suites. Students apply theoretical concepts while planning and designing programs, capturing, editing and post-producing shows in the studio and the field.

Level	Course Name	Course Code	Course Abbreviation
Level 1	Audio Video Technology and Film I	10.51810	AAVTC-AVTFI
Level 2	Audio Video Technology and Film II	10.51910	AAVTC-AVTFII
Level 3	Audio Video Technology and Film III	10.52010	AAVTC-AVTFIII

*Levels 1, 2, and 3 are required for pathway completion.

Course Descriptions

10.51810   Audio Video Technology and Film I   Grades 9-11
This course will serve as the foundational course in the Audio & Video Technology & Film pathway. The course prepares students for employment or entry into a postsecondary education program in the audio and video technology career field. Topics covered may include, but are not limited to: terminology, safety, basic equipment, script writing, production teams, production and programming, lighting, recording and editing, studio production, and professional ethics. All topics covered in Audio & Video Technology & Film I will be utilized in subsequent courses. The pre-requisite for this course is advisor approval.

10.51910   Audio Video Technology and Film II   Grades 9--12
This course includes planning, writing, directing and editing a production; field equipment functions; operational set-up and maintenance; advanced editing operations; studio productions; performance; audio/video control systems; production graphics; career opportunities; and professional ethics. The pre-requisite for this course is Audio Video Technology and Film I.

10.52010   Audio Video Technology and Film III   Grades 10-12
This course is designed to facilitate student-led projects under the guidance of the instructor. Students work cooperatively and independently in all phases of production. Skills USA, the Georgia Scholastic Press Association, and Student Television Network are examples of, but not limited to, appropriate organizations for providing leadership training and/or for reinforcing specific career and technical skills and may be considered an integral part of the instructional program. The pre-requisite for this course is Audio Video Technology and Film II.

End of Pathway Assessment and/or Pathway Credentialing Opportunity:
Television Video Production Skills Connect Assessment by SkillsUSA

Graphics Communications Pathway

Graphic Communications is defined as the processes and industries that create, develop, produce, and disseminate products utilizing or incorporating words or pictorial images to convey information, ideas, and feelings. Graphic Communications includes the family of market segments embracing the technologies of printing, publishing, packaging, electronic imaging, and their allied industries.

Level	Course Name	Course Code	Course Abbreviation
Level 1	Introduction to Graphics and Design	48.56100	AAVTC-IGD
Level 2	Graphic Design and Production	48.56200	AAVTC-GDP
Level 3	Advanced Graphic Output Processes	48.57000	AAVTC-AGOP

*Levels 1, 2, and 3 are required for pathway completion.

Course Descriptions

48.56100   Introduction to Graphics and Design   Grades 9-11
This course is designed as the foundational course for both the Graphics Production and Graphics Design pathways. The Graphics and Design course provides students with the processes involved in the technologies of printing, publishing, packaging, electronic imaging, and their allied industries. In addition, the Graphics and Design course offers a range of cognitive skills, aesthetics, and crafts that includes typography, visual arts, and page layout. Pre-requisite for this course is adviser approval.

48.56200   Graphic Design and Production   Grades 9--12
This course builds on knowledge and skills learned in the Introduction to Graphics and Design course and focuses on procedures commonly used in the graphic communication and design industries. Students will gain more experience in creative problem solving and the practical implementation of those solutions across multiple areas of graphic design and graphic communications. The prerequisite for this course is Introduction to Graphics and Design.

48.57000   Advanced Graphic Output Processes   Grades 10-12
In this course students will gain more advanced levels of experience to complete the output processes of various projects in an increasingly independent manner. Students also learn to manage the output and completion process as a whole including customer relations management, printing, finishing, and binding. The prerequisite for this course is Graphic Design and Production.

End of Pathway Assessment and/or Pathway Credentialing Opportunity:
PrintEd

Graphics Design Pathway

Graphic design is the process of communicating visually using typography and images to present information. Graphic design practice embraces a range of cognitive skills, aesthetics, and crafts, including typography, visual arts, and page layout. Like other forms of design, graphic design often refers to both the process (designing) by which the communication is created and the products (designs) which are generated.

Level	Course Name	Course Code	Course Abbreviation
Level 1	Introduction to Graphics and Design	48.56100	AAVTC-IGD
Level 2	Graphic Design and Production	48.56200	AAVTC-GDP
Level 3	Advanced Graphic Design	48.52800	AAVTC-AGD

   *Levels 1, 2, and 3 are required for pathway completion.

Course Descriptions

48.56100   Introduction to Graphics and Design   Grades 9-11
This course is designed as the foundational course for both the Graphics Production and Graphics Design pathways. The Graphics and Design course provides students with the processes involved in the technologies of printing, publishing, packaging, electronic imaging, and their allied industries. In addition, the Graphics and Design course offers a range of cognitive skills, aesthetics, and crafts that includes typography, visual arts, and page layout. Pre-requisite for this course is adviser approval.

48.56200   Graphic Design and Production   Grades 9--12
This course builds on knowledge and skills learned in the Introduction to Graphics and Design course and focuses on procedures commonly used in the graphic communication and design industries. Students will gain more experience in creative problem solving and the practical implementation of those solutions across multiple areas of graphic design and graphic communications. The prerequisite for this course is Introduction to Graphics and Design.
This course

48.52800   Advanced Graphic Design   Grades 10-12
Students will continue to explore in an increasingly independent manner, the principles of design and layout procedures relating to the field of graphic design. Content will cover electronic systems and software programs used in graphic design, page composition, image conversion, and digital printing. Knowledge and skills in digital design and imaging will be enhanced through experiences that simulate the graphic design industry.

End of Pathway Assessment and/or Pathway Credentialing Opportunity:
Advertising Design Skills Connect Assessment (in collaboration with PrintED) - by SkillsUSA

Georgia Performance Standards

Cluster Description

The Business Management & Administration Career Cluster prepares students with computer skills for future college and career plans. Cluster skills mastered include planning, organizing, directing, and evaluating as well as owning and operating a successful business.

Pathways

Entrepreneurship
07.44130 Introduction to Business & Technology
06.41500 Legal Environment of Business
06.41600 Entrepreneurship

Business & Technology
07.44130 Introduction to Business & Technology
07.44100 Business & Technology
07.45100 Business Communications

Human Resources Management
07.44130 Introduction to Business & Technology
06.41500 Legal Environment of Business
06.41800 Human Resources Principles

Career and Technical Student Organization (CTSO)

FBLA   http://fbla-pbl.org
Future Business Leaders of America-Phi Beta Lambda is a nonprofit education association of students preparing for careers in business and business-related fields. The FBLA Mission is to bring business and education together in a positive working relationship through innovative leadership and career development programs.

This pathway is designed for those considering a career in business, especially small business. Courses provide students with the skills needed to develop and manage independent small businesses. Includes instruction in business administration; enterprise planning and entrepreneurship; start-up; small business operations and problems; personnel supervision; capitalization and investment; taxation; business law and regulations; e-commerce; home business operations; and applications to specific sectors, products, and services.

Level	Course Name	Course Code	Course Abbreviation
Level 1	Introduction to Business & Technology	07.44130	BMA-IBT
Level 2	Legal Environment of Business	06.41500	BMA-LEB
Level 3	Entrepreneurship	06.41600	BMA-ENT

*Levels 1, 2, and 3 are required for pathway completion.

Course Descriptions

07.44130   Introduction to Business and Technology   Grades 9-11
Introduction to Business & Technology is the foundational course for Business and Technology, Entrepreneurship, and Human Resources Management pathways. The course provides an overview of business and technology skills required for today's business environment. Knowledge of business principles, the impact of financial decisions, and technology proficiencies demanded by business combine to establish the elements of this course. Emphasis is placed on developing proficient fundamental computer skills required for all career pathways. Students will learn essentials for working in a business environment, managing a business, and owning a business.

06.41500   Legal Environment of Business   Grades 9--12
This course addresses statutes and regulations affecting businesses, families, and individuals. Students will get an overview of business law while concentrating on the legal aspects of business ownership and management. Legal issues addressed include court procedures, contracts, torts, consumer law, employment law, environmental law, international law, ethics, and the role of the government in business. The prerequisite for this course is Introduction to Business and Technology.

06.41600   Entrepreneurship   Grades 10-12
Entrepreneurship focuses on recognizing a business opportunity, starting a business, operating and maintaining a business. Integration of accounting, finance, marketing, business management, legal and economic environments will be developed throughout projects in this course. Working to develop a business plan that includes structuring the organization, financing the organization, and managing information, operations, marketing, and human resources will be a focus in the course. The prerequisite for this course is Legal Environment of Business.

End of Pathway Assessment and/or Pathway Credentialing Opportunity:
NOCTI—General Management

Business & Technology

The agricultural education pathway is built on the three core areas of classroom/laboratory instruction, supervised agricultural experience programs and FFA student organization activities/opportunities. Students enrolled in this pathway will receive instruction in and about establishing forests, maintaining and surveying forests, identifying and protecting trees, measuring, mapping, preparing for timber sales and harvest while utilizes a "learning by doing" philosophy.

Level	Course Name	Course Code	Course Abbreviation
Level 1	Introduction to Business & Technology	07.44130	BMA-IBT
Level 2	Business & Technology	07.44100	BMA-BT
Level 3	Business Communications	07.45100	BMA-BC

  *Levels 1, 2, and 3 are required for pathway completion.

07.44130   Introduction to Business and Technology   Grades 9-11
Introduction to Business & Technology is the foundational course for Business and Technology, Entrepreneurship, and Human Resources Management pathways. The course provides an overview of business and technology skills required for today's business environment. Knowledge of business principles, the impact of financial decisions, and technology proficiencies demanded by business combine to establish the elements of this course. Emphasis is placed on developing proficient fundamental computer skills required for all career pathways. Students will learn essentials for working in a business environment, managing a business, and owning a business.

07.44100   Business & Technology   Grades 9--12
This course is designed to prepare students with the knowledge and skills to be an asset to the collaborative, global, and innovative business world of today and tomorrow. The ability to apply leadership skills to make informed business decisions will be a highlight of this course for students. Publishing industry appropriate documents to model effective communication and leadership will be demonstrated through project based learning. Students will use spreadsheet and database software to manage data while analyzing, organizing and sharing data through visually appealing presentation. The prerequisite for this course is Introduction to Business and Technology.

07.45100   Business Communications   Grades 10-12
In this course students will create, edit, and publish professional-appearing business documents with clear and concise communication. Creative design, persuasive personal and professional communications will be applied through research, evaluation, validation, written, and oral communication. Leadership development and teamwork skills will be stressed as students work independently and collaboratively. Presentation skills will be developed and modeled for students master presentation software in this course. The prerequisite for this course is Business and Technology.

End of Pathway Assessment and/or Pathway Credentialing Opportunity:
Microsoft Office Specialist (Word, Excel, PowerPoint, Access)

Human Resources Management

Human resource management is a term used to describe a set of tasks aimed at effectively managing an organization's employees (human resources). In this pathway student will learn about the business of managing people in an organization which includes compensation, benefits, training and development, staffing, strategic HR management and other functions. In today's competitive environment, human capital management is critically important to remain viable in the global marketplace. As a result, HR plays a pivotal role in the world—because people are truly the only thing that differentiates one business from another.

Level	Course Name	Course Code	Course Abbreviation
Level 1	Introduction to Business & Technology	07.44130	BMA-IBT
Level 2	Legal Environment of Business	06.41500	BMA-LEB
Level 3	Human Resources Principles	06.41800	BMA-HRP

  *Levels 1, 2, and 3 are required for pathway completion.

07.44130   Introduction to Business and Technology   Grades 9-11
Introduction to Business & Technology is the foundational course for Business and Technology, Entrepreneurship, and Human Resources Management pathways. The course provides an overview of business and technology skills required for today's business environment. Knowledge of business principles, the impact of financial decisions, and technology proficiencies demanded by business combine to establish the elements of this course. Emphasis is placed on developing proficient fundamental computer skills required for all career pathways. Students will learn essentials for working in a business environment, managing a business, and owning a business.

06.41500   Legal Environment of Business   Grades 9--12
This course addresses statutes and regulations affecting businesses, families, and individuals. Students will get an overview of business law while concentrating on the legal aspects of business ownership and management. Legal issues addressed include court procedures, contracts, torts, consumer law, employment law, environmental law, international law, ethics, and the role of the government in business. The prerequisite for this course is Introduction to Business and Technology. The prerequisite to this course is Introduction to Business and Technology.

06.41800   Human Resources Principles   Grades 10-12
In this course students will analyze the primary functions of human resources management which include recruitment, selection, training, development, compensation, and evaluation. The course is designed to equip students with operational knowledge of hiring, managing, and firing employees. Throughout this course students will be introduced to the Human Resource Management role by following the life cycle of an employee from organizational entry to exit. The prerequisite to this course is Legal Environment of Business.

End of Pathway Assessment and/or Pathway Credentialing Opportunity:
Professional in Human Resources (PHR®) Exam

Georgia Performance Standards
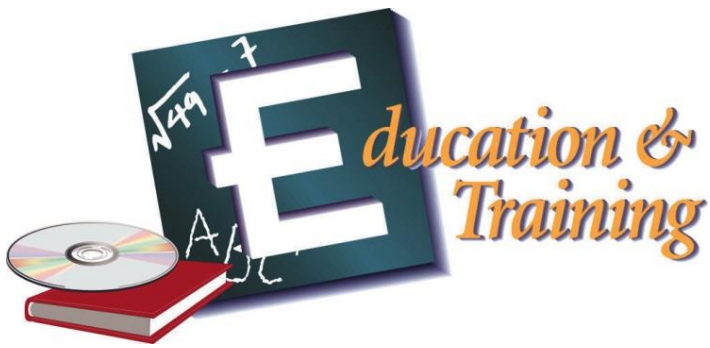
Cluster Description

The Education and Training Career Cluster includes planning, managing, and providing education and training services as well as related learning support services.

Pathways

Teaching as a Profession
13.01100 Examining the Teaching Profession
13.01200 Contemporary Issues in Education
13.01300 Teaching as a Profession Practicum

Early Childhood Care & Education
20.52810 Early Childhood Education I
20.42400 Early Childhood Education II
20.42500 Early Childhood Education III
20.42600 Early Childhood Education Practicum

Career and Technical Student Organization (CTSO)

FCCLA   http://www.fcclainc.org
Family, Career and Community Leaders of America, Inc. (FCCLA) is a nonprofit national career and technical student organization for young men and women in family and consumer sciences education in public and private school through grade 12.

Teaching as a Profession

This pathway includes broad introductory coverage of teaching as a profession, public school organization, planning and delivery of instruction, creation and maintenance of learning environment, standards, teaching and learning in multicultural settings, mainstream education of students with exceptionalities, "at risk" students, family and community partnerships, school law, and educational philosophies.

Level	Course Name	Course Code	Course Abbreviation
Level 1	Examining the Teaching Profession	13.01100	ET-ETP
Level 2	Contemporary Issues in Education	13.01200	ET-CIE
Level 3	Teaching as a Profession Practicum	13.01300	ET-TAPP

   *Levels 1, 2, and 3 are required for pathway completion.

Course Descriptions

13.01100   Examining the Teaching Profession   Grades 9-11
This course prepares students for future positions in the field of education. Teaching as a Profession students study, apply, and practice the use of current technologies, effective teaching and learning strategies, the creation of an effective learning environment, the creation of instructional opportunities for diverse learners and students with special needs, and plan instruction based on knowledge of subject matter, students, community, and curriculum performance standards. Prerequisite for this course is adviser approval.

13.01200   Contemporary Issues in Education   Grades 9--12
This course engages the students in observations, interactions, and analyses of critical and contemporary educational issues. The candidate will 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. The prerequisite for this course is Examining the Teaching Profession.

13.01300   Teaching as a Profession Practicum   Grades 10-12
The practicum offers a candidate in the Teaching as a Profession career pathway a field experience under the direct supervision of a certified teacher (mentor teacher). The practicum stresses observing, analyzing and classifying activities of the mentor teacher and comparing personal traits with those of successful teachers. The candidate intern will develop a portfolio of their skills, plan and teach a lesson or lessons, understand and practice confidentiality as it pertains to the teaching profession, meet the needs of students with special needs, maintain the safety of the students, practice professionalism, and demonstrate ethical behavior. Prerequisite for this course is Contemporary Issues in Education.

End of Pathway Assessment and/or Pathway Credentialing Opportunity:
NOCTI Teaching as a Profession Assessment

Early Childhood Care & Education I

Students in this pathway are introduced to teaching in diverse and inclusive environments, including homes, schools, and other community settings, which serve children from birth to age 8 and their families. Child-centered and culturally sensitive practices are emphasized throughout the pathway, focusing on the need for multiple methods of instruction to accommodate a broad range of learners.

Level	Course Name	Course Code	Course Abbreviation
Level 1	Early Childhood Education I	20.52810	ET-ECE
Level 2	Early Childhood Education II	20.42400	ET-ECEII
Level 3	Early Childhood Education III	20.42500	ET-ECEIII

*Levels 1, 2, and 3 are required for pathway completion.

Course Descriptions

20.52810   Early Childhood Education I   Grades 9-11
The Early Childhood Education I course is the foundational course under the Early Childhood Care & Education pathway and prepares the student for employment in early childhood education and services. The course addresses the knowledge, skills, attitudes, and behaviors associated with supporting and promoting optimal growth and development of infants and children. The pre-requisite for this course is advisor approval.

20.42400   Early Childhood Education II   Grades 9--12
Early Childhood Education II is the second course in the Early Childhood Care and Education pathway and further prepares the student for employment in early childhood care and education services. The course provides a history of education, licensing and accreditation requirements, and foundations of basic observation practices and applications. Early childhood care, education, and development issues are also addressed and include health, safety, and nutrition education; certification in CPR/First Aid/Fire Safety; information about child abuse and neglect; symptoms and prevention of major childhood illnesses and diseases; and prevention and control of communicable illnesses.

20.42500   Early Childhood Education III   Grades 10-12
Early Childhood Education III is the third course in the Early Childhood Care and Education pathway and one option for program completers who may not have the opportunity of participating in the Early Childhood Education Internship. The course provides in-depth study of early brain development and its implications for early learning, appropriate technology integration, and developmentally appropriate parenting and child guidance trends. Also addressed are collaborative parent/teacher/child relationships and guidance, child directed play, the changing dynamics of family culture and diversity, the causes and effects of stress on young children, and infant nutrition.

End of Pathway Assessment and/or Pathway Credentialing Opportunity:
NOCTI Early Childhood Education and Care – Basic

Early Childhood Care & Education II

Students in this pathway are introduced to teaching in diverse and inclusive environments, including homes, schools, and other community settings, which serve children from birth to age 8 and their families. Child-centered and culturally sensitive practices are emphasized throughout the pathway, focusing on the need for multiple methods of instruction to accommodate a broad range of learners.

Level	Course Name	Course Code	Course Abbreviation
Level 1	Early Childhood Education I	20.52810	ET-ECE
Level 2	Early Childhood Education II	20.42400	ET-ECEII
Level 4	Early Childhood Education Practicum	20.42600	ET-ECEP

*Levels 1, 2, and 3 are required for pathway completion.

Course Descriptions

20.52810   Early Childhood Education I   Grades 9-11
The Early Childhood Education I course is the foundational course under the Early Childhood Care & Education pathway and prepares the student for employment in early childhood education and services. The course addresses the knowledge, skills, attitudes, and behaviors associated with supporting and promoting optimal growth and development of infants and children. The pre-requisite for this course is advisor approval.

20.42400   Early Childhood Education II   Grades 9--12
Early Childhood Education II is the second course in the Early Childhood Care and Education pathway and further prepares the student for employment in early childhood care and education services. The course provides a history of education, licensing and accreditation requirements, and foundations of basic observation practices and applications. Early childhood care, education, and development issues are also addressed and include health, safety, and nutrition education; certification in CPR/First Aid/Fire Safety; information about child abuse and neglect; symptoms and prevention of major childhood illnesses and diseases; and prevention and control of communicable illnesses.

20.42600   Early Childhood Education Practicum   Grades 10-12
The practicum offers a candidate in the Early Childhood Education career pathway a field experience under the direct supervision of a certified early childhood educator (mentor). This field experience may be used as partial requirements for the candidate to earn the nationally recognized CDA credential. The practicum stresses observing, analyzing, and classifying activities of the mentor and comparing personal traits with those of successful early childhood educators. The candidate intern will develop a portfolio of their skills, plan and teach a lesson or lessons, understand and practice confidentiality as it pertains to the teaching profession, meet the needs of students with special needs, maintain the safety of the students, practice professionalism, and demonstrate ethical behavior.

End of Pathway Assessment and/or Pathway Credentialing Opportunity:
NOCTI Early Childhood Education and Care – Basic
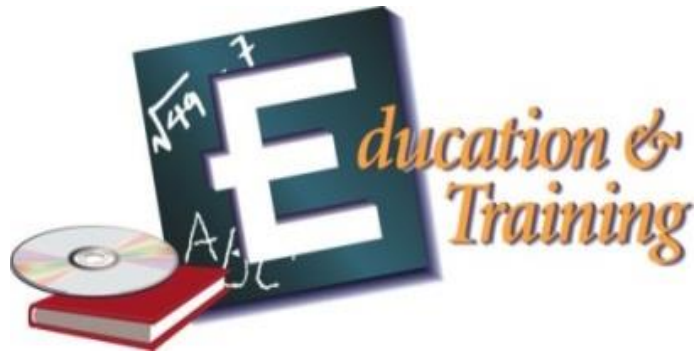
Georgia Performance Standards

Cluster Description

The Energy Career Cluster prepares individuals for careers in the designing, planning, maintaining, generating, transmission, and distribution of traditional and alternative energy.

Pathways

Energy Systems
49.53700 Foundations of Energy Technologies
21.45100 Energy and Power Technology
21.45700 Appropriate and Alternative Energy Technologies

Energy and Power: Generation, Transmission, and Distribution
49.53700 Foundations of Energy Technologies
49.53800 Energy and Power: Generation, Transmission, Distribution
49.53900 Energy Systems Applications

Career and Technical Student Organization (CTSO)

TSA   http://www.tsaweb.org
Technology Student Association (TSA) is a national, non-profit organization for students with an interest in technology. TSA members learn problem-solving, decision-making, critical thinking and leadership skills as they relate to design, communications, power, energy, transportation, engineering, manufacturing, construction and biotechnology. TSA strives to meet the educational needs and challenges of all students in an increasingly and ever-changing technological world.

Energy Systems

This pathway will introduce students to energy systems technologies. Students will understand mechanical, electrical, fluid, and alternate systems.   Students will also identify and understand energy resources. This pathway will cover the codes, regulations, and industry standards that are currently in place for sustainable energy buildings and Green Buildings. Evaluation of a building style and the energy efficient materials used in its construction will be included. Students will develop an awareness of the energy crisis and the use of alternative energy.

Level	Course Name	Course Code	Course Abbreviation
Level 1	Foundations of Energy Technologies	49.53700	ENRG-FET
Level 2	Energy and Power Technology	21.45100	ENRG-EPT
Level 3	Appropriate and Alternative Energy Technologies	21.45700	ENRG-AAET

*Levels 1, 2, and 3 are required for pathway completion.

Course Descriptions

49.53700   Foundations of Energy Technologies   Grades 9-11
This introductory course is designed to allow students to develop a broad understanding of the energy industry including infrastructure, generation, transmission and distribution of nonrenewable, renewable, and inexhaustible energy sources. Energy sources will be researched to include the regional and global economic implications, environmental, and sustainability issues. Students will explore future trends of energy and power. Students will develop, through research, an alternative energy system that will demonstrate their understanding of a unique, as well as appropriate, approach to energy and power generation.

21.45100   Energy and Power Technology   Grades 9--12
As the second course in the Energy Systems Pathway, this introductory course explores the relationship between force, work, energy, and power. Students study the characteristics, availability, conversion, control, transmission, and storage of energy and power. Students will explore and apply the principles of electrical and mechanical power systems. Students will research renewable, non-renewable resources and conservation efforts. Students will develop an awareness of the many careers that exist in energy and related technologies and their related safety regulations. Prerequisite for this course is satisfactory completion of Foundations of Engineering and Technology.

21.45700   Appropriate and Alternative Energy Technologies   Grades 10-12
As the third course in the Energy Systems Pathway, students will develop an understanding of the differences between nonrenewable and renewable energy sources and how these energy sources affect their world. Alternative energy sources will be researched to include the regional implications and economic, environmental, and sustainability issues. Students will evaluate the positive and negative impacts of nuclear power and its relevancy to various situations in today's society. Students will explore future trends of energy, power, and transportation. Students will develop, through research, an alternative energy system that will demonstrate their understanding of a unique, as well as appropriate, approach to energy generation. The prerequisite for this course is Energy and Power Technology.

End of Pathway Assessment and/or Pathway Credentialing Opportunity:
NOCTI Engineering Assessment

Energy and Power: Generation, Transmission, and Distribution

The Energy and Power: Generation, Transmission, and Distribution pathway allows students to learn the key concepts and methods of energy systems, applications and efficiency. Students will also explore how energy is converted into useful services and the role of increased efficiency in providing those services with less energy. The different forms of efficiency improvements and conservation are introduced, drawing upon examples in transportation, buildings, and industry. The practical implications of public policies, behavior, and economics are interspersed with technical and theoretical aspects. Key concepts include how to convert and design efficient energy systems.

Level	Course Name	Course Code	Course Abbreviation
Level 1	Foundations of Energy Technologies	49.53700	ENRG-FET
Level 2	Energy and Power: Generation, Transmission, Distribution	49.53800	ENGR-EPGTD
Level 3	Energy Systems Applications	49.53900	ENGR-ESA

*Levels 1, 2, and 3 are required for pathway completion.

Course Descriptions

49.53700   Foundations of Energy Technologies   Grades 9-11
This introductory course is designed to allow students to develop a broad understanding of the energy industry including infrastructure, generation, transmission and distribution of nonrenewable, renewable, and inexhaustible energy sources. Energy sources will be researched to include the regional and global economic implications, environmental, and sustainability issues. Students will explore future trends of energy and power. Students will develop, through research, an alternative energy system that will demonstrate their understanding of a unique, as well as appropriate, approach to energy and power generation.

49.53800   Energy and Power: Generation, Transmission, Distribution   Grades 9--12
Energy and Power: Generation, Transmission, and Distribution is the second course in the Energy Systems pathway. In this course, students will continue to learn about energy and power industry fundamentals by furthering their knowledge regarding electric power generation, transmission and distribution. In addition, the students will gain knowledge about business models, regulations, and safety within the energy industry.

49.53900   Energy Systems Applications   Grades 10-12
As the third course, Energy Systems Applications explores the relationship between force, work, energy, and power. Students study the characteristics, availability, conversion, control, transmission, and storage of energy and power, as well as examine and apply the principles of electrical, fluid, and mechanical power. Students research renewable, non-renewable, and inexhaustible resources and conservation efforts. Using their course-acquired skills, students will further understand the many careers that exist in energy and related technologies.

End of Pathway Assessment and/or Pathway Credentialing Opportunity:
NOCTI Engineering Assessment

Georgia Performance Standards

Cluster Description
The Finance Career Cluster focuses on money management, including planning, investing, and spending. Students will gain career development skills for the finance world with opportunities that expand beyond basic business skills into financial literacy, banking, investing, insurance, and risk management.

Pathways
Advanced Accounting
07.44130 Introduction To Business & Technology
07.41100 Principles of Accounting I
07.41200 Principles of Accounting II

Business Accounting
07.44130 Introduction To Business & Technology
07.42600 Financial Literacy
07.41100 Principles of Accounting I

Financial Services
07.44130   Introduction to Business & Technology
07.42600 Financial Literacy
07.43100 Banking, Investing, and Insurance

Career and Technical Student Organization (CTSO):

FBLA   http://fbla-pbl.org
Future Business Leaders of America-Phi Beta Lambda is a nonprofit education association of students preparing for careers in business and business-related fields. The FBLA Mission is to bring business and education together in a positive working relationship through innovative leadership and career development programs.

Advanced Accounting

This pathway exposes student to the profession of accounting and related business functions. Includes instruction in accounting principles and theory, financial accounting, managerial accounting, cost accounting, budget control, tax accounting, legal aspects of accounting, auditing, reporting procedures, statement analysis, planning and consulting, business information systems, accounting research methods, professional standards and ethics, and applications to specific for-profit, public, and non-profit organizations.

Level	Course Name	Course Code	Course Abbreviation
Level 1	Introduction To Business & Technology	07.44130	FIN-IBT
Level 2	Principles of Accounting I	07.41100	FIN-PA1
Level 3	Principles of Accounting II	07.41200	FIN-PA2

*Levels 1, 2, and 3 are required for pathway completion.

Course Descriptions

07.44130   Introduction To Business & Technology   Grades 9-11
Introduction to Business & Technology is the foundational course for Business and Technology, Entrepreneurship, and Human Resources Management pathways. The course provides an overview of business and technology skills required for today's business environment. Knowledge of business principles, the impact of financial decisions, and technology proficiencies demanded by business combine to establish the elements of this course. Emphasis is placed on developing proficient fundamental computer skills required for all career pathways. Students will learn essentials for working in a business environment, managing a business, and owning a business.

07.41100   Principles of Accounting I   Grades 9--12
Principles of Accounting 1 is a skill-level course that is of value to all students pursuing a strong background in business, marketing, and management. Using financial information, students will learn how to make decisions about planning, organizing, and allocating resources using accounting procedures. Performing accounting activities for sole proprietorships and corporations following Generally-Accepted Accounting Procedures are included in the course. Students analyze business transactions and financial statements, perform payroll, and evaluate the effects of transactions on the economic health of a business.

07.41200   Principles of Accounting II   Grades 10-12
Building on the foundation knowledge acquired in Principles of Accounting I, students will extend their skills and knowledge in accounting. By performing accounting activities for various business entities following Generally-Accepted Accounting Procedures, students will apply their skills and knowledge in applicable format. Uncollectible accounts, plant assets, inventory, notes payable and receivable, prepaid and accrued expenses, and unearned and accrued revenues are analyzed and related adjustments are calculated. Students will apply managerial accounting techniques. Students enrolled in this course should have successfully completed Introduction to Business & Technology and Principles of Accounting I.

End of Pathway Assessment and/or Pathway Credentialing Opportunity:
NOCTI Accounting—Advanced

Business Accounting

This pathway exposes student to the profession of accounting and related business functions. Includes instruction in accounting principles and theory, financial accounting, managerial accounting, cost accounting, budget control, tax accounting, legal aspects of accounting, auditing, reporting procedures, statement analysis, planning and consulting, business information systems, accounting research methods, professional standards and ethics, and applications to specific for-profit, public, and non-profit organizations.

Level	Course Name	Course Code	Course Abbreviation
Level 1	Introduction To Business & Technology	07.44130	FIN-IBT
Level 2	Financial Literacy	07.42600	FIN-FL
Level 3	Principles of Accounting I	07.41100	FIN-PA1

*Levels 1, 2, and 3 are required for pathway completion.

Course Descriptions

07.44130   Introduction to Business & Technology   Grades 9-11
Introduction to Business & Technology is the foundational course for Business and Technology, Entrepreneurship, and Human Resources Management pathways. The course provides an overview of business and technology skills required for today's business environment. Knowledge of business principles, the impact of financial decisions, and technology proficiencies demanded by business combine to establish the elements of this course. Emphasis is placed on developing proficient fundamental computer skills required for all career pathways. Students will learn essentials for working in a business environment, managing a business, and owning a business.

07.42600   Financial Literacy   Grades 10-12
This course specifically designed for high school students to understand the importance of the financial world, including planning and managing money wisely. Areas of study taught through application in personal finance include sources of income, budgeting, banking, consumer credit, credit laws and rights, personal bankruptcy, insurance, spending, taxes, investment strategies, savings accounts, mutual funds and the stock market, buying a vehicle, and living independently. Based on the hands-on skills and knowledge applied in this course, students will develop financial goals, and create realistic and measurable objectives. Students enrolled in this course should have successfully completed Introduction to Business & Technology.

07.41100   Principles of Accounting I   Grades 9--12
Principles of Accounting 1 is a skill-level course that is of value to all students pursuing a strong background in business, marketing, and management. Using financial information, students will learn how to make decisions about planning, organizing, and allocating resources using accounting procedures. Performing accounting activities for sole proprietorships and corporations following Generally-Accepted Accounting Procedures are included in the course. Students analyze business transactions and financial statements, perform payroll, and evaluate the effects of transactions on the economic health of a business.

End of Pathway Assessment and/or Pathway Credentialing Opportunity:
NOCTI Accounting—Basic

Financial Services

This pathway prepares students to plan, manage, and analyze the financial and monetary aspects and performance of business enterprises, banking institutions, or other organizations. Includes instruction in financial instruments; capital planning; funds acquisition; asset and debt management; budgeting; financial analysis; and investments and portfolio management.

Level	Course Name	Course Code	Course Abbreviation
Level 1	Introduction to Business & Technology	07.44130	FIN-IBT
Level 2	Financial Literacy	07.42600	FIN-FL
Level 3	Banking, Investing, and Insurance	07.43100	FIN-BII-1

*Levels 1, 2, and 3 are required for pathway completion.

Course Descriptions

07.44130   Introduction to Business & Technology   Grades 9-11
Introduction to Business & Technology is the foundational course for Business and Technology, Entrepreneurship, and Human Resources Management pathways. The course provides an overview of business and technology skills required for today's business environment. Knowledge of business principles, the impact of financial decisions, and technology proficiencies demanded by business combine to establish the elements of this course. Emphasis is placed on developing proficient fundamental computer skills required for all career pathways. Students will learn essentials for working in a business environment, managing a business, and owning a business.

07.42600   Financial Literacy   Grades 10-12
This course specifically designed for high school students to understand the importance of the financial world, including planning and managing money wisely. Areas of study taught through application in personal finance include sources of income, budgeting, banking, consumer credit, credit laws and rights, personal bankruptcy, insurance, spending, taxes, investment strategies, savings accounts, mutual funds and the stock market, buying a vehicle, and living independently. Based on the hands-on skills and knowledge applied in this course, students will develop financial goals, and create realistic and measurable objectives. Students enrolled in this course should have successfully completed Introduction to Business & Technology.

07.43100   Banking, Investing, and Insurance   Grades 9--12
Explore the financial world as students dive into the main areas of financial services, including banking, investing, and insurance. Basics of banking and credit include a brief history of money and banking, negotiable instruments, creation of credit, and the function of banks. Methods for measuring the financial performance of financial institutions are analyzed. Students will be introduced to a variety of investment options and learn to determine the appropriate options for an investment goal. By analyzing financial reports and employing other tools to predict growth rates and return on investment, students will develop strategies to produce financial growth strategies for a business.

End of Pathway Assessment and/or Pathway Credentialing Opportunity:
NOCTI Financial & Investment Planning

Georgia Performance Standards

Government & Public Administration

Cluster Description

The Government & Public Administration Career Cluster includes the planning and performing of government management and administrative functions at local, state, and federal levels. Careers are available in national security, foreign service, revenue, and regulations. The goal of the Junior Reserve Officer Training Corps (JROTC) is to provide secondary school students the opportunity to become better informed, responsible citizens through a military environment. Sixty percent of the curriculum focuses on development of academic areas including United States military history, national security, meteorology, astronomy, aerospace vehicles and environment (aircraft, rocketry satellite, and spacecraft) Management, communications, survival, navigation, and physical fitness. Forty percent of class time is spent in developing leadership skills and military courtesies and customs.

**Click here to view the Government and Public Administration Performance Standards.

Pathways

JROTC - Air Force
Aerospace Science Leadership 100
Aerospace Science Leadership 200
Aerospace Science: Cultural Studies
Aerospace Science: Leadership 300
Aerospace Science: Space Exploration
Aerospace Science: Leadership 400
Aerospace Science: Aviation History
Aerospace Science: Survival
Aerospace Science: Honors Ground School

JROTC - Army
28.03100 JROTC Army Leadership 1
28.03200 JROTC Army Leadership 2
28.03300 JROTC Army Leadership 3
28.03400 JROTC Army Leadership 4
28.03500 JROTC Army Leadership 5
28.03600 JROTC Army Leadership 6
28.03700 JROTC Army Leadership 7
28.03800 JROTC Army Leadership 8

Government & Public Administration

Cluster Description

The Government & Public Administration Career Cluster includes the planning and performing of government management and administrative functions at local, state, and federal levels. Careers are available in national security, foreign service, revenue, and regulations. The goal of the Junior Reserve Officer Training Corps (JROTC) is to provide secondary school students the opportunity to become better informed, responsible citizens through a military environment. Sixty percent of the curriculum focuses on development of academic areas including United States military history, national security, meteorology, astronomy, aerospace vehicles and environment (aircraft, rocketry satellite, and spacecraft) Management, communications, survival, navigation, and physical fitness. Forty percent of class time is spent in developing leadership skills and military courtesies and customs. The program also provides college scholarship opportunities and Military Academy appointments for qualified individuals.

Additional Pathways

JROTC Marines

28.04100 MCJROTC Leadership Education I
28.04200 MCJROTC Leadership Education II
28.04300 MCJROTC Leadership Education III
28.04400 MCJROTC Leadership Education IV
28.04500 MCJROTC Leadership Education V
28.04600 MCJROTC Leadership Education VI
28.04700 MCJROTC Leadership Education VII
28.04800 MCJROTC Leadership Education VIII

JROTC - Navy

28.02100 Naval Science I Cadet Field Manual
28.02200 Naval Science I Introduction to NJROTC
28.02300 Naval Science II Maritime History
28.02400 Naval Science II Nautical Science
28.02500 Naval Science III Naval Knowledge
28.02600 Naval Science III Naval Orientation and Skills
28.02700 Naval Science IV Naval Leadership and Ethics
28.02800 Naval Science IV Effective Communications

JROTC - Air Force

The AFJROTC program is a 4-year program that teaches students Aerospace Science, leadership, and citizenship skills. Each year is divided into two categories: academics and leadership. Academic studies include aviation history, science of flight, astronomy and private pilot training. Leadership studies include Air Force customs and courtesies, cadet corps activities, study habits, time management, communication skills and leadership and management studies. All students are expected to wear the uniform (issued free) once a week. Students are expected to participate in field training activities and community/school service projects.

Level	Course Name	Course Code
Level 1	Aerospace Science Leadership 100	28.01100
Level 2	Aerospace Science Leadership 200	28.01200
Level 3	Aerospace Science: Cultural Studies	28.01300
Level 4	Aerospace Science: Leadership 300	28.01400
Level 5	Aerospace Science: Space Exploration	28.01500
Level 6	Aerospace Science: Leadership 400	28.01600
Level 7	Aerospace Science: Aviation History	28.01700
Level 8	Aerospace Science: Survival	28.01800
Level 9	Aerospace Science: Honors Ground School	28.01900

*Levels 1, 2, and 3 are required for pathway completion.

Course Descriptions

28.01100   Aerospace Science Leadership 100
The aviation history course provides students a background of the development of flight from early myths to the present as part of an historical overview of American warfare. Students will focus on aviation issues, objectives, strategy, technology, scientific advances, forces, milestones, and assessments. Students examine major figures in aviation history while investigating the heritage of flight, the development of air power through the use of scientific knowledge, the historic role of airpower during wartime, aerospace aviation technological advances, and contemporary aviation.

28.01200   Aerospace Science Leadership 200
The second year is a science course designed to acquaint the student with the aerospace environment, the human requirements of flight, principles of aircraft flight, and principles of navigation. The course begins with a discussion of the atmosphere and weather. After developing an understanding of the environment, how that environment affects flight is introduced. Discussions include the forces of lift, drag, thrust, and weight. Students also learn basic navigation including map reading, course plotting, and the effects of wind. The portion on the Human Requirements of Flight is a survey course on human physiology. Discussed here are the human circulatory system, the effects of acceleration and deceleration, and protective equipment. Basic concepts of aircraft flight, high school math, physics, and science are brought to life as students study The Science of Flight.

28.01300   Aerospace Science: Cultural Studies
Cultural Studies is a multidisciplinary course that introduces students to various regions of the world from a geographic, historical and cultural perspective. The course provides increased international awareness and insight into foreign affairs that permits a more educated understanding of other cultures and enhanced knowledge of America's interests and role in the world. Geopolitical issues such as terrorism, economics, politics, military issues, religion, environmental concerns, human rights, disease, over population, literacy, the migration of peoples and other cultural issues will be examined. The regional areas included in this course are Europe, the Middle East, South Asia, East Asia, Africa, and Latin America.

28.01400   Aerospace Science: Leadership 300
Explorations: An Introduction to Astronomy guides students through the history of astronomy starting with the Chinese and ending with today's scientific discoveries. Students learn about the scientific reasons for the composition of celestial objects in the Milky Way using the laws of physics. They review the discoveries various astronomers and scientists have made, concluding with recent efforts to learn more about objects in our universe.   Basic concepts of space, high school math, and science are brought to life as students study this introduction to astronomy.

28.01500   Aerospace Science: Space Exploration
Aerospace Science: The Exploration of Space guides students through an all new world of satellites, orbits, space environments and travel to other planets. Students gain great insights into how and why we go to so much trouble to put complicated satellites into orbit. The discoveries and sacrifices of many space pioneers are highlighted in this course. Basic concepts of space flight, high school math, physics, and science are brought to life as students study space exploration.

28.01600   Aerospace Science: Leadership 400
Leadership, Life Skills and Career Opportunities discusses principles of management. It includes definitions and histories of the discipline, conflict management, negotiation, and mentoring. It covers management techniques including principles and functions of management; management decisions involving conflict management, personal coping mechanisms, skills, roles, performance of management, and delegation; management functions of problem solving, decision making, negotiation, and mentoring, and managing one's self and others by managing self-development, time, and information.

28.01700   Aerospace Science: Aviation History
This course studies aviation history, focusing on the development of flight throughout the centuries. It starts with ancient civilizations, then progresses through time to modern day. The emphasis is on civilian and military contributions to aviation; the development, modernization, and transformation of the Air Force; and a brief astronomical and space exploration history. The course includes concise overviews of the principles of flight to include basic aeronautics, aircraft motion and control, flight power, and rockets.

28.01800   Aerospace Science: Survival
Survival introduces students to the physical and mental needs individuals must satisfy during varied survival situation. Students learn about survival preparedness, conditions affection survival, individual survivor needs, psychological aspects of survival, and the will to survive.   They also learn required personal protection measures, where to find necessities required to maintain life, and orientation and traveling techniques to use during a survival situation. Students will learn what to do to maintain life in a survival situation—whether that situation is caused by a natural or manmade disaster. They learn to quickly assess their environment, determine immediate and long term actions for survival, and scientifically pursue survival in an unfamiliar environment.

28.01900   Aerospace Science: Honors Ground School
Aviation Honors Ground School is an advanced, more in depth study of previous aerospace topics. The course is the foundation for students interested in receiving a private pilot's license. Upon successful completion of this course, the student will be prepared to take the Federal Aviation Administration (FAA) Private Pilot Written Exam.

JROTC – Army

The mission of the United States Army Junior Reserve Officer Training Corps (JROTC) Program is to motivate young people to be better citizens. The program is offered as an academic elective and the grade received is included in the student's overall grade point average. Program objectives are to: provide and encourage citizenship; promote high school completion; develop leadership potential; strengthen self-esteem; improve wellness and physical fitness; provide an incentive to live drug-free; and enhance life skills.

Major subject areas in the JROTC curriculum are: Leadership and Patriotism (decision making, problem-solving, teamwork, moral responsibility, respect for constituted authority, personal and group success), Communication (communicate and listen effectively, improve verbal and written skills, interview and presentation methods), Citizenship and History (ethical values, rights and responsibilities, role of military in a democracy, current events, importance of citizenship in American History), Life Management Skills (self-reliance, goal setting, time management, financial management, stress reduction, increase self-confidence, overcome fear of failure, career options and opportunities), Wellness and Physical Fitness (first aid training, good health and appearance, drug prevention, importance of diet and exercise). No military obligation is incurred by participation in the program, though all students are expected to wear the uniform (issued free) once a week. Students are expected to participate in field training activities and community/school service projects. Successful graduates of this program can earn scholarships to a college or university. Entry-level active military pay is increased if a student has had at least two years of high school ROTC.

Level	Course Name	Course Code
Level 1	JROTC Army Leadership 1	28.03100
Level 2	JROTC Army Leadership 2	28.03200
Level 3	JROTC Army Leadership 3	28.03300
Level 4	JROTC Army Leadership 4	28.03400
Level 5	JROTC Army Leadership 5	28.03500
Level 6	JROTC Army Leadership 6	28.03600
Level 7	JROTC Army Leadership 7	28.03700
Level 8	JROTC Army Leadership 8	28.03800

*Levels 1, 2, and 3 are required for pathway completion.

Course Descriptions

28.03100   JROTC Army Leadership 1

Junior Reserve Officer Training Corps (JROTC) is a leadership education program. This program will help students build a strong knowledge base of self-discovery and leadership skills applicable to many leadership and managerial situations. Mastery of these standards through project-based learning, service learning and leadership development activities will prepare students for 21st Century leadership responsibilities. This laboratory course is designed to introduce students to the history, customs, traditions and purpose of the Army JROTC program. It teaches students strategies to maximize their potential for success through learning and self-management. Basic leadership skills to include leadership principles, values and attributes and communications skills are integrated throughout the course.

28.03200   JROTC Army Leadership 2
This laboratory course is designed to build on the self-discovery skills sets taught in JROTC 1. As self-directed learners, students study the fundamentals citizenship skills, the foundation of the American political system and our Constitution. Personal responsibility and wellness is reinforced by diet, nutrition and physical fitness activities. Drug and alcohol awareness and prevention are reinforced. Students are placed in leadership roles that enable them to demonstrate an understanding of basic leadership principles, values and attributes.

28.03300   JROTC Army Leadership 3
Junior Reserve Officer Training Corps (JROTC) is a leadership education program. This program will help students build a strong knowledge base of self-discovery and leadership skills applicable to many leadership and managerial situations. Mastery of these standards through project-based learning, service learning and leadership development activities will prepare students for 21st Century leadership responsibilities. Students develop an in-depth understanding of the branches of military service. Intermediate leadership skills to include leadership principles, values and attributes and communications skills are integrated throughout the course. Financial planning skills are studied through the National Endowment for Financial Education. Fundamental teaching skills are introduced.

28.03400   JROTC Army Leadership 4
This laboratory course is designed build on the leadership skills developed in JROTC 3. Students develop an in-depth understanding of the branches of military service. Intermediate leadership skills to include leadership principles, values and attributes and communications skills are integrated throughout the course. Financial planning skills are studied through the National Endowment for Financial Education. Fundamental teaching skills are introduced.

28.03500   JROTC Army Leadership 5
This laboratory course allows students to investigate the interrelationships of the different branches of the service while it continues to build student leadership development and decision making skills. Goal setting, leadership supervision and meetings incorporated into project based learning and service learning opportunities. Geography, map reading and the practical application of land navigation and orienteering are introduced.

28.03600   JROTC Army Leadership 6
This laboratory course expands on the skills taught in JROTC 5. It focuses on creating a positive leadership situation, team development, project management and the importance of mentoring as a leader or as a follower. Students are given the opportunity to demonstrate leadership potential in an assigned command or staff position within the cadet battalion organizational structure. Interactions between groups of people and how they affect the area's cultural, economic, and political characteristics are included.

28.03700   JROTC Army Leadership 7
This laboratory course expands on the skills taught in JROTC 6. It focuses on creating a positive leadership situation, team development, project management and the importance of mentoring as a leader or as a follower. Interactions between groups of people and how they affect the area's cultural, economic, and political characteristics are included. Students are given the opportunity to demonstrate leadership potential in an assigned command or staff position within the cadet battalion organizational structure.

28.03800   JROTC Army Leadership 8
This laboratory course expands on the skills taught in JROTC 7 and reinforces previous leadership experiences. It allows students to continue to build their leadership, management, decision making and negotiating skills by serving in a variety of staff or leadership positions. Students create a career portfolio to plan for college or work. Students are expected to take leadership roles in the battalion and participate in community service or service learning projects based on their level of leadership development.

JROTC Marines

Marine Corps JROTC (MCJROTC) Leadership Education develops good citizenship, self-confidence and self-discipline. Leadership Education classes introduce cadets to the elements of Leadership, Military Customs, Drill and ceremonies, Uniform Inspections, Physical Fitness Training, Marksmanship, and Marine Corps history. Cadets are required to participate in civic service, and wear a uniform at least once weekly.

MCJROTC prepares high school students for responsible leadership roles while making them aware of their rights, responsibilities, and privileges as American citizens. As a cadet gains experience and knowledge, he or she will be given active, hands-on leadership responsibilities with the JROTC Program.

Benefits of the Marine Corps Junior ROTC Program include improved self-esteem, increased time management skills, development of leadership skills, increased knowledge and appreciation for the military. No military obligation is incurred by participation in the program, though all students are expected to wear the uniform (issued free) once a week. Students are expected to participate in field training activities and community/school service projects. Successful graduates of this program can earn scholarships to a college or university. Entry-level active military pay is increased if a student has had at least two years of high school ROTC.

Level	Course Name	Course Code
Level 1	MCJROTC Leadership Education I	28.04100
Level 2	MCJROTC Leadership Education II	28.04200
Level 3	MCJROTC Leadership Education III	28.04300
Level 4	MCJROTC Leadership Education IV	28.04400
Level 5	MCJROTC Leadership Education V	28.04500
Level 6	MCJROTC Leadership Education VI	28.04600
Level 7	MCJROTC Leadership Education VII	28.04700
Level 8	MCJROTC Leadership Education VIII	28.04800

*Levels 1, 2, and 3 are required for pathway completion.

Course Descriptions

28.04100   MCJROTC Leadership Education I
This is the initial course of Marine Corps JROTC. It includes program orientation, classroom instruction, and practical application of instructed skills. The course lays the foundations for subsequent Leadership Education courses by teaching the basics of leadership, citizenship, personal growth, appearance and responsibility, general Marine Corps knowledge, drill, and physical training. Emphasis is on introduction to leadership, citizenship, physical training and drill. Minimum performance requirements for the course are based on successful completion of competencies according to the national Marine Corps JROTC curriculum.

28.04200   MCJROTC Leadership Education II
This is the second course of Marine Corps JROTC. It includes classroom instruction and practical application of the tasks instructed.   Completion of the LE1 course is prerequisite. The course builds on the foundations attained in LE1 (leadership, citizenship, personal growth and responsibility, and general military subjects) with more emphasis in the area of General Marine Corps subjects. Career exploration, civilian marksmanship, and first aid are introduced.   Minimum performance requirements for the course are based on successful completion of competencies according to the national Marine Corps JROTC curriculum. In this course, novice leaders begin to develop their relationships in personal and practical situations.

28.04300   MCJROTC Leadership Education III
This is the third course of Marine Corps JROTC. It includes classroom instruction and practical application of instructed skills. The course builds on the foundations developed in the initial courses and begins to develop more advanced leadership skills. Leadership Education courses at this level provide elevated instruction in the basics of leadership, citizenship, personal growth, appearance and responsibility, and additional instruction and practical application general military subjects.   An introduction to career awareness is also introduced. Emphasis is on development of leadership skills, citizenship, physical training and drill. Minimum performance requirements for the course are based on successful completion of competencies according to the national Marine Corps JROTC curriculum.

28.04400   MCJROTC Leadership Education IV
This is the fourth course of Marine Corps JROTC. The course builds on the foundations developed in level 3 and continues to introduce advanced leadership instruction with emphasis on motivation and discipline. Leadership Education courses at this level provide elevated instruction in leadership, citizenship, personal growth, appearance and responsibility, career awareness, and general military subjects. Basic instruction on military law and land navigation are also introduced. Expanded instruction on rifle safety and marksmanship techniques build on basic instruction at level 2. Physical fitness is enhanced to include planning and supervision. Minimum performance requirements for the course are based on successful completion of competencies according to the national Marine Corps JROTC curriculum.

28.04500   MCJROTC Leadership Education V
This is the fifth course of Marine Corps JROTC. It includes classroom instruction and practical application of instructed tasks. Completion of the LEI through LEIV course is prerequisite. The course builds, refines and introduces cause and effect relationships dealing with the foundations attained in previous leadership classes (leadership, citizenship, personal growth and responsibility, and general military subjects), with increased emphasis in the area of general Marine Corps subjects and leadership instruction. Career exploration, financial management and responsibility, and relationships with other military services are introduced. Minimum performance requirements for the course are based on successful completion of competencies according to the national Marine Corps JROTC curriculum.

28.04600   MCJROTC Leadership Education VI
This is the sixth course of Marine Corps JROTC. It includes classroom instruction and practical application of instructed tasks. Completion of the LEI through LEV course is a prerequisite. Sequential instruction in the course includes additional study in General Military Subjects. Additional topics covered are leading close order drill activities and marksmanship competition. School and community service activities are also emphasized. Marine Corps participation in World War Two is reviewed and advanced compass and land navigation techniques are introduced. Additional instruction in the Uniform Code of Military Justice is also provided. Minimum performance requirements for the course are based on successful completion of competencies according to the national Marine Corps JROTC curriculum. The performance standards of this course are based on the performance standards identified in the course for Marine Corps JROTC.

28.04700   MCJROTC Leadership Education VII
This is the seventh course of Marine Corps JROTC. It includes classroom instruction and practical application of more advanced tasks included in the training cadets and managing assets. The course emphasizes the application of the skills acquired in the first six Leadership Education courses and provides the cadet with practical experience in leadership experiences. Performance requirements for the course are based on successful completion of competencies according to the national Marine Corps JROTC curriculum. Successful completion of at least three units of credit in the Marine Corps JROTC program qualify the student for advanced placement in a college ROTC program or accelerated promotion in the military services.

28.04800   MCJROTC Leadership Education VIII
This is the eighth course of Marine Corps JROTC. It includes classroom instruction and practical application of advanced tasks for cadets who have successfully completed the LE VII course. The course emphasizes the application of the skills acquired in the first seven Leadership Education courses and provides the cadet with practical experience in leadership and management experiences. Performance requirements for the course are based on successful completion of competencies according to the national Marine Corps JROTC curriculum. Successful completion of at least three units of credit in the Marine Corps JROTC program qualify the student for advanced placement in a college ROTC program or accelerated promotion in the military services.

JROTC - Navy

The Navy JROTC (NJROTC) curriculum emphasizes citizenship and leadership development, as well as maritime heritage, the significance of sea power, and naval topics such as the fundamentals of naval operations, seamanship, navigation and meteorology. Classroom instruction is augmented throughout the year by community service activities, drill competition, field meets, visits to naval activities, marksmanship training, and other military training.

Students will:
- Develop an appreciation of the ethical values and principles that underlie good citizenship which include integrity, responsibility and respect.
- Expand the ability to think logically and to communicate effectively both orally and in writing.
- Develop a better understanding of 'patriotism" and what it means to be an American.
- Become more informed about the importance of first aid, physical conditioning, proper diet and nutrition.
- Engage in activities that foster pride, self-respect, confidence, serf-discipline and the desire to do one's best.

No military obligation is incurred by participation in the program, though all students are expected to wear the uniform (issued free) once a week. Students are expected to participate in field training activities and community/school service projects. Successful graduates of this program can earn scholarships to a college or university. Entry-level active military pay is increased if a student has had at least two years of high school ROTC.

Level	Course Name	Course Code	Course Abbreviation
Level 1	Naval Science I Cadet Field Manual	28.02100	
Level 2	Naval Science I Introduction to NJROTC	28.02200	
Level 3	Naval Science II Maritime History	28.02300	
Level 4	Naval Science II Nautical Science	28.02400	
Level 5	Naval Science III Naval Knowledge	28.02500	
Level 6	Naval Science III Naval Orientation and Skills	28.02600	
Level 7	Naval Science IV Naval Leadership and Ethics	28.02700	
Level 8	Naval Science IV Effective Communications	28.02800	

*Levels 1, 2, and 3 are required for pathway completion.

Course Descriptions

28.02100   Naval Science I Cadet Field Manual
The purpose of this course is to combine all information on military drill and ceremonies, uniform regulations, physical fitness, orienteering, principles of health, first aid, survival, leadership, and communications. Minimum performance requirements of this course are in accordance with current Chief of Naval Education Training Instruction, NAVEDTRA 37128. The performance standards in this course are based on the performance standards identified in the curriculum for the United States Navy Junior Reserve Officer Training Corps. Successful completion of three courses of credit will qualify the student for advanced placement in a college ROTC program or accelerated promotion in the military service.

28.02200   Naval Science I Introduction to NJROTC
The purpose of this course is to help students understand the missions, goals, and opportunities available as members of the NJROTC program. This course will also introduce students to the basic principles of leadership, which combined with

the many opportunities for practical experience in the NJROTC program will prepare them for leadership roles in school and upon graduation. Students will gain an understanding of our nation, our values, traditions, heritage, respect for our laws, as well as becoming involved, responsible citizens. Minimum performance requirements of this course are in accordance with current Chief of Naval Education Training Instruction, NAVEDTRA 37128.

28.02300   Naval Science II Maritime History
The purpose of this course is to build on the general introduction provided in Naval Science I, to further develop the traits of citizenship and leadership in students, introduce cadets to the maritime history of the world and the United States from the American Revolution through the present time. The material includes Bosnia, the demise of the Soviet Union, and the September 11, 2001 terrorists' attack upon the United States. Minimum performance requirements of this course are in accordance with current Chief of Naval Education Training Instruction, NAVEDTRA 37128.

28.02400   Naval Science II Nautical Science
The purpose of this course is to introduce the various nautical sciences through classroom work and some laboratory time. The development of core skills that students should master is integrated throughout the course and includes geography, oceanography, astronomy, physical science, meteorology, and weather. Minimum performance requirements of this course are in accordance with current Chief of Naval Education Training Instruction, NAVEDTRA 37128.

28.02500   Naval Science III Naval Knowledge
The purpose of this course is to further the foundation in citizenship and leadership established in Naval Science One and Two and to expound upon the virtues of the United States citizenship with knowledge of uses of the world's waterways through the viewpoint of National power and International law. Minimum performance requirements of this course are in accordance with current Chief of Naval Education Training Instruction, NAVEDTRA 37128.

28.02600   Naval Science III Naval Orientation and Skills
The purpose of this course is to further the foundation in citizenship and leadership established in Naval Science One and Two and to provide classroom and practical application in Naval and Ship Organization. Minimum performance requirements of this course are in accordance with current Chief of Naval Education Training Instruction, NAVEDTRA 37128.

28.02700   Naval Science IV Naval Leadership and Ethics
The purpose of this course is to take a more in-depth look at what leadership is and to learn how to maximize leadership abilities. More importantly, this course will assist the student in adding the polish necessary to be a truly effective leader in the NJROTC unit, school, community, and in life. Minimum performance requirements of this course are in accordance with current Chief of Naval Education Training Instruction, NAVEDTRA 37128.

28.02800   Naval Science IV Effective Communications
The purpose of this course is to teach the students the techniques of effective communication, which is one of the most important skills that a good leader must develop in order to be successful. Minimum performance requirements of this course are in accordance with current Chief of Naval Education Training Instruction, NAVEDTRA 37128.

Georgia Performance Standards

Health Science

Cluster Description
The Health Science Career Cluster includes planning, managing, and providing services in therapeutics, diagnostics, health informatics, support areas, and biotechnology research and development.

**Click here to view the Health Science Performance Standards.

Pathways

Therapeutic Services /Allied Health and Medicine
25.52100 Introduction to Healthcare Science
25.44000 Essentials of Healthcare
25.43700 Allied Health and Medicine

Diagnostics/Phlebotomy
25.52100 Introduction to Healthcare Science
25.44000 Essentials of Healthcare
25.57400 Phlebotomy

Therapeutic Services/Sports Medicine
25.52100 Introduction to Healthcare Science
25.44000 Essentials of Healthcare
25.44600 Sports Medicine

Diagnostics/Clinical Lab
25.52100 Introduction to Healthcare Science
25.44000 Essentials of Healthcare
25.57600 Clinical Lab I
25.57700 Clinical Lab II

Therapeutic Services/Dental Science
25.52100 Introduction to Healthcare Science
25.48800 Essentials of Dental Science
25.48900 Dental Science II

Therapeutic Services/Patient Care
25.52100 Introduction to Healthcare Science
25.44000 Essentials of Healthcare
25.43600 Patient Care Fundamentals

Health Informatics/Health Information Management/Medical Office
25.52100 Introduction to Healthcare Science
25.44000 Essentials of Healthcare
25.49700 Health Information Management / Medical Office

HOSA   http://www.hosa.org
HOSA is a national student organization endorsed by the U.S. Department of Education and the Health Science Technology Education Division of ACTE. HOSA's two-fold mission is to promote career opportunities in the health care industry and to enhance the delivery of quality health care to all people. HOSA's goal is to encourage all health occupations instructors and students to join and be actively involved in the HSTE-HOSA Partnership.

Therapeutic Services /Allied Health and Medicine

Students wishing to pursue a career in the area of Therapeutic Services will receive initial exposure to the fundamental principles, practices, and essential skills used Allied Health and Medicine. This pathway includes both classroom instruction and hands-on laboratory experiences in the development of skills required Allied Health and Medicine. Areas of study include career planning, legal and professional ethics, medical terminology, documentation, communication skills, human relations, medical asepsis/infection control, vital signs, cardiopulmonary resuscitation, and first aid.

Level	Course Name	Course Code	Course Abbreviation
Level 1	Introduction to Healthcare Science	25.52100	HS-HIS
Level 2	Essentials of Healthcare	25.44000	HS-EHS
Level 3	Allied Health and Medicine	25.43700	HS-AHM

*Levels 1, 2, and 3 are required for pathway completion.

Course Descriptions

25.52100   Introduction to Healthcare Science   Grades 9-11
Introduction to Healthcare Science is the foundational course for all Health Science pathways and is a prerequisite for all other Healthcare Science pathway courses. This course will enable students to receive initial exposure to the many Healthcare Science careers as well as employability, communication, and technology skills necessary in the healthcare industry. The concepts of human growth and development, interaction with patients and family members, health, wellness, and preventative care are evaluated, as well as the legal, ethical responsibilities of today's healthcare provider. Fundamental healthcare skills development is initiated including microbiology, basic life support and first aid.

25.44000   Essentials of Healthcare   Grades 9--12
The Essentials of Healthcare is a medical-focused anatomy course addressing the physiology of each body system, along with the investigation of common diseases, disorders and emerging diseases. The prevention of disease and the diagnosis and treatment that might be utilized are addressed, along with medical terminology related to each system.

25.43700   Allied Health and Medicine   Grades 10-12
This course is designed to offer students (preferably upper classmen - juniors or seniors) the opportunity to become effective and efficient multi-skilled healthcare providers as they develop a working knowledge of various allied health opportunities. Students focusing on a career path in the healthcare field may apply classroom/lab knowledge and skills in the clinical setting as they participate in direct or simulated client care.

End of Pathway Assessment and/or Pathway Credentialing Opportunity:
National Center for Competency Testing Certified Medical Office Assistant (NCMOA), National Health Association Certified Medial Administrative Assistant (CMAA), NCHSE Precision Exam

Health Science

Therapeutic Services/Sports Medicine

The Sports Medicine pathway will help students develop skills that will give them a competitive edge in the fields of physical therapy or sports medicine. This program covers medical terminology, nutrition, kinesiology, gait training, therapeutic exercise, pharmacology, and modality and treatment techniques in physical medicine training.

Level	Course Name	Course Code	Course Abbreviation
Level 1	Introduction to Healthcare Science	25.52100	HS-IHS
Level 2	Essentials of Healthcare	25.44000	HS-EHS
Level 3	Sports Medicine	25.44600	HS-SM

*Levels 1, 2, and 3 are required for pathway completion.

Course Descriptions

25.52100   Introduction to Healthcare Science   Grades 9-11
Introduction to Healthcare Science is the foundational course for all Health Science pathways and is a prerequisite for all other Healthcare Science pathway courses. This course will enable students to receive initial exposure to the many Healthcare Science careers as well as employability, communication, and technology skills necessary in the healthcare industry. The concepts of human growth and development, interaction with patients and family members, health, wellness, and preventative care are evaluated, as well as the legal, ethical responsibilities of today's healthcare provider. Fundamental healthcare skills development is initiated including microbiology, basic life support and first aid.

25.44000   Essentials of Healthcare   Grades 9--12
The Essentials of Healthcare is a medical-focused anatomy course addressing the physiology of each body system, along with the investigation of common diseases, disorders and emerging diseases. The prevention of disease and the diagnosis and treatment that might be utilized are addressed, along with medical terminology related to each system.

25.44600   Sports Medicine   Grades 10-12
The course is appropriate for students who wish to pursue a career in healthcare with a focus on the musculoskeletal system, injury assessment, injury prevention, or rehabilitation including careers in Sports Medicine and Rehabilitative Services. This course will enable 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 introduced. Fundamental healthcare skills development is initiated, including medical terminology, kinesiology, patient assessment, record keeping, and basic life support.

End of Pathway Assessment and/or Pathway Credentialing Opportunity:
Precision Exercise Science / Sports Medicine Assessment (701)

Therapeutic Services/Dental Science

This pathway is designed for students wishing to pursue a career in the area of Dental Science. Students will receive initial exposure to dental health science technical skills and attitudes applicable to dental health occupations.

Level	Course Name	Course Code	Course Abbreviation
Level 1	Introduction to Healthcare Science	25.52100	HS-IHS
Level 2	Essentials of Dental Science	25.48800	HS-EDS
Level 3	Dental Science II	25.48900	HS-DSII

  *Levels 1, 2, and 3 are required for pathway completion.

Course Descriptions

25.52100   Introduction to Healthcare Science   Grades 9-11
Introduction to Healthcare Science is the foundational course for all Health Science pathways and is a prerequisite for all other Healthcare Science pathway courses. This course will enable students to receive initial exposure to the many Healthcare Science careers as well as employability, communication, and technology skills necessary in the healthcare industry. The concepts of human growth and development, interaction with patients and family members, health, wellness, and preventative care are evaluated, as well as the legal, ethical responsibilities of today's healthcare provider. Fundamental healthcare skills development is initiated including microbiology, basic life support and first aid.

25.48800   Essentials of Dental Science   Grades 9--12
In this course students will receive initial exposure to dental health science technical skills applicable to all dental health occupations. This course provides an overall framework of basic skills utilized in the dental field. Students are required to meet both national and intrastate professional guidelines as designated by applicable regulatory agencies such as the Occupational Safety and Health Administration (OSHA), Center for Disease Control (CDC) and the Georgia Board of Dentistry. The prerequisite for this course is Introduction to Healthcare Science Technology.

25.48900   Dental Science II   Grades 10-12
This course is designed to offer student an in-depth study and practical application of dental charting, office procedures, chair-side assisting, anatomy and physiology, and tooth morphology. Academics and other related science are integrated throughout the course. The prerequisite for this course include Introduction to Healthcare Science and Essentials of Dental Science.

End of Pathway Assessment and/or Pathway Credentialing Opportunity:
Precision Dental Assisting I and II

Diagnostics/Clinical Lab

Students wishing to pursue a career in the area of Diagnostics/Clinical Lab will receive initial exposure to the fundamental principles, practices, and essential skills used in diagnostic services. This pathway includes both classroom instruction and hands-on laboratory experiences in the development of skills required in Diagnostics/Clinical Lab. Areas of study include career planning, legal and professional ethics, microbiology, analytical chemistry and quality control procedures.

Level	Course Name	Course Code	Course Abbreviation
Level 1	Introduction to Healthcare Science	25.52100	HS-IHS
Level 2	Essentials of Healthcare	25.44000	HS-EHS
Level 3	Clinical Lab I	25.57600	HS-CLI
Optional Level 4	Clinical Lab II	25.57700	HS-CLII

*Levels 1, 2, and 3 are required for pathway completion.

Course Descriptions

25.52100   Introduction to Healthcare Science   Grades 9—11
Introduction to Healthcare Science is the foundational course for all Health Science pathways and is a prerequisite for all other Healthcare Science pathway courses. This course will enable students to receive initial exposure to the many Healthcare Science careers as well as employability, communication, and technology skills necessary in the healthcare industry. The concepts of human growth and development, interaction with patients and family members, health, wellness, and preventative care are evaluated, as well as the legal, ethical responsibilities of today's healthcare provider. Fundamental healthcare skills development is initiated including microbiology, basic life support and first aid.

25.44000   Essentials of Healthcare   Grades 9—12
The Essentials of Healthcare is a medical-focused anatomy course addressing the physiology of each body system, along with the investigation of common diseases, disorders and emerging diseases. The prevention of disease and the diagnosis and treatment that might be utilized are addressed, along with medical terminology related to each system.

25.57600   Clinical Lab I   Grades 10—12
The goal of this course is to provide fundamental clinical laboratory assistant skills and knowledge that includes the use of laboratory equipment, safety in the lab, quality control and quality assurance, chemistry, and microbiology. Students will have the opportunity to explore careers in the clinical lab industry and the education required at each level. The prerequisites for this course include Introduction to Healthcare Science and Essentials of Healthcare.

25.57700   Clinical Lab II   Grades 10—12
The goal of this course is to provide fundamental clinical laboratory-assistant skills and knowledge to include the use of laboratory equipment, safety in the lab, quality control and assurance, hematology, urinalysis, serology/immunology, immunohematology, and knowledge of phlebotomy procedures. Students will have the opportunity to explore careers in the clinical lab industry and the education required at each level. The prerequisites for this course include Introduction to Healthcare Science, Essentials of Healthcare, and Clinical Lab I.

End of Pathway Assessment and/or Pathway Credentialing Opportunity:
Precision National Health Science Assessment

Health Informatics/Health Information Management/Medical Office

In this pathway medicolegal issues surrounding the management, storage, retrieval, and release of medical records are examined including new legal issues surrounding current electronic and imaging technology developments and trends in medical records management.

Level	Course Name	Course Code	Course Abbreviation
Level 1	Introduction to Healthcare Science	25.52100	HS-IHS
Level 2	Essentials of Healthcare	25.44000	HS-EHS
Level 3	Health Information Management / Medical Office	25.49700	HS-HIMMO

*Levels 1, 2, and 3 are required for pathway completion.

Course Descriptions

25.52100   Introduction to Healthcare Science   Grades 9-11
Introduction to Healthcare Science is the foundational course for all Health Science pathways and is a prerequisite for all other Healthcare Science pathway courses. This course will enable students to receive initial exposure to the many Healthcare Science careers as well as employability, communication, and technology skills necessary in the healthcare industry. The concepts of human growth and development, interaction with patients and family members, health, wellness, and preventative care are evaluated, as well as the legal, ethical responsibilities of today's healthcare provider. Fundamental healthcare skills development is initiated including microbiology, basic life support and first aid.

25.44000   Essentials of Healthcare   Grades 9--12
The Essentials of Healthcare is a medical-focused anatomy course addressing the physiology of each body system, along with the investigation of common diseases, disorders and emerging diseases. The prevention of disease and the diagnosis and treatment that might be utilized are addressed, along with medical terminology related to each system.

25.49700   Health Information Management / Medical Office   Grades 10-12
This course will orient the student to health information management and working in a medical office. Topics include introducing students to skills and knowledge utilized in a medical office, the structure of healthcare in the United States, healthcare providers, and the structure and function of professional organizations. The course provides students with medical office computer and software skills that include hardware and software components of computers for medical record applications; database software and information management; specialized information management systems in healthcare; methods of controlling confidentiality and patient rights; and accuracy and security of health information data in computer systems. Prerequisites for this course are Introduction to Healthcare and Essentials of Healthcare.

End of Pathway Assessment and/or Pathway Credentialing Opportunity:
Precision National Health Science Assessment, NHA Certified Medical Administrative Assistant (CMAA)

Therapeutic Services/Patient Care

In this pathway medicolegal issues surrounding the management, storage, retrieval, and release of medical records are examined including new legal issues surrounding current electronic and imaging technology developments and trends in medical records management.

Level	Course Name	Course Code	Course Abbreviation
Level 1	Introduction to Healthcare Science	25.52100	HS-IHS
Level 2	Essentials of Healthcare	25.44000	HS-EHS
Level 3	Patient Care Fundamentals	25.43600	HS-PCF

*Levels 1, 2, and 3 are required for pathway completion.

Course Descriptions

25.52100   Introduction to Healthcare Science   Grades 9-11
Introduction to Healthcare Science is the foundational course for all Health Science pathways and is a prerequisite for all other Healthcare Science pathway courses. This course will enable students to receive initial exposure to the many Healthcare Science careers as well as employability, communication, and technology skills necessary in the healthcare industry. The concepts of human growth and development, interaction with patients and family members, health, wellness, and preventative care are evaluated, as well as the legal, ethical responsibilities of today's healthcare provider. Fundamental healthcare skills development is initiated including microbiology, basic life support and first aid.

25.44000   Essentials of Healthcare   Grades 9--12
The Essentials of Healthcare is a medical-focused anatomy course addressing the physiology of each body system, along with the investigation of common diseases, disorders and emerging diseases. The prevention of disease and the diagnosis and treatment that might be utilized are addressed, along with medical terminology related to each system.

25.43600   Patient Care Fundamentals   Grades 10-12
This course is designed to provide students interested in the careers that involve patient care with entry level skills most commonly associated with the career Nursing Assistant. The students are required to meet both national and intrastate professional guidelines as designated by applicable regulatory agencies such as the Occupational Health and Safety Administration (OSHA), Center for Disease Control (CDC), and the Department of Health and Human Services (HHS) with a specific focus on the Omnibus Budget Reconciliation Act of 1987 (OBRA) and the Health Insurance Portability and Accountability Act of 1996 (HIPAA).

End of Pathway Assessment and/or Pathway Credentialing Opportunity:
Certified Nursing Assistant or (Aide) (CNA) through an approved Nurse Aide Training Program (NATP)

Georgia Performance Standards

Cluster Description

The Hospitality & Tourism Career Cluster encompasses the management, marketing, and operations of restaurants, and other food services, lodging, attractions, recreation events, and travel related services.

**Click here to view the Hospitality and Tourism Performance Standards.

Pathways

Culinary Arts
20.53100 Introduction to Culinary Arts
20.53210 Culinary Arts I
20.53310 Culinary Arts II

Career and Technical Student Organization (CTSO)

FCCLA   http://www.fcclainc.org
Family, Career and Community Leaders of America, Inc. (FCCLA) is a nonprofit national career and technical student organization for young men and women in family and consumer sciences education in public and private school through grade 12.

Hospitality, Recreation and Tourism
08.47400 Marketing Principles
08.45300 Hospitality, Recreation and Tourism Essentials
08.45400 Hospitality, Recreation and Tourism Management

Sports & Entertainment Marketing
08.47400 Marketing Principles
08.47800 Introduction to Sports & Entertainment Marketing
08.48500 Advanced Sports & Entertainment Marketing

Career and Technical Student Organization (CTSO)

DECA   http://www.deca.org
Distributive Education Club of America is a student-centered, educational/professional organization with a program of leadership and career development designed specifically for students enrolled in marketing education. Marketing education prepares students for rewarding careers in marketing, management and entrepreneurship. DECA enhances that education by providing marketing-related activities based directly on classroom study.

Culinary Arts

The Culinary Arts pathway creates an awareness of opportunities within the vast areas of the Food Service Industry. This pathway incorporates developments in the areas of institutional food, fine dining and basic baking principals. Pathway completers will have a strong foundation in the basics of food preparation, safety, nutrition, and restaurant operating procedures.

Level	Course Name	Course Code	Course Abbreviation
Level 1	Introduction to Culinary Arts	20.53100	HOSP–ICA
Level 2	Culinary Arts I	20.53210	HOSP-CAI
Level 3	Culinary Arts II	20.53310	HOSP-CAII

*Levels 1, 2, and 3 are required for pathway completion.

Course Descriptions

20.53100   Introduction to Culinary Arts   Grades 9—11
Introduction to Culinary Arts is the foundational course designed to introduce students to fundamental food preparation terms, concepts, and methods in Culinary Arts where laboratory practice will parallel class work. Fundamental techniques, skills, and terminology are covered and mastered with an emphasis on basic kitchen and dining room safety, sanitation, equipment maintenance and operation procedures. The course also provides an overview of the professionalism in the culinary industry and career opportunities leading into a career pathway to Culinary Arts.

20.53210   Culinary Arts I   Grades 9—12
As the second course in the Culinary Arts Career Pathway, the prerequisite for this course is Introduction to Culinary Arts. Culinary Arts I is designed to create a complete foundation and understanding of Culinary Arts leading to postsecondary education or a food-service career. This fundamentals course begins to involve in-depth knowledge and hands-on skill mastery of culinary arts.

20.53310   Culinary Arts II   Grades 10—12
As the third course in the Culinary Arts Pathway, the prerequisite for this course is Culinary Arts I. Culinary Arts II is an advanced and rigorous in-depth course designed for the student who is continuing in the Culinary Arts Pathway and wishes to continue their education at the postsecondary level or enter the food-service industry as a proficient and well-rounded individual. Strong importance is given to refining hands-on production of the classic fundamentals in the commercial kitchen.

End of Pathway Assessment and/or Pathway Credentialing Opportunity:
NOCTI Culinary Arts Cook Level 2

Hospitality, Recreation and Tourism

This pathway prepares students for a career in Hospitality, Recreation and Tourism. This pathway will explore the tourism AND lodging industry and the role that marketing plays in each. Other topics explored include convention and meeting planning, human relations, management structures, legal and liability issues and human resource functions.

Level	Course Name	Course Code	Course Abbreviation
Level 1	Marketing Principles	08.47400	MKT-MP
Level 2	Hospitality, Recreation and Tourism Essentials	08.45300	MKT-HRTE
Level 3	Hospitality, Recreation and Tourism Management	08.45400	MKT-HRTM

*Levels 1, 2, and 3 are required for pathway completion.

Course Descriptions

08.47400   Marketing Principles   Grades 9-11
Marketing Principles is the foundational course for the Marketing and Management, Fashion Merchandising and Buying, and Marketing Communications and Promotion Pathways. Marketing Principles addresses all the ways in which marketing satisfies consumer and business needs and wants for products and services. Students develop a basic understanding of Employability, Foundational and Business Administration skills, Economics, Entrepreneurship, Financial Analysis, Human Resources Management, Information Management, Marketing, Operations, Professional Development, Strategic Management, and Global Marketing strategies.

08.45300   Hospitality, Recreation and Tourism Essentials   Grades 9--12
The second course in the Hospitality, Recreation and Tourism Pathway educates students on the basics of marketing and business in relation to the hospitality, recreation, and tourism industry in the U.S. and abroad. Students will study destination geography, world economies, and historical timelines related to major segments of the hospitality industry. Students will determine how the lodging industry uses marketing to achieve goals. The vital roles of group, convention and meeting planning, human relations, communications and ethics will be discussed along with the recreation industry segment. The prerequisite for this course is Marketing Principles.

08.45400   Hospitality, Recreation and Tourism Management   Grades 10-12
The third course in the Hospitality, Recreation and Tourism (HRT) Pathway will ensure that students develop a leadership perspective about social, environmental, economic and consumer factors impacting the HRT industry. Students will analyze operations, control systems, management structures, service levels, cost effective operations and related technology. Students will demonstrate skills in handling legal and liability issues and human resources functions. Throughout the course, students will develop an innate understanding that exemplary customer service skills define success in the industry. The prerequisite for this course is Hospitality, Recreation & Tourism Essentials.

End of Pathway Assessment and/or Pathway Credentialing Opportunity:
NOCTI Travel & Tourism

Sports & Entertainment Marketing

This pathway prepares students for versatile careers in sports and event marketing. Leading marketing organizations today are creating and managing their communications in an integrated manner, with coordination in terms of messages, positioning, and timing, all developed in support of overall organizational objectives. This pathway will help the student prepare for a key role in such organizations.

Level	Course Name	Course Code	Course Abbreviation
Level 1	Marketing Principles	08.47400	MKT-MP
Level 2	Introduction to Sports & Entertainment Marketing	08.47800	MKT-ISEM
Level 3	Advanced Sports & Entertainment Marketing	08.48500	MKT-ASEM

*Levels 1, 2, and 3 are required for pathway completion.

Course Descriptions

08.47400   Marketing Principles   Grades 9-11
Marketing Principles is the foundational course for the Marketing and Management, Fashion Merchandising and Buying, and Marketing Communications and Promotion Pathways. Marketing Principles addresses all the ways in which marketing satisfies consumer and business needs and wants for products and services. Students develop a basic understanding of Employability, Foundational and Business Administration skills, Economics, Entrepreneurship, Financial Analysis, Human Resources Management, Information Management, Marketing, Operations, Professional Development, Strategic Management, and Global Marketing strategies.

08.47800   Introduction to Sports & Entertainment Marketing   Grades 9--12
This course introduces the student to the major segments of the Sports and Entertainment Industry and the social and economic impact it 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.

08.48500   Advanced Sports & Entertainment Marketing   Grades 10-12
This course provides students opportunities to develop managerial and analytical skills and deepen their knowledge in sports/entertainment marketing. Topical units include: Marketing-Information Management, Selling, Publicity/Public Relations, Sales Promotion, Management of Promotion, Product Mix, Pricing, Positioning, and Marketing Planning.

End of Pathway Assessment and/or Pathway Credentialing Opportunity:
A*S*K Institute Fundamental Marketing Concepts

Georgia Performance Standards

Cluster Description

The Human Services Career Cluster prepares individuals for employment activities related to family and human needs such as nutrition and food science, counseling and mental health services, family and community services, personal care, and consumer services.

Pathways

Nutrition & Food Science
20.41610 Food , Nutrition & Wellness
20.41400 Food for Life
20.41810 Food Science

Interior, Fashion and Textiles
20.44100 Foundations of Interior Design
20.44500 Fundamentals of Fashion
20.44700 Textile Science

Career and Technical Student Organization (CTSO)

FCCLA   **http://www.fcclainc.org**
Family, Career and Community Leaders of America, Inc. (FCCLA) is a nonprofit national career and technical student organization for young men and women in family and consumer sciences education in public and private school through grade 12.

Additional Pathways

Personal Care Services—Cosmetology
12.54400 Introduction to Personal Care Services
12.41000 Cosmetology Services 2
12.41100 Cosmetology Services 3

Personal Care Services--Esthetics
12.54400 Introduction to Personal Care Services
12.43000 Esthetics Services 2
12.43100 Esthetics Services 3

Personal Care Services—Barbering
12.54400 Introduction to Personal Care Services
12.42000 Barbering 2
12.42100 Barbering 3

Personal Care Services—Nails
12.54400 Introduction to Personal Care Services
12.47000 Nail Care Services 2
12.47100 Nail Care Services 3

Career and Technical Student Organization (CTSO)

SkillsUSA   **http://www.skillsusa.org**
SkillsUSA is national organization that provides quality education experiences for students in leadership, teamwork, citizenship and character development. It builds and reinforces self-confidence, work attitudes and communications skills. It emphasizes total quality at work, high ethical standards, superior work skills, life-long education and pride in the dignity of work. SkillsUSA also promotes understanding of the free enterprise system and involvement in community service activities.

Nutrition & Food Science

This pathway includes broad introductory coverage the individual's involvement in nutrition and food, factors involved in consumer food choices, in food selection, in food preparation, career opportunities in nutrition and food occupations, and commercial food preparation.

Level	Course Name	Course Code	Course Abbreviation
Level 1	Food , Nutrition & Wellness	20.41610	HUM-FNW
Level 2	Food for Life	20.41400	HUM-FL
Level 3	Food Science	20.41810	HUM-FS

  *Levels 1, 2, and 3 are required for pathway completion.

Course Descriptions

20.41610   Food , Nutrition & Wellness   Grades 9-11
Food, Nutrition and Wellness is the foundational course in the nutrition and food science pathway. The focus of the course is centered on healthy food and lifestyle choices. Students will investigate the interrelationship of food, nutrition and wellness to promote good health.

20.41400   Food for Life   Grades 9—12
Food for Life is an advanced course in food and nutrition that addresses the variation in nutritional needs at specific stages of the human life cycle: lactation, infancy, childhood, adolescence, and adulthood including elderly. 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 emphasized. This course provides knowledge for real life and offers students a pathway into dietetics, consumer foods, and nutrition science careers with additional education at the post-secondary level.

20.41810   Food Science   Grades 10-12
Food science integrates many branches of science and relies on the application of the rapid advances in technology to expand and improve the food supply. Students will evaluate the effects of processing, preparation, and storage on the quality, safety, wholesomeness, and nutritive value of foods. Building on information learned in Nutrition and Wellness and Chemistry, this course illustrates scientific principles in an applied context, exposing students to the wonders of the scientific world. Related careers will be explored.

End of Pathway Assessment and/or Pathway Credentialing Opportunity:
NRAEF – ServSafe

Interior, Fashion and Textiles

The Interior Design pathway is designed to expose students to a variety of opportunities in the field of both residential and non-residential interior design. The focus of the pathway is technical knowledge, professional practices, and aesthetic principles. Curriculum content includes residential and non-residential interior design, architectural drafting, computer-aided design, and universal design. Also included are basic design, history of interiors and furnishings, color theory, products, business practices, and graphic presentations.

Level	Course Name	Course Code	Course Abbreviation
Level 1	Foundations of Interior Design	20.44100	HUM-FID
Level 2	Fundamentals of Fashion	20.44500	HUM-FF
Level 3	Textile Science	20.44700	HUM-TS

*Levels 1, 2, and 3 are required for pathway completion.

Course Descriptions

20.44100   Foundations of Interior Design   Grades 9-11
This course introduces the student to the basic fundamentals of design and the interior design profession. The skills taught throughout the course will allow the student to investigate and explore the various careers within the aspects of interior design. Students will gain knowledge of the history of interior furnishings.

20.44500   Fundamentals of Fashion   Grades 9--12
The Fundamentals of Fashion course introduces the students to the fascinating world of how textiles are woven into the fabric of everyday life. This course is designed to advance student skills in the selection, purchase, design, care, and construction of textile products. The course emphasizes critical-thinking skills needed for making wise consumer choices and career decisions. Contextual learning experiences further develop critical-thinking skills needed for success in the professional environment and merchandising. Integration of Family Career and Community Leaders of America (FCCLA) greatly enhances this curriculum.

20.44700   Textile Science   Grades 10-12
The Textile Science course introduces students to the fascinating world of fabrics, fibers, dyes and fabric construction of the textile industry. Textiles for apparel, interior furnishings, and industrial applications are investigated. The course introduces students to testing methods, labeling laws, trends, applications, and color forecasting. Various career paths will be researched to determine educational levels, salary expectations, and growing industry demands.

End of Pathway Assessment and/or Pathway Credentialing Opportunity:
NOCTI – Interior Decorating & Design

Personal Care Services—Cosmetology

This pathway introduces the cosmetology profession. Instruction is provided on the various methods of disinfection, sanitation, and safety used in the cosmetology industry. This pathway introduces various types of scalp treatments, hair and scalp structures, and hair disorders. Training is provided in a lab or classroom setting. Instruction is provided on the laws, rules and regulations and how they govern the cosmetology industry.

Level	Course Name	Course Code	Course Abbreviation
Level 1	Introduction to Personal Care Services	12.54400	HUM-IPCS
Level 2	Cosmetology Services 2	12.41000	HUM-CSII
Level 3	Cosmetology Services 3	12.41100	HUM-CSIII

*Levels 1, 2, and 3 are required for pathway completion.

Course Descriptions

12.54400 Introduction to Personal Care Services Grades 9-11
This course introduces both fundamental theory and practices of the personal care professions including nail technicians, estheticians, barbers, and cosmetologists. Emphasis will be placed on professional practices and safety. Areas addressed in this course include: state rules and regulations, professional image, bacteriology, decontamination and infection control, chemistry fundamentals, safety, Hazardous Duty Standards Act compliance, and anatomy and physiology. Pre-requisite for this course is advisor approval.

12.41000 Cosmetology Services II Grades 9--12
This course is designed to enhance the understanding of anatomy of the skin and hair relating to the Cosmetology Industry. Students will master shampooing, permanent waving, haircutting, basic skin care, and make-up application while maintaining safety and sanitation in the workplace set forth by OSHA standards. The prerequisite for this course is Introduction to Personal Care Services.

12.41100 Cosmetology Services III Grades 10-12
This course will cover haircutting, hair color, and relaxers. Both theory and practical work will be implemented for students to have basic entry level skills in the field of cosmetology. Safety and infection control will be applied throughout this course. Professional work ethics, communication skills, critical thinking skills, soft skills and professional image will be utilized during this course.

End of Pathway Assessment and/or Pathway Credentialing Opportunity:
SkillsUSA Connect Cosmetology Exam

Personal Care Services—Barbering

This pathway introduces the Barbering profession. Instruction is provided on the various methods of disinfection, sanitation, and safety used in the barbering industry. This pathway introduces individualized and precise designing, cutting, and shaping of the hair, to include mustache and beard designs, facials and scalp treatment. Training is provided in a lab or classroom setting. Instruction is provided on the laws, rules and regulations and how they govern the industry.

Level	Course Name	Course Code	Course Abbreviation
Level 1	Introduction to Personal Care Services	12.54400	HUM-IPCS
Level 2	Barbering II	12.42000	HUM-BRII
Level 3	Barbering III	12.42100	HUM-BRIII

*Levels 1, 2, and 3 are required for pathway completion.

Course Descriptions

12.54400   Introduction to Personal Care Services   Grades 9-11
This course introduces both fundamental theory and practices of the personal care professions including nail technicians, estheticians, barbers, and cosmetologists. Emphasis will be placed on professional practices and safety. Areas addressed in this course include: state rules and regulations, professional image, bacteriology, decontamination and infection control, chemistry fundamentals, safety, Hazardous Duty Standards Act compliance, and anatomy and physiology. Pre-requisite for this course is advisor approval.

12.42000   Barbering II   Grades 9--12
This course is designed as an introductory level course for the Barbering Pathway and presents intermediate skills and knowledge related to barbering and scientific and mathematical corollaries. Clinical activities are included in this phase of study. Clinicals included in this course involve: individualized and precise designing, cutting, and shaping of the hair. The pre-requisite for this course is Introduction to Personal Care Services.

12.42100   Barbering III   Grades 10-12
This course will provide higher level skills that students can transfer to post-secondary barber schools. The knowledge and skills gained through this course will assist students in the analysis and performance of professional services such as haircutting and styling, mustache and beard design, facials, shaves and scalp treatments. The pre-requisite for this course is Introduction to Personal Care Services and Barbering II.

Personal Care Services—Esthetics

This pathway introduces the Esthetics profession. Instruction is provided on the various methods of disinfection, sanitation, and safety used in the barbering industry. This pathway introduces individualized and precise designing, cutting, and shaping of the hair, to include mustache and beard designs, facials and scalp treatment. Training is provided in a lab or classroom setting. Instruction is provided on the laws, rules and regulations and how they govern the industry.

Level	Course Name	Course Code	Course Abbreviation
Level 1	Introduction to Personal Care Services	12.54400	HUM-IPCS
Level 2	Esthetics Services II	12.43000	HUM-ESII
Level 3	Esthetics Services III	12.43100	HUM-ESIII

*Levels 1, 2, and 3 are required for pathway completion.

Course Descriptions

12.54400   Introduction to Personal Care Services   Grades 9-11
This course introduces both fundamental theory and practices of the personal care professions including nail technicians, estheticians, barbers, and cosmetologists. Emphasis will be placed on professional practices and safety. Areas addressed in this course include: state rules and regulations, professional image, bacteriology, decontamination and infection control, chemistry fundamentals, safety, Hazardous Duty Standards Act compliance, and anatomy and physiology. Pre-requisite for this course is advisor approval.

12.43000   Esthetics Services II   Grades 9--12
The primary purpose of this course is to prepare the student to enter the field of esthetics, skin care and make-up. Esthetics is a study of the artistic and scientific principles of esthetics, in theory, concept and application. The course covers basic knowledge and techniques in developing skills in facials, massage, hair removal and make-up. Students will receive a basic understanding of science, business management and state law, as it relates to esthetics.

12.43100   Esthetics Services III   Grades 10-12
This course will focus on the advanced skills required for employment within esthetics area. Areas of study include cosmetology law and rules; spa therapies; chemical peels; exfoliates, exfoliation techniques; microdermabrasion equipment; advanced esthetics and esthetics chemistry.

Personal Care Services—Nails

This pathway introduces the Barbering profession. Instruction is provided on the various methods of disinfection, sanitation, and safety used in the barbering industry. This pathway introduces individualized and precise designing, cutting, and shaping of the hair, to include mustache and beard designs, facials and scalp treatment. Training is provided in a lab or classroom setting. Instruction is provided on the laws, rules and regulations and how they govern the industry.

Level	Course Name	Course Code	Course Abbreviation
Level 1	Introduction to Personal Care Services	12.54400	HUM-IPCS
Level 2	Nail Care Services II	12.47000	HUM-NCS II
Level 3	Nail Care Services III	12.47100	HUM-NCS III

*Levels 1, 2, and 3 are required for pathway completion.

Course Descriptions

12.54400   Introduction to Personal Care Services   Grades 9-11
This course introduces both fundamental theory and practices of the personal care professions including nail technicians, estheticians, barbers, and cosmetologists. Emphasis will be placed on professional practices and safety. Areas addressed in this course include: state rules and regulations, professional image, bacteriology, decontamination and infection control, chemistry fundamentals, safety, Hazardous Duty Standards Act compliance, and anatomy and physiology. Pre-requisite for this course is advisor approval.

12.47000   Nail Care Services II   Grades 9--12
This course provides training in manicuring, pedicuring and advanced nail techniques. Topics include: implements, products and supplies, diseases and disorders, advanced manicure techniques, pedicure techniques, nail product and general safety precautions and practices and advanced nail techniques (acrylics, wraps, tips and gel).

**12.47100   Nail Care Services III   Grades 10-12**
This course is designed to provide advanced training for employment in nail care careers. Academic knowledge and skills related to cosmetology are reviewed. Instruction includes advanced training in disinfection and sanitation processes and nail care.

End of Pathway Assessment and/or Pathway Credentialing Opportunity:
SkillsUSA Nail Care Skill Connect Assessment

Georgia Performance Standards
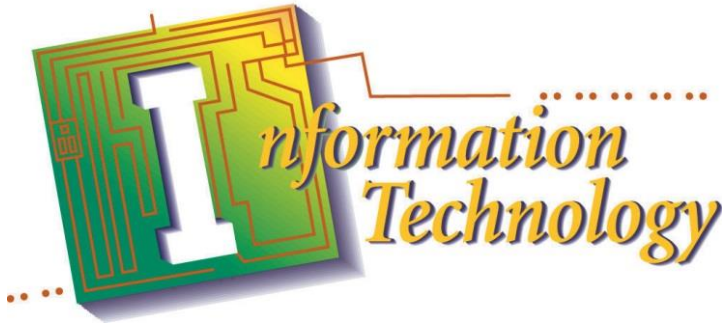
Cluster Description
The rapidly changing digital world of the Information Technology Career Cluster engages students in hands-on learning to prepare for careers that create, use, modify, and engage technology skills. Graphics, multimedia animation, web design, game and application development, networking, and computer repair are all possibilities.

Pathways
Computer Science
11.41500 Introduction to Digital Technology
11.47100 Computer Science Principles
11.01600 AP Computer Science

Information Support & Services
11.41500 Introduction to Digital Technology
11.41400 Information Technology Essentials
11.42000 Information Technology Support

Networking
11.41500 Introduction to Digital Technology
11.46100 Networking Fundamentals
11.46200 Network Systems and Support

Programming
11.41500 Introduction to Digital Technology
11.47100 Computer Science Principles
11.47200 Programming, Apps, Games, and Society

Web & Digital Design
11.41500 Introduction to Digital Technology
11.45100 Digital Design
11.45200 Web Design

Career and Technical Student Organization (CTSO):

FBLA   http://fbla-pbl.org
Future Business Leaders of America-Phi Beta Lambda is a nonprofit education association of students preparing for careers in business and business-related fields. The FBLA Mission is to bring business and education together in a positive working relationship through innovative leadership and career development programs.

Computer Science

This pathway focuses on the general writing and implementation of generic and customized programs to drive operating systems and prepares students to apply the methods and procedures of software design and programming to software installation and maintenance. Includes instruction in software design, low- and high-level languages and program writing; program customization and linking; prototype testing; troubleshooting; and related aspects of operating systems and networks.

Level	Course Name	Course Code	Course Abbreviation
Level 1	Introduction to Digital Technology	11.41500	IT-IDT
Level 2	Computer Science Principles	11.47100	IT-CSP
Level 3	AP Computer Science	11.01600	

 *Levels 1, 2, and 3 are required for pathway completion.

Course Descriptions

11.41500   Introduction to Digital Technology   Grades 9-11
This course is the foundational course for Web & Digital Design, Programming, Advanced Programming, Information Support & Services and Network Systems pathways. This course is designed for students to understand, communicate, and adapt to a digital world as it impacts their personal life, society, and the business world. Exposure to foundational knowledge in hardware, software, programming, web design, IT support and networks are all covered.

11.47100   Computer Science Principles   Grades 9--12
Various forms of technologies will be used to expose students to resources and application of computer science. Professional communication skills and practices, problem-solving, ethical and legal issues, and the impact of effective presentation skills are enhanced in this course to prepare students to be college and career ready. This course aims to appeal to a broad audience. The focus of this course will fall into these computational thinking practices: connecting computing, developing computational artifacts, abstracting, analyzing problems and artifacts, communicating, and collaborating. Computer Science Principles is the second course in the pathways Programming and Computer Science in the Information Technology Cluster. Students enrolled in this course should have successfully completed Introduction to Digital Technology.

11.01600   AP Computer Science   Grades 10-12
This course introduces students to computer science with fundamental topics that include problem solving, design strategies and methodologies, organization of data (data structures), approaches to processing data (algorithms), analysis of potential solutions, and the ethical and social implications of computing. The course emphasizes both object-oriented and imperative problem solving and design using Java language.

End of Pathway Assessment and/or Pathway Credentialing Opportunity:
Microsoft Technology Associate (MTA): HTML5 Application Developer Fundamentals

Information Support & Services

Students in this course develop the skills necessary for troubleshooting computer and peripherals and performing preventive maintenance. Additionally, students will install, build, upgrade, repair, configure, troubleshoot, and perform preventative maintenance on computer hardware, operating systems, laptops and portable devices.

Level	Course Name	Course Code	Course Abbreviation
Level 1	Introduction to Digital Technology	11.41500	IT-IDT
Level 2	Information Technology Essentials	11.41400	IT-ITE
Level 3	Information Technology Support	11.42000	IT-ITS

*Levels 1, 2, and 3 are required for pathway completion.

Course Descriptions

11.41500   Introduction to Digital Technology   Grades 9-11
This course is the foundational course for Web & Digital Design, Programming, Advanced Programming, Information Support & Services and Network Systems pathways. This course is designed for students to understand, communicate, and adapt to a digital world as it impacts their personal life, society, and the business world. Exposure to foundational knowledge in hardware, software, programming, web design, IT support and networks are all covered.

11.41400   Information Technology Essentials   Grades 9--12
Students taking this course will develop a skill set to solve computer problems, perform preventive maintenance, and explain functions of purposes of computer elements. Existing in a world full of computer technology, students will gain practical experience in assembling a computer system, installing an operating system, troubleshooting computers and peripherals, and using system tools and diagnostic software.

11.42000   Information Technology Support   Grades 10-12
Students will apply Information Technology Essentials skills to diagnose and correct computer problems. By building knowledge and skill, students will install, build, upgrade, repair, configure, troubleshoot, and perform preventative maintenance on computer hardware, operating systems, laptops and portable devices. Practical and hands-on experience of troubleshooting and maintenance will allow students to demonstrate mastery of skills. Information Technology Support is the third course in the Information Support and Services pathway in the Information Technology cluster. Students enrolled in this course should have successfully completed Introduction to Digital Technology and Information Technology Essentials.

End of Pathway Assessment and/or Pathway Credentialing Opportunity:
NOCTI Information Support and Services

Networking

Students in this course develop the skills necessary for the planning, installation, and management of networks that enable computers to communicate both locally and globally. It includes networking essentials, network architectures, network operating systems, wide-area networks, and network management.

Level	Course Name	Course Code	Course Abbreviation
Level 1	Introduction to Digital Technology	11.41500	IT-IDT
Level 2	Networking Fundamentals	11.46100	IT-NF
Level 3	Network Systems and Support	11.46200	IT-NSS

*Levels 1, 2, and 3 are required for pathway completion.

Course Descriptions

11.41500   Introduction to Digital Technology   Grades 9-11
This course is the foundational course for Web & Digital Design, Programming, Advanced Programming, Information Support & Services and Network Systems pathways. This course is designed for students to understand, communicate, and adapt to a digital world as it impacts their personal life, society, and the business world. Exposure to foundational knowledge in hardware, software, programming, web design, IT support and networks are all covered.

11.46100   Networking Fundamentals   Grades 9--12
This course is designed to provide students with the background necessary to understand the local area networking information on workstations and networking. Students will learn the processes involved in designing, implementing, upgrading, managing, and otherwise working with networks and network technologies. Networking Fundamentals is the second course in the Networking pathway in the Information Technology cluster. Students enrolled in this course should have successfully completed Introduction to Digital Technology.

11.46200   Network Systems and Support   Grades 10-12
Students will apply a variety of fundamental skills utilized in entry-level computer network systems administration positions. Exposure to various aspects of network hardware and software maintenance and monitoring, configuring and supporting a local area network (LAN) and a wide area network (WAN), Internet systems and segments of network systems will allow students to develop a strong knowledge base for networking systems and support. Students will be involved in designing, implementing, upgrading, managing, and working with networks and network technologies.

End of Pathway Assessment and/or Pathway Credentialing Opportunity:
NOCTI Network Systems Assessment

Programming

This pathway focuses on the general writing and implementation of generic and customized programs to drive operating systems and prepares students to apply the methods and procedures of software design and programming to software installation and maintenance. Includes instruction in software design, low- and high-level languages and program writing; program customization and linking; prototype testing; troubleshooting; and related aspects of operating systems and networks.

Level	Course Name	Course Code	Course Abbreviation
Level 1	Introduction to Digital Technology	11.41500	IT-IDT
Level 2	Computer Science Principles	11.47100	IT-CS
Level 3	Programming, Apps, Games, and Society	11.47200	IT-PGAS

*Levels 1, 2, and 3 are required for pathway completion.

Course Descriptions

11.41500   Introduction to Digital Technology   Grades 9-11
This course is the foundational course for Web & Digital Design, Programming, Advanced Programming, Information Support & Services and Network Systems pathways. This course is designed for students to understand, communicate, and adapt to a digital world as it impacts their personal life, society, and the business world. Exposure to foundational knowledge in hardware, software, programming, web design, IT support and networks are all covered.

11.47100   Computer Science Principles   Grades 9--12
Various forms of technologies will be used to expose students to resources and application of computer science. Professional communication skills and practices, problem-solving, ethical and legal issues, and the impact of effective presentation skills are enhanced in this course to prepare students to be college and career ready. This course aims to appeal to a broad audience. The focus of this course will fall into these computational thinking practices: connecting computing, developing computational artifacts, abstracting, analyzing problems and artifacts, communicating, and collaborating. Computer Science Principles is the second course in the pathways Programming and Computer Science in the Information Technology Cluster. Students enrolled in this course should have successfully completed Introduction to Digital Technology.

11.47200   Programming, Apps, Games, and Society   Grades 10-12
The course is designed for students to strategize, design, and develop games and mobile and desktop applications that can be produced in the real world. Students will 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. Programming constructs will be employed which will allow students' applications to interact with "real world," stimuli. The course exposes students to privacy, legality, and security considerations with regards to the software industry.

End of Pathway Assessment and/or Pathway Credentialing Opportunity:
Microsoft Technology Associate (MTA): Gaming Development Fundamentals

Web & Digital Design

This pathway exposes students to the skills needed to develop and maintain web servers and the hosted web pages at one or a group of web sites, and to function as designated webmasters. Includes instruction in computer systems and networks; web page design and editing; information resources management; web policy and procedures; Internet applications of information systems security; user interfacing and usability research; and relevant management and communications skills.

Level	Course Name	Course Code	Course Abbreviation
Level 1	Introduction to Digital Technology	11.41500	IT-IDT
Level 2	Digital Design	11.45100	IT-DD
Level 3	Web Design	11.45200	IT-FWD

*Levels 1, 2, and 3 are required for pathway completion.

Course Descriptions

11.41500   Introduction to Digital Technology   Grades 9-11
This course is the foundational course for Web & Digital Design, Programming, Advanced Programming, Information Support & Services and Network Systems pathways. This course is designed for students to understand, communicate, and adapt to a digital world as it impacts their personal life, society, and the business world. Exposure to foundational knowledge in hardware, software, programming, web design, IT support and networks are all covered.

11.45100   Digital Design   Grades 9--12
Using web design as the platform for product design and presentation, students will create and learn digital media applications using elements of text, graphics, animation, sound, video and digital imaging for various format. The digital media and interactive media projects developed and published showcase the student skills and ability. Emphasis will be placed on effective use of tools for interactive multimedia production including storyboarding, visual development, project management, digital citizenship, and web processes. Students will create and design web sites that incorporate digital media elements to enhance content of web site.

**11.45200   Web Design   Grades 10-12**
This course will equip students with the ability to plan, design, and create a web site. Students will move past learning how to write code and progress to designing a professional looking web site using graphical authoring tools that contains multimedia elements. Working individually and in teams, students will learn to work with web page layout and graphical elements to create a professional looking web site.
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End of Pathway Assessment and/or Pathway Credentialing Opportunity:
Adobe Certified Associate (ACA-Dreamweaver)

Georgia Performance Standards
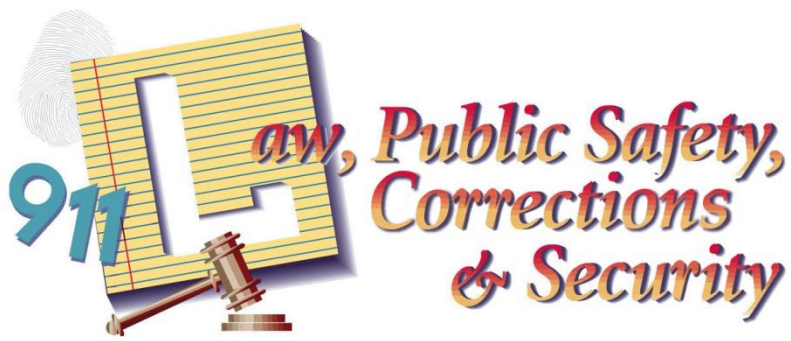
Cluster Description
The Law, Public Safety, Corrections, & Security Career Cluster prepares individuals for employment relating to emergency and fire services, legal services, protective services, and homeland security.

Pathways
Law Enforcement Services/Forensic Science
43.45000 Introduction to Law, Public Safety, Corrections and Security
43.45100 Criminal Justice Essentials
43.45200 Forensic Science and Criminal Investigations

Law Enforcement Services/Criminal Investigations
43.45000 Introduction to Law, Public Safety, Corrections and Security
43.45100 Criminal Justice Essentials
43.45300 Criminal Investigations

Corrections Services
43.45000 Introduction to Law, Public Safety, Corrections and Security
43.45100 Criminal Justice Essentials
43.45700 Applications of Corrections

Security and Protective Services
43.45000 Introduction to Law, Public Safety, Corrections and Security
43.45100 Criminal Justice Essentials
43.45800 Security and Protective Services

Career and Technical Student Organization (CTSO)

SkillsUSA   http://www.skillsusa.org
SkillsUSA is national organization that provides quality education experiences for students in leadership, teamwork, citizenship and character development. It builds and reinforces self-confidence, work attitudes and communications skills. It emphasizes total quality at work, high ethical standards, superior work skills, life-long education and pride in the dignity of work. SkillsUSA also promotes understanding of the free enterprise system and involvement in community service activities.

Law Enforcement Services/Forensic Science

This pathway includes, but is not limited to, introduction to the criminal justice system, police ethics and constitutional law, patrol procedures, traffic control procedures, defensive tactics and physical proficiency skills, interpersonal and communication skills, investigation procedures, court systems and trial procedures, correctional system, introduction to forensic science, crime prevention, property control, and employability skills. .

Level	Course Name	Course Code	Course Abbreviation
Level 1	Intro to Law, Public Safety, Corrections and Security	43.45000	LPSCS-ILPSCS
Level 2	Criminal Justice Essentials	43.45100	LPSCS-CJE
Level 3	Forensic Science and Criminal Investigations	43.45200	LPSCS-FSCI

   *Levels 1, 2, and 3 are required for pathway completion.

Course Descriptions

43.45000   Intro to Law, Public Safety, Corrections and Security   Grades 9-11
This course provides students with career-focused educational opportunities in various Intro to Law, Public Safety, Corrections and Security fields. It examines the basic concepts of law related to citizens' rights and the responsibilities and students will receive instruction in critical skill areas including: communicating with diverse groups, conflict resolution, report writing, terrorism, civil and criminal law.

43.45100   Criminal Justice Essentials   Grades 9--12
Criminal Justice Essentials provides an overview of the criminal justice system. Starting with historical perspectives of the origin of the system, the course reviews the overall structure. Students will become immersed in criminal and constitutional law and will review basic law enforcement skills. The course ends with a mock trial to provide participants with a first-hand experience of the criminal justice system.

43.45200   Forensic Science and Criminal Investigations   Grades 10-12
Forensic Science and Criminal Investigations is a course designed to contextualize scientific principles within the career studies of students interested in criminal justice. The course will utilize scientific equipment; therefore, instructors should have access to a science lab if their Career and Technical Education lab is not equipped. Students will study the forensic application of principles of chemistry, biology, physics and other disciplines. Students will utilize chromatography, electrophoresis, microscopic observation, and other scientific techniques in their studies. Students will also learn some investigative techniques and crime scene investigation skills through the lens of the scientific method. The prerequisites for this course are Introduction to Law, Public Safety, Corrections and Security and Criminal Justice Essentials.

End of Pathway Assessment and/or Pathway Credentialing Opportunity:
SkillsUSA Criminal Justice/CSI Skill Connect Assessment
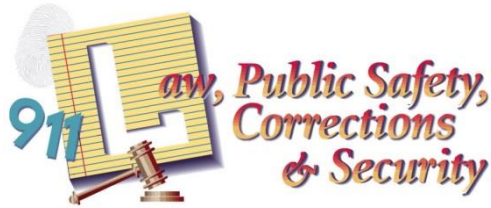
Law Enforcement Services/Criminal Investigations

This pathway includes, but is not limited to, introduction to the criminal justice system, police ethics and constitutional law, patrol procedures, traffic control procedures, defensive tactics and physical proficiency skills, interpersonal and communication skills, investigation procedures, court systems and trial procedures, correctional system, introduction to forensic science, crime prevention, property control, and employability skills. .

Level	Course Name	Course Code	Course Abbreviation
Level 1	Intro to Law, Public Safety, Corrections and Security	43.45000	LPSCS-ILPSCS
Level 2	Criminal Justice Essentials	43.45100	LPSCS-CJE
Level 3	Criminal Investigations	43.45300	LPSCS-CI

  *Levels 1, 2, and 3 are required for pathway completion.

Course Descriptions

43.45000   Intro to Law, Public Safety, Corrections and Security   Grades 9-11
This course provides students with career-focused educational opportunities in various Intro to Law, Public Safety, Corrections and Security fields. It examines the basic concepts of law related to citizens' rights and the responsibilities and students will receive instruction in critical skill areas including: communicating with diverse groups, conflict resolution, report writing, terrorism, civil and criminal law.

43.45100   Criminal Justice Essentials   Grades 9--12
Criminal Justice Essentials provides an overview of the criminal justice system. Starting with historical perspectives of the origin of the system, the course reviews the overall structure. Students will become immersed in criminal and constitutional law and will review basic law enforcement skills. The course ends with a mock trial to provide participants with a first-hand experience of the criminal justice system.

43.45300   Criminal Investigations   Grades 10-12
This course is designed to provide students with an opportunity to explore the basic processes and principles of a criminal investigation. Students will learn the legal responsibilities and challenges of the patrol officer, investigator, and crime scene technician at a crime scene. Students will learn the importance of preserving and documenting the crime scene along with the identification, collection, and processing of evidence and the contribution to the criminal investigation. The prerequisites for this course are Introduction to Law, Public Safety, Corrections and Security, and Criminal Justice Essentials.

End of Pathway Assessment and/or Pathway Credentialing Opportunity:
SkillsUSA Criminal Justice/CSI Skill Connect Assessment

Corrections Services

This pathway includes, but is not limited to, introduction to the criminal justice system, police ethics and constitutional law, patrol procedures, traffic control procedures, defensive tactics and physical proficiency skills, interpersonal and communication skills, investigation procedures, court systems and trial procedures, correctional system, introduction to forensic science, crime prevention, property control, and employability skills. .

Level	Course Name	Course Code	Course Abbreviation
Level 1	Intro to Law, Public Safety, Corrections and Security	43.45000	LPSCS-ILPSCS
Level 2	Criminal Justice Essentials	43.45100	LPSCS-CJE
Level 3	Applications of Corrections	43.45700	LPSCS-AC

 *Levels 1, 2, and 3 are required for pathway completion.

Course Descriptions

43.45000   Intro to Law, Public Safety, Corrections and Security   Grades 9-11
This course provides students with career-focused educational opportunities in various Intro to Law, Public Safety, Corrections and Security fields. It examines the basic concepts of law related to citizens' rights and the responsibilities and students will receive instruction in critical skill areas including: communicating with diverse groups, conflict resolution, report writing, terrorism, civil and criminal law.

**43.45100   Criminal Justice Essentials   Grades 9--12**
Criminal Justice Essentials provides an overview of the criminal justice system. Starting with historical perspectives of the origin of the system, the course reviews the overall structure. Students will become immersed in criminal and constitutional law and will review basic law enforcement skills. The course ends with a mock trial to provide participants with a first-hand experience of the criminal justice system.

43.45700   Applications of Corrections   Grades 10-12
This course provides an analysis of all phases of the American Correctional System and practices, including the history, procedures and objectives. Topics include the history and evolution of correctional facilities; legal and administrative problems; institutional facilities and procedures; probation, parole and pre-release programs; alternative sentencing; rehabilitation; effects and costs of recidivism; community involvement; and officer safety; and staffing. The prerequisites for this course are Introduction to Law, Public Safety, Corrections and Security and Criminal Justice Essentials.

End of Pathway Assessment and/or Pathway Credentialing Opportunity:
SkillsUSA Criminal Justice/CSI Skill Connect Assessment
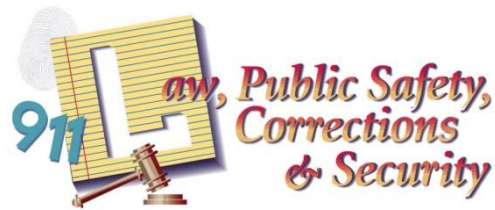
Security and Protective Services

This pathway includes, but is not limited to, introduction to the criminal justice system, police ethics and constitutional law, patrol procedures, traffic control procedures, defensive tactics and physical proficiency skills, interpersonal and communication skills, investigation procedures, court systems and trial procedures, correctional system, introduction to forensic science, crime prevention, property control, and employability skills. .

Level	Course Name	Course Code	Course Abbreviation
Level 1	Intro to Law, Public Safety, Corrections and Security	43.45000	LPSCS-ILPSCS
Level 2	Criminal Justice Essentials	43.45100	LPSCS-CJE
Level 3	Security and Protective Services	43.45800	LPSCS-SPS

*Levels 1, 2, and 3 are required for pathway completion.

Course Descriptions

43.45000   Intro to Law, Public Safety, Corrections and Security   Grades 9-11
This course provides students with career-focused educational opportunities in various Intro to Law, Public Safety, Corrections and Security fields. It examines the basic concepts of law related to citizens' rights and the responsibilities and students will receive instruction in critical skill areas including: communicating with diverse groups, conflict resolution, report writing, terrorism, civil and criminal law.

**43.45100   Criminal Justice Essentials   Grades 9--12**
Criminal Justice Essentials provides an overview of the criminal justice system. Starting with historical perspectives of the origin of the system, the course reviews the overall structure. Students will become immersed in criminal and constitutional law and will review basic law enforcement skills. The course ends with a mock trial to provide participants with a first-hand experience of the criminal justice system.

43.45800   Security and Protective Services   Grades 10-12
This course provides an analysis of the various careers in Security and Protective Serves, including the history, procedures and objectives. Topics include: history and evolution of private security and private security services; regulatory and organizational guidelines; the impact of federal, state and local laws on security and protective services; public relations; strategies; supervision and management; intelligence analysis; and staffing. Prerequisites for this course include Introduction to Law, Public Safety, Corrections and Security, and Criminal Justice Essential.

End of Pathway Assessment and/or Pathway Credentialing Opportunity:
SkillsUSA Criminal Justice/CSI Skill Connect Assessment
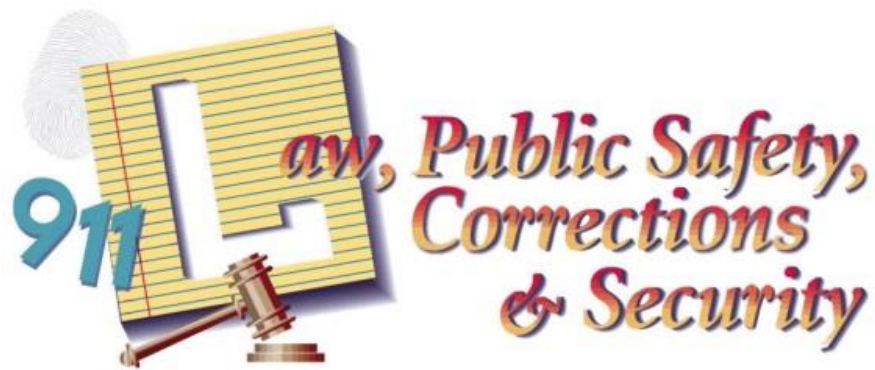
Georgia Performance Standards

Cluster Description

The Manufacturing Career Cluster includes the processing of materials into intermediate or final products and related professional and technical support activities, such as production control, maintenance, and process engineering.

Pathways

Manufacturing
21.44100 Foundations of Manufacturing and Materials Science
21.44500 Robotics and Automated Systems
21.44400 Production Enterprises

Mechatronics
21.46200 Introduction to Mechatronics –DC Theory, Pneumatic Systems, and Programmable Logic Controllers
21.46300 AC Theory, Electric Motors, and Hydraulic Systems
21.46400 Semiconductors, Mechanical Systems, and Pump and Piping Systems

Career and Technical Student Organization (CTSO)

TSA   http://www.tsaweb.org
Technology Student Association (TSA) is a national, non-profit organization for students with an interest in technology. TSA members learn problem-solving, decision-making, critical thinking and leadership skills as they relate to design, communications, power, energy, transportation, engineering, manufacturing, construction and biotechnology. TSA strives to meet the educational needs and challenges of all students in an increasingly and ever-changing technological world.

Manufacturing

This pathway provides students with an introduction to manufacturing technology and its relationship with society, individuals, and the environment. This pathway also includes a study of the various managed activities which are used to develop, produce, use, and assess production technology. Research and development, production, and marketing techniques are reviewed. In addition, students learn about a wide variety of production techniques. Fabrication and assembly steps are highlighted. Assuring product quality is also explored.

Level	Course Name	Course Code	Course Abbreviation
Level 1	Foundations of Manufacturing and Materials Science	21.44100	ENGR-FMMS
Level 2	Robotics and Automated Systems	21.44500	ENGR-RAS
Level 3	Production Enterprises	21.44400	ENGR-PE

*Levels 1, 2, and 3 are required for pathway completion.

Course Descriptions

21.44100   Foundations of Manufacturing and Materials Science   Grades 9-11
Foundations of Manufacturing and Materials Science is the introductory course for the Manufacturing career pathway. This course provides students with opportunities to become familiar with related careers and develop fundamental technological literacy as they learn about the history, systems, and processes of manufacturing. In addition, the course will provide an overview of the safe use of tools and equipment used in the industry.

21.44500   Robotics and Automated Systems   Grades 9--12
Upon completing this course, students will be able to apply their knowledge of computer aided design (CAD), computer numerical control (CNC), robotics, computer assisted manufacturing (CAM), programmable logic controllers, automated guided vehicles (AGV), and computer integrated manufacturing (CIM).

21.44400   Production Enterprises   Grades 10-12
The purpose of this course is to give students on understanding of how to design and implement a production system. Students learn how businesses engage in the production of products beginning with pre-production activities and continuing through post-production activities. Additionally, students will learn about the historical and societal impact of production. Students will also develop an understanding of careers available in manufacturing and the skills and education required for those careers..

End of Pathway Assessment and/or Pathway Credentialing Opportunity:
NOCTI Manufacturing Technology

Mechatronics

This pathway provides students with an introduction to manufacturing technology and its relationship with society, i
ndividuals, and the environment. This pathway also includes a study of the various managed activities which are used to
develop, produce, use, and assess production technology. Research and development, production, and marketing techniques
are reviewed. In addition, students learn about a wide variety of production techniques. Fabrication and assembly steps are
highlighted. Assuring product quality is also explored.

Level	Course Name	Course Code	Course Abbreviation
Level 1	Introduction to Mechatronics –DC Theory, Pneumatic Systems, and Programmable Logic Controllers	21.46200	MANF-IMDCTPSPLC
Level 2	AC Theory, Electric Motors, and Hydraulic Systems	21.46300	MANF-ACTEMHS
Level 3	Semiconductors, Mechanical Systems, and Pump and Piping Systems	21.46400	

*Levels 1, 2, and 3 are required for pathway completion.

Course Descriptions

21.46200   Introduction to Mechatronics –DC Theory, Pneumatic Systems   Grades 9-11
                and Programmable Logic Controllers
By completing this course, students will be introduced to direct current concepts and applications, pneumatic system
fundamentals, and programmable logic controllers (PLCs). Topics include, but are not limited to, electrical laws and principles,
magnetism, series, parallel, and simple combination DC circuits, pneumatic system principles and components, and PLC
installation and programming. Theory and practical application concepts are discussed and illustrated through labs.
Furthermore, this course introduces students to the operational theory, systems terminology, installation, and programming
procedures for PLCs. Emphasis is placed on PLC programming, connections, installation, and start-up procedures. Other topics
include timers and counters, relay logic instructions, and hardware and software applications.

21.46300   AC Theory, Electric Motors, and Hydraulic Systems   Grades 9--12
This course further expands the student's knowledge and understanding of Mechatronics through introducing students to:
alternating current theory and applications of varying sine wave voltages and current, inductance and capacitance, motor theory
and operating principles, control devices, symbols and schematic diagrams, preventative maintenance and troubleshooting, and
hydraulic system principles and components. Theory and practical application concepts are discussed and illustrated through
labs.

21.46400   Semiconductors, Mechanical Systems   Grades 10-12
                and Pump and Piping Systems
By completing this course, students will be introduced to electronics theory, mechanical systems, and pump and piping systems.
Topics include, but are not limited to, diodes and amplifiers, semiconductor fundamentals, mechanical drives, measurement
processes and techniques, maintenance tools, manufacturing processes, bearing design and application, and pump and piping
systems. Theory and practical application concepts are discussed and illustrated through labs.

End of Pathway Assessment and/or Pathway Credentialing Opportunity:
NOCTI Mechatronics Level 1

Georgia Performance Standards

Cluster Description

Marketing is the process of anticipating, managing, and satisfying consumers' demand for products, services, and ideas. The Marketing Career Cluster generates the strategy that underlies advertising and promotional techniques, business communication, and business development.

Pathways

Fashion, Merchandising and Retail Management
08.47400 Marketing Principles
08.42100 Fashion, Merchandising and Retailing Essentials
08.42200 Advanced Fashion, Merchandising and Retailing

Marketing Communications and Promotions
08.47400 Marketing Principles
08.45100 Promotion and Professional Sales
08.45200 Marketing Communications Essentials

Marketing and Management
08.47400 Marketing Principles
08.44100 Marketing and Entrepreneurship
08.44200 Marketing Management

Career and Technical Student Organization (CTSO)

DECA   http://www.deca.org

Distributive Education Club of America is a student-centered, educational/professional organization with a program of leadership and career development designed specifically for students enrolled in marketing education. Marketing education prepares students for rewarding careers in marketing, management and entrepreneurship. DECA enhances that education by providing marketing-related activities based directly on classroom study.

Fashion, Merchandising and Retail Management

In this pathway students will develop basic business skills with a focus in Fashion Merchandising and Retail Management. The curriculum will focus on marketing, management, and general merchandising. Students will hone their skills in the area of display and effective visual merchandising, retail buying, retail management, and merchandising and planning.

Level	Course Name	Course Code	Course Abbreviation
Level 1	Marketing Principles	08.47400	MKT-MP
Level 2	Fashion, Merchandising and Retailing Essentials	08.42100	MKT-FMRE
Level 3	Advanced Fashion, Merchandising and Retailing	08.42200	MKT-AFMR

*Levels 1, 2, and 3 are required for pathway completion.

Course Descriptions

08.47400   Marketing Principles   Grades 9-11
Marketing Principles is the foundational course for the Marketing and Management, Fashion Merchandising and Buying, and Marketing Communications and Promotion Pathways. Marketing Principles addresses all the ways in which marketing satisfies consumer and business needs and wants for products and services. Students develop a basic understanding of Employability, Foundational and Business Administration skills, Economics, Entrepreneurship, Financial Analysis, Human Resources Management, Information Management, Marketing, Operations, Professional Development, Strategic Management, and Global Marketing strategies.

08.42100   Fashion, Merchandising and Retailing Essentials   Grades 9--12
Fashion, Merchandising and Retailing Essentials is the second course in the Fashion, Merchandising and Retail Management Pathway. This course introduces students to the retail industry including the fundamentals of fashion marketing, key marketing concepts essential to every business, types of businesses involved in the industry, and an array of career opportunities. Students will develop skills in such areas as fashion economics, marketing segmentation and target marketing, product selection and buying, and inventory systems.

08.42200   Advanced Fashion, Merchandising and Retailing   Grades 10-12
Advanced Fashion, Merchandising and Retailing is the third course in the Fashion, Merchandising and Retail Management Career Pathway and focuses on the application of knowledge and the performance of key skills required in a retail environment. Students will develop skills necessary for managing the following elements: pricing, visual merchandising, advertising, special promotions, professional sales, and customer service.

End of Pathway Assessment and/or Pathway Credentialing Opportunity:
NOCTI-ASK Institute Fundamental Marketing Concepts

Marketing Communications and Promotions

This pathway focuses on the decisions facing marketing managers as they attempt to harmonize the objectives and resources of the organization with the needs and opportunities in the marketplace.

Level	Course Name	Course Code	Course Abbreviation
Level 1	Marketing Principles	08.47400	MKT-MP
Level 2	Promotion and Professional Sales	08.45100	MKT-PPS
Level 3	Marketing Communications Essentials	08.45200	MKT-MCE

*Levels 1, 2, and 3 are required for pathway completion.

Course Descriptions

08.47400   Marketing Principles   Grades 9-11
Marketing Principles is the foundational course for the Marketing and Management, Fashion Merchandising and Buying, and Marketing Communications and Promotion Pathways. Marketing Principles addresses all the ways in which marketing satisfies consumer and business needs and wants for products and services. Students develop a basic understanding of Employability, Foundational and Business Administration skills, Economics, Entrepreneurship, Financial Analysis, Human Resources Management, Information Management, Marketing, Operations, Professional Development, Strategic Management, and Global Marketing strategies.

08.45100   Promotion and Professional Sales   Grades 9--12
Promotion and Professional Sales is the second course in the Marketing Communications and Promotions pathway. This course focuses on the performance of key responsibilities required in a retail environment. Students develop skills in pricing, visual merchandising, advertising, special promotions, professional sales, and customer service.

08.45200   Marketing Communications Essentials   Grades 10-12
Marketing Communications Essentials is the third course in the Marketing Communications and Promotion Career Pathway. This course focuses on the communication aspects of the business in relation to customer/consumer relationships. Students develop knowledge and skills in advertising, direct marketing, public relations, sales promotions, and digital marketing communications. Students learn how communications affects budget considerations, marketing information decision-making and all future business opportunities.

End of Pathway Assessment and/or Pathway Credentialing Opportunity:
NOCTI-ASK Institute Fundamental Marketing Concepts

Marketing and Management

This pathway focuses on the decisions facing marketing managers as they attempt to harmonize the objectives and resources of the organization with the needs and opportunities in the marketplace.

Level	Course Name	Course Code	Course Abbreviation
Level 1	Marketing Principles	08.47400	MKT-MP
Level 2	Marketing and Entrepreneurship	08.44100	MKT-ME
Level 3	Marketing Management	08.44200	MKT-MM

 *Levels 1, 2, and 3 are required for pathway completion.

Course Descriptions

08.47400   Marketing Principles   Grades 9-11
Marketing Principles is the foundational course for the Marketing and Management, Fashion Merchandising and Buying, and Marketing Communications and Promotion Pathways. Marketing Principles addresses all the ways in which marketing satisfies consumer and business needs and wants for products and services. Students develop a basic understanding of Employability, Foundational and Business Administration skills, Economics, Entrepreneurship, Financial Analysis, Human Resources Management, Information Management, Marketing, Operations, Professional Development, Strategic Management, and Global Marketing strategies.

08.44100   Marketing and Entrepreneurship   Grades 9--12
Marketing and Entrepreneurship is the second course in the Marketing and Management Career Pathway. Marketing and Entrepreneurship begins an in-depth and detailed study of marketing while also focusing on management with specific emphasis on small business ownership. This course builds on the theories learned in Marketing Principles by providing practical application scenarios which test these theories. In addition, Marketing and Entrepreneurship focuses on the role of the supervisor and examines the qualities needed to be successful.

08.44200   Marketing Management   Grades 10-12
Marketing Management is the third course in the Marketing and Management pathway. Students assume a managerial perspective by applying economic principles in marketing, analyzing operation's needs, examining channel management and financial alternatives, managing marketing information, pricing products and services, developing product/service planning strategies, promoting products and services, purchasing, and professional sales. This course also includes global marketing where students analyze marketing strategies employed in the United States versus those employed in other countries.

End of Pathway Assessment and/or Pathway Credentialing Opportunity:
NOCTI-ASK Institute Fundamental Marketing Concepts

Georgia Performance Standards

Cluster Description

The Science, Technology, Engineering, Mathematics Career Cluster means planning, managing, and providing scientific research and professional and technical services.

**Click here to view the Science, Technology, Engineering and Mathematics Performance Standards.

Pathways

Engineering and Technology
21.42500 Foundations of Engineering and Technology
21.47100 Engineering Concepts
21.47200 Engineering Applications

Engineering Drafting and Design
48.54100 Introduction to Drafting and Design
48.54200 Survey of Engineering Graphics
48.54300 3D Modeling and Analysis

Electronics Pathway
21.45200 Foundations of Electronics
21.45300 Advanced AC and DC Circuits
21.45400 Digital Electronics

Career and Technical Student Organization (CTSO)

TSA   http://www.tsaweb.org
Technology Student Association (TSA) is a national, non-profit organization for students with an interest in technology. TSA members learn problem-solving, decision-making, critical thinking and leadership skills as they relate to design, communications, power, energy, transportation, engineering, manufacturing, construction and biotechnology. TSA strives to meet the educational needs and challenges of all students in an increasingly and ever-changing technological world.

Engineering and Technology

This pathway is a sequence of courses which, when combined with traditional mathematics and science courses in high school, introduces students to the scope, rigor and discipline of engineering. This pathway will introduce students to the field of engineering technology. Students will solve problems using common engineering practices. Students will be acquainted with the major fields of engineering and with the diverse functions engineers and technologists perform. Students will be familiar with the paths and certifications that can lead to careers in engineering and engineering technology. Students will understand and demonstrate communication skills necessary in the field of engineering. They will employ an individual and team approach while solving engineering problems.

Level	Course Name	Course Code	Course Abbreviation
Level 1	Foundations of Engineering and Technology	21.42500	STEM-FET
Level 2	Engineering Concepts	21.47100	STEM-EC
Level 3	Engineering Applications	21.47200	STEM-EA

*Levels 1, 2, and 3 are required for pathway completion.

Course Descriptions

21.42500   Foundations of Engineering and Technology   Grades 9-11
The Foundations of Engineering and Technology is the introductory course for the Engineering and Technology Education pathways. This STEM driven course provides the students with an overview of engineering and technology including the different methods used in the engineering design process developing fundamental technology and engineering literacy. Students will demonstrate the skills and knowledge they have learned through various project based activities while using an engineering design process to successfully master the "E" in STEM.

21.47100   Engineering Concepts   Grades 9--12
Engineering Concepts is the second course in the Engineering and Technology Pathway. Students will learn to design technical solutions to engineering problems using a whole systems approach to engineering design. Students will demonstrate the application of mathematical tools, teamwork, and communications skills in solving various design challenges, while maintaining a safe work environment. The prerequisite for this course is Foundations of Engineering and Technology.

21.47200   Engineering Applications   Grades 10-12
Engineering Applications is the third course in the Engineering and Technology Pathway. Students will apply their knowledge of Science, Technology, Engineering, and Math (STEM) to develop solutions to technological problems. Solutions will be developed using a combination of engineering software and prototype production processes. Students will use market research, cost benefit analysis, and an understanding of the design cycle to create and present design, marketing, and business plans for their solutions. A capstone project will allow students to demonstrate their depth of knowledge of the engineering design process and prepare them for future opportunities in the field of engineering. The prerequisite for this course is Engineering Concepts..

End of Pathway Assessment and/or Pathway Credentialing Opportunity:
NOCTI Engineering Assessment

Engineering Drafting and Design

Drafting and design is the process of turning ideas of how things should be constructed into technical drawings. These drawings are based on sketches and calculations made by engineers, surveyors, architects and/or scientists. The drawings provide visual guidelines such as dimensions, materials to be used, and procedures to be followed to build everything from manufactured products such as spacecraft, automobiles, and industrial machinery to structures such as homes, office buildings, and oil and gas pipelines.

Level	Course Name	Course Code	Course Abbreviation
Level 1	Introduction to Drafting and Design	48.54100	AC-IDD
Level 2	Survey of Engineering Graphics	48.54200	AC-SEG
Level 3	3D Modeling and Analysis	48.54300	AC-3DMA

*Levels 1, 2, and 3 are required for pathway completion.

Course Descriptions

48.54100   Introduction to Drafting and Design   Grades 9-11
Introduction to Drafting and Design is the foundational course for the Architectural Drafting and Design pathway. Emphasis is placed on safety, geometric construction, fundamentals of computer-aided drafting, and multi-view drawings. Students learn drafting techniques through the study of geometric construction at which time they are introduced to computer-aided drafting and design. The standards are aligned with the national standards of the American Design Drafting Association (ADDA).

48.54200   Survey of Engineering Graphics   Grades 9--12
Survey of Engineering Graphics is the second course in the Engineering Drafting and Design Career Pathway. The course is designed to build student skills and knowledge in the field of engineering graphics/technical drafting. The course focus includes employability skills, career opportunities, applied math, working drawings that include sectional, auxiliary, detail and pictorial views, and pattern developments. In addition, elements in applied mathematics are integrated throughout the course. The prerequisite for this course is Introduction to Drafting & Design.

48.54300   3D Modeling and Analysis   Grades 10-12
Three-Dimensional (3D) Modeling and Analysis is a one-credit course that completes the pathway in Engineering Drafting and Design. Reverse engineering strategies are recommended for third level working drawings. Computer-aided design (CAD) is recommended for use extensively with each standard in the course. Focus is on employability strategies, career studies, applied math, fasteners, working drawings, and assembly drawings.

End of Pathway Assessment and/or Pathway Credentialing Opportunity:
NOCTI Engineering Assessment

Electronics Pathway

This pathway covers electronic practices and fundamentals, roles of electronics in communications and industry, and career development. Topics include safety, tools, direct current, schematics, measuring electricity, Ohm's/Watt's/Kirchoff's Laws, power, and circuits. Leadership skills, science, thinking skills, and principles of technology are reinforced. This pathway also covers advanced electronic practices and principles, special equipment and materials, and employment opportunities. Safety, mathematics, reading, problem solving, tools, and using test equipment are reinforced.

Level	Course Name	Course Code	Course Abbreviation
Level 1	Foundations of Electronics	21.45200	STEM-FE
Level 2	Advanced AC and DC Circuits	21.45300	STEM-AACDCC
Level 3	Digital Electronics	21.45400	STEM-DE

*Levels 1, 2, and 3 are required for pathway completion.

Course Descriptions

21.45200   Foundations of Electronics   Grades 9-11
This foundational course is designed for students who are interested in careers related to the design, production, analysis, repair, and operation of devices that use electronics. Students will study and apply using project based learning activities the fundamentals of electricity and electronic systems including the theory and operation of how the basic components function, how a variety circuits are connected, and how to design these circuits.

21.45300   Advanced AC and DC Circuits   Grades 9--12
As the second course in the Electronics Pathway, this course is designed for students interested in careers related to the design, production, analysis, repair, and operation of devices that use electronics. The course is designed around major individual and class projects that promote critical thinking, real world problem solving, and abstract reasoning that encourage the student to become an investigative lifelong learner. Students will create artifacts that demonstrate application of competencies in technical, academic, cognitive, and personal skills through daily work, team work, and homework, formative and informative assessments. The prerequisite for this course is Foundations of Electronics.

21.45400   Digital Electronics   Grades 10-12
As the third course in the Electronics pathway, the Digital Electronics course provides students with opportunities to apply prior learning in electronics to the digital world in which they live. Students use applications of mathematics and science to predict the success of an engineered solution and complete hands-on activities with tools, materials, and processes as they develop functional devices and working prototypes aided by computer simulations.

End of Pathway Assessment and/or Pathway Credentialing Opportunity:
NOCTI Engineering Assessment

[Georgia Performance Standards](#)

Cluster Description

The Transportation, Distribution & Logistics Career Cluster encompasses planning, managing, and moving people, materials, and goods by road, pipeline, air, rail, and water, and also includes other related professional and technical support services.

Pathways

Automobile Maintenance and Light Repair
47.53110 Basic Maintenance and Light Repair
47.53210 Maintenance and Light Repair 2
47.53310 Maintenance and Light Repair 3

Automotive Service Technology Pathway
47.43400 Automobile Service Technology 4
47.43500 Automobile Service Technology 5
47.43600 Automobile Service Technology 6

Master Automobile Service Technology Pathway
47.43700 Master Automobile Service Technology 7
47.43800 Master Automobile Service Technology 8
47.43900 Automobile Service Technology Internship

Painting & Refinishing Pathway
47.56500 Intro to Collision Repair
47.56600 Painting & Refinishing I
47.56700 Painting & Refinishing II

Non-Structural Analysis and Damage Repair Pathway
47.56500 Intro to Collision Repair
47.56800 Non Structural Analysis & Damage Repair I
47.56900 Non Structural Analysis & Damage Repair II

Automobile Maintenance and Light Repair

This pathway includes classroom instruction and hands-on laboratory performance of the basic tasks included in the initial training required for employment in the automotive service field as identified by the National Automotive Technicians Education Foundation (NATEF). The courses include the development of basic technical skills required in steering and suspension, electrical and electronics, brakes, and engine performance.

Level	Course Name	Course Code	Course Abbreviation
Level 1	Basic Maintenance and Light Repair	47.53110	TDL-BMLR
Level 2	Maintenance and Light Repair 2	47.53210	TDL-MLR2
Level 3	Maintenance and Light Repair 3	47.53310	TDL-MLR3

*Levels 1, 2, and 3 are required for pathway completion.

Course Descriptions

47.53110   Basic Maintenance and Light Repair   Grades 9-11
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.

47.53210   Maintenance and Light Repair 2   Grades 9--12
Students will learn the basic skills needed to gain employment as a maintenance and light repair technician and will expose students to automotive preventative maintenance and servicing, as well as replacing brakes, and steering and suspension components. Students will also learn general electrical system diagnosis, electrical theory, basic test requirements, and determining necessary action. In addition, students will learn how to evacuate and recharge air conditioning systems using the proper refrigerant.

47.53310   Maintenance and Light Repair 3   Grades 10-12
Building on the knowledge and skills gained in the prerequisite course, students will learn the basic skills needed to gain employment as a maintenance and light repair technician and will expose students to automotive preventative maintenance and servicing, as well as replacing brakes, and steering and suspension components. Students will also learn general electrical system diagnosis, electrical theory, basic test requirements, and determining necessary action. In addition, students will learn how to evacuate and recharge air conditioning systems using the proper refrigerant.

End of Pathway Assessment and/or Pathway Credentialing Opportunity:
ASE Student Certification

Automotive Service Technology Pathway

This pathway includes classroom instruction and hands-on laboratory performance of the basic tasks included in the initial training required for employment in the automotive service field as identified by the National Automotive Technicians Education Foundation (NATEF). The courses include the development of basic technical skills required in steering and suspension, electrical and electronics, brakes, and engine performance.

Level	Course Name	Course Code	Course Abbreviation
Level 1	Automobile Service Technology 4	47.43400	TDL-AST4
Level 2	Automobile Service Technology 5	47.43500	TDL-AST5
Level 3	Automobile Service Technology 6	47.43600	TDL-AST6

*Levels 1, 2, and 3 are required for pathway completion.

Course Descriptions

47.43400   Automobile Service Technology 4   Grades 9-11
Building on the knowledge and skills gained in the prerequisite course, students will learn the basic skills needed to gain employment as a maintenance and light repair technician and will expose students to automotive preventative maintenance and servicing, as well as replacing brakes, and steering and suspension components. Students will also learn general electrical system diagnosis, electrical theory, basic test requirements, and determining necessary action. In addition, students will learn how to evacuate and recharge air conditioning systems using the proper refrigerant.

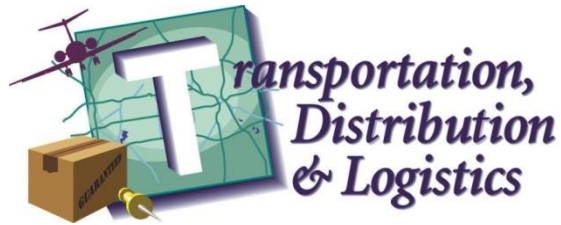**47.43500   Automobile Service Technology 5   Grades 9--12**
Building on the knowledge and skills gained in the prerequisite course, students will learn the basic skills needed to gain employment as a maintenance and light repair technician and will expose students to automotive preventative maintenance and servicing, as well as replacing brakes, and steering and suspension components. Students will also learn general electrical system diagnosis, electrical theory, basic test requirements, and determining necessary action. In addition, students will learn how to evacuate and recharge air conditioning systems using the proper refrigerant.

47.43600   Automobile Service Technology 6   Grades 10-12
Building on the knowledge and skills gained in the prerequisite course, students will learn the basic skills needed to gain employment as a maintenance and light repair technician and will expose students to automotive preventative maintenance and servicing, as well as replacing brakes, and steering and suspension components. Students will also learn general electrical system diagnosis, electrical theory, basic test requirements, and determining necessary action. In addition, students will learn how to evacuate and recharge air conditioning systems using the proper refrigerant.

End of Pathway Assessment and/or Pathway Credentialing Opportunity:
ASE Student Certification

Master Automobile Service Technology Pathway

This pathway includes classroom instruction and hands-on laboratory performance of the basic tasks included in the initial training required for employment in the automotive service field as identified by the National Automotive Technicians Education Foundation (NATEF). The courses include the development of basic technical skills required in steering and suspension, electrical and electronics, brakes, and engine performance.

Level	Course Name	Course Code	Course Abbreviation
Level 1	Master Automobile Service Technology 7	47.43700	TDL-AST7
Level 2	Master Automobile Service Technology 8	47.43800	TDL-AST8
Level 3	Automobile Service Technology Internship	47.43900	TDL-ASTI

*Levels 1, 2, and 3 are required for pathway completion.

Course Descriptions

47.43700   Master Automobile Service Technology 7   Grades 9-11
Students in this course will learn the basic skills needed to gain employment as a maintenance and light repair technician. This course will expose students to automotive preventative maintenance and servicing and replacing brakes. In addition, students will learn about steering and suspension components and general electrical system diagnosis, as well as learning electrical theory, performing basic tests, and determining necessary action.

47.43800   Master Automobile Service Technology 8   Grades 9--12
Students in this course will learn the basic skills needed to gain employment as a maintenance and light repair technician. This course will expose students to automotive preventative maintenance and servicing and replacing brakes. In addition, students will learn about steering and suspension components and general electrical system diagnosis, as well as learning electrical theory, performing basic tests, and determining necessary action.

47.43900   Automobile Service Technology Internship   Grades 10-12
The Automobile Service Technology Internship is an elective course for all Automobile Service Technology pathways. Students have the opportunity to practice finished work and develop problem solving skills. Students practice adaptability to job equipment and technology and exhibit progressive productivity and acceptable job performance.

End of Pathway Assessment and/or Pathway Credentialing Opportunity:
ASE Student Certification

Painting & Refinishing Pathway

This pathway includes classroom instruction and hands-on laboratory performance of the basic tasks included in the initial training required for employment in the automotive service field as identified by the National Automotive Technicians Education Foundation (NATEF). The courses include the development of basic technical skills required in steering and suspension, electrical and electronics, brakes, and engine performance.

Level	Course Name	Course Code	Course Abbreviation
Level 1	Intro to Collision Repair	47.56500	TDL-ICR
Level 2	Painting & Refinishing I	47.56600	TDL-PR1
Level 3	Painting & Refinishing II	47.56700	TDL-PR2

*Levels 1, 2, and 3 are required for pathway completion.

Course Descriptions

47.56500   Intro to Collision Repair   Grades 9-11
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.

47.56600   Painting & Refinishing I   Grades 9--12
Painting and Refinishing I is the first course in the painting and refinishing strand of collision repair and will provide students with automotive-refinishing skills and knowledge to assist in obtaining a career in the automotive refinishing industry. The student will learn theory, as well as hands-on application in a project-based setting. The prerequisite for this course is Introduction to Collision Repair.

47.56700   Painting & Refinishing II   Grades 10-12
Painting and Refinishing II is the second course in the painting and refinishing strand of the Collision Repair Pathway and will provide students with skills and knowledge to assist in obtaining a career in the automotive refinishing industry. The student will learn theory, as well as hands-on application in a project-based setting. The prerequisite for this course is Painting and Refinishing I.

End of Pathway Assessment and/or Pathway Credentialing Opportunity:
ASE Student Certification

Non-Structural Analysis and Damage Repair Pathway

This pathway includes classroom instruction and hands-on laboratory performance of the basic tasks included in the initial training required for employment in the automotive service field as identified by the National Automotive Technicians Education Foundation (NATEF). The courses include the development of basic technical skills required in steering and suspension, electrical and electronics, brakes, and engine performance.

Level	Course Name	Course Code	Course Abbreviation
Level 1	Intro to Collision Repair	47.56500	TDL-ICR
Level 2	Non Structural Analysis & Damage Repair I	47.56800	TDL-NSADR1-1
Level 3	Non Structural Analysis & Damage Repair II	47.56900	TDL-NSADR2

*Levels 1, 2, and 3 are required for pathway completion.

Course Descriptions

47.56500   Intro to Collision Repair   Grades 9-11
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.

47.56800   Non Structural Analysis & Damage Repair I   Grades 9--12
Non Structural Analysis and Damage Repair I is the second of three courses in the Non Structural Analysis and Damage Repair pathway that will teach students the skills and knowledge that can lead to a career in the automotive body repair industry. Damage Analysis, Estimating, and Customer Service (DAECS) provides students with special knowledge needed to assess collision damage, estimate repair costs, and work with vehicle owners.

47.56900   Non Structural Analysis & Damage Repair II   Grades 10-12
Non Structural Analysis and Damage Repair II is the third of three courses in the Non Structural Analysis and Damage Repair pathway that will teach students the skills and knowledge that can lead to a career in the automotive body repair industry. Damage Analysis, Estimating, and Customer Service (DAECS) provides students with special knowledge needed to assess collision damage, estimate repair costs, and work with vehicle owners.

End of Pathway Assessment and/or Pathway Credentialing Opportunity:
ASE Student Certification

Georgia Performance Standards

WORK-BASED LEARNING

Work-Based Learning Programs are structured educational experiences that integrate classroom learning (school-based) with productive, structured work experiences (work-based), related to a student's career goal.
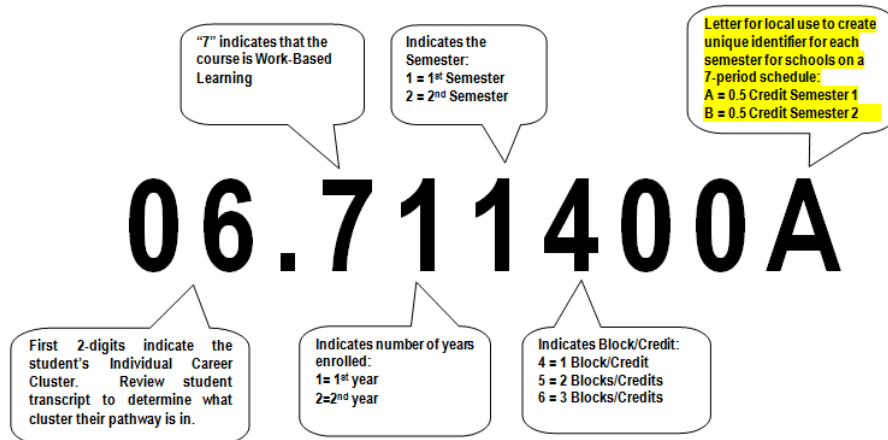
Key Components:
- School-based learning
- Work-based learning
- Connecting activities
- Work-Based Learning
- Provides paid or unpaid work experience
- Promotes a partnership between education and industry
- Integrates academic and technical instruction

Work-Based Learning provides an opportunity for juniors and seniors to start preparing for a career while still in high school. Individual programs of study in the freshman and sophomore years prepare students for a successful work-based learning experience.

Through Work-Based Learning, students are able to earn wages while learning from skilled professionals, increase career options and future employability, strengthen academic skills, experience the connection between education and real-life work skills, earn post-secondary credit while in high school and experience potential careers in the workplace.

Work-Based Learning enables employers to play an active role in shaping the quality of their future workforce. Through Work-Based Learning, employers are able to increase skill levels of potential workers, work with educators to develop curriculum based on industry standards, recruit and screen potential employers, reduce turnover of entry-level employees through the hiring of Work-Based Learning graduates and improve competitiveness in the international marketplace.

DeKalb County School District Work-Based Learning Course Codes

"7" indicates that the course is Work-Based Learning

Indicates the Semester:
1 = 1st Semester
2 = 2nd Semester

Letter for local use to create unique identifier for each semester for schools on a 7-period schedule:
A = 0.5 Credit Semester 1
B = 0.5 Credit Semester 2

06.711400A

First 2-digits indicate the student's Individual Career Cluster. Review student transcript to determine what cluster their pathway is in.

Indicates number of years enrolled:
1= 1st year
2=2nd year

Indicates Block/Credit:
4 = 1 Block/Credit
5 = 2 Blocks/Credits
6 = 3 Blocks/Credits

For example:

08.711500 = Marketing Career Cluster, 1st year, 1st semester, 2 credits
25.712500 = Healthcare Career Cluster, 1st year, 2nd semester, 2 credits
21.722300 = Manufacturing Career Cluster, 2nd year, 2nd semester, 3 credits at a school on a block-schedule
21.722300B = Manufacturing Career Cluster, 2nd year, 2nd semester, 1.5 credits at a school on 7-period schedule *(three periods of WBL)*

MIDDLE SCHOOL

Designed to meet the needs of young adolescents (ages 10-15), middle schools bridge the gap between elementary and high school by providing students with an opportunity to learn in a safe, nurturing, and positive environment. The following middle school CTAE courses are offered in DeKalb County Schools:

Middle School Business and Computer Science
07.08300 Business and Computer Science (Grade 6)
07.08400 Business and Computer Science (Grade 7)
07.08500 Business and Computer Science (Grade 8)

**Click here to view the Business and Computer Science Middle School Performance Standards.

*The goal of these courses is to provide all middle school students with an introduction to the principles of computer science, basic keyboarding skills, Internet safety and usage, and computer applications. Students will explore how personality traits and personal values align with career choices and will develop a career plan. Personal, professional, and ethical standards of behavior for the workplace will be examined and reinforced in the classroom. Development of leadership skills through participation in the career and technical student organization, **FBLA**, will provide students the opportunity to explore possible career pathways.*

Middle School Career Development
32.02100 Career Awareness Grade 6
32.02200 Career Discovery Grade 7
32.02300 Career Management Grade 8

**Click here to view the Career Development Middle School Performance Standards.

The goal of these courses is to promote essential knowledge, skills and attitudes students need to make key decisions about career options, high school curricular offerings relating to a pathway of their choice, as well as, postsecondary and workforce opportunities. Instructional focus will address interpersonal skills, management skills, employability skills, self-awareness, educational and career planning. Students will increase awareness of resources available to support educational and career planning.

Middle School Engineering and Technology
21.02100 Exploring Engineering and Technology Grade 6
21.02200 Invention and Innovation Grade 7
21.02300 Technological Systems Grade 8

**Click here to view the Engineering and Technology Middle School Performance Standards.

The goal of these courses is to provide all students with an introduction to the principles of Engineering & Technology and its place in the modern world. Students will be introduced to the world of invention and innovation along with the Engineering Design Process. They will examine the impacts of invention and innovation on society and solve problems through research, design, and experimentation in one or more of the areas of Engineering and Technology. Students will utilize the universal systems model including input, process, output and feedback to examine various systems. Development of leadership skills through participation in the career and technical student organization, TSA, will provide students the opportunity to explore possible career pathways.

Middle School Family and Consumer Science
20.01100 Family and Consumer Science (Grade 6)
20.01200 Family and Consumer Science (Grade 7)
20.01300 Family and Consumer Science (Grade 8)

**Click here to view the Family and Consumer Science Middle School Performance Standards.

The goal of these courses is to provide all students with an introduction to the Family and Consumer Sciences Career Pathways. The FACS career pathways are Nutrition and Food Science, Consumer Services, Interior and Fashion Design, and Family, Community, and Global Leadership. Education career pathways are Early Childhood Education and Teaching as a Profession and Culinary Arts is also a career pathway. Students acquire fundamental knowledge and skills necessary for success in any of the career pathways. Exposure to career possibilities in each area will allow students to successfully integrate their own interests into a career plan. Development of leadership skills through participation in the career and technical student organization, FCCLA, will provide students the opportunity to explore possible career pathways.

Middle School
Career Technical & Agricultural Education
Georgia Performance Standards

CAREER & TECHNICAL STUDENT ORGANIZATIONS

DECA   http://www.deca.org

Distributive Education Club of America is a student-centered, educational/professional organization with a program of leadership and career development designed specifically for students enrolled in marketing education. Marketing education prepares students for rewarding careers in marketing, management and entrepreneurship. DECA enhances that education by providing marketing-related activities based directly on classroom study.

FBLA   http://fbla-pbl.org

Future Business Leaders of America-Phi Beta Lambda is a nonprofit education association of students preparing for careers in business and business-related fields. The FBLA Mission is to bring business and education together in a positive working relationship through innovative leadership and career development programs.

FCCLA   http://www.fcclainc.org

Family, Career and Community Leaders of America, Inc. (FCCLA) is a nonprofit national career and technical student organization for young men and women in family and consumer sciences education in public and private school through grade 12.

FFA   http://www.ffa.org

The FFA is a national organization dedicated to preparing members for leadership and careers in the science, business and technology of agriculture. Local, state and national activities and award programs provide opportunities to apply knowledge and skills acquired through agriculture education.

HOSA   http://www.hosa.org

HOSA is a national student organization endorsed by the U.S. Department of Education and the Health Science Technology Education Division of ACTE. HOSA's two-fold mission is to promote career opportunities in the health care industry and to enhance the delivery of quality health care to all people. HOSA's goal is to encourage all health occupations instructors and students to join and be actively involved in the HSTE-HOSA Partnership.

SkillsUSA   http://www.skillsusa.org

SkillsUSA is national organization that provides quality education experiences for students in leadership, teamwork, citizenship and character development. It builds and reinforces self-confidence, work attitudes and communications skills. It emphasizes total quality at work, high ethical standards, superior work skills, life-long education and pride in the dignity of work. SkillsUSA also promotes understanding of the free enterprise system and involvement in community service activities.

TSA   http://www.tsaweb.org

Technology Student Association (TSA) is a national, non-profit organization for students with an interest in technology. TSA members learn problem-solving, decision-making, critical thinking and leadership skills as they relate to design, communications, power, energy, transportation, engineering, manufacturing, construction and biotechnology. TSA strives to meet the educational needs and challenges of all students in an increasingly and ever-changing technological world.

CTI   http://www.garvi.org

Career and Technical Instruction (CTI) provides students with disabilities the opportunity to successfully participate in career technology education programs. CTI also ensures delivery of appropriate services and accommodations for students that participate in career technology education programs.

PERSONAL PLANNING GUIDE

My Career Goals

After high school I plan to: _____

_____

Year 9	List Course Here	Year 10	List Course Here
Math		Math	
English		English	
Science		Science	
Social Studies		Social Studies	
Career Tech. Pathway		Career Tech. Pathway	
Elective		Elective	
Other		Other	
Other		Other	
Year 11	**List Course Here**	**Year 12**	**List Course Here**
Math		Math	
English		English	
Science		Science	
Social Studies		Social Studies	
Career Tech. Pathway		Career Tech. Pathway	
Elective		Elective	
Other		Other	
Other		Other	

★ *1 unit of Health and Physical Education required for all students*
★ *The 4th science unit may be used to meet both the science and elective requirements*
★ *A total of 3 units required from: Career Technical & Agricultural Education and/or Foreign Language and/or Fine Arts for all students (students planning to enter or transfer into a University System of Georgia institution or other post-secondary institution must take two units of the same foreign language).*

Post-Secondary Plans

Year 13 (1st year out of high school) _____

_____

Year 14 (2nd year out of high school) _____

_____

Year 15 (3rd year out of high school) _____

_____

Year 16 (4th year out of high school) _____

_____

NOTES

DeKalb County School District
1701 Mountain Industrial Blvd
Stone Mountain, GA 30083