Helping Students Graduate College and Career Ready in Architecture and Construction

Educational programs in this cluster prepare students for careers in designing, planning, managing, building, and maintaining the built environment.

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Georgia Department of Education

Career Cluster Pathways in Architecture and Construction

Architectural Drawing and Design 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

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

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

Machining Operations Pathway
46.54500 - Industry Fundamentals and Occupational Safety
48.58100 - Introduction to Metals
48.59000 - Machining Operations I

Welding Pathway
46.54500 - Industry Fundamentals and Occupational Safety
48.58100 - Introduction to Metals
48.55100 - Welding I

Sheet Metal Pathway
46.54500 - Industry Fundamentals and Occupational Safety
48.58100 - Introduction to Metals
48.58200 - Sheet Metal I

Heating, Ventilation, Air Conditioning & Refrigeration Pathway
46.54500 - Industry Fundamentals and Occupational Safety
47.41400 - Introduction to HVACR Systems
47.41500 - Heating, Ventilation, Air Conditioning and Refrigeration

HVACR Electrical Pathway
46.54500 - Industry Fundamentals and Occupational Safety
47.41400 - Introduction to HVACR Systems
47.41600 - Low Voltage Electrical

Fine Furniture - Cabinetmaking Pathway
46.45400 - Fine Furniture/Cabinetmaking I
46.45500 - Fine Furniture/Cabinetmaking II
46.45600 - Fine Furniture/Cabinetmaking III

Industrial Maintenance Pathway
46.41000 - Industrial Mechanics
46.42000 - Fluid Power and Piping Systems
46.43000 - Electrical Motor Control

Helping Students Graduate College and Career Ready in Arts, AV/Technology, & Communications

Designing, producing, exhibiting, writing, and publishing multimedia content including graphic design and printing production, audio video technology, and film production.

Career Cluster Pathways
in Arts, A/V Technology, & Communications

Audio Video Technology and Film Pathway
10.51810 - Audio and Video Technology and Film
10.51910 - Audio Video Technology and Film II
10.52010 - Audio Video Technology and Film III **OR**
10.51410 - Broadcast/Video Production Applications

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

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

Animation and Digital Media Pathway
48.42100 - Introduction to Digital Media
48.42200 - Principles and Concepts of Animation
48.42300 - Advanced Animation, Game and App Design
48.42400 - Animation Internship/Capstone

Helping Students Graduate College and Career Ready in Business, Management, & Administration

Educational programs in this cluster prepare students for careers in planning, organizing, directing, and evaluating business functions essential to efficient and productive business operations.

Career Cluster Pathways in Business, Management, & Administration

Business and Technology Pathway
07.44130 - Introduction to Business and Technology
07.44100 - Business and Technology
07.45100 - Business Communications

Entrepreneurship Pathway
07.44130 - Introduction to Business and Technology
06.41500 - Legal Environment of Business
06.41610 - Entrepreneurship

Human Resources Management Pathway
07.44130 - Introduction to Business and Technology
06.41500 - Legal Environment of Business
06.41800 - Human Resources Principles

Helping Students Graduate College and Career Ready in Education and Training

Educational programs in this cluster prepare students to plan, manage, and provide education and training services, and related learning support services, such as administration, teaching/training, administrative support, and professional support.

Career Cluster Pathways in Education and Training

Early Childhood Care and Education I Pathway
20.52810 - Early Childhood Education I
20.42400 - Early Childhood Education II
20.42500 - Early Childhood Education III

Early Childhood Care and Education II Pathway
20.52810 - Early Childhood Education I
20.42400 - Early Childhood Education II
20.42600 - Early Childhood Education Practicum

Teaching as a Profession Pathway
13.01100 - Examining the Teaching Profession
13.01200 - Contemporary Issues In Education
13.01300 - Teaching as a Profession Practicum

Career Pathways and courses listed for this Career Cluster are current as approved by the Georgia State Board of Education. To view recently-approved pathways and courses, please visit ctae.gadoe.org.

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Helping Students Graduate College and Career Ready in Energy

Educational programs in the Energy cluster prepare students for careers in planning, managing, and providing support and technical services related to the generation, transmission, and distribution of various types of energy; in addition to engineering design, construction, maintenance, and repair of these systems.

Career Cluster Pathways in Energy

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

Helping Students Graduate College and Career Ready in Manufacturing

Educational programs in the Manufacturing cluster prepare students to plan, manage, and perform the processing of materials into intermediate or final products, and the related professional and technical support activities such as production planning and control, maintenance, and manufacturing/process engineering.

Career Cluster Pathways in Manufacturing

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

Mechatronics Pathway
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

Granite Technology Pathway
47.45400 - Occupational Safety of Granite
47.45500 - Introduction to Granite
47.45600 - Applications in Granite Industry

Industrial Maintenance Pathway
46.4100 - Industrial Mechanics
46.4200 - Fluid Power and Piping Systems
46.4300 - Electrical Motor Control

Career Pathways and courses listed for this Career Cluster are current as approved by the Georgia State Board of Education. To view recently-approved pathways and courses, please visit ctae.gadoe.org.

June 2016

Helping Students Graduate College and Career Ready in Finance

Educational programs in this cluster prepare students to plan and implement related services for financial and investment planning, banking, insurance, and business financial management.

Career Cluster Pathways in Finance

Advanced Accounting Pathway
07.44130 - Introduction to Business and Technology
07.41100 - Principles of Accounting I
07.41200 - Principles of Accounting II

Business Accounting Pathway
07.44130 - Introduction to Business and Technology
07.42600 - Financial Literacy
07.41100 - Principles of Accounting I

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

Helping Students Graduate College and Career Ready in Government and Public Administration

Educational programs in this cluster prepare students to plan and execute government functions at the local, state and federal levels, including governance, national security, foreign service, planning, revenue and taxation, and regulations.

GaDOE
Georgia Department of Education
Richard Woods, Georgia's School Superintendent
"Educating Georgia's Future"

Career Cluster Pathways in Government and Public Administration

Public Management and Administration Pathway
29.41000 - Introduction to Government and Public Administration
29.41100 - Government Public Administration: State and Federal Issues
29.41200 - Government Public Administration: Local and State Issues

JROTC - Army
28.03100 - JROTC Army Leadership Education 1
28.03110 - Army JROTC LET 1 Alpha
28.03120 - Army JROTC LET 1 Bravo
28.03200 - JROTC Army Leadership Education 2
28.03210 - Army JROTC LET 2 Alpha
28.03220 - Army JROTC LET 2 Bravo
28.03300 - JROTC Army Leadership Education 3
28.03310 - Army JROTC LET 3 Alpha
28.03320 - Army JROTC LET 3 Bravo
28.03400 - JROTC Army Leadership Education 4
28.03410 - Army JROTC LET 4 Alpha
28.03420 - Army JROTC LET 4 Bravo
28.03500 - JROTC Army Leadership Education 5
28.03600 - JROTC Army Leadership Education 6
28.03700 - JROTC Army Leadership Education 7
28.03800 - JROTC Army Leadership Education 8

JROTC - Air Force
28.01100 - Aerospace Science Leadership 100
28.01200 - Aerospace Science Leadership 200
28.01300 - Aerospace Science: Cultural Studies
28.01400 - Aerospace Science: Leadership 300
28.01500 - Aerospace Science: Space Exploration
28.01600 - Aerospace Science: Leadership 400
28.01700 - Aerospace Science: Aviation History
28.01800 - Aerospace Science: Survival
28.01900 - Aerospace Science: Honors Ground School
28.01910 - Aerospace Science: Flight Science
28.09120 - Aerospace Science: Corps Management
28.01930 - Aerospace Science: Drill Only
28.01940 - Aerospace Science: Senior Project

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: 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

Career Pathways and courses listed for this Career Cluster are current as approved by the Georgia State Board of Education. To view recently-approved pathways and courses, please visit ctae.gadoe.org.

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Helping Students Graduate College and Career Ready in Health Science

Therapeutic Services / Pharmacy Pathway
25.52100 - Introduction to Healthcare Science
25.44000 - Essentials of Healthcare
25.45300 - Pharmacy Operations and Fundamentals

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

Therapeutic Services / Emergency Medical Responder Pathway
25.52100 - Introduction to Healthcare Science
25.44000 - Essentials of Healthcare
25.45000 - Emergency Medical Responder

Therapeutic Services / Public Safety Communications Pathway
25.52100 - Introduction to Healthcare Science
25.44000 - Essentials of Healthcare
43.46200 - Public Safety Communications

Therapeutic Services / Exercise Physiology Pathway
25.52100 - Introduction to Healthcare Science
25.44000 - Essentials of Healthcare
25.45400 - Fundamentals of Exercise Physiology

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

Therapeutic Services / Public Health Pathway
25.52100 - Introduction to Healthcare Science
25.44000 - Essentials of Healthcare
25.45200 - Applications of Public Health

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

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

Therapeutic Services / Surgical Technology Pathway
25.52100 - Introduction to Healthcare Science
25.44000 - Essentials of Healthcare
25.44700 - Surgical Technician I

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

Diagnostics / Clinical Lab Pathway
25.52100 - Introduction to Healthcare Science
25.44000 - Essentials of Healthcare
25.57600 - Clinical Lab I

Diagnostics / Non-Invasive Technology in Healthcare Pathway
25.52100 - Introduction to Healthcare Science
25.44000 - Essentials of Healthcare
25.44500 - Non-Invasive Diagnostic Technology

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

Health Informatics / Health Information Technology Pathway
25.52100 - Introduction to Healthcare Science
25.49500 - Essentials of Health Information Technology
25.49600 - Applications of Health Information Technology

Support Services Pathway
25.52100 - Introduction to Healthcare Science
25.44000 - Essentials of Healthcare
25.44400 - Healthcare Support Services

Biotechnology Research and Development Pathway
25.52100 - Introduction to Healthcare Science
25.57000 - Essentials of Biotechnology
25.56900 - Applications of Biotechnology

Helping Students Graduate College and Career Ready in Hospitality and Tourism

Educational programs in this cluster prepare students for employment in career pathways that relate to leisure activities, families, and human needs, such as restaurant and food/beverage services, lodging, travel and tourism, recreation, and sports and entertainment marketing.

Career Cluster Pathways in Hospitality and Tourism

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

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

Sports and Entertainment Marketing Pathway
08.47400 - Marketing Principles
08.47800 - Introduction to Sports and Entertainment Marketing
08.48500 - Advanced Sports and Entertainment Marketing

Helping Students Graduate College and Career Ready in Human Services

Educational programs in this cluster prepare students for employment in career pathways that relate to families and human needs, such as family and community services, personal care, and consumer services.

Career Cluster Pathways in Human Services

Nutrition and Food Science Pathway
20.41610 - Food, Nutrition and Wellness
20.41400 - Food for Life
20.41810 - Food Science

Housing and Community Management Pathway
20.44000 - Introduction to Consumer Relations
20.43200 - Housing and Community Management
20.43300 - Managing Diverse Property Types

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

Personal Care Services - Cosmetology Pathway
12.54400 - Introduction to Personal Care Services
12.41000 - Cosmetology Services II
12.41100 - Cosmetology Services III

Personal Care Services - Barbering Pathway
12.54400 - Introduction to Personal Care Services
12.42000 - Barbering II
12.42100 - Barbering III

Personal Care Services - Esthetics Pathway
12.54400 - Introduction to Personal Care Services
12.43000 - Esthetics Services II
12.43100 - Esthetics Services III

Personal Care Services - Nails Pathway
12.54400 - Introduction to Personal Care Services
12.47000 - Nail Care Services II
12.47100 - Nail Care Services III

Helping Students Graduate College and Career Ready in Information Technology

Educational programs in this cluster prepare students to build linkages in information technology occupations for entry level, technical, and professional careers related to the design, development, support and management of hardware, software, multimedia, and systems integration services.

Career Cluster Pathways in Information Technology

Web and Digital Design Pathway
11.41500 - Introduction to Digital Technology
11.45100 - Digital Design
11.45200 - Web Design

Programming Pathway
11.41500 - Introduction to Digital Technology
11.47100 - Computer Science Principles **OR**
11.01900 - Advanced Placement Computer Science Principles
11.47200 - Programming, Games, Apps and Society

Computer Science Pathway
11.41500 - Introduction to Digital Technology
11.47100 - Computer Science Principles **OR**
11.01900 - Advanced Placement Computer Science Principles
11.01600 - Advanced Placement Computer Science

Information Support and Services Pathway
11.41500 - Introduction to Digital Technology
11.41400 - Information Technology Essentials
11.42000 - Information Technology Support

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

Health Information Technology Pathway
25.52100 - Introduction to Healthcare Science
25.49500 - Essentials of Health Information Technology
25.49600 - Applications of Health Information Technology

Cybersecurity Pathway
11.41500 - Introduction to Digital Technology
11.48100 - Introduction to Cybersecurity
11.48200 - Advanced Cybersecurity

Game Design Pathway
11.41500 - Introduction to Digital Technology
11.47100 - Computer Science Principles **OR**
11.01900 - Advanced Placement Computer Science Principles
11.42900 - Game Design: Animation and Simulation

Internet of Things Pathway
11.41500 - Introduction to Digital Technology
11.47100 - Computer Science Principles **OR**
11.01900 - Advanced Placement Computer Science Principles
11.42700 - Embedded Computing

Web Development Pathway
11.41500 - Introduction to Digital Technology
11.47100 - Computer Science Principles **OR**
11.01900 - Advanced Placement Computer Science Principles
11.42500 - Web Development

Career Pathways and courses listed for this Career Cluster are current as approved by the Georgia State Board of Education. To view recently-approved pathways and courses, please visit ctae.gadoe.org.

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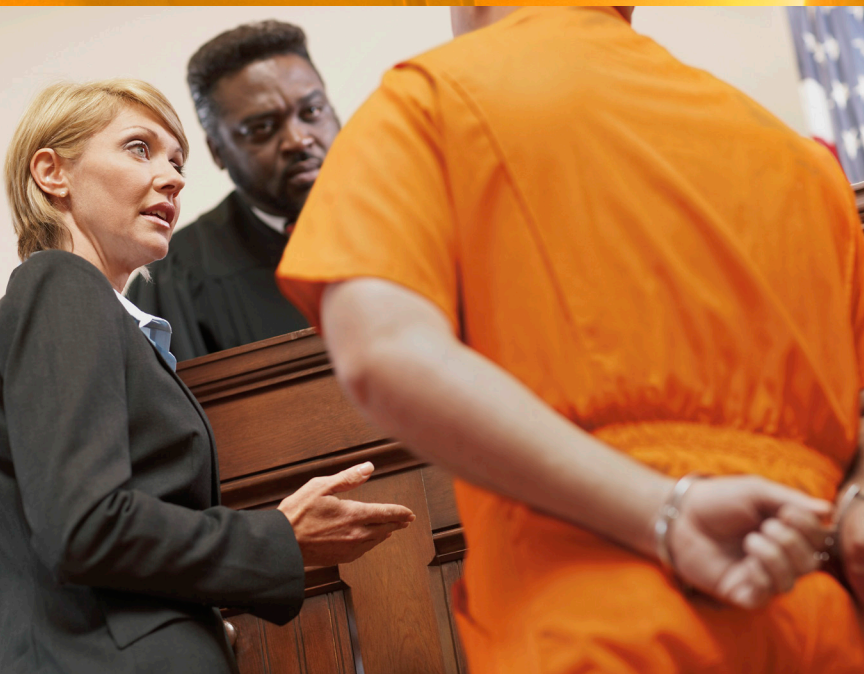
Helping Students Graduate College and Career Ready in Law, Public Safety, Corrections, & Security

Educational programs in this cluster provide students with the basic knowledge and skills for careers in law enforcement, the legal system, public safety, corrections, security, and protective services.

Career Cluster Pathways
in Law, Public Safety, Corrections, & Security

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

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

Law Enforcement Services/Forensic Science Pathway
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/
Public Safety Communications Pathway
43.45000 - Introduction to Law, Public Safety, Corrections, and Security
43.45100 - Criminal Justice Essentials
43.46200 - Public Safety Communications

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

Fire and Emergency Services /
Emergency Medical Responder Pathway
43.45000 - Introduction to Law, Public Safety, Corrections, and Security
43.46000 - Essentials of Fire and Emergency Services
25.45000 - Emergency Medical Responder

Fire and Emergency Services /
Public Safety Communications Pathway
43.45000 - Introduction to Law, Public Safety, Corrections, and Security
43.46000 - Essentials of Fire and Emergency Services
43.46200 - Public Safety Communications

Fire and Emergency Services / Firefighting Pathway
43.45000 - Introduction to Law, Public Safety, Corrections, and Security
43.46000 - Essentials of Fire and Emergency Services
43.44000 - Applications of Firefighting

Legal Services / Applications of the Law Pathway
43.45000 - Introduction to Law, Public Safety, Corrections, and Security
43.45400 - Essentials of Legal Services
43.45500 - Applications of Law

Legal Services / Legal Administrative Services Pathway
43.45000 - Introduction to Law, Public Safety, Corrections, and Security
43.45400 - Essentials of Legal Services
43.45600 - Legal Administrative Services

Helping Students Graduate College and Career Ready in Marketing

Educational programs in this cluster prepare students to plan, manage, and perform marketing activities to reach organizational objectives that include brand management, professional sales, merchandising, marketing communications, promotions, and market research.

Career Cluster Pathways in Marketing

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

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

Marketing Communications and Promotions Pathway
08.47400 - Marketing Principles
08.45100 - Promotion and Professional Sales
08.45200 - Marketing Communications Essentials
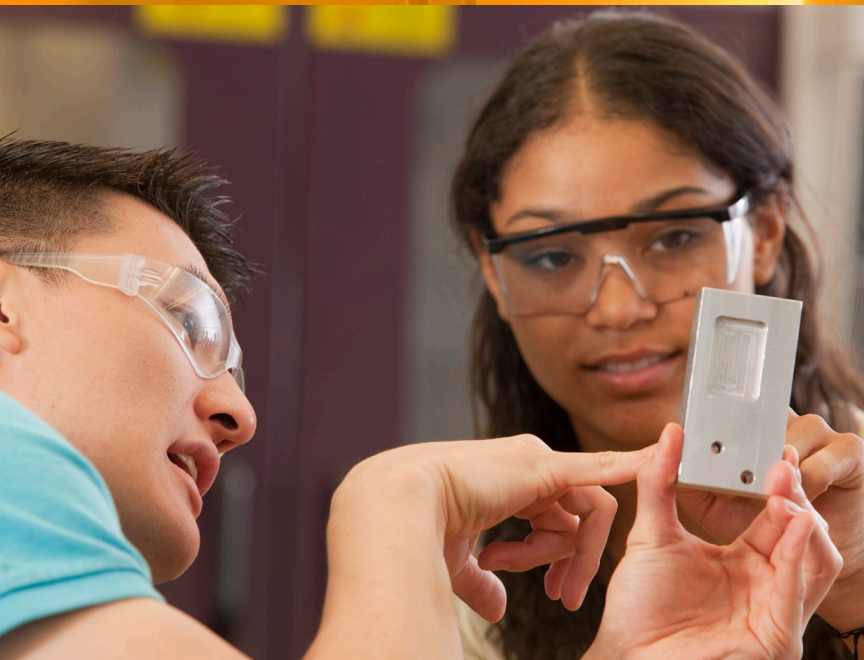
Helping Students Graduate
College and Career Ready in
Science, Technology, Engineering, & Mathematics

Educational programs in this cluster prepare students to plan, manage, and provide scientific research and professional and technical services (e.g., physical science, social science, engineering), including laboratory and testing services, and research and development services.

Career Cluster Pathways
in Science, Technology, Engineering, & Mathematics

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

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

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

Career Pathways and courses listed for this Career Cluster are current as approved by the Georgia State Board of Education. To view recently-approved pathways and courses, please visit ctae.gadoe.org.

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Helping Students Graduate College and Career Ready in Transportation, Distribution, & Logistics

Educational programs in this cluster prepare students for the planning, management, and movement of people, materials, and goods by road, pipeline, air, rail, and water. Related professional and technical support services, such as transportation infrastructure planning and management, logistics services, mobile equipment, and facility maintenance are also included.

Career Cluster Pathways
in Transportation, Distribution, & Logistics

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

Automobile 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 - Automobile Service Technology 7
47.43800 - Automobile Service Technology 8
47.43900 - Automobile Service Technology Internship

Distribution and Logistics Pathway
47.47010 - Logistics Fundamentals
47.47110 - Logistics Operations
47.47210 - Materials Management

Marine Engine Technology Pathway
47.58000 - Foundations of Marine Engine Technology
47.58100 - Marine Electrical Systems
47.58200 - Marine Engine Drive Systems

Collision Repair - Painting and Refinishing Pathway
47.56500 - Introduction to Collision Repair
47.56600 - Painting and Refinishing I
47.56700 - Painting and Refinishing II

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

Flight Operations Pathway
47.46000 - Fundamentals of Aerospace
47.48800 - Flight Operations I
47.48900 - Flight Operations II

Aviation Maintenance Pathway
47.46000 - Fundamentals of Aerospace
47.46200 - Aviation Maintenance I
47.46300 - Aviation Maintenance II

Helping Students Graduate College and Career Ready in Agriculture, Food, and Natural Resources

Animal Science

Animal Production & Processing Pathway
02.47100 - Basic Agricultural Science
01.43200 - Agricultural Animal Production and Management
02.43200 - Agriculture Meat and Dairy Product Processing

Animal / Mechanical Systems Pathway
02.47100 - Basic Agricultural Science
01.42100 - Agricultural Mechanics Technology I
01.43200 - Agricultural Animal Production and Management

Agriculture Leadership in Animal Production Pathway
02.47100 - Basic Agricultural Science
02.42100 - Animal Science Technology / Biotechnology
01.41200 - Agribusiness Management and Leadership

Companion Animal Systems Pathway
02.47100 - Basic Agricultural Science
02.42100 - Animal Science Technology / Biotechnology
02.42300 - Small Animal Care

Veterinary Science Pathway
02.47100 - Basic Agricultural Science
02.42100 - Animal Science Technology / Biotechnology
02.42400 - Veterinary Science

Equine Science Pathway
02.47100 - Basic Agricultural Science
02.42100 - Animal Science Technology / Biotechnology
02.42200 - Equine Science

Food Animal Systems Pathway
02.47100 - Basic Agricultural Science
02.42100 - Animal Science Technology / Biotechnology
01.43200 - Agricultural Animal Production and Management

Forestry / Natural Resources

Forest/Renewable Energy Pathway
02.47100 - Basic Agricultural Science
03.45100 - Forest Science
03.47100 - Introduction to Renewable Energy

Agriculture Leadership in Aquaculture Pathway
02.47100 - Basic Agricultural Science
01.41200 - Agribusiness Management and Leadership
03.43100 - Aquaculture

Forest Mechanical Systems Pathway
02.47100 - Basic Agricultural Science
03.45100 - Forest Science
01.42100 - Agricultural Mechanics Technology I

Agriculture Leadership in Forestry Pathway
02.47100 - Basic Agricultural Science
01.41200 - Agribusiness Management and Leadership
03.45100 - Forest Science

Forest / Natural Resources Management Pathway
02.47100 - Basic Agricultural Science
03.45100 - Forest Science
03.41100 - Natural Resources Management

Forest Management Systems Pathway
02.47100 - Basic Agricultural Science
03.45100 - Forest Science
03.45200 - Forestry Science II

Forestry / Wildlife Systems Pathway
02.47100 - Basic Agricultural Science
03.45100 - Forest Science
03.45300 - Wildlife Management

Environmental Agriculture Systems Pathway
02.47100 - Basic Agricultural Science
03.42200 - Environmental Science and Stewardship
03.46100 - Sustainable Agriculture

Plant Science / Horticulture

Horticulture Mechanical Systems Pathway
02.47100 - Basic Agricultural Science
01.42100 - Agricultural Mechanics Technology I
01.46100 - General Horticulture and Plant Science

Plant Mechanical Systems Pathway
02.47100 - Basic Agricultural Science
01.42100 - Agricultural Mechanics Technology I
02.44100 - Plant Science and Biotechnology

Agriculture Leadership in Plant Science Pathway
02.47100 - Basic Agricultural Science
02.44100 - Plant Science and Biotechnology
01.41200 - Agribusiness Management and Leadership

Agriculture Leadership in Horticulture Pathway
02.47100 - Basic Agricultural Science
01.46100 - General Horticulture and Plant Science
01.41200 - Agribusiness Management and Leadership

Landscape Management Systems Pathway
02.47100 - Basic Agricultural Science
01.46100 - General Horticulture and Plant Science
01.46500 - Turf Production and Management

Plant and Floral Design Systems Pathway
02.47100 - Basic Agricultural Science
01.46100 - General Horticulture and Plant Science
01.46600 - Floral Design and Management

Plant and Landscape Systems Pathway
02.47100 - Basic Agricultural Science
01.46100 - General Horticulture and Plant Science
01.47000 - Nursery and Landscape

Plant and Floriculture Systems Pathway
02.47100 - Basic Agricultural Science
01.46100 - General Horticulture and Plant Science
01.46200 - Floriculture Production and Management

Agricultural Mechanics
Agricultural Mechanics and Electrical Systems Pathway
02.47100 - Basic Agricultural Science
01.42100 - Agricultural Mechanics Technology I
01.42600 - Agricultural Electricity and Electrical Controls

Agricultural Mechanics and Metal Fabrications Pathway
02.47100 - Basic Agricultural Science
01.42100 - Agricultural Mechanics Technology I
01.42400 - Agricultural Metals Fabrication

Agriculture Energy Systems Pathway
02.47100 - Basic Agricultural Science
03.47100 - Introduction to Renewable Energy
03.46200 - Renewable Fuel Production

Agricultural Mechanics Systems Pathway
02.47100 - Basic Agricultural Science
01.42100 - Agricultural Mechanics Technology I
01.42200 - Agricultural Mechanics Technology II

Food Science
Food Products and Processing Systems Pathway
02.47100 - Basic Agricultural Science
01.44100 - Agricultural Food Products and Processing, Operations and Management
02.43200 - Agriculture Meat and Dairy Product Processing

Agriculture Leadership in Food Product Processing Pathway
02.47100 - Basic Agricultural Science
01.41200 - Agribusiness Management and Leadership
02.43200 - Agriculture Meat and Dairy Product Processing

Diversified Agriculture
Horticulture and Forest Science Pathway
02.47100 - Basic Agricultural Science
01.46100 - General Horticulture and Plant Science
03.45100 - Forest Science

Horticulture and Animal Science Pathway
02.47100 - Basic Agricultural Science
01.46100 - General Horticulture and Plant Science
02.42100 - Animal Science Technology / Biotechnology

Forestry & Animal Science Pathway
02.47100 - Basic Agricultural Science
03.45100 - Forest Science
02.42100 - Animal Science Technology / Biotechnology

Agribusiness Systems Pathway
02.47100 - Basic Agricultural Science
01.41200 - Agribusiness Management and Leadership
01.41300 - Marketing Agricultural Products & Services

Agriscience Systems Pathway
02.47100 - Basic Agricultural Science
02.42100 - Animal Science Technology / Biotechnology
02.44100 - Plant Science and Biotechnology

Helping Students Graduate
College and Career Ready in
Advanced Academics, Fine Arts, & World Language

Educational programs in these pathway areas prepare students for career opportunities that will lead to multiple postsecondary options for advanced studies and skills. Students will be able to use these skills in a university or college setting and/or many career fields.

Career Cluster Pathways
in Advanced Academics, Fine Arts and World Language

Advanced Academic Pathway in English Language Arts Criteria:
1. Students need to earn four units of credit in English language arts; and
2. The student's chosen English Language Arts Pathway will include at least one Advanced Placement English Language Arts course, or one International Baccalaureate English Language Arts course, or one postsecondary course that fulfills a core graduation requirement in English language arts; and
3. Students need to complete two units of sequential course credit in one world language.

Advanced Academic Pathway in Mathematics Criteria:
1. Students need to earn four units of credit in mathematics; and
2. The student's chosen Mathematics Pathway will include at least one Advanced Placement Mathematics course, or one International Baccalaureate Mathematics course, or one postsecondary course that fulfills a core graduation requirement in mathematics; and
3. Students need to complete two units of sequential course credit in one world language.

Advanced Academic Pathway in Science Criteria:
1. Students need to earn four units of credit in science; and
2. The student's chosen Science Pathway will include at least one Advanced Placement Science course, or one International Baccalaureate Science course, or one postsecondary course that fulfills a core graduation requirement in science; and
3. Students need to complete two units of sequential course credit in one world language.

Advanced Academic Pathway in Social Studies Criteria:
1. Students need to earn three units of credit in social studies; and
2. The student's chosen Social Studies Pathway will include at least one Social Studies Advanced Placement course, or one International Baccalaureate Social Studies course, or one postsecondary course that fulfills a core graduation requirement in social studies; and
3. Students need to complete two units of sequential course credit in one world language.

Fine Arts Pathway
1. Students may complete a Fine Arts Pathway when three courses from Visual Arts, Theatre, Dance, Music, or Journalism have been successfully completed.
2. All three courses should be taken within one of the five Fine Arts Pathways.

World Language Pathway Criteria:
1. Students need to earn three units of credit in one world language; and
2. The student's chosen World Language Pathway will include three distinct high school courses in one world language or include two distinct high school courses in one world language and a third reflecting an Advanced Placement course, where Advanced Placement courses in world language are offered; or a third reflecting an International Baccalaureate course, where International Baccalaureate courses in world language are offered, or one postsecondary enrollment course in the same world language reflecting a third course at the college level.

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Helping Students Graduate College and Career Ready through Career & Technical Student Organizations

- *All Georgia Career and Technical Student Organizations (CTSOs) are co-curricular and link student activities to what is learned in the classroom.*
- *There are eight (8) Career and Technical Student Organizations with more than 140,000 members in Georgia.*
- *Seven of the eight Career and Technical Student Organizations are affiliated with their national student organization; therefore, many Georgia students are able to participate in leadership events at the state, national and international levels.*
- *Career and Technical Student Organizations promote leadership skills, community service learning, and skill development through competitive events.*

Career and Technical Student Organizations (CTSOs) play an integral role in the success of Career, Technical and Agricultural Education (CTAE) programs and are supported by the Georgia Department of Education. CTSOs are important to preparing students to become members of society who hold productive leadership roles in their communities.

These organizations provide motivation, leadership training, and career development opportunities for students enrolled in CTAE programs in middle and high schools. Students enhance their occupational, employability, and leadership skills through various activities such as conferences, award programs, service projects, and competitive events. Students can participate in numerous CTSO activities and events that are organized on the local, state, and national levels.

DECA – had 11,540 members and three out of the five largest chartered student associations in the world.

FBLA – had a membership of 23,042, and largest state chapter for 13th year in a row.

FCCLA – ranked 1st in the nation for the past 10 years with more than 29,111 members in 312 schools.

FFA – ranked 3rd in the nation with more than 37,000 members striving for premier leadership, personal growth, and career success through agricultural education.

HOSA – had the largest State Leadership Conference in the nation with 3,300 attending out of 12,287 members.

SkillsUSA – ranked top 10 in nation with 8,212 active members.

TSA – ranked 1st in the nation with more than 28,000 membership and the most High School Chapters (131).

CTI – A Georgia student organization serving students with disabilities and providing an additional resource and student leadership opportunity for nearly 6,000 students.

Helping Students Graduate College and Career Ready with Georgia's Graduation Plan

Increasing public high school graduation rate is a major goal in Georgia. As more students graduate from high school better prepared to enter postsecondary studies, the workforce, or the military, the state of Georgia benefits by an improved economy.

Teachers, counselors, and administrators work daily to engage students to learn and master essential skills and make the step to their next educational goal. Despite economic challenges our districts have encountered, educational teams have worked tirelessly to graduate more high school students annually than ever before.

If the United States could achieve a 90 percent high school graduation rate, the projected economic benefits would include as much as:
- *$16.8 billion a year in additional new home purchases;*
- *$1.3 billion annually in additional federal tax revenues;*
- *$661 million a year to state and local tax coffers.*

Georgia Dual Enrollment/Dual Credit Programs

All previous dual-credit programs have been combined into one program entitled Move on When Ready, in which high school students may earn high school course credits while taking college courses. Georgia's Move on When Ready dual-credit program is available to any Georgia student in grades 9-12 enrolled in a public school, private school, or home-study environment.

Under the new Move on When Ready dual-credit program; the tuition, mandatory fees, book fees, and non-course fees are waived. Students may be charged for course-related fees, supplies, or equipment. Student participation in Move on When Ready is available for up to four years, or even one semester, since the dual-credit program is a semester-by-semester program. Students may participate with multiple colleges during the semester/quarter not to exceed 15 semester/ 12 quarter hours. College courses must be selected from the approved Move on When Ready Course List.

More details about the new Move on When Ready dual-credit program may be found at www.gsfc.org/.

Current GEORGIA Graduation Rule for students entering the 9th grade in fall of 2008-09 and beyond Areas of Study:	Credits
English / Language Arts	4
Math	4
* Science	4
Social Studies	3
**Career, Technical and Agricultural Education (CTAE), and/or Modern Language/Latin, and/or Fine Arts	3
Health & Physical Education	1
Electives (4 units)	4
TOTAL UNITS	23

* 4th Science may be used to meet both the required science and required elective in CTAE sequence of courses.
** Student must complete 3 units in a pathway and take a related national credentialing assessment. Student must complete 2 years of the same Modern Language /Latin for admission to Georgia Board of Regents colleges/universities.

Helping Students Graduate College and Career Ready with a Career-Related Capstone Project

What is the High School Career-Related Capstone Project?

In an effort to provide all students with an education that leads to being college and career ready, students will participate in a career-related capstone project. Reflecting on who they are and what they want to do, the Capstone project provides students with the opportunity to explore a career of personal or professional interest and address the latest trends or issues through focused study and applied research.

What is the suggested timeline for students to complete the project?

The timeline may vary based on the school's type of grading schedule, i.e. semester, year-long, or block. The project may be carried out over an entire year or be completed in a specified amount of time, such as a nine-week period or a semester.

Will the Capstone Project be graded?

Graded components may include the research paper, presentation, and the portfolio. Local systems will also determine the class for which the grade will be associated.

What are the components of the Capstone Project?

Research Paper

The first component is a research paper documenting information on a subject of the student's choice -- a subject demonstrating the student's career interest.

Portfolio

The second component of the project should be a portfolio. This portfolio may be in a notebook form or kept electronically. The portfolio provides physical documentation of the career-related capstone project journey.

Mentor

As part of the project, students must obtain a mentor to assist in learning more about the career area. The mentor must be someone who is knowledgeable in the chosen area of interest or someone working in the field.

Student Presentation

The fourth and final component of the project will be a presentation. This presentation could be a formal presentation before a panel of community judges where the students present their research information and findings or a presentation before a group of interested students at another grade level such as middle school or elementary school students.

Helping Students Graduate College and Career Ready in Work-Based Learning

Work-Based Learning (WBL) programs are structured experiences that connect the student's career goal and classroom learning with a productive work environment. Work-Based Learning includes student placement that may be paid or unpaid positions. Students in Work-Based Learning are classified in one of four ways according to the alignment of their career-tech coursework with job placement and future postsecondary/career plans:

- Youth Apprenticeship (YAP)
- Internship
- Cooperative Education (Co-op)
- Employability Skills Development (ESD)

Student placement is dependent on defined criteria for each placement type including the paid or unpaid status. Contact your local CTAE Supervisor or Director for state-approved WBL course numbers.

Insert the CIP code for the concentration/pathway that the WBL placement is related to.

The first digit past the decimal is "7" for all WBL enrollments using this system. Reminder: All YAP enrollments must use this system.

A "1" in the second digit indicates the students first year of enrollment, whereas a "2" indicates the second year.

X X . 7 1 1 4 0 0 0

A "1" in the third digit indicates semester one, whereas a "2" indicates semester two.

4 = one period/block/credit.
5 = two periods/blocks/credits.
6 = three period/blocks/credits.

Last two digits for local use. May be used to create a unique number for each period in the student's schedule.

Helping Students Graduate College and Career Ready with Support Services for Special Populations

The Career and Technical Instruction (CTI) and Coordinated Career Academic Education (CCAE)/Project Success (PS) programs provide intervention support to students from special populations enrolled in Career, Technical, and Agricultural Education courses. Student participation in these courses is only available through teacher referral. These are not career pathway courses.

Career and Technical Instruction

The Georgia Career and Technical Instruction (CTI) support service is designed to assist high school students with disabilities who are enrolled in Career, Technical, Agricultural Education (CTAE) courses. In these courses students acquire employability skills that ease their transition to postsecondary education or the workforce. The role of the CTI Coordinator is to provide individualized special education transition support to students served under an Individualized Education Plan (IEP), which is necessary for them to achieve their desired postsecondary outcome goal. CTI courses do not count toward pathway completion. (Career and Technical Instruction I, II, III, IV)

Coordinated Career Academic Education

The Coordinated Career Academic Education/Project Success (CCAE/PS) courses provide additional opportunities for students to sharpen academic and employability skills in their chosen Career, Technical, and Agricultural Education (CTAE) pathway. Through participation in a CCAE or PS program, students learn about the world of work by achieving academic challenges, project-based learning activities, and participating in a Career and Technical Student Organization (CTSO) aligned with their career goal. The courses in this category do not count toward pathway completion.

CCAE I course / Project Success I course

CCAE I/PS I: Career Foundations and Leadership - teaches students the academic skills needed to graduate from high school, along with the introductory employability skills necessary to obtain employment. Other topics covered include basic safety and health, teamwork, work ethics, basic personal finance, Career and Technical Student Organizations, self-assessment, career pathways, career readiness, and employment performance. There is no pre-requisite for this course.

CCAE II/PS II course / Project Success II course

Career Essentials and Leadership - teaches students the academic skills necessary to graduate from high school, along with the intermediate employability skills needed to obtain and maintain employment. Students will develop the skills to utilize academic concepts in school, on the job, at home, and in work-based learning settings. In this course, students will create or evaluate their individualized career plan, while learning about successful employment practices that involve personal safety and health issues, negative and positive work behaviors, effective leadership practices, legal situations, and effective use of technology. There is no pre-requisite for this course.

CCAE III course

Career Transition and Leadership - teaches students the academic skills needed to graduate from high school, along with advanced employability skills needed to obtain and maintain employment. Students will learn how to apply for and obtain work-based learning opportunities; revise individualized career plans; utilize community resources; use critical-thinking skills in school, home, and in the workplace; make ethical choices; as well as, adapt to changes in the workplace. There is no prerequisite for this course.

Helping Students Graduate College and Career Ready with Industry Credentialing

Georgia's End-of-Pathway Assessment (EOPA) process was derived in direct response to the Perkins IV Legislation, which requires states to implement a measurement mechanism that would ascertain the technical skill attainment level of students participating in career and technical education courses.

The End of Pathway Assessment (EOPA) process provides students with a sustainable opportunity to gain valuable skills and knowledge through participation and completion of a career pathway at the secondary level. Obtaining such skills in the secondary realm will potentially provide students with increased opportunities to earn industry-validated credentials while still in high school and possibly lead to increased earning potential throughout the student's career span.

Credentials are awarded in recognition of an individual's attainment of measurable technical or occupational skills necessary to obtain employment or to advance within an occupation. These technical or occupational skills are generally based on standards developed or endorsed by employers.

Georgia's Technical Skill Attainment Inventory contains approximately 197 exam options. This inventory (or list of available End-of-Pathway Assessments) is updated annually based on input from GaDOE state program area specialists and other subject matter experts (which include industry and secondary/postsecondary representatives).

The EOPAs in the Technical Skill Attainment Inventory consist of several different measurement components. A student can earn a credential through one of the following measurement components:

- Industry-Recognized Credentialing Exams (or assessments): An industry-recognized credential is one that is either developed, offered by, or endorsed by a recognized industry association or organization representing a sizeable portion of the industry sector, or a credential that is sought or accepted by companies within the industry sector for purposes of hiring or recruitment, which may include credentials from vendors of certain products.*
- Occupational Assessments: occupational assessments measure technical skills at the occupation level, including aspects of occupational competence such as factual and theoretical knowledge.
- State Licensing Exams (or state licensures): State licensures are required by governmental entities, typically state regulatory bodies, before an individual is allowed to be employed in a practice or a trade, profession, or other occupation. Such exams measure knowledge and skill proficiency levels.*
- State Developed Occupational Assessments: State developed occupational assessments measure technical skills at the occupation level, including aspects of occupational competence such as factual and theoretical knowledge attained by student participation in state identified career pathways offerings.

When choosing exam options from Georgia's Technical Skill Attainment Inventory that will be administered to students, local systems should make that determination based upon the student's career aspirations as well as the system's ability to provide such exam options. Exam offerings from the Technical Skill Attainment Inventory will be determined by local system administrators with input from program area instructors.

(U. S. Department of Labor/Employment and Training Administration Advisory System: Training and Employment Guidance Letter No. 15-10, December 15, 2010)