

# FOCUS ON

# ELECTRICAL & ELECTRONIC ENGINEERING TECHNICIANS

Houston Gulf Coast Region\*

**ARE YOU MECHANICALLY INCLINED? DO YOU ENJOY WORKING WITH YOUR HANDS, TROUBLESHOOTING AND REPAIRING EQUIPMENT? IF SO, THEN GET WHY NOT EARN A GOOD LIVING DOING WHAT YOU ENJOY BY BECOMING AN ELECTRICAL & ELECTRONIC ENGINEERING TECHNICIAN!**

Electrical and electronic engineering technicians, commonly known as instrumentation and electrical (I & E) technicians, are a must have when it comes to the continued operation of many businesses. They install, maintain, and repair automated equipment vital to functioning of manufacturing and industrial plants as well as for pipeline systems and power generation companies and many other high tech operations. Electrical and electronic engineering technicians are in constant demand in the Gulf Coast Region.

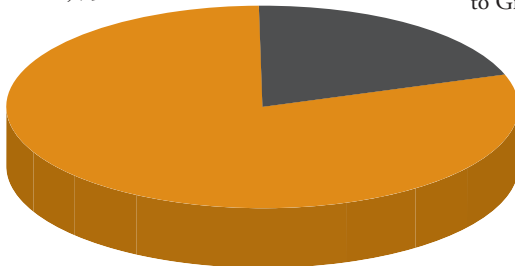
The demand for electrical and electronic technicians translates into outstanding career opportunities to individuals entering into the workforce as well as individuals with an electronic background looking to change careers.



### Annual Job Openings – Gulf Coast Region

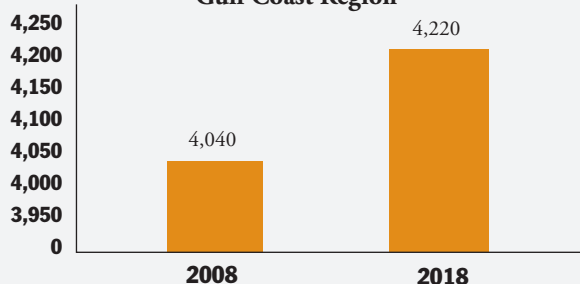
Openings Due to Replacement, 75

Openings Due to Growth, 20



**The Gulf Coast Region needs nearly 100 new Electrical & Electronic Engineering Technicians every year.**

### Electrical & Electronic Engineering Technicians – Gulf Coast Region



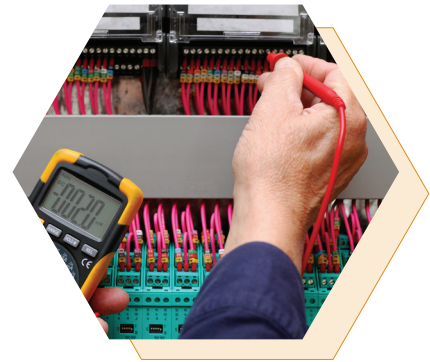
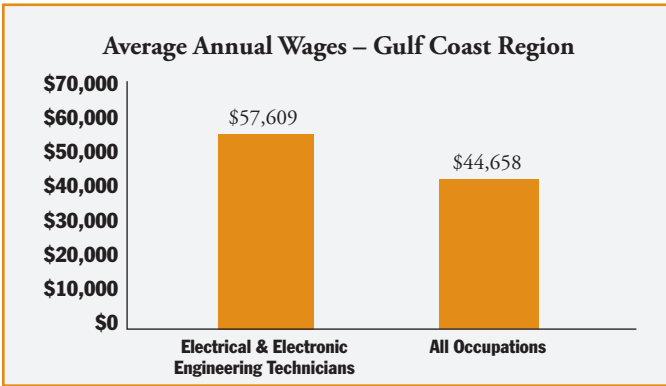
**There are expected to be over 4,000 Electrical & Electronic Engineering Technicians in the Gulf Coast Region by 2018.**

\*Includes the following counties: Austin, Brazoria, Chambers, Colorado, Fort Bend, Galveston, Harris, Liberty, Matagorda, Montgomery, Walker, Waller, and Wharton.

Brought to you by the Education Committee of The Gulf Coast Workforce Board. For more information visit us on the Web at [www.wrksolutions.com](http://www.wrksolutions.com). Latest data available as of June 2011.

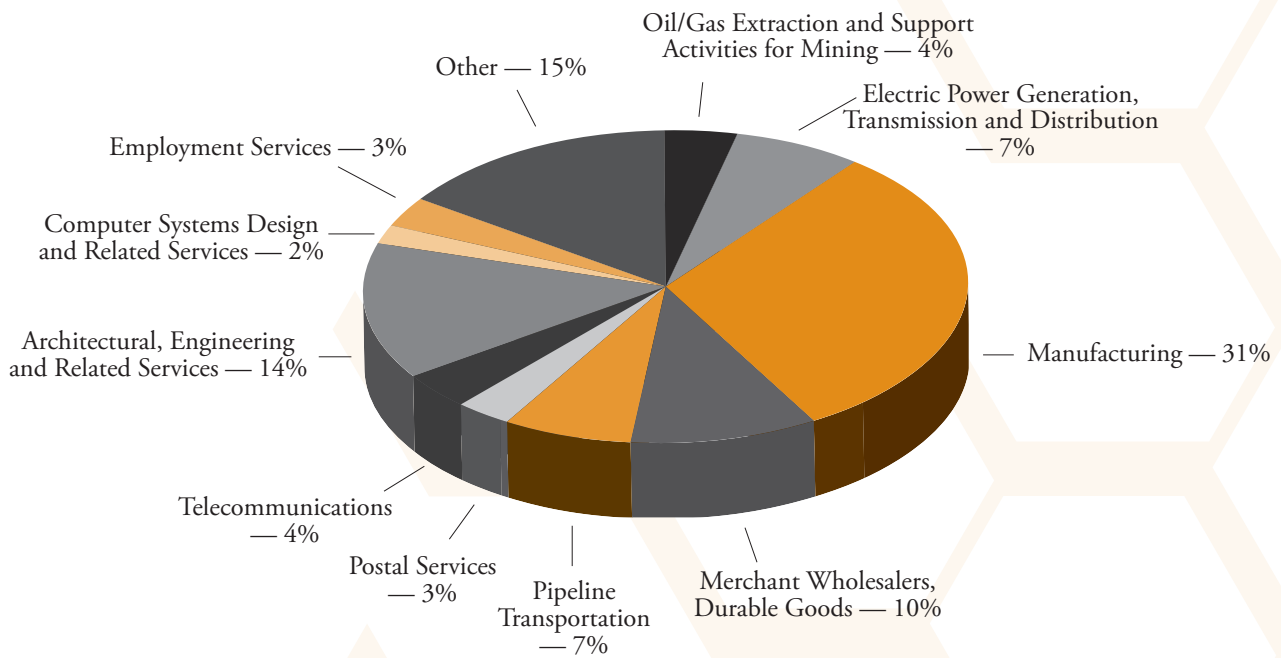
# FOCUS ON ELECTRICAL & ELECTRONIC ENGINEERING TECHNICIANS

**ELECTRICAL & ELECTRONIC ENGINEERING TECHNICIANS EARN AN AVERAGE ANNUAL SALARY OF OVER \$57,000 PER YEAR IN THE GULF COAST REGION!**



**ELECTRICAL AND ELECTRONIC ENGINEERING TECHNICIANS ARE FOUND AT A VARIETY OF INDUSTRIES WITH THE LARGEST NUMBER WORKING AT VARIOUS MANUFACTURING COMPANIES.**

Electrical & Electronic Engineering Technicians – Gulf Coast Region 2018



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## ELECTRICAL & ELECTRONIC ENGINEERING TECHNICIANS

### **PATHWAY TO BECOMING AN I & E TECHNICIAN**

In addition to a HS diploma or a GED, employers generally require an associate's degree in instrumentation technology, industrial technology, and industrial control or related. As machinery gets more and more complex it is becoming increasingly difficult to enter this field without formal training. Electrical & electronics engineering technicians are commonly required to be able to read schematics and blueprints, calibrate instruments, and perform component level troubleshooting. In the Gulf Coast Region, there are two options for obtaining training:

- Training programs at postsecondary vocational/technical schools
- Training programs at community colleges

High schools may also offer related programs although they vary in scope. High school programs are an asset offering an introduction to the skills of the trade. Individuals completing related high school training are better prepared for successful completion of more intensive career preparation at vocational schools and community colleges.

### **LICENSE AND CERTIFICATION REQUIREMENTS**

Most employers require NCCER instrument technician certification or a combined industrial maintenance electrical and instruments technician certification. Additional information can be obtained at the National Center for Construction Education and Research, [www.nccer.org](http://www.nccer.org).

Many positions involve electrical work and require a license. Types of licenses vary from an apprentice to a master electrician.

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## ELECTRICAL & ELECTRONIC ENGINEERING TECHNICIANS

### PREPARING FOR A CAREER AS AN ELECTRICAL & ELECTRONIC ENGINEERING TECHNICIAN

9th Grade			
Suggested Coursework			
	English I	World Geography	<b>Career-Related Electives:</b> Principles of Manufacturing or Energy, Power and Transportation Systems
	Algebra I	Languages other than English I	
	Biology	Health/PE or Equivalent	
10th Grade			
Suggested Coursework			
	English II	World History	<b>Career-Related Electives:</b> Welding
	Geometry	Languages other than English II	
	Chemistry		
11th Grade			
Suggested Coursework			
	English III	United States History	<b>Career-Related Electives:</b> Advanced Welding or Practicum in Manufacturing
	Algebra II	Professional Communications	
	Physics		
12th Grade			
Suggested Coursework			
	English IV	Government/Economics	<b>Career-Related Electives:</b> Manufacturing Engineering or Scientific Research and Design or Engineering Mathematics
	Precalculus	Fine Arts	
	Engineering design and Problem Solving		

\*Source: AchieveTexas.org

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## ELECTRICAL & ELECTRONIC ENGINEERING TECHNICIANS

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### **GULF COAST REGION ELECTRICAL & ELECTRONIC ENGINEERING TECHNICIAN PROGRAMS**

#### **Community Colleges**

- Brazosport
- Houston Community College System

#### **Technical Colleges**

- Texas State Technical College (Waco and Marshall campuses)

#### **Major Employers in the Gulf Coast Region**

- Anheuser-Busch Inc
- Baker Hughes
- Baker Oil Tools
- BASF
- BP Exploration
- Chevron Corporation
- ConocoPhillips
- Dow Chemical
- Dresser-Rand
- Fluor Corp.
- Shell

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**Texas Relay Numbers:**

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