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.

COLLEGE ACCESS
CHALLENGE G R A N T

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

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

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 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

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.

May 2015

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.

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

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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
11.47200 - Programming, Games, Apps and Society

Computer Science Pathway
11.41500 - Introduction to Digital Technology
11.47100 - 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

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

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.