

# Apprenticeship: 2008-2009 Exit Cohort



## Apprenticeship is the “best-kept secret” in workforce training.

Apprenticeship training is designed to prepare individuals for occupations in skilled trades and crafts and combines structured on-the-job training — supervised by experienced journeyworkers — with related classroom instruction (Texas Workforce Commission 2012). Since learning often takes place in the form of paid, on-the-job training, apprenticeship is a pathway for learners to “earn while they learn”—gain entry into high-wage occupations without the burden of large student debts (Glover 2011).

Much attention in the media and in policymaking communities is directed at the phenomenon of “job polarization,” or employment growth at the high and low ends of the skills spectrum but a hollowing out in the middle (Autor 2010). While there is strong evidence to suggest job polarization is a real phenomenon, we believe that apprenticeable trades constitute an exception. The theoretical case for job polarization is mostly about automation: computers can quickly, easily and accurately perform most repetitive clerical and production tasks and therefore shift the demand for related occupations like mail clerks or assembly line workers.

Analyses that declare an end to middle-skill occupations such as MIT economist David Autor’s “The Polarization of Job Opportunities in the U.S. Labor Market use broad occupational categories, lumping skilled crafts and trades workers together with production workers (Holzer 2010). Many of these apprenticeable occupations have a better outlook than analyses like Autor’s would suggest—a conclusion supported by the strong labor market performance of Texas apprentices relative to learners in other workforce programs.<sup>1</sup>

While apprenticeship in Texas is primarily a private system of training, government plays an important oversight and supporting role in the system (Glover 2011). Through Chapter 133 of the Texas Education code, the Texas Workforce Commission helps fund a portion of the required classroom instruction component of some apprenticeship programs (approximately one-third of programs statewide). The Texas Higher Education Coordinating Board also provides similar funding for some apprentices, but there is currently no system in place to track these individuals.

Current challenges facing apprenticeship are getting the secret of apprenticeship out to more individuals, and, specific to the Texas context, developing a system by which data from the US Department of Labor’s national RAPIDS database of all apprenticeship programs can be compared with Texas data, which currently only covers about one-third of programs.

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<sup>1</sup> For the 2008-2009 exit cohort, 72 percent of apprentices successfully completed and advanced to the next level. 87.9 percent of these former apprentices were found employed in Q42009.

## **Methodology**

LMCI received original seed records for 2008-2009 Apprenticeship exiters from the Workforce Business Services Department of TWC. Each of these original records represents a service delivered to a unique client, i.e. a combination of SSN and service code. Because clients could receive more than one service, the input file included duplicate SSNs. Seed records were grouped by SSN and by service category. After unduplicating the file by SSN, there were 4,070 usable, unique records.

## **Purpose of the Report**

Senate Bill 281 (2003) requires the Texas Workforce Commission (TWC) to, at least annually, issue an analysis of the job placement performance of each workforce development program by occupation and by training provider (possibly including other relevant data), for the previous one-year, three-year, and five-year periods. TWC's Labor Market and Career Information (LMCI) department fulfills this mandate. We provide these data in the spirit of continuous improvement and do not seek to single out or punish any program, provider or geography. LMCI's mission is to improve the way Texans make career and educational decisions by providing useful and reliable information about careers, educational training options and jobs. For more information, visit [www.lmci.state.tx.us](http://www.lmci.state.tx.us).

## **Structure of the Report**

This report addresses the set of individuals (cohort) that exited Texas Apprenticeship programs in 2008-2009. The report examines a snapshot of the cohort's outcomes, i.e. their employment and median earnings, in the fourth quarter of 2009 (Q42009). Three-year and five-year snapshots of this cohort's outcomes in Q42012 and Q42014 will be added to the report as the data become available. The report's body provides a high-level overview and analysis of the data. Detailed tables of all measures discussed can be found in appendix A. All data are from LMCI's follow-up analysis unless otherwise noted.

## **Caveats About the Data and Analysis**

To our knowledge, there is no better source of data on labor market outcomes than UI wage records, but these data have some limitations. UI wage records do not cover individuals engaged in certain types of employment ranging from domestic workers to railroads. The collection of UI wage data involves editing to clean incoming data, but inaccurate records may remain in the system unless and until a claim for UI benefits is filed. SSNs are not validated against a national database: fraudulent SSNs may be present in the data as well as multiple individuals using one SSN (leading to outlandishly high earnings in some cases). Neither occupational title nor hours worked per quarter are reported, preventing us from calculating hourly wage and determining relatedness of training to employment or part-time/full-time status. This characteristic of the data sometimes leads to very low earnings in the case of individuals who worked for only part of a quarter we sampled. Despite these limitations, data from UI wage records provide an invaluable glimpse of post-exit achievements of workforce training participants.

In the fourth quarter of 2009 (Q42009), the period examined in this report, the Texas economy continued to fare better than that of most other states. According to the

National Bureau of Economic Research, the U.S. economy peaked in December 2007 and entered the “Great Recession,” which officially ended in July 2009 (although subsequent growth has been anemic, with the remaining effects of the Great Recession strongest in the labor market). The Texas economy proved robust during much of this period, continuing to grow through most of 2008 and maintaining an unemployment rate 1-2 percent lower than the national average. Employment peaked in October of 2008, after which Texas joined the nation in losing jobs. Texas unemployment in Q42009 was 8.1 percent, 2.4 percent higher than Q42008. At the same time, the U.S. national unemployment rate was 10.0 percent, rising 3.1 percent on the year. For purposes of this report, we frequently cite Q42009 median earnings for participants. For reference, the Texas median worker’s 2009 quarterly earnings were \$6,663.<sup>2</sup>

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<sup>2</sup>Texas median quarterly worker earnings were derived by dividing estimates of annual median worker earnings from the US Census Bureau’s American Community Survey (2009 one-year estimates) by four.

## Results

As one might expect, individuals who completed apprenticeship training and advanced to the next stage in their careers had the best chance of being found employed in Q42009 , 87.9 percent of those who completed and advanced were found employed compared with 62.4 percent of all others (Figure 1).

Electricians, the majority of Apprenticeship participants, had employment outcomes slightly better than the overall figure of 80.7 percent, as did Plumbers. Iron workers, carpenters and painters fared less well than other trades. Two trades, Heating, Ventilation and Air Conditioning (HVAC) and Motor Grader Operator had over 90 percent of participants found employed in the study period.

Individuals under the age of 25 were slightly more likely to be employed than older cohort members.

**Figure 1: Employment by Selected Characteristics**

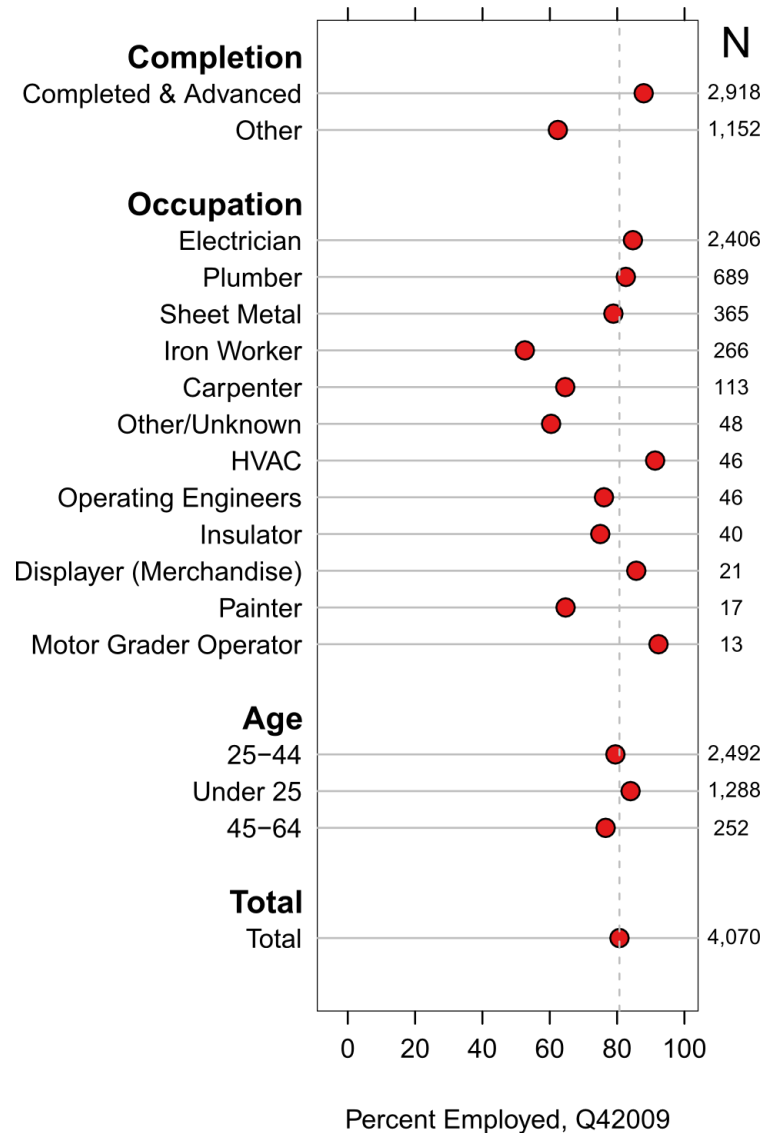


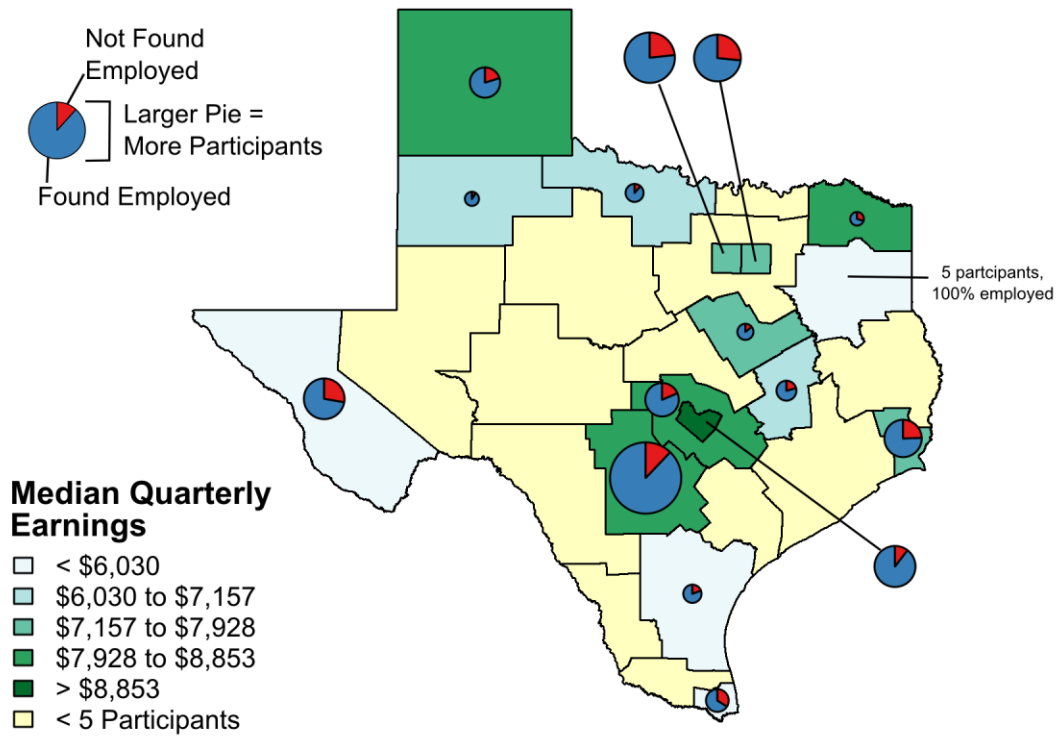
Figure 2 shows the distribution of quarterly earnings by occupation or trade. Electricians were the largest occupational cohort, and had slightly higher-than-average median quarterly earnings, \$7,871. HVAC participants were relatively few, but they enjoyed high median earnings in Q42009, as did the second-largest group of apprentices, Plumbers. Iron workers had relatively low median earnings.

**Figure 2: Distribution of Quarterly Earnings by Occupation (Earnings Greater than Zero)**



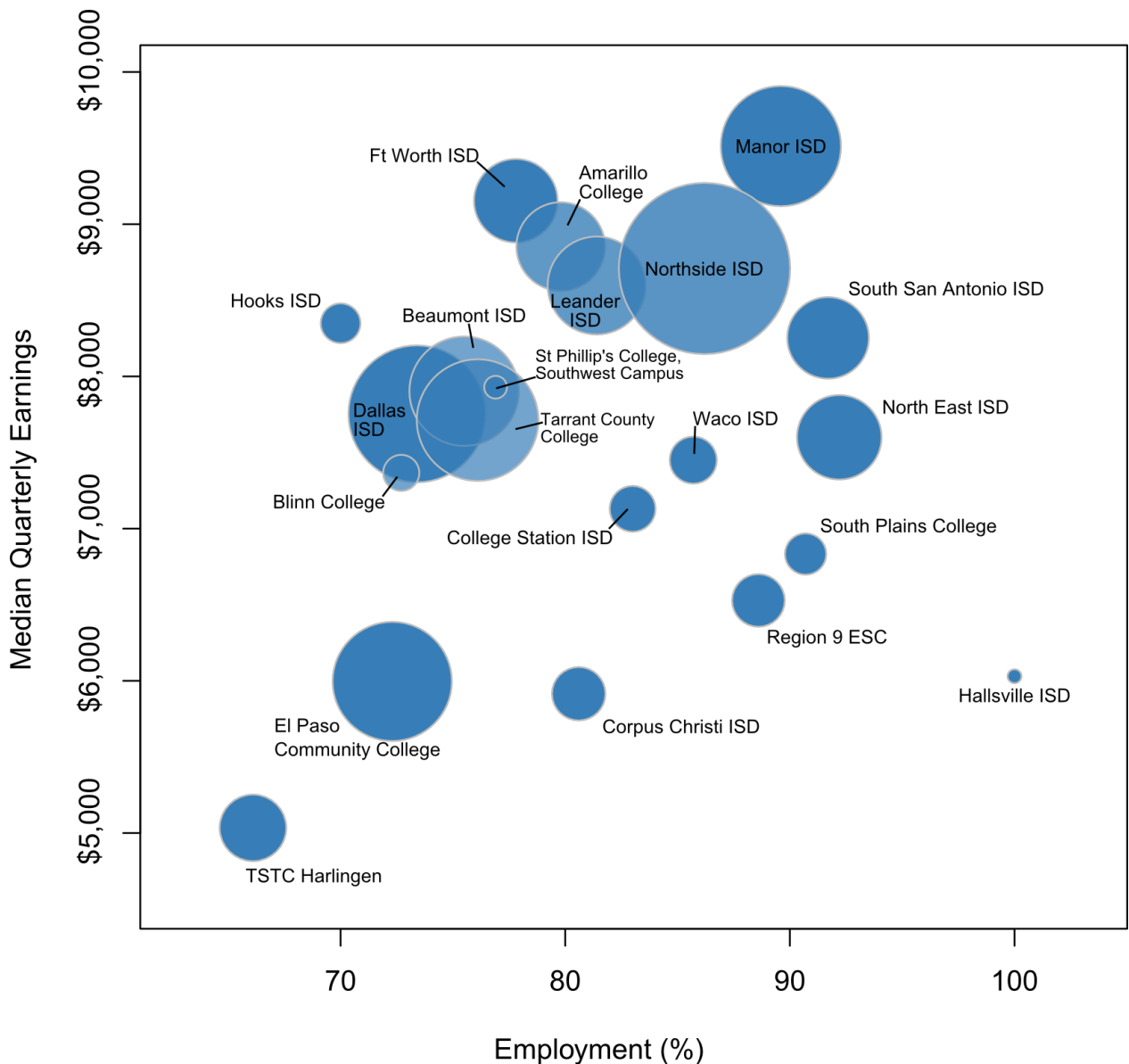
Figure 3 displays labor market outcomes by Local Workforce Development Area. Alamo WDA (San Antonio Area) had the most participants, and relatively high employment and median earnings. Capital Area WDA (Travis County) had the highest median quarterly earnings and employment near 90 percent.

**Figure 3: Labor Market Outcomes by LWDA**



Apart from the small (5 participants) Hallsville ISD which had 100 percent employment, North East ISD (San Antonio) had the highest employment rate, 92.2 percent, followed closely by South San Antonio ISD with 91.7 percent. The highest earnings were achieved by participants at Manor ISD.

**Figure 4: Labor Market Outcomes by Classroom Training Provider**





The market for Apprenticeship trades concentrates in construction, as shown by the sizeable majority of apprentices employed by Building Equipment Contractors (specialized contractors who install electrical, plumbing, ventilation and other systems). Relatively few individuals were found employed in non-training-related industries such as Employment Services (temporary staffing) and Limited Service Eating Places (fast food).

<b>Industry of Employment</b>	<b>N</b>	<b>% of Employed</b>	<b>Median Earnings</b>
<b>Building Equipment Contractors</b>	2,343	71.3%	\$8,285
<b>Employment Services</b>	167	5.1%	\$5,076
<b>Foundation, Structure, and Building Exterior Contractors</b>	99	3.0%	\$7,111
<b>Nonresidential Building Construction</b>	62	1.9%	\$8,423
<b>Building Finishing Contractors</b>	60	1.8%	\$8,138
<b>Architectural and Structural Metals Manufacturing</b>	48	1.5%	\$7,885
<b>Other Specialty Trade Contractors</b>	31	0.9%	\$12,866
<b>Limited-Service Eating Places</b>	28	0.9%	\$2,014
<b>Specialized Freight Trucking</b>	24	0.7%	\$4,607
<b>Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers</b>	22	0.7%	\$11,631

## References

Autor, David (2010). "The Polarization of Job Opportunities in the U.S. Labor Market: Implications for Employment and Earnings." Washington, D.C.: The Center for American Progress and the Hamilton Project. Online: <http://econ-www.mit.edu/files/5554>

Glover, Robert W. (2011). "Apprenticeship in Texas: a Case Study for the Texas Data Quality Initiative." Austin: Ray Marshall Center for the Study of Human Resources, LBJ School of Public Affairs, The University of Texas at Austin.

Holzer, Harry J (2010). "Is the Middle of the U.S. Job Market Really Disappearing? A Comment on the 'Polarization' Hypothesis." Washington, D.C.: The Center for American Progress. Online: [http://www.americanprogress.org/issues/2010/05/pdf/Holzer\\_memo.pdf](http://www.americanprogress.org/issues/2010/05/pdf/Holzer_memo.pdf)

Texas Workforce Commission (2012). Apprenticeship Homepage. Online: <http://www.twc.state.tx.us/svcs/apprentice/apprentice.html>

## Appendix A

<b>Table 2: Outcomes by Completion Status</b>			
<b>Completion Status</b>	<b>N</b>	<b>% Working</b>	<b>Median Earnings</b>
Successfully Completed & Advanced	2,918	87.9	\$8,398
Completed & Did Not Advance	146	67.8	\$6,777
Gained Skills & Did Not Complete	571	64.4	\$5,428
Other	1152	62.4	\$5,904
Did Not Complete Training	435	57.9	\$5,508
<b>Total</b>	<b>4,070</b>	<b>80.7</b>	<b>\$7,958</b>

<b>Table 3: Outcomes by Occupation/Trade</b>			
<b>Occupation</b>	<b>N</b>	<b>% Working</b>	<b>Median Earnings</b>
Motor Grader Operator	13	92.3	\$7,895
HVAC	46	91.3	\$9,389
Displayer (Merchandise)	21	85.7	\$3,011
Electrician	2,406	84.7	\$7,871
Plumber	689	82.6	\$9,295
Sheet Metal	365	78.9	\$7,982
Operating Engineers	46	76.1	\$11,816
Insulator	40	75	\$8,066
Painter	17	64.7	\$2,707
Carpenter	113	64.6	\$7,269
Other/Unknown	48	60.4	\$7,412
Iron Worker	266	52.6	\$5,174
<b>Total</b>	<b>4,070</b>	<b>80.7</b>	<b>\$7,958</b>

**Table 4: Outcomes by Age Group**

Age Group	N	% Working	Median Earnings
Less Than 24	1,288	84.0	\$7,469
Greater Than 65	5	80.0	\$6,560
Between 25-44	2,492	79.5	\$8,341
Unknown	33	78.8	\$7,375
Between 45-64	252	76.6	\$7,486
<b>Total</b>	<b>4,070</b>	<b>80.7</b>	<b>\$7,958</b>

**Table 5: Outcomes by LWDA**

LWDA	N	% Working	Median Earnings
East Texas	5	100	\$6,030
South Plains	43	90.7	\$6,833
Capital Area	364	89.6	\$9,513
North Texas	70	88.6	\$6,528
Alamo	1,100	87.9	\$8,431
Heart of Texas	56	85.7	\$7,450
Rural Capital	242	81.4	\$8,597
Coastal Bend	72	80.6	\$5,915
Panhandle	198	79.8	\$8,853
Brazos Valley	86	79.1	\$7,157
Tarrant County	549	76.7	\$7,928
South East Texas	302	75.5	\$7,903
Dallas	473	73.4	\$7,754
Upper Rio Grande	358	72.3	\$5,996
North East Texas	40	70	\$8,349
Cameron County	112	66.1	\$5,034
<b>Total</b>	<b>4,070</b>	<b>80.7</b>	<b>\$7,958</b>

**Table 6: Outcomes by Training Provider**

Training Provider	N	% Working	Median Earnings
Hallsville ISD	5	100.0	\$6,030
North East ISD	180	92.2	\$7,600
South San Antonio ISD	168	91.7	\$8,253
South Plains College	43	90.7	\$6,833
Manor ISD	364	89.6	\$9,513
Region 9 ESC	70	88.6	\$6,528
Northside ISD	739	86.2	\$8,709
Waco ISD	56	85.7	\$7,450
College Station ISD	53	83.0	\$7,130
Leander ISD	242	81.4	\$8,597
Corpus Christi ISD	72	80.6	\$5,915
Amarillo College	198	79.8	\$8,853
Ft Worth ISD	176	77.8	\$9,154
St Phillip's College, Southwest Campus	13	76.9	\$7,929
Tarrant County College	373	76.1	\$7,713
Beaumont ISD	302	75.5	\$7,903
Dallas ISD	473	73.4	\$7,754
Blinn College	33	72.7	\$7,366
El Paso Community College	358	72.3	\$5,996
Hooks ISD	40	70.0	\$8,349
TSTC Harlingen	112	66.1	\$5,034
<b>Total</b>	<b>4,070</b>	<b>80.7</b>	<b>\$7,958</b>

### Table 7. Higher Education Dashboard

Summary of Linkage	N	% of Cohort	Median Earnings
Working Only	2,944	72.3	8,011
Pursuing Higher Education Only	50	1.2	0
Working & Pursuing High Ed.	341	8.4	7,461
Subtotal for All Working	3,285	80.7	7,945
All Enrolled	391	9.6	7,069
Not Verified	542	13.3	0
Subtotal	4,070	99.8	7,106
TX Vital Statistics	9	0.2	0
Total	4,079	100.0	7,103

N	%	Higher Education Enrollment by Institution Type
370	94.6	Community/Technical Colleges & Career Schools/Colleges
21	5.4	Public or Private Universities & Health Science Centers
391	100.0	Total Found Enrolled

Top LWDA by Enrollment	N	Number Enrolled	% of All Enrolled
Tarrant County	549	19	3.5
Rural Capital	242	5	2.1

Top 10 Public Postsecondary Institutions	N	% of All Enrolled	Top 10 Majors (6-digit Classification of Instructional Programs Code)	N	% of All Enrolled
Tarrant Co NW	262	67.01	Electrical and Power Transmission Installers	163	41.79
South Plains College	18	4.60	Precision Metal Working	47	12.05
Blinn College	13	3.32	Plumbing and Related Water Supply Services	35	8.97
San Antonio College	8	2.05	Liberal Arts and Sciences	23	5.90
El Paso CCD	7	1.79	Environmental Control Technologies/Technicians	15	3.85
Austin CC	6	1.53	Carpenters	11	2.82
St. Philip's College	5	1.28	Electrical/Electronics Maintenance and Repair	10	2.56
Dcccd Mountain View College	5	1.28	Construction Engineering Technology/Technician	9	2.31
Tarrant Co South	5	1.28	Undeclared	8	2.05
Houston CC	5	1.28	Criminal Justice and Corrections	7	1.79