



CAREER & TECHNICAL EDUCATION: *THE NEXT 10 YEARS*

2012-2023



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CAREER & TECHNICAL EDUCATION: *THE NEXT 10 YEARS*

Career and Technical Education (CTE) has experienced a major overhaul over the last 10 years. The old days of “vocational education” for students who are not going to college are a thing of the past and a completely new paradigm has emerged. Today, 62 percent of occupations require some type of post-secondary training through universities, community colleges, and/or technical schools, according to the Department of Labor. At the same time, a study by the Center for Labor Market Studies at Northeastern University found that only 60 percent of college graduates are in jobs that require a degree (Headapohl). More and more, we hear stories of four-year degree graduates returning to community colleges for a workforce degree.

The Bureau of Labor Statistics (BLS) has projected national growth in 88 percent of occupations by the year 2020, with the greatest growth in health care, personal care, social assistance, and construction as the United States continues its shift from a goods-producing to a service-providing economy. Excluded from this growth will be the jobs that only require a high school diploma. At the same time, the BLS predicts lower population growth and labor force participation rate.

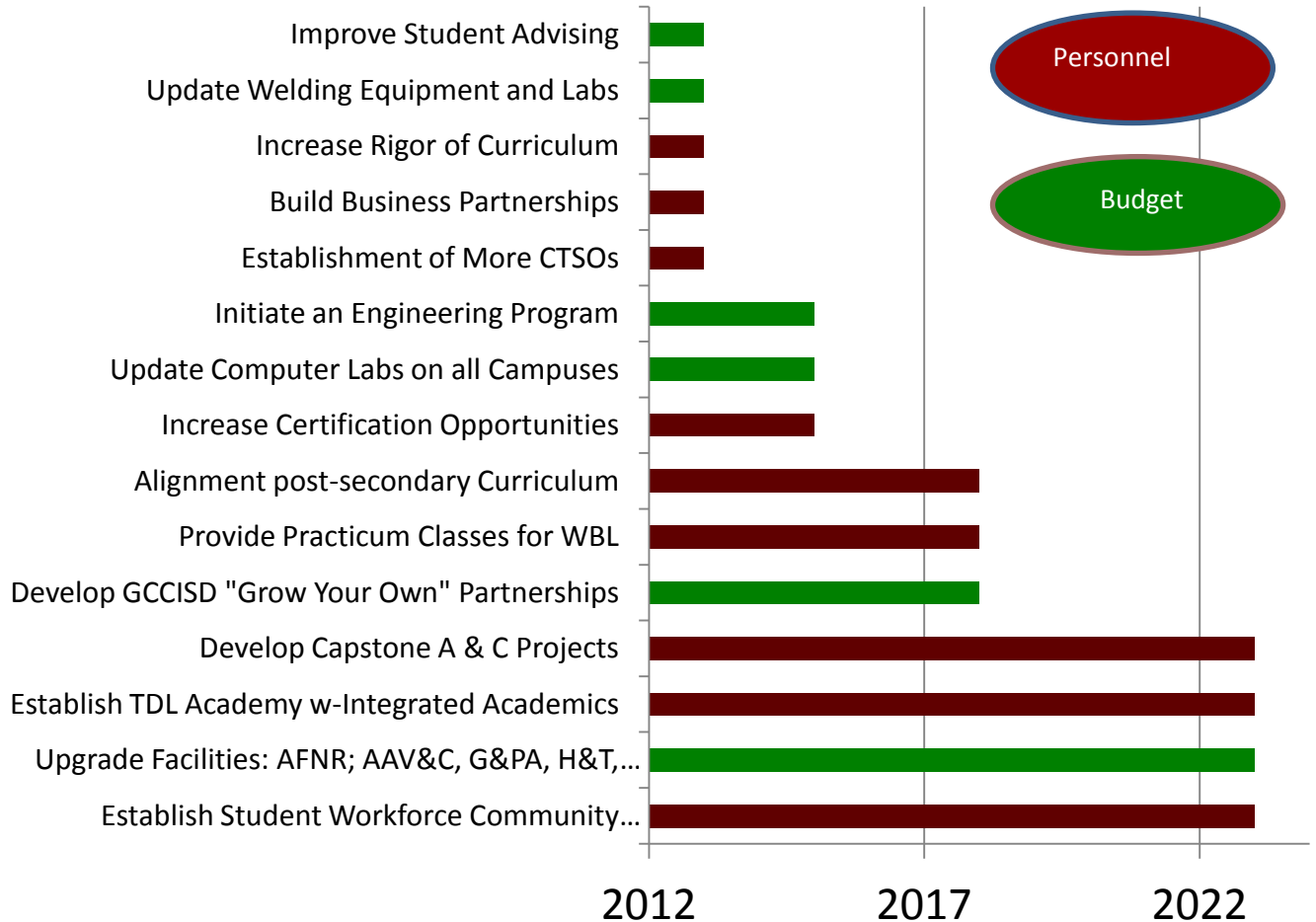
Based upon data from the Labor Market and Career Information (LMCI) division of the Texas Workforce Commission (TWC), the Texas Gulf Coast has a larger projection for employment growth (19.4 percent) than does Texas (17.0 percent) or the nation as a whole (10.1 percent). For this reason, the school district must strive towards preparing students to meet these employment needs through its College and Career Readiness programs. To this end, a CTE Programmatic Visioning Committee was established in February 2012 and given the mission, “Through research, evaluation and collaboration, design a vision for the future of Goose Creek CISD Career & Technical Education Programs of Study to meet the needs of our growing communities and student population.”

Goose Creek Consolidated Independent School District’s panel of 70 subject-matter experts (SME) was composed of regional business and industry representatives as well as secondary and post-secondary education representatives, to establish a vision for the next 10 years of Career and Technical Education in the district. This group broke into sub-committees based upon the Achieve Texas Career Cluster model and met a total of six times from February through June of 2012 to review current programs in the district, conduct labor market research on local, regional, state and national levels, and to advise the district on upcoming industry labor market and skills needs in each respective career cluster. Each group then developed a timeline to meet their recommended goals and objectives.

The overall goals and objectives for each career cluster can generally be grouped into categories of curriculum and course development and alignment, upgrading of equipment to meet current industry standards, and improving/enlarging facilities to meet student demand as well as growing industry needs. Below is a summary of the timeline of goals and objectives for the Career and Technical Education (CTE) programs in Goose Creek Consolidated Independent School District.












SUMMARY OF GOALS AND OBJECTIVES





SUMMARY OF FACILITY RECOMMENDATIONS

	<p>Expand the <u>Agriscience Center</u> to include</p> <ul style="list-style-type: none"> • a classroom • more pens to serve more students • cross-fencing for the rotation of animals • a show pen with bleachers for in-district shows • a science lab equipped for environmental studies
	<p>Upgrade the <u>Stuart Career Center</u> to include</p> <ul style="list-style-type: none"> • an Audio-Video Production lab shared with GCCISD Communications Office, using industry-standard Macintosh and PC computers
	<p>Upgrade <u>ROTC</u> facilities, including</p> <ul style="list-style-type: none"> • Install a computer lab for student use in ROTC rooms • Upgrade current classroom facilities, obstacle course and arms training facilities on all campuses
	<p>Expand the <u>Stuart Career Center</u> in order to</p> <ul style="list-style-type: none"> • Move the health science practicum for all three high schools to the same, shared facility with specialized labs for training in various high demand areas: pharmaceuticals, nursing, physicians, and medical records
	<p>Redesign the <u>Stuart Career Center</u> to</p> <ul style="list-style-type: none"> • Design a collaboratively run, student managed restaurant to provide work-based learning experiences for all students <p>Rebuild the <u>Homemaking Labs (REL & RSS)</u></p> <ul style="list-style-type: none"> • Build commercial kitchens at REL & RSS campuses to provide commercial kitchens and science labs for food science and nutrition courses
	<p>Expand the <u>Stuart Career Center</u> in order to</p> <ul style="list-style-type: none"> • Build a central cosmetology program to house labs for training in all certification areas
	<p>Expand the <u>Stuart Career Center</u> in order to</p> <ul style="list-style-type: none"> • Develop an industrial training center in which students will complete training in welding and other high demand manufacturing occupations
	<p>Expand the <u>Stuart Career Center</u> in order to</p> <ul style="list-style-type: none"> • Install a fully functional engineering lab with high tech computer lab and general lab for engineering design projects
	<p>Redesign the <u>Stuart Career Center</u> to</p> <ul style="list-style-type: none"> • Open a Transportation, Distribution, and Logistics Academy with a focus on Automotive Technology, Collision Repair, A.T.V., Motorcycle, Marine, Diesel, and the Maritime Academy with academic classes and science labs structured toward students in this field of study



SUMMARY OF RECOMMENDATIONS



AGRICULTURE, FOOD & NATURAL RESOURCES

Short Term Recommendations	Mid-Term Recommendations	Long Term Recommendations
<ul style="list-style-type: none"> • Update and enhance labs and equipment to better meet industry standards in general construction • Develop a plan to address the careers and certifications in Natural Resources and Environmental Systems 	<ul style="list-style-type: none"> • Expand the Agriscience Center to include a classroom • Develop a two-period practicum course to be taught at the Agriscience Facility • Develop curriculum to support student certifications in Waste Water, Pesticide Applications, Floral Design and/or other areas related to these occupations 	<ul style="list-style-type: none"> • Develop a fully functional Agriscience Center with <ul style="list-style-type: none"> ○ more pens to serve more students, ○ cross-fencing for the rotation of animals ○ a show pen with bleachers for in-district shows managed by the practicum class ○ a science lab equipped for environmental studies



ARCHITECTURE & CONSTRUCTION

Short Term Recommendations	Mid-Term Recommendations	Long Term Recommendations
<ul style="list-style-type: none"> • Create a program of interest for all levels by engaging students with design software and an understanding of the related occupations • Strengthen post-secondary partnerships by <ul style="list-style-type: none"> ○ Aligning the high school curriculum with college courses ○ Increasing the number of students taking advantage of existing articulation agreements with Lee College ○ Establishing more articulation agreements in other courses 	<ul style="list-style-type: none"> • Increase connections with local business and industry to set up visits / field trips to businesses and job sites • Build relationships with business and industry for job shadowing and internship opportunities • Establish summer academic program with Lee College for junior high and high school students 	<ul style="list-style-type: none"> • Create a Capstone Project that incorporates all of the courses in the cluster at each high school campus and industry



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ARTS, A/V TECHNOLOGY & COMMUNICATIONS

Short Term Recommendations	Mid-Term Recommendations	Long Term Recommendations
<ul style="list-style-type: none"> • Develop a marketing strategy that will increase student interest to fill advanced levels of all courses • Increase number of students earning certifications in Adobe software • Improve access to technology for professional communications classes • Adjust curriculum to teach Adobe CS6. 	<ul style="list-style-type: none"> • Establish job shadowing opportunities through increased networking with the community, • Install an industry-aligned Apple (Mac) Lab at Stuart Career Center • Increase community and university partnerships to establish a guest speaker bureau • Establish a chapter of Future Business Leaders of America to increase student • Align curriculum with Lee College and establish college credit plans 	<ul style="list-style-type: none"> • Create an internship program for students within the district and the community • Build an Audio-Video Production lab shared with GCCISD Communications Office that will engage students with modern equipment, sound booth and operational sets for production that will include them in the full audio-video production process from start to final production using industry-standard Macintosh and PC computers



BUSINESS MANAGEMENT & ADMINISTRATION, FINANCE & MARKETING

Short Term Recommendations	Mid-Term Recommendations	Long Term Recommendations
<ul style="list-style-type: none"> • Complete the district-wide alignment of curriculum with software simulations • Initiate a Career and Technical Education Student Organization • Increase the number of students earning certifications • Upgrade textbooks to e-books 	<ul style="list-style-type: none"> • Improve technology in the classrooms, including upgrading to Office 2010 • Engage students in all aspects of the CTSO • Create a practicum for students with internship that will establish the business community. 	<ul style="list-style-type: none"> • Develop a student managed and staffed GCCISD business that provides real world experience for students



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CAREER DEVELOPMENT

Short Term Recommendations	Mid-Term Recommendations	Long Term Recommendations
<ul style="list-style-type: none"> • Expand the Exploring Careers curriculum to clarify the connection between students' career interests and high school classes • Provide career development training for 7th grade social studies teachers • Expand the business partners in order to <ul style="list-style-type: none"> ○ Increase the number of guest speakers from business and industry ○ Strengthen the Student Workforce Connection partnership • Take students on field trips to a variety of businesses and industries to demonstrate real-world expectations 	<ul style="list-style-type: none"> • Develop a strong curriculum for Exploring Careers • Continue building Student Workforce Connection partnerships 	<ul style="list-style-type: none"> • Enhance the Student Workforce Connection partnership to become a service provider of teen employees in the community



EDUCATION & TRAINING

Short Term Recommendations	Mid-Term Recommendations	Long Term Recommendations
<ul style="list-style-type: none"> • Meet with elementary and junior school principals to create after-school volunteer programs • Align courses to the junior college level that would lead to a post-secondary degree • Seek scholarships for outstanding students • Develop a plan for district- and school-wide recognition for the Ready, Set, Teach interns 	<ul style="list-style-type: none"> • Develop an Early Childhood Program for each high school campus to allow students to become day care providers • Develop a Teacher's Assistant Certificate, that aligns with highly qualified guidelines, that will be awarded to RST interns at the end of the course 	<ul style="list-style-type: none"> • Develop a "grow your own" agreement in GCCISD <ul style="list-style-type: none"> ○ Provide scholarships to outstanding Ready, Set, Teach (RST) students who complete program ○ Employ RST students who are in college to be teachers as aids within the district ○ Hire RST students upon college graduation



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FINANCE

See Business Administration & Management



GOVERNMENT & PUBLIC ADMINISTRATION

Short Term Recommendations	Mid-Term Recommendations	Long Term Recommendations
<ul style="list-style-type: none"> • Repair obstacle course at RSS • Develop curriculum in office management procedures, job interest and placement techniques and supply and inventory lessons • Obtain current enlistment and ASVAB scores for each occupational specialty (jobs) in the military by developing and working with the local recruiters • Initiate an aggressive plan to obtain funding assistance for additional technology and equipment 	<ul style="list-style-type: none"> • Expand the lessons listed above to all juniors and seniors in our program • Install a computer lab for student use • Administer the ASVAB to all cadets sophomore and above will be given the ASVAB • Strengthen partnerships with local region and recruiters 	<ul style="list-style-type: none"> • Obtain approval for Goose Creek Memorial’s ROTC unit • Administer the ASVAB to all seniors, regardless of military interest for use as career interest tool • Upgrade current classroom facilities, obstacle course and arms training facilities on all campuses to improve student success



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HEALTH SCIENCE

Short Term Recommendations	Mid-Term Recommendations	Long Term Recommendations
<ul style="list-style-type: none"> Develop a plan for the growth in enrollment with all three campuses in sync with curriculum and professional expectations Encourage and prepare students to pass the Certified Nurse Aide test on the first attempt Design a plan to improve the Pharmacy Technician training and develop a better follow-up method for students taking the Pharmacy Technician Certification test 	<ul style="list-style-type: none"> Have a stronger program in Pharmacy and Nurse Aide that is taught during the school day for all three schools in order that all Health Science practicum students have the opportunity to leave high school with a certification in the medical field Investigate the possibility of adding other courses leading to certifications in high demand areas possibly partnering with the Lee College Continuing Education Department Align curriculum with Lee College in order to ease student transition into post-secondary education 	<ul style="list-style-type: none"> Move the health science practicum for all three high schools to the same, shared facility with specialized labs for training in various high demand areas: pharmaceuticals, nursing, physicians, and medical records Develop a strong Health Occupations Students of America (HOSA) programs, with students routinely participating in district and state competitions



HOSPITALITY & TOURISM

Short Term Recommendations	Mid-Term Recommendations	Long Term Recommendations
<ul style="list-style-type: none"> Increase articulation agreements Increase number of students earning industry certification in ServSafe Prepare curriculum for students to complete the TABC certification Have all instructors involved in a CTSO and competitions 	<ul style="list-style-type: none"> Develop and implement plan to add Hospitality and Tourism to curriculum 	<ul style="list-style-type: none"> Build commercial kitchens at all campuses to provide consistent curriculum Design a collaboratively run, student managed restaurant to provide work-based learning experiences for all students



HUMAN SERVICES

Short Term Recommendations	Mid-Term Recommendations	Long Term Recommendations
<ul style="list-style-type: none"> Develop a plan for the integration of other certificates into the cosmetology program Create lessons connecting psychology and sociology careers to curriculum 	<ul style="list-style-type: none"> Offer at least two additional certification opportunities to students 	<ul style="list-style-type: none"> Build a central cosmetology program to house labs for training in all certification areas



INFORMATION TECHNOLOGY

Short Term Recommendations	Mid-Term Recommendations	Long Term Recommendations
<ul style="list-style-type: none"> Establish standards for hardware and software Adjust written curriculum to ensure all TEKS are covered 	<ul style="list-style-type: none"> Develop and implement a plan to reorganize programs of study to target high demand occupations and attract students 	<ul style="list-style-type: none"> Develop a practicum course in project management for advanced students Developing partnerships with industry to create additional job shadowing and internship opportunities for student



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LAW, PUBLIC SAFETY, CORRECTIONS & SECURITY

Short Term Recommendations	Mid-Term Recommendations	Long Term Recommendations
<ul style="list-style-type: none"> Develop plans for students to earn the Basic Jailer Proficiency Certificate upon high school graduation 	<ul style="list-style-type: none"> Develop plan and implement curriculum for the firefighter course Develop new curriculum/dual credit crosswalk for Emergency Medical Attendant and/or Technician certification Align curriculum with Lee College to establish an articulated/ dual credit crosswalk 	<ul style="list-style-type: none"> Develop and implement a plan for all students to have the opportunity to graduate with at least one industry certification or significant college credit toward an Associate of Applied Science degree



MANUFACTURING

Short Term Recommendations	Mid-Term Recommendations	Long Term Recommendations
<ul style="list-style-type: none"> Implement a curriculum in partnership with Austin Industrial and Bayer that will expose students to industrial standards and expectations in skilled crafts areas Standardize a crosswalk to help counselors advise students who begin the Process Technology dual credit program Develop a plan to integrate the NCCER curriculum into the skilled crafts courses 	<ul style="list-style-type: none"> Increase connections with local business and industry for work-based activities Build relationships with business and industry for job shadowing and internship opportunities for teachers and students Develop and implement a plan to increase the number of students who graduate with at least the first semester of the Process Technology degree Upgraded welding lab equipment to meet industry expectations in TIG welding 	<ul style="list-style-type: none"> Develop an industrial training center in which students will complete training in welding and other high demand manufacturing occupations



MARKETING

See Business Administration & Management



SCIENCE, TECHNOLOGY, ENGINEERING & MATHEMATICS

Short Term Recommendations	Mid-Term Recommendations	Long Term Recommendations
<ul style="list-style-type: none"> Develop a plan to implement of four-year program of study leading to engineering Increase enrollment in STEM related courses across the district Standardize a crosswalk to help counselors advise students who begin the instrumentation and other STEM dual credit programs 	<ul style="list-style-type: none"> Develop curriculum for an engineering program of study in GCCISD Engage more high school students in robotics and other engineering competitions Increase the number of students graduating with at least one semester completed toward the Associate of Applied Science in Instrumentation Technology or Instrumentation Certificate of Completion 	<ul style="list-style-type: none"> Install a fully functional engineering lab with high tech computer lab and general lab for engineering design projects



TRANSPORTATION, DISTRIBUTION & LOGISTICS

Short Term Recommendations	Mid-Term Recommendations	Long Term Recommendations
<ul style="list-style-type: none"> • Change TDL classes to Small Engine Technology with the advance program taught at Stuart Career Center • Start Texas Workforce Commission Financial assistance program with employee training • Add section of Diesel technology to Automotive and Small engine program 	<ul style="list-style-type: none"> • Make changes required by N.A.T.E.F. to keep automotive program certified • Introduce a Maritime Academy with focus on new programs such Large Marine Diesel and Hazardous Materials • Develop curriculum to add a new component of Logistics and Distribution • Create a Business Information Management course for freshmen entering high school that will apply transportation-related activities to the use of Microsoft Office 	<ul style="list-style-type: none"> • Open a Transportation, Distribution, and Logistics Academy with a focus on Automotive Technology, Collision Repair, A.T.V., Motorcycle, Marine, Diesel, and the Maritime Academy with academic classes structured toward students in this field of study • Re-tool the Collision Repair program to meet federal requirements to transition to waterborne paint systems



DETAILED RESULTS: SUB-COMMITTEE WORK BY CAREER CLUSTER



AGRICULTURE, FOOD & NATURAL RESOURCES

VISION:

The Agriculture, Food & Natural Resources Career Cluster envisions a future in which students are prepared for careers in high demand areas of Natural Resources and Environmental Services, Construction Engineering, Welding, and Surveying through a central Agriscience Facility that serves all students.

MISSION:

It is the mission of the Agriculture, Food & Natural Resources Career Cluster to equip students with the knowledge and skills required for associate and baccalaureate degree programs and/or entry into the workforce with Waste Water, Pesticide Applications, Floral Design and other related certifications.

GOALS AND OBJECTIVES:

Short Term Goal (1 Year):

By the end of 2013, the Agriculture, Food, and Natural Resources teachers will

- update and enhance labs and equipment to better meet industry standards for general construction, and
- develop a plan to address the careers and certifications in Natural Resources and Environmental Systems.

Mid-Term Goal (3-5 Years):

By the end of 2013, the Agriculture, Food, and Natural Resources teachers will

- expand the Agriscience Center to include a classroom,
- develop a two-period Practicum course to be taught at the Agriscience Center that will give students the opportunity to learn facility management and agribusiness systems in a hands-on manner, including curriculum on bio-fuels, organic and natural feed stuffs, waste water leaching and chemical run-off, and
- develop curriculum to support student certifications in Waster Water, Pesticide Applications, Floral Design, and/or other areas related to occupations in the community.

Long Term Goal (10+ Years):

By the end of 2023, the Agriculture, Food, and Natural Resources teachers will develop a fully functional Agriscience Center with

- more pens to serve more students,
- cross-fencing for the rotation of animals,
- a show pen with bleachers for in-district shows managed by the practicum class



- a science lab equipped for environmental studies.

Current GCCISD programs of study:

The 2012 Agricultural Science Career Cluster currently targets five of the eight programs of study (Career Pathways) in this cluster:

- Agribusiness Systems
- Animal Systems
- Food Products & Processing Systems
- Plant Systems
- Power, Structural & Technical Systems

The 2012 Agricultural Science Career Cluster does not target the following three programs of study (Career Pathways) within this cluster:

- Environmental Service Systems
- Natural Resources Systems
- Biotechnology

RESEARCH:

According to the Bureau of Labor Statistics, “overall employment in agriculture, forestry, fishing, and hunting is expected to decrease by 4 percent because of rising costs of production, more consolidation, and increases in productivity.” Within this sector, only forest, conservation and logging are anticipated to have small growth (Occupational Outlook Handbook). An increase of 26 percent in employment in water, sewage, and other systems is anticipated. Employment of farm and ranch managers is expected to decline by 8 percent. On the list of the top 20 occupations with the highest percent of growth, Veterinary Technicians are expected to increase 52 percent between 2010 and 2020.

AGRICULTURE, FOOD & NATIONAL RESOURCES OCCUPATIONS INCLUDED IN TOP 20 NATIONAL OCCUPATIONS 2010-2020

	# of New Jobs
Landscaping & Groundskeeping Workers	240,800 (+21%)

*SOURCE: [Occupational Outlook Handbook](#)

AGRICULTURE, FOOD & NATIONAL RESOURCES OCCUPATIONS IN GULF COAST WDA 2008-2018

None

*SOURCE: “GULF COAST WDA OCCUPATIONAL PROJECTIONS,” TEXAS WORKFORCE COMMISSION

STRATEGIC WORKFORCE ASSESSMENT-TARGETED OCCUPATIONS

- Petroleum Pump System Operators, Refinery Operators, & Guagers
- Service Unit Operators, Oil, Gas, and Mining
- Geological and Petroleum Technicians

SOURCE: STRATEGIC WORKFORCE ASSESSMENT PROGRAM, TWC



ADDITIONAL COMMITTEE FEEDBACK:

No certifications are currently offered for students in this area, but students are very active in the FFA Organization. The committee was concerned that Natural Resources / Environmental areas are not address while these are targeted occupations in the Gulf Coast. The committee found that current programs do not target occupations, but generally focuses on preparing students for post-secondary study in related areas. Agricultural Production, Farming and Ranching are anticipated “hard-to-fill occupations.

Recommended Target Occupations & Certifications: Environmental Engineers, Building Information Management Systems, Community Resource Planners, Metal Fabricators (in Manufacturing Cluster); Pesticide Applications, Welding Certifications (AWS or NCCER Curriculum), and Waste Water Certifications are encouraged to be pursued.



ARCHITECTURE & CONSTRUCTION

VISION:

The Architecture & Construction Career Cluster envisions a program of study tightly intertwined with Lee College in which students graduate prepared for both high demand occupations and post-secondary programs in related fields through collaborative projects and workforce internships.

MISSION:

To prepare students for high demand occupations and post-secondary education in areas such as Computer-Aided Drafting, Construction Trades & Management, Building Code Officiating, General Contracting, and Architectural Designing & Engineering.

GOALS AND OBJECTIVES:

Short Term Goal (1 Year):

By the end of 2013, Architecture and Construction teachers will

- create a program of interest for all levels by engaging students with design software and an understanding of the related occupations, making sure that students are prepared with the necessary information for college and career readiness, and
- strengthen post-secondary partnerships by
 - aligning the high school curriculum with college courses,
 - increasing the number of students taking advantage of existing articulation agreements with Lee College, and
 - establishing more articulation agreements in other courses.



Mid-Term Goal (3-5 Years):

By the end of 2017, Architecture and Construction teachers will build relationships with local business and industry in order to

- set up visits / field trips to businesses and job sites,
- generate job shadowing and internship opportunities, and
- establish summer academic program with Lee College for junior high and high school students.

Long Term Goal (10+ Years):

By the end of 2023, Architecture and Construction teachers will create a yearlong, large scale project that incorporates all of the courses in the cluster at each high school campus. Classes will join together along with mentorship of teachers and industry partners to plan, design and build the project. to prepare students to enter industry in various positions with the ability to lead, problem solve and use innovative applications on their projects. Students will become valued members of a construction team and participate in planning, cost estimating, scheduling, supervision, and completing the project in a timely, safe and quality manner. Students will also gain the professional knowledge to confidently interact with professional engineers, registered architects, and others to solve problems that may arise.

GCCISD PROGRAMS OF STUDY:

The 2012 Architecture and Construction Career Cluster currently targets two of the three programs of study (Career Pathways) in this cluster:

- Design & Pre-Construction
- Construction

The 2012 Architecture and Construction Career Cluster does not target the following Program of Study (Career Pathways) within this cluster:

- Maintenance & Operations

RESEARCH:

According to the Occupational Outlook Handbook, employment in all areas of construction is expected to rise over 33 percent, but this still will not bring its employment levels back to its pre-recession numbers. Architecture and Construction employment is expecting a 10 percent increase. Employment in building and grounds cleaning and maintenance is anticipated to increase 12 percent by 2020. Employment in mining, quarrying, and oil and gas extraction is projected to increase by 4 percent over the 2010-20 decade, with growth rates of up to 15 percent.

ARCHITECTURE & CONSTRUCTION OCCUPATIONS INCLUDED IN TOP 20 NATIONAL OCCUPATIONS 2010-2020

HIGHEST PERCENT OF GROWTH

Helpers—Brickmasons, Blockmasons, Stonemasons, and Tile +60%

HIGHEST NUMERIC GROWTH

Construction Laborers 212,400 +21%



and Marble Setters	
Helpers—Carpenters	+56%
Reinforcing Iron and Rebar Workers	+49%
Helpers-Pipelayers, Plumbers, Pipefitters, and Steamfitters	+45%
Glaziers and	+42%
Brickmasons and Blockmasons	+41%

*SOURCE: Occupational Outlook Handbook

ARCHITECTURE & CONSTRUCTION OCCUPATIONS IN GULF COAST WDA 2008-2018

Occupations Adding the Most Jobs	Occupations with Most Projected <u>Annual</u> Openings	Largest Associate Degree Occupations w/2010 Wages	Fastest Growing Occupations
Construction Laborers (#8/10) 11,470	None in Top 10	Electrical \$60,000 Engineering Techs (#5/10) Civil \$45,000 Engineering Techs (#6/10)	Electrical & Electronics Repairers (#6/10) 50%

*SOURCE: "GULF COAST WDA OCCUPATIONAL PROJECTIONS," TEXAS WORKFORCE COMMISSION

STRATEGIC WORKFORCE ASSESSMENT-TARGETED OCCUPATIONS in the GULF COAST LABOR WORKFORCE DEVELOPMENT AREA

- Electricians
- Plumbers, Pipefitters, and Steamfitters
- Heating, Air Conditioning & Refrigeration Mechanics & Installers
- Electrical Power-Line Installers and Repairers
- Mechanical Drafters
- Electrical and Electronic Drafters

SOURCE: STRATEGIC WORKFORCE ASSESSMENT PROGRAM

ADDITIONAL COMMITTEE FEEDBACK:

Currently no certifications exist for students in this area. Students do participate in SkillsUSA drafting projects. The committee emphasized the need for business classes to be encouraged for construction students since many will eventually create their own small business. Curriculum in the Construction classes should integrate all aspects of general construction: HVAC, Electrical, etc. The committee recognized the following top occupations: Estimators, Superintendents, Project Managers, Architects, and Engineers.



Target Occupations & Certifications: Scaffolders, insulators, painters, laborers, carpenters and heavy equipment operators (cranes, earth moving, etc.)



ARTS, A/V TECHNOLOGY & COMMUNICATIONS

VISION:

The Arts, Audio Video Technology, and Communications Career Cluster envisions a program of study in which future students graduate college and career ready through diverse curriculum, communication skills and work-based learning through internships and practical experience in partnership with the GCCISD Communications Office.

MISSION:

To prepare students for high demand, exciting careers and post-secondary education in Arts, Audio-Video Production and Communications by earning Adobe certifications and hands-on learning experiences inside the district and the community.

GOALS AND OBJECTIVES:

Short Term Goal (1 Year):

By the end of 2013, Arts, Audio Video Technology and Communications teachers will

- develop a marketing strategy that will increase student interest to fill advanced levels of all courses,
- increase number of students earning certifications in Adobe software,
- improve access to technology for Professional communications classes, and
- adjust curriculum to teach Adobe CS6.

Mid-Term Goal (3-5 Years):

By the end of 2017, Arts, Audio Video Technology and Communications teachers will

- establish job shadowing opportunities through increased networking with the community,
- install an industry-aligned Apple (Mac) Lab at Stuart Career Center,
- increase community and university partnerships to establish a guest speaker bureau,
- establish a chapter of Future Business Leaders of America (FBLA) to increase student engagement, and
- align curriculum with Lee College and establish college credit plans.

Long Term Goal (10+ Years):

By the end of 2023, Arts, Audio Video Technology and Communications teachers will

- create an internship program for students within the district and the community, and
- build an Audio-Video Production lab shared with GCCISD Communications Office that will engage students with modern equipment, sound booth, and operational sets for production that will include them in the full audio-video production process from start to final production.



GCCISD PROGRAMS OF STUDY:

The 2012 Arts, AV Technology & Communications Career Cluster currently targets two of the six programs of study (Career Pathways) in this cluster:

- Audio & Video Technology & Film
- Visual Arts

The 2012 Arts, AV Technology & Communications Career Cluster does not target the following program of study (Career Pathways) within this cluster:

- Journalism & Broadcasting
- Performing Arts
- Printing Technology
- Telecommunications

Students in this program may earn Adobe certification, and students in the Visual Arts-Fashion Design Program of Study may participate in Family, Career and Community Leaders of America.

RESEARCH:

According to the Occupational Outlook Handbook, employment in newspaper, periodical, book, and directory publishers is expected to decline by 12 percent, largely because of competition on the Internet and efficiency in production. However, Internet publishing and broadcasting is expected to grow 16 percent by 2020. General employment nationwide in arts and design is expected to increase 10 percent, with half of the growth to be in graphic design. Nationally, media and communications occupations are looking at a 13 percent growth, largely among public relations specialists. The number of interpreters and translators is also expected to increase due to continued globalization.

ARTS, A/V TECHNOLOGY & COMMUNICATIONS OCCUPATIONS INCLUDED IN TOP 20 NATIONAL OCCUPATIONS 2010-2020

Meeting, Convention, and Event Planner (+44%)
 Interpreters and Translators (+42%)

*SOURCE: [Occupational Outlook Handbook](#)

ARTS, A/V TECHNOLOGY & COMMUNICATIONS OCCUPATIONS IN GULF COAST WDA 2008-2018

Occupations Adding the Most Jobs	Occupations with Most Projected <u>Annual</u> Openings	Largest Associate Degree Occupations w/2010 Wages	Fastest Growing Occupations
None in Top 10	None in Top 10	None in Top 10	None in Top 10



*SOURCE: "GULF COAST WDA OCCUPATIONAL PROJECTIONS," TEXAS WORKFORCE COMMISSION

STRATEGIC WORKFORCE ASSESSMENT-TARGETED OCCUPATIONS in the GULF COAST LABOR WORKFORCE DEVELOPMENT AREA

None

SOURCE: STRATEGIC WORKFORCE ASSESSMENT PROGRAM, TWC

ADDITIONAL COMMITTEE FEEDBACK:

The committee questioned the existence of the Fashion Design program of study because of the fact that it is limited to one true Fashion course. The committee reported that top occupations today are Communications, Newspapers, Journalism (TV or print), Commercial Photography and Video Photographers.

The committee has also encouraged the use of Apple products in the Graphics and AV classes because of the fact that industry in this cluster is Mac-based.

Target Occupations & Certifications: Freelance Web Site Design, Audio Engineer, Video Production (Final Cut Pro certification); Game Designer; Graphic Designer, Film, and Communications; Adobe certifications in Photoshop, Premiere, After Effects, In-Design, and Illustrator.



**BUSINESS MANAGEMENT &
ADMINISTRATION, FINANCE &
MARKETING**

VISION:

A combined Business Management, Finance and Marketing Career Cluster envisions a future in which students are prepared for post-secondary education and high demand entry-level occupations by earning Microsoft Office Specialist (MOS) certifications and experiencing real-world business through work-based learning opportunities.

MISSION:

To prepare students for entry-level positions and advanced placement in post-secondary education through Microsoft Office Specialist certifications and articulation agreements with community colleges.



GOALS AND OBJECTIVES:

Short Term Goal (1 Year):

By the end of 2013, the Business, Marketing and Finance teachers will

- complete the district-wide alignment of curriculum with software simulations,
- initiate a Career and Technical Education Student Organization (CTSO) that targets students interested in careers and post-secondary education in business, finance and marketing (Future Business Leaders of America or Business Professionals of America),
- increase the number of students earning certifications, and
- upgrade textbooks to e-books.

Mid-Term Goal (3-5 Years):

By the end of 2017, the Business, Marketing and Finance teachers will

- improve technology in the classrooms, including upgrading to Office 2010,
- engage students in all leadership and competition within the newly developed CTSE, and
- create a practicum for students to intern in specialized areas within the business community.

Long Term Goal (10+ Years):

By the end of 2023, the Business, Marketing and Finance teachers will develop a student-managed and staffed GCCISD business that provides real world experience for students.

GCCISD PROGRAMS OF STUDY:

The 2012 Business Management & Administration Career Cluster is combined with the Finance and Marketing Career Clusters because of the overlapping of courses and the few courses offered in the Finance & Marketing Career Clusters. It currently targets four of the six Programs of Study (Career Pathways) in this cluster:

- Administrative & Information Support
- Management
- Business Financial Management & Accounting
- Marketing

The 2012 Business Management & Administration Career Cluster does not target the following program of study (Career Pathways) within this cluster:

- Business Analysis
- Human Resources

Students in this program may earn Microsoft Office Specialist (MOS) Certification. There are no student organizations available to students.

RESEARCH:

Based upon the Occupational Outlook Handbook, slow growth of 6 percent is expected in the management of companies and enterprises as companies reorganize to increase efficiency. Large growth is expected in the human resources services area, up to 21 percent, because of the strong need for seasonal and temporary workers. Fastest growth will be in waste collection, expected to grow 35 percent because of privatization of these services. There are declines expected in food service managers, farm and ranch managers, and postal mail



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carrier managers. Office and administrative support jobs (office clerks, customer service representatives, bookkeepers, accounting and auditing clerks, etc.) will also be increasing, largely as a comeback from the recession.

BUSINESS MANAGEMENT & ADMINISTRATION OCCUPATIONS INCLUDED IN TOP 20 NATIONAL OCCUPATIONS 2010-2020

	# of New Jobs
Office Clerks, general	489,500 (+17%)
Customer Service Representatives	338,400 (15%)
Bookkeeping, Accounting, & Auditing Clerks	259,000 (+14%)
Cashiers	250,200 (+7%)
Receptionists & Informatin Clerks	248,500 (24%)

*SOURCE: [Occupational Outlook Handbook](#)

BUSINESS MANAGEMENT & ADMINISTRATION OCCUPATIONS IN GULF COAST WDA 2008-2018

Occupations Adding the Most Jobs		Occupations with Most Projected Annual Openings		Largest Associate Degree Occupations w/2010 Wages	Fastest Growing Occupations
Customer Service Representatives (#6/10)	12,380	Cashiers (#2/10)	3,860		
Office Clerks (#8/10)	11,190	Customer Service Representatives (#5/10)	2,825	None in Top 10	None in Top 10
Cashiers (#9/10)	10,210	Office Clerks (#8/10)	1,995		

*SOURCE: "GULF COAST WDA OCCUPATIONAL PROJECTIONS," TEXAS WORKFORCE COMMISSION

STRATEGIC WORKFORCE ASSESSMENT-TARGETED OCCUPATIONS in the GULF COAST LABOR WORKFORCE DEVELOPMENT AREA

- Accountants and Auditors

SOURCE: STRATEGIC WORKFORCE ASSESSMENT PROGRAM, TWC

ADDITIONAL COMMITTEE FEEDBACK:

The committee has recommended that Spanish be emphasized as the preferred foreign language for business student and that students focus more on the finance side of business. The committee identified current top occupations including Customer Service Representatives, Hospitality Administration and Insurance. The district



should continue Microsoft certifications for students, with emphasis on increasing the number of students.

Target Occupations & Certifications: MOS Certification, Accounting, Network Administration (under Information Technology cluster), Management and Human Resources



CAREER DEVELOPMENT

VISION:

The Career Development Program of Study envisions a future in which students have chosen their respective career pathways and are prepared with employability skills for a fast-changing workplace allowing them to be successful in a chosen career path immediately after high school or after post-secondary education.

MISSION:

To assist students in choosing the career pathway of their dreams and developing the employability (soft) skills required for success in college and careers.

GOALS AND OBJECTIVES:

Short Term Goal (1 Year):

By the end of 2013, the Career Development staff will

- expand the curriculum in Exploring Careers to help students understand the connection between their career interests and high school classes,
- provide career development training for 7th grade social studies teachers,
- expand the business partners in order to
 - increase the number of business and industry representatives from different clusters who speak to classes about the career opportunities, and
 - strengthening the Student Workforce Connection partnership with the community, and
- take students on field trips to a variety of businesses and industries so that students can see what happens in the real world.

Mid-Term Goal (3-5 Years):

By the end of 2017, the Career Development Program of Study will

- Develop a strong curriculum for Exploring Careers, and
- Continue building Student Workforce Connection partnerships.

Long Term Goal (10+ Years):

By the end of 2023, Career Development Program of Study needs to enhance the Student Workforce Connection partnership to become a fully functional provider of teen employees in the community.



GCCISD PROGRAM OF STUDY:

Separated from the career clusters, this Program of Study deals with general employability, including:

- Career Awareness
 - Six weeks unit in 7th grade Social Studies to introduce students to the sixteen career clusters and the occupations within each cluster.
 - 1 semester junior school course explaining all 16 career clusters and their relationship to high school courses,
 - 1 semester junior school course focusing on individual clusters (different at each school)
- Employability Skills
 - K-12 Matrix of the integrated approach to general career development, and
 - Career Preparation classes that bridge students to the world of work through training plans and agreements with local employers (formerly called Co-Op).



EDUCATION & TRAINING

VISION:

The Education & Training Career Cluster envisions a future in which GCCISD future educators begin their career in high school through internships at district schools in high schools, work as aides through their post-secondary training, and return as degreed educators in the district.

MISSION:

To prepare students to be qualified child care providers, bilingual teachers, speech pathologists, deaf education teachers, special education teachers by earning Educational Aide I certificate upon high school graduation and college ready for post-secondary training.

GOALS AND OBJECTIVES:

Short Term Goal (1 Year):

By the end of 2013, the Education and Training teachers will

- meet with elementary and junior school principals at the beginning of the year to create tutorials and other after school volunteer programs,
- align courses to the junior college level that would lead to a post-secondary degree,
- seek scholarships for outstanding students, and
- develop a plan for district- and school-wide recognition for the Ready, Set, Teach interns.

Mid-Term Goal (3-5 Years):

By the end of 2017, the Education and Training teachers will



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- develop an Early Childhood Program for each high school campus to allow students to become day care providers, and
- develop a Teacher’s Assistant Certificate within the district awarded to Ready, Set, Teach! (RST) interns at the end of the course.

Long Term Goal (10+ Years):

By the end of 2023, the Education and Training teachers will develop a "grow your own" agreement in GCCISD in order to

- provide scholarships to outstanding Ready, Set, Teach! (RST) students who complete program,
- employ RST students who are in college to be teachers are hired as educational aids within the district during college, and
- hire RST students upon graduation of college if a position is available in their area of study.

GCCISD PROGRAMS OF STUDY:

The 2012 Education and Training Career Cluster currently targets one of the three Programs of Study (Career Pathways) in this cluster:

- Teaching and Training

The 2012 Education and Training Career Cluster does not target the following Program of Study (Career Pathways) within this cluster:

- Administration and Administrative Support
- Professional Support Services

Students in this program do not currently earn certification, although they do earn work experience through unpaid internships at schools within the district. Students may participate in the Texas Association of Future Educators.

RESEARCH:

According to Bureau of Labor Statistics data in the Occupational Outlook Handbook, employment in the education sector is expected to increase by 14 percent because of rising student enrollment at all educational levels.

EDUCATION & TRAINING OCCUPATIONS INCLUDED IN TOP 20 NATIONAL OCCUPATIONS 2010-2020

	# of New Jobs
Post-Secondary Teachers	305,700 (+17%)
Elementary School Teachers, except Special Education	248,800 (17%)

*SOURCE: [Occupational Outlook Handbook](#)



EDUCATION & TRAINING OCCUPATIONS IN GULF COAST WDA 2008-2018

Occupations Adding the Most Jobs		Occupations with Most Projected <u>Annual</u> Openings		Largest Associate Degree Occupations w/2010 Wages	Fastest Growing Occupations	
Elementary School Teachers (#2/10)	18,080	Elementary School Teachers (#6/10)	2,645	None in Top 10	Special Education Teachers Middle School	51%
Secondary School Teachers (#10/10)	9,580	Secondary School Teachers (#10/10)	1,645		Special Education Teachers Elementary School	50%
					Elementary School Teachers Middle School Teaches Kindergarten Teachers	49%
						49%
						48%

*SOURCE: "GULF COAST WDA OCCUPATIONAL PROJECTIONS," TEXAS WORKFORCE COMMISSION

STRATEGIC WORKFORCE ASSESSMENT-TARGETED OCCUPATIONS in the GULF COAST LABOR WORKFORCE DEVELOPMENT AREA

NONE

SOURCE: STRATEGIC WORKFORCE ASSESSMENT PROGRAM, TWC

ADDITIONAL COMMITTEE FEEDBACK:

Faculty should utilize the Peter E. Hyland Center's Day Care Center as a work site.

Target Occupations & Certifications: Youth Services Aide (YMCA), Preschool Aide; Child Care Workers (Human Services), Bilingual Teachers, School Teachers, all levels are recommended targets by the committee. Curriculum for the course should also focus on integrating technology into the classroom and around the digital classroom in general. Both child care and tutoring are occupations that students should be directed to while still in high school. Upon graduating high school, students should be encouraged to continue tutoring or becoming instructional aides during their post-secondary education for teacher certification.



FINANCE

Business Management & Administration, Finance & Marketing Career Clusters are combined into the Business Management & Administration Cluster. See that section of this document for the Vision, Mission & Goals.

RESEARCH:

Recovering from the recession’s job losses, the finance and insurance industry is projected to increase 9 percent by 2020. A 25 percent jump in employment in securities, commodity contracts, and other financial investments and related activities is also projected in the Occupational Outlook Handbook. Increasing financial regulations will drive demand for accountants, auditors and analysts.

FINANCE OCCUPATIONS IN GULF COAST, GULF COAST WDA REGION 2008-2018

Occupations Adding the Most Jobs	Occupations with Most Projected <u>Annual</u> Openings	Largest Associate Degree Occupations w/2010 Wages	Fastest Growing Occupations
None in Top 10	None in Top 10	None in Top 10	None in Top 10

*SOURCE: "GULF COAST WDA OCCUPATIONAL PROJECTIONS," TEXAS WORKFORCE COMMISSION

STRATEGIC WORKFORCE ASSESSMENT-TARGETED OCCUPATIONS in the GULF COAST LABOR WORKFORCE DEVELOPMENT AREA

None

SOURCE: STRATEGIC WORKFORCE ASSESSMENT PROGRAM, TWC

GCCISD PROGRAMS OF STUDY:

The 2012 Finance Career Cluster is currently merged with the Business Management and Administration Cluster and targets only one of the four Programs of Study (Career Pathways) in this cluster:

- Business Financial Management

The 2012 Finance Career Cluster does not target the following Program of Study (Career Pathways) within this cluster:

- Banking and Related Services
- Financial and Investment Planning
- Insurance Services

Students in this program do not currently earn certifications and there are no student organizations for students in this cluster.

ADDITIONAL COMMITTEE FEEDBACK:

Current top occupations highlighted by the committee include those in the insurance industry. The committee



has recommended stronger focus on building enrollment in accounting courses.



GOVERNMENT & PUBLIC ADMINISTRATION

VISION:

The Government & Public Administration Career Cluster envisions a future in which students are prepared for diverse careers in public service and/or military services through strong leadership development activities.

MISSION:

To prepare students for careers in any field of endeavor to include the business industry and/or military service by providing them both tangible and intangible leadership qualities along with the latest in advanced business technology through military-style training.

GOALS AND OBJECTIVES:

Short Term Goal (1 Year):

By the end of 2013, the Government and Public Administration teachers will

- sign, repair or rebuild obstacle course at RSS in order to improve safety conditions
- develop curriculum in office management procedures, job interest and placement techniques and supply and inventory lessons,
- provide a select group of juniors and seniors with the opportunity to take these courses (because of limited number of computers),
- obtain current enlistment and ASVAB scores for each occupational specialty (jobs) in the military by developing and working with the local recruiters, and
- initiate an aggressive plan to obtain funding assistance for additional technology and equipment.

Mid-Term Goal (3-5 Years):

By the end of 2017, the Government and Public Administration teachers will

- expand the lessons listed above to all juniors and seniors in our program,
- install a computer lab for student use,
- administer the ASVAB to all cadets at the sophomore level and above, and
- strengthen the partnership with local region and recruiters.

Long Term Goal (10+ Years):

By the end of 2023, the Government and Public Administration teachers will

- have Goose Creek Memorial approved for its own ROTC unit,
- administer the ASVAB to all seniors, regardless of military interest for use as career interest tool, and
- upgrade current classroom facilities, obstacle course and arms training facilities on all campuses to improve student success.



GCCISD PROGRAMS OF STUDY:

The Marine Corps JROTC currently has sections at Robert E. Lee and Ross S. Sterling high school.

As of 2012, no Government & Public Administration Career Cluster exists based on the courses approved by the Texas Education Agency. None of the seven Program of Study (Career Pathways) within this cluster are offered:

- Foreign Service
- Governance
- National Security
- Planning
- Public Management & Administration
- Regulation
- Revenue and Taxation

RESEARCH:

Slow growth is expected in the government and public administration sector, adding up to only about 2 percent, largely because of outsourcing of government jobs. Federal government employment is expected to decline 13 percent, while state and local governments expect a greater burden causing an increase of 7 percent in their employment.

GOVERNMENT & PUBLIC ADMINISTRATION OCCUPATIONS IN GULF COAST WDA 2008-2018

Occupations Adding the Most Jobs	Occupations with Most Projected Annual Openings	Largest Associate Degree Occupations w/2010 Wages	Fastest Growing Occupations
None in Top 10	None in Top 10		None in Top 10

*SOURCE: "GULF COAST WDA OCCUPATIONAL PROJECTIONS," TEXAS WORKFORCE COMMISSION

STRATEGIC WORKFORCE ASSESSMENT-TARGETED OCCUPATIONS in the GULF COAST LABOR WORKFORCE DEVELOPMENT AREA

None

SOURCE: STRATEGIC WORKFORCE ASSESSMENT PROGRAM, TWC

ADDITIONAL COMMITTEE FEEDBACK:

Current top occupations include analysts and department managers in federal, state and local government, non-profits and health care facilities. The committee saw a strong overlap between the courses in this cluster and those in business, stating that none of them really started with the thought of being in public administration.



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The committee recommends that the business departments work in partnership with local and state governments to provide resources for this area. The ROTC classes should partner with the Law, Public Safety, Corrections, and Security for sharing of facilities and integrating of activities when possible.

The committee also has advised the district that the ROTC obstacle course at Sterling High School is not safe. It should be signed to keep anyone from using the course without direct ROTC supervision. Repairs should be made soon in order to secure the safety of students using the equipment. The course at Lee High School should also be improved.



HEALTH SCIENCE

VISION:

The Health Science Career Cluster envisions a comprehensive program in which students graduate college-ready with entry-level certifications and work-based learning experiences that start them on their chosen career pathway in the health industry.

MISSION:

To prepare students for careers in high demand occupations such as Registered Nurse, Licensed Vocational Nurse, Certified Nurse Aide, Home Health Aide, Medical Assistant, Pharmacy Tech, Medical Secretary, Dental Assistant, Medical Records & Health Information Technology, Physical Therapy, Emergency Medical Technician & Paramedics either as a career or an entry level position providing a strong foundation for many health career opportunities.

By earning state certifications for Certified Nurse Aide, Pharmacy Tech, and possibly other specialties which would lead to good jobs and health care experience while pursuing associates and/or bachelor's degrees.

GOALS AND OBJECTIVES:

Short Term Goal (1 Year):

By the end of 2013, Health Science teachers will:

- develop a plan for the growth in enrollment with all three campuses in sync with curriculum and professional expectations,
- encourage and prepare students to pass the Certified Nurse Aide test on the first attempt, and
- design a plan to improve the Pharmacy Technician training and develop a better follow-up method for students taking the Pharmacy Technician Certification test.

Mid-Term Goal (3-5 Years):

By the end of 2017, we need to:

- have a stronger program in Pharmacy and Nurse Aide that is taught during the school day for all three schools in order that all Health Science Practicum students have the opportunity to leave high school with a certification in the medical field,
- investigate the possibility of adding other courses such as Physical Therapy Aide, Veterinary Assistant, and Medical Administrative Assistant leading to associated certification possibly partnering with Lee



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College Continuing Education Department which already offers some of these courses, and

- align curriculum with Lee College in order to ease student transition into post-secondary education.

Long Term Goal (10+ Years):

By the end of 10 years, we will

- move the health science practicum for all three high schools to the same, shared facility with specialized labs for training in various high demand areas: pharmaceuticals, nursing, physicians, and medical records, and
- have strong Health Occupations Students of America (HOSA) programs established with students routinely participating in district and state competitions.

GCCISD PROGRAMS OF STUDY:

The 2012 Health Science Career Cluster targets only one of the five Programs of Study (Career Pathways) in this cluster:

- Diagnostic Services

The 2012 Health Science Career Cluster does not target the following Program of Study (Career Pathways) within this cluster:

- Biotechnology Research & Development
- Health Informatics
- Support Services
- Therapeutic Services

Students in this program may currently earn certification as a Certified Nurses Aide (CNA) or Pharmacy Technician. They may participate in HOSA on one campus or the Red Cross Club on another.

The committee suggests that the current top occupations include Nursing (both associate and bachelor degree) Physical Therapy and Occupational Therapy, and Phlebotomy. They recommend conversational Spanish be offered and recommended to students in this field and that Medical Terminology be emphasized.

RESEARCH:

Based on information from the Occupational Outlook Handbook, an aging population and longer life expectancies will increase employment in the healthcare and social assistance sector by 33 percent, accounting for 28 percent of all new jobs created in the U.S. Employment nationally will increase largely in life science occupations including research and technology developments.

HEALTH SCIENCE OCCUPATIONS INCLUDED IN TOP 20 NATIONAL OCCUPATIONS

HIGHEST PERCENT OF GROWTH		HIGHEST NUMERIC GROWTH		
Home Health Aides	+69%	Registered Nurses	711,900	+26%
Biomedical Engineers	+62%	Home Health Aides	706,300	+69%
Physical Therapist Assistants	+46%	Nursing Aides, Orderlies, & attendants	302,000	+17%
Diagnostic Medical	+44%			



Sonographers
 Occupational Therapy Assistants +43%
 Physical Therapist Aides +43%
 Medical Secretaries +41%

*SOURCE: Occupational Outlook Handbook

HEALTH SCIENCE OCCUPATIONS IN GULF COAST WDA 2008-2018

Occupations Adding the Most Jobs		Occupations with Most Projected Annual Openings		Largest Associate Degree Occupations		Fastest Growing Occupations	
Registered Nurses (#4/10)	13,990	Registered Nurses (#710)	2,090	Registered Nurses (#1/10)	\$70,000	Home Health Aides (#1/10)	56%
				Radiologic Technologists (#7/10)	\$55,000	Physician Assistants (#9/10)	54%
				Medical Records & Health Information Techs (#8/10)	\$35,000		
				Medical Laboratory Techs (#10/10)	\$35,000		

*SOURCE: "GULF COAST WDA OCCUPATIONAL PROJECTIONS," TEXAS WORKFORCE COMMISSION

STRATEGIC WORKFORCE ASSESSMENT-TARGETED OCCUPATIONS in the GULF COAST LABOR WORKFORCE DEVELOPMENT AREA

- Registered Nurses
- Licensed Practical and Licensed Vocational Nurses
- Radiologic Technologists and Technicians
- Medical Records and Health Information Technicians
- Medical and Clinical Laboratory Technologists
- Physical Therapists
- Speech-Language Pathologists
- Respiratory Therapists
- Occupational Therapists

SOURCE: STRATEGIC WORKFORCE ASSESSMENT PROGRAM, TWC



ADDITIONAL COMMITTEE FEEDBACK:

Target Occupations & Certifications: Registered Nurse, Home Health Care Aide, Medical Assistant, Health Care Administration, Ultrasound/sonography, athletic trainers, lab technicians and biomedical engineers. Members anticipate that Speech Pathology will continue to be one of the most difficult areas to fill. The program should continue certifications in Certified Nursing Assistant and Pharmacy Technician, and also consider expanding to include phlebotomy certification.



VISION:

The Hospitality & Tourism Career Cluster envisions that students are prepared for entry-level occupations in high demand occupations upon graduation and are college ready for post-secondary programs in Culinary Arts, Hotel and Restaurant Management, or Recreation and Tourism through experience with district-run restaurant and community-based partnerships.

MISSION:

To prepare students for high demand occupations such as line cooks, wait staff, and fast food preparation upon graduation by earning ServSafe and TABC certifications and for post-secondary education to become restaurant managers, chefs, and research chefs through a rigorous curriculum.

GOALS AND OBJECTIVES:

Short Term Goal:

By the end of 2013, Hospitality and Tourism faculty will

- increase articulation agreements,
- increase number of students earning industry certification in ServSafe,
- prepare curriculum for students to complete the TABC certification, and
- have all instructors involved in a CTSO and competitions.

Mid-Term Goal (3-5 Years):

By the end of 2017, Hospitality and Tourism faculty will

- develop and implement plan to add Hospitality and Tourism to curriculum.

Long Term Goal (10+ Years):

By the end of 2023, Hospitality and Tourism faculty will

- build commercial kitchens at all campuses to provide consistent curriculum, and
- design a collaboratively run, student managed restaurant to provide work-based learning experiences for all students.

GCCISD PROGRAMS OF STUDY:

The 2012 Hospitality & Tourism Career Cluster targets only one of the four Programs of Study (Career Pathways) in this cluster:

- Restaurants & Food/Beverage Services

The 2012 Hospitality & Tourism Career Cluster does not target the following Program of Study (Career Pathways) within this cluster:

- Lodging



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- Recreation, Amusements & Attractions
- Travel & Tourism

Students in this program may currently earn certification through ServSafe. They may participate in the SkillsUSA competitions, HEAT competitions and various other competitions.

The top occupation identified by the committee is Executive Chef, and believes the program should expand to include other Programs of Study. Personal Chefs and Specialty Chefs are emerging occupations.

RESEARCH:

Based upon Bureau of Labor Statistics projections, there is a 9 percent growth projection in accommodation and food services by 2020, largely in the food and beverage industry. The arts, entertainment and recreation industry is expected to grow by 18 percent through 2020, largely in the amusement, gambling, and recreation sector. Entertainment and sports occupations specifically are expected to increase 16 percent nationwide. Food preparation and serving occupations will increase approximately 10 percent within this timeframe. Up to 39 percent of growth in this area will be because of increase in fast-food and counter workers. Increasing demand for coaches and scouts nationwide will account for more than half of the job growth. Food service managers will decline about 3 percent.

HOSPITALITY & TOURISM OCCUPATIONS INCLUDED IN TOP 20 NATIONAL OCCUPATIONS 2010-2020

of New Jobs

Combined Food Preparation & Serving Workders 398,000 (+15)

*SOURCE: [Occupational Outlook Handbook](#)

HOSPITALITY & TOURISM OCCUPATIONS IN GULF COAST WDA 2008-2018

Occupations Adding the Most Jobs	Occupations with Most Projected Annual Openings	Largest Associate Degree Occupations w/2010 Wages	Fastest Growing Occupations
Fast Food Preparation Workers (#1/10)	Waiters & Waitresses (#1/10)		
20,450	3,915		
Waiters & Waitresses (#5/10)	Fast Food Preparation Workers (#4/10)	None in Top 10	None in Top 10
13,430	3,250		

*SOURCE: "GULF COAST WDA OCCUPATIONAL PROJECTIONS," TEXAS WORKFORCE COMMISSION

STRATEGIC WORKFORCE ASSESSMENT-TARGETED OCCUPATIONS in the GULF COAST LABOR WORKFORCE DEVELOPMENT AREA



None

SOURCE: STRATEGIC WORKFORCE ASSESSMENT PROGRAM, TWC

ADDITIONAL COMMITTEE FEEDBACK:

Target Occupations & Certifications: Amusement and Recreation Attendants, Food Preparation and Serving Workers, Cooks (fast food restaurant), Hotel/Motel Desk Clerks, Waiters/Waitresses with ServSafe and Certified Culinarian certifications. The largest occupations in the immediate area are meeting and convention planner, food service managers, and concierges. Bartending is a possible occupation for students upon reaching the age of 18.



HUMAN SERVICES

VISION:

The Human Services Career Cluster envisions a future in which students graduate fully licensed through the state in a variety of cosmetology fields and college-ready for other social and psychological occupations.

MISSION:

To prepare students for careers in high demand cosmetology areas such as Nail Tech, Facialist, and Barber by offering students certification in all areas and to encourage them to continue their studies into post-secondary education in areas of either business ownership or psychology /sociology.

GOALS AND OBJECTIVES:

Short Term Goal (1 Year):

By the end of 2013, Human Services teachers will

- develop a plan for the integration of other certificates into the cosmetology program, and
- create lessons connecting psychology and sociology careers to curriculum

Mid-Term Goal (3-5 Years):

By the end of 2017, Human Services teachers will be offering at least two additional certification opportunities to students.

Long Term Goal (10+ Years):

By the end of 10 years, a district central cosmetology program should be built to house labs for training in all certification areas.



GCCISD PROGRAMS OF STUDY:

The 2012 Human Services Career Cluster targets only two of the five Programs of Study (Career Pathways) in this cluster:

- Early Childhood Development & Services
- Personal Care Services

The 2012 Human Services Career Cluster does not target the following Program of Study (Career Pathways) within this cluster:

- Consumer Services
- Counseling & Mental Health Services
- Family & Community Services

Students in this program may currently earn licensure through the Texas Cosmetology Commission. They may also participate in the SkillsUSA competitions.

RESEARCH:

According to the Occupational Outlook Handbook, community and social service occupations will increase 24 percent by the year 2020, largely dealing with mental and behavioral health treatment and the needs of elderly populations. Nationally, growth will be led by clinical, counseling, and school psychologists. Personal care occupations growth nationally will reach 27 percent, especially in cosmetic and health spas. Personal care aides and child care aides will account for almost two-thirds of the new occupations.

HUMAN SERVICES OCCUPATIONS INCLUDED IN TOP 20 NATIONAL OCCUPATIONS 2010-2020

HIGHEST PERCENT OF GROWTH		HIGHEST NUMERIC GROWTH		
Personal Care Aides	70%	Personal Care Aides	607,000	+70%
Marriage and Family Therapists	41%	Child Care Workers	262,000	+20%

*SOURCE: Occupational Outlook Handbook

HUMAN SERVICES OCCUPATIONS IN GULF COAST WDA 2008-2018

Occupations Adding the Most Jobs	Occupations with Most Projected Annual Openings	Largest Associate Degree Occupations w/2010 Wages	Fastest Growing Occupations
None in Top 10	None in Top 10	None in Top 10	None in Top 10

*SOURCE: "GULF COAST WDA OCCUPATIONAL PROJECTIONS," TEXAS WORKFORCE COMMISSION

STRATEGIC WORKFORCE ASSESSMENT-TARGETED OCCUPATIONS in the GULF COAST LABOR WORKFORCE DEVELOPMENT AREA

None

SOURCE: STRATEGIC WORKFORCE ASSESSMENT PROGRAM, TWC



ADDITIONAL COMMITTEE FEEDBACK:

Target Occupations & Certifications: The top occupations identified by the committee are Hair Dresser/ Barber, Financial Advisors in Non-Profit agencies, Career Counseling and Social Work. The committee recommends that a barber program be considered by the district, and that the district allow more high school required courses to be offered in junior school to give students more freedom to choose career-based courses in high school. Students should be able to earn a shampoo tech certification before graduation to allow them to begin employment in the field while continuing toward a nail tech or cosmetology license.



INFORMATION TECHNOLOGY

VISION:

The Information Technology Career Cluster envisions a future in which students graduate high school college and career-ready for success as a competitive and creative knowledge worker in an emerging global digital society.

MISSION:

To ensure that all students are prepared for high demand occupations in game design, “app” development, database administrators and systems/maintenance specialists through rigorous curriculum, challenging competitions, industry certifications and college credit.

GOALS AND OBJECTIVES:

Short Term Goal (1 Year):

By May 2013, Information Technology teachers will

- create standards for hardware and software, and
- adjust written curriculum to ensure all new TEKS are covered.

Mid-Term Goal (3-5 Years):

By May 2017, Information Technology teachers will

- develop and implement a plan to reorganize the Programs of Study to target high demand occupations and attract students.

Long Term Goal (10+ Years):

By 2023, students will graduate from this Program of Study with practical experience with projects that will enhance their résumé by

- developing a practicum course in project management for advanced students, and
- developing partnerships with industry to create additional job shadowing and internship opportunities for students.



RESEARCH:

The Occupational Outlook Handbook states that software publishing is expected to grow by 35 percent as organizations continue to adopt new software. Internet publishing and broadcasting is expected to grow 16 percent by 2020. The satellite and wireless telecommunications industry is expected to grow 8 percent. Employment in computer systems design and related services, especially consulting, is expected to increase by 47 percent. Computer and Information Technology occupations are expected to increase 22 percent by 2020 nationwide. Workers will be needed in software development, cyber security as well as the maintenance of infrastructure.

INFORMATION TECHNOLOGY OCCUPATIONS IN GULF COAST WDA 2008-2018

Occupations Adding the Most Jobs	Occupations with Most Projected Annual Openings	Largest Associate Degree Occupations w/2010 Wages	Fastest Growing Occupations
None in Top Ten	None in Top 10	Computer Support Specialist (#2/10) \$50,000	None in Top 10

*SOURCE: "GULF COAST WDA OCCUPATIONAL PROJECTIONS," TEXAS WORKFORCE COMMISSION

STRATEGIC WORKFORCE ASSESSMENT-TARGETED OCCUPATIONS in the GULF COAST LABOR WORKFORCE DEVELOPMENT AREA

- Computer Systems Analyst
- Computer Software Engineers, Applications
- Computer Software Engineers, Systems Software
- Network and Computer Systems Administrators

SOURCE: STRATEGIC WORKFORCE ASSESSMENT PROGRAM, TWC

GCCISD PROGRAMS OF STUDY:

The 2012 Information Technology Career Cluster targets two of the four Programs of Study (Career Pathways) in this cluster:

- Programming & Software Development
- Network Systems

The 2012 Information Technology Career Cluster does not target the following Program of Study (Career Pathways) within this cluster:

- Information Support & Services
- Interactive Media (supported through Arts, AV Technology & Communications Program)



Students in this program may currently earn A+ certification. There are no student organizations.

ADDITIONAL COMMITTEE FEEDBACK:

The top occupations identified by the committee are Network Administration, database management, desktop support, mobile application development, security, and cloud computing, software development and messaging administration. The committee believes that some database management (Oracle) be presented to students.



LAW, PUBLIC SAFETY, CORRECTIONS & SECURITY

VISION:

The Law, Public Safety, Corrections & Security Career Cluster envisions a future in which students are prepared for college and careers and high demand areas through strong partnerships with the city of Baytown emergency management programs.

MISSION:

To prepare students for exciting, high demand occupations in firefighting, law enforcement and security by earning certifications for entry-level positions in these areas.

GOALS AND OBJECTIVES:

Short Term Goal (1 Year):

By the end of 2013, faculty must develop plans for students to earn the Basic Jailer Proficiency Certificate upon high school graduation.

Mid-Term Goal (3-5 Years):

By the end of 2017, faculty will

- Develop plan and implement curriculum for the firefighter course (preferably by 2014),
- Develop new curriculum/dual credit crosswalk for Emergency Medical Attendant and/or Technician certification, and
- Align curriculum with Lee College to establish an articulated/ dual credit crosswalk.

Long Term Goal (10+ Years):

Within 10 years, students in the Law, Public Safety, Corrections & Security Program of Study will graduate

- with at least one certification respective to their field, and
- with at least six college hours directly related to their post-secondary major.

GCCISD PROGRAMS OF STUDY:

The 2012 Law, Public Safety, Corrections and Security Career Cluster targets two of the five Programs of Study (Career Pathways) in this cluster:

- Law Enforcement Services



- Legal Services

The 2012 Law, Public Safety, Corrections and Security Career Cluster does not target the following Program of Study (Career Pathways) within this cluster:

- Correction Services
- Emergency and Fire Management Services
- Security and Protective Services

Currently, there is no certification or student organization in this career cluster.

RESEARCH:

Legal occupations will have about an 11 percent increase nationally, according to the Occupational Outlook Handbook. Over half of these will be lawyers. Paralegals and legal assistants will make up the rest of the increase. Protective services are expected to add 11 percent to their ranks nationally, more than half of which will be among security guards.

LAW, PUBLIC SAFETY, CORRECTIONS & SECURITY OCCUPATIONS IN GULF COAST

WDA 2008-2018			
Occupations Adding the Most Jobs	Occupations with Most Projected Annual Openings	Largest Associate Degree Occupations w/2010 Wages	Fastest Growing Occupations
None in Top 10	None in Top 10	Paralegal & Legal Assistants (#3/10) \$45,000	None in Top 10
		Legal Secretaries (#4/10) \$40,000	

*SOURCE: "GULF COAST WDA OCCUPATIONAL PROJECTIONS," TEXAS WORKFORCE COMMISSION

STRATEGIC WORKFORCE ASSESSMENT-TARGETED OCCUPATIONS in the GULF COAST LABOR WORKFORCE DEVELOPMENT AREA

- Firefighters

SOURCE: STRATEGIC WORKFORCE ASSESSMENT PROGRAM, TWC

ADDITIONAL COMMITTEE FEEDBACK:

The top occupations identified by the committee are firefighters, law enforcement officers, (local, state, and federal) and forensics. The committee encourages a fire program be started with the district and to look at articulation of law enforcement classes at Lee College.

Target Occupations & Certifications: Computer Forensics, Emergency Medical Attendant, Emergency Medical Technician, jailer, security (because of limits on age for many occupations)



VISION:

The Manufacturing Career Cluster envisions a future in which GCCISD, Lee College and local industry partners to empower students to be prepared for college and careers in high demand areas in the oil, gas and manufacturing industry.

MISSION:

To prepare students for high demand manufacturing careers such as process technology and skill crafts by earning certifications for entry-level positions in these areas and college credit.

GOALS AND OBJECTIVES:

Short Term Goal (1 Year):

By the end of 2013, the Manufacturing Career Cluster will

- implement a curriculum in partnership with Austin Industrial and Bayer that will expose students to industrial standards and expectations in skilled crafts area,
- standardize a crosswalk to help counselors advise students who begin the Process Technology dual credit program, and
- develop a plan to integrate the NCCER curriculum into the skill crafts courses.

Mid-Term Goal (3-5 Years):

By the end of 2017, the Manufacturing Career Cluster will

- increase connections with local business and industry to set up visits / field trips to business and job sites,
- build relationships with business and industry for job shadowing and internship opportunities for teachers and students,
- increase the number of students graduating with at least the first semester of the Process Technology degree, and
- upgrade welding lab equipment to meet industry expectations in TIG welding.

Long Term Goal (10+ Years):

By the end of 2023, the Manufacturing Career Cluster will

- develop an industrial training center in which students will complete training in electrical, millwright/machinist, pipefitting, welding and other high demand manufacturing occupations.

GCCISD PROGRAMS OF STUDY:

The 2012 Manufacturing Career Cluster targets two of the six programs of study (Career Pathways) in this cluster:

- Manufacturing Production Process Development-Process Technology



- Production - Welding

The 2012 Manufacturing Career Cluster does not target the following Program of Study (Career Pathways) within this cluster:

- Health, Safety, and Environmental Assurance
- Logistics and Inventory Control
- Maintenance, Installation and Repair
- Quality Assurance

Currently, there are no certifications or student organizations for this career cluster.

RESEARCH:

As international competition and automation increase, the manufacturing industry is projected to have an overall 1 percent decrease in employment. Computer and electronic product manufacturing is expected to decline 14 percent, along with declines in the manufacturing of machinery, apparel and chemicals. However, employment in fabricated product manufacturing is expected to grow by 12 percent. Increases are also expected in the manufacture of plastics, rubber and wood products.

MANUFACTURING OCCUPATIONS IN GULF COAST WDA 2008-2018

Occupations Adding the Most Jobs	Occupations with Most Projected Annual Openings	Largest Associate Degree Occupations w/2010 Wages	Fastest Growing Occupations
None in Top 10	None in Top 10	Chemical Technicians (#9/10) \$55,000	None in Top 10

*SOURCE: "GULF COAST WDA OCCUPATIONAL PROJECTIONS," TEXAS WORKFORCE COMMISSION

STRATEGIC WORKFORCE ASSESSMENT-TARGETED OCCUPATIONS in the GULF COAST LABOR WORKFORCE DEVELOPMENT AREA

- Welders, Cutters, Solders and Brazers
- Machinists
- Industrial Machinery Mechanics
- Chemical Plant and System Operators
- Electrical and Electronic Engineering Technicians
- Computer-Controlled Machine Tool Operators, Metal & Plastic

SOURCE: STRATEGIC WORKFORCE ASSESSMENT PROGRAM, TWC



ADDITIONAL COMMITTEE FEEDBACK:

There is a high level of overlap between this career cluster, Architecture and Construction, and STEM. The top occupations identified by the committee are the various Maintenance Crafts, Chemical Operators, Engineers, and the various construction crafts (see "Architecture and Construction.") Emerging occupations include control systems techs, instrumentation techs (see "STEM"), analyzer technicians (see "STEM"), and planners/estimators. Positions in logistics, warehousing, craft helpers, and scaffolding are available to high school graduates. The district needs to consider implementing the NCCER curriculum for , skilled crafts areas listed below. Solders and Brazers, although listed on the Strategic Workforce Assessment Targeted Occupations for the Gulf Coast, are not in high demand in Baytown and its surrounding communities.

Target Occupations & Certifications: Analyzer Technology (STEM), Electrical (Architecture & Construction) Instrumentation Technology (STEM), Machining, Maintenance Technology, Millwright, Operations Technology, Pipe and Vessel Fabrication, Welding



MARKETING

Business Management & Administration, Finance & Marketing Career Clusters are combined into the Business Management & Administration Cluster. See that section of this document for the Vision, Mission & Goals.

RESEARCH:

As the housing market expands and population increases, employment in the real estate and rental/leasing industry is expected to grow by 14 percent nationally according to the Occupational Outlook Handbook. Retail trade is expected to increase by 12 percent because of rising personal consumption and increasing population. Sales workers in general will add to more than half of the job growth in this area. Wholesale trade is projected to increase 14 percent, largely in the electronic markets. Market research analysts and marketing specialists are on the nation list of the top twenty occupations with the highest percent of growth from 2010 to 2020.

MARKETING OCCUPATIONS INCLUDED IN TOP 20 NATIONAL OCCUPATIONS 2010-2020

Retail Salespersons	# of New Jobs 706, 800 (+17%)
Sales Representatives, Wholesale and Manufacturing, except Technical & Scientific Products	223,400 (+16%)

*SOURCE: [Occupational Outlook Handbook](#)



MARKETING OCCUPATIONS IN GULF COAST WDA
2008-2018

Table with 4 columns: Occupations Adding the Most Jobs, Occupations with Most Projected Annual Openings, Largest Associate Degree Occupations w/2010 Wages, Fastest Growing Occupations. Data includes Retail Salespersons (#3/10) with 14,560 jobs and 3,825 openings.

*SOURCE: "GULF COAST WDA OCCUPATIONAL PROJECTIONS," TEXAS WORKFORCE COMMISSION

STRATEGIC WORKFORCE ASSESSMENT-TARGETED OCCUPATIONS
in the GULF COAST LABOR WORKFORCE DEVELOPMENT AREA

None

SOURCE: STRATEGIC WORKFORCE ASSESSMENT PROGRAM, TWC

GCCISD PROGRAMS OF STUDY:

The 2012 Marketing Career Cluster is currently combined with the Business Administration and Management and the Finance Career Clusters due to the limited number of courses being offered. It targets one of the seven Programs of Study (Career Pathways) in this cluster:

- Marketing Communications & Promotion

The 2012 Marketing Career Cluster does not target the following Program of Study (Career Pathways) within this cluster:

- Buying & Merchandising
Distribution & Logistics
E-marketing
Management & Entrepreneurship
Marketing Information Management & Research
Professional Sales & Marketing

Currently, there is no certification or student organization in this career cluster.

ADDITIONAL COMMITTEE FEEDBACK:

Target Occupations & Certifications:

Social Media Marketers have been suggested as an emerging marketing occupation by the Business, Finance and Marketing committee.



SCIENCE, TECHNOLOGY, ENGINEERING & MATHEMATICS

VISION:

The Science, Technology, Engineering and Mathematics (STEM) Career Cluster envisions a future in which Goose Creek CISD students complete a four-year plan that will lead them to college and careers in either engineering or engineering technology.

MISSION:

To prepare students for high demand occupations in engineering and engineering technology by providing rigorous curriculum and college credit for students.

GOALS AND OBJECTIVES:

Short Term Goal (1 Year):

By the end of 2013, the STEM faculty will

- develop a plan to implement of four-year program of study leading to engineering,
- increase enrollment in STEM related courses across the district,
- standardize a crosswalk to help counselors advise students who begin the Instrumentation dual credit program.

Mid-Term Goal (3-5 Years):

By the end of 2017, the STEM faculty will

- develop curriculum for an engineering program of study in GCCISD,
- engage more high school students in robotics and other engineering competitions, and
- increase the number of students graduating with at least one semester completed towards the Associate of Applied Science in Instrumentation Technology or Instrumentation Certificate of Completion.

Long Term Goal (10+ Years):

By the end of 2017, a fully functional engineering lab will be built with high tech computer lab and general lab for engineering design projects.

GCCISD PROGRAMS OF STUDY:

The 2012 Science, Technology, Engineering and Mathematics (STEM) Career Cluster targets one of two Programs of Study (Career Pathways) in this cluster:

- Engineering and Technology

The 2012 STEM Career Cluster does not target the following Program of Study (Career Pathways) within this cluster:

- Science and Math



GOOSE CREEK

CONSOLIDATED INDEPENDENT SCHOOL DISTRICT

Students in this program are not able to earn any certifications. The district does offer a robotics team that competes locally and nationally. Participation is not dependent upon enrollment in classes in this cluster.

Although there is much overlap of occupations with the Architecture and Construction and Manufacturing Career Clusters in the Gulf Coast, STEM is separate because of the fact that the majority of careers in this area require two and four year college degrees, therefore requiring more rigorous academic courses as well. The top occupations identified by the committee are process technicians (see “Manufacturing”); craftsmen, i.e. welders, machinists, metal men, insulators, and electricians (see “Architecture and Construction”), analyzer technicians, instrumentation technicians, inspectors. Drafting is anticipated to be one of the most difficult to fill, and the district should find a way to attract advanced students into this pre-engineering pathway, possibly by increasing the rigor of the pre-engineering courses and weighting the grade points earned.

RESEARCH:

Based on the Occupational Outlook Handbook, nationwide employment in professional, scientific, and technical services is projected to grow by 29 percent. Consulting services in these areas is anticipating at 58 percent increase. High growth is expected among engineers, partly because of recovery from the recession, especially in civil engineering as the nation’s infrastructure ages. National employment in math is expected to grow by 17 percent, primarily in operations research analysts.

SCIENCE, TECHNOLOGY, ENGINEERING & MATHEMATICS OCCUPATIONS IN GULF COAST WDA 2008-2018

Occupations Adding the Most Jobs	Occupations with Most Projected Annual Openings	Largest Associate Degree Occupations w/2010 Wages		Fastest Growing Occupations	
None in Top 10	None in Top 10	Electrical Engineering Techs (#5/10)	\$60,000	Petroleum Engineers (#3/10)	54%
		Civil Engineering Techs (#6/10)	\$45,000		
		Chemical Technicians (#9/10)	\$55,000		

*SOURCE: “GULF COAST WDA OCCUPATIONAL PROJECTIONS,” TEXAS WORKFORCE COMMISSION

STRATEGIC WORKFORCE ASSESSMENT-TARGETED OCCUPATIONS in the GULF COAST LABOR WORKFORCE DEVELOPMENT AREA



- Petroleum Engineers
- Geoscientists, except Hydrologists and Geographers
- Environmental Engineers
- Mining & Geological Engineers, Incl. Mining Safety Engineers

SOURCE: STRATEGIC WORKFORCE ASSESSMENT PROGRAM, TWC

ADDITIONAL COMMITTEE FEEDBACK:

The district should explore the possibilities of weighting dual credit grade points for dual credit courses like Process Technology, Instrumentation, etc. to encourage students planning to enter engineering to take college classes related to their field of interest.

Target Occupations & Certifications: Instrumentation Technicians, Advanced Process Control and Distributive Control Systems, and all areas of Engineering.



TRANSPORTATION, DISTRIBUTION & LOGISTICS

VISION:

The Transportation, Distribution & Logistics (TDL) Career Cluster envisions a future in which students graduate prepared for entry-level positions and post-secondary education in high demand fields through partnerships and internships within the school district and the community.

MISSION:

To prepare students for high demand occupations such as Automotive Technology, Collision Repair, All Terrain Vehicles Repair, Marine Repair, Diesel Repair (Over-the-road and Marine) by earning

- ASE and I-CAR certifications;
- Credits toward associates degrees in manufacturers automotive program such as T-TEN and ASSETT;
- GOLD STAR certifications in ATV and motorcycle repair; and

GOALS AND OBJECTIVES:

Short Term Goal (1 Year):

By the end of 2013, the TDL Program of Study will

- change TDL classes to Small Engine Technology with the advance program taught at Stuart Career Center,
- start Texas Workforce Commission Financial assistance program with employee training, and
- add section of Diesel technology to Automotive and Small engine program.



Mid-Term Goal (3-5 Years):

By the end of 2017, the TDL Program of Study will

- make changes required by N.A.T.E.F. to keep automotive program certified,
- introduce a Maritime Academy with focus on new programs such Large Marine Diesel and Hazardous Materials,
- develop curriculum to add a new component of Logistics and Distribution, and
- create a Business Information Management course for freshmen entering high school that will apply transportation-related activities to the use of Microsoft Office.

Long Term Goal (10+ Years):

Within 10 years, the TDL Career Cluster will open a Transportation, Distribution, and Logistics Academy with a focus on Automotive Small Engine, Marine, Diesel Technology, Collision Repair, and Maritime Occupations with academic classes structured towards students in this field of study. The Collision Repair program will be retooled to meet federal requirements to transition to water born paint systems.

GCCISD PROGRAMS OF STUDY:

The 2012 Transportation, Distribution & Logistics Career Cluster targets one of the seven Programs of Study (Career Pathways) in this cluster:

- Facility & Mobile Maintenance

The 2012 Transportation, Distribution & Logistics Career Cluster does not target the following Program of Study (Career Pathways) within this cluster:

- Health, Safety, & Environmental Management
- Logistics Planning & Management Services
- Sales & Service
- Transportation Operations
- Transportation Systems/ Infrastructure Planning, Management, & Regulation
- Warehouse & Distribution Center Operations.

Students in this program are able to test for the National Automotive Student Skills Standards Assessment (NA3SA). or I-CAR certifications. Students in programs are very active in SkillsUSA, and automotive technology students also participate in Ford AAA competitions.

RESEARCH:

According to the Occupational Outlook Handbook, employment of transportation and material moving workers is anticipated to increase 15 percent, surpassing pre-recession numbers. This includes truck drivers, laborers, hand, freight, and materials movers. The automotive repair and maintenance industry is expected to have a 30 percent growth rate by the year 2020.



GOOSE CREEK

CONSOLIDATED INDEPENDENT SCHOOL DISTRICT

	# of New Jobs
Heavy and Tractor-Trailer Truck Drivers	330,100 (+21%)
Laborers and Freight, Stock, and Material Movers	319,100 (+15%)

*SOURCE: [Occupational Outlook Handbook](#)

TRANSPORTATION, DISTRIBUTION & LOGISTICS OCCUPATIONS IN TEXAS 2008-2018*

Occupations Adding the Most Jobs	Occupations with Most Projected Annual Openings	Largest Associate Degree Occupations w/2010 Wages	Fastest Growing Occupations
None in Top Ten	Laborers & Freight, Stock & Material Movers 1,705	None in Top 10	None in Top 10

*SOURCE: "GULF COAST WDA OCCUPATIONAL PROJECTIONS," TEXAS WORKFORCE COMMISSION

STRATEGIC WORKFORCE ASSESSMENT-TARGETED OCCUPATIONS in the GULF COAST LABOR WORKFORCE DEVELOPMENT AREA

- Automotive Service Technicians and Mechanics

SOURCE: STRATEGIC WORKFORCE ASSESSMENT PROGRAM, TWC

ADDITIONAL COMMITTEE FEEDBACK:

The top occupations identified by the committee are automotive technician and logistics positions. Emerging occupations include those in information technology, computer systems, and customer relations. The hardest to fill will be the technicians and automotive support staff, including porters and customer service. While in high school, students should be steered toward part-time jobs as lube techs, porters, and helpers to gain experience in the field. Upon high school graduation, students should work toward ASE and manufacturer-specific certifications.

Target Occupations & Certifications: Automotive Technician, Sales, Logistics

Agriculture, Food, & Natural Resources	CTE VISIONING COMMITTEE PARTICIPANTS		Manufacturing
Doug Hall (GCCISD)	Health Science	Donnie McCoy (Austin Industrial)	Jerry Mayfield (ExxonMobil)
James Walls (Harris Co.)	Anne Sewell (San Jacinto Methodist Hospital)	Lloyd Johnson (Bayer)	Mary Ann Amelang (Lee College)
Joe Berezoski (GCCISD)	Debbie Himsel (GCCISD)	Rod Herrick (Bayer)	Rosa Ewelina (ExxonMobil)
Kenny Rogers (GCCISD)	Donna Truncale (GCCISD)	Sara Jansen (Bayer)	Toby York (GCCISD)
Architecture & Construction	Joey Baham (San Jacinto Methodist Hospital)	Tony Krause (Bayer)	
Cary Duhon (GCCISD)	Hospitality		
Dana Byal (Lee College)	Daniel Arocha (Univ. of Houston)		
DeDe Griffith (Lee College)	Maria Gonzalez (GCCISD)	Science, Technology, Engineering & Math	Carl Burg (GCCISD)
Donnie Robbins (Emax Gen Contractors)	Sean Perrodin (San Jacinto College)	Debi Jordan (Lee College)	
Mike Riojas (GCCISD)	Todd Shaler (Texas Roadhouse)		
Arts, AV Technology, & Communications	Tom Kelchner (GCCISD)	Joe Whiddon (ExxonMobil)	Jerry Gainer (Hutichinson & Assoc)
Carrie Pryor-Newman (GCCISD)	Human Services	Richard Tunstall (Lee College)	Robert Hoskins (Enterprise)
Janci Alexander (GCCISD)	Carrie Trawick (GCCISD)	Tex Woodall (Lee College)	
Richard Cagle (ExxonMobil)	Mary Davis (GCCISD)		
Angie Pagel (Baytown Sun)	Mike Wilson (Communities in Schools)	Transportation, Distribution & Logistics	BJ Simon (BWCCEDF)
Business Administration-Finance-Marketing	Stephanie Stevenson (GCCISD)		Doug Shipley (Community Toyota)
Dave Jirrels (Chamber of Commerce)	Tiffany Upshaw (GCCISD)	Mike Rozzell (Community Toyota)	Michael Coopersmith (GCCISD)
Henriella Riley (GCCISD)	Tim Foley (Workforce Solutions)	Paige Nguyen (Wilhelmsmen Ships)	Richard Shively (Thomas Bus)
Mike Smith (CRCU)	Information Technology	Rick Walterscheid (GCCISD)	Steve Barron (GCCISD)
Renee Cosby (GCCISD)	Chuck Ganze (Lee College)		
Education & Training	Steve Koester (GCCISD)		
Don Beck (GCCISD)	Tameka Mills (GCCISD)		
Jennifer DeHart (GCCISD)	Law Enforcement, Public Safety, & Corrections		
Matt Bolinger (GCCISD)	Lt. Charles Murrell (City of Baytown)		
Matt Warford (GCCISD)	Daniel Blackford (GCCISD)		
Shannon Rogers (GCCISD)	Dr. David Jaroszewski, J.D.		
Susan Moore-Fontenot (GCCISD)	Enrique DeLeon (GCCISD)		
Suzanne Heinrich (GCCISD)	Gina Rivon (City of Baytown)		
Government & Public Administration	Teri Johnson (Lee College)		
Nick Woolery (City of Baytown)			
Samantha Villalon (City of Baytown)			

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