

Central Valley/Mother Lode Region

SECTOR PROFILE REPORTS








June 2018

Central  Mother Lode

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METHODOLOGY AND DATA SOURCES

The occupations included in these reports are those most relevant to the skills and training provided by a community college education. Community college programs and courses are organized into the Taxonomy of Programs (TOP) system. The same occupation may exist across a variety of TOP code programs; for example, administrative services managers, included in both TOP 0506.00 – Business Management and TOP 0506.30 – Management Development and Supervision due to the inherent overlap of the two programs with the Standard Occupational Classification (SOC) system. Occupations were selected for each TOP code based primarily upon the Center of Excellence’s TOP-SOC Crosswalk. Matches were determined based on the overlap between TOP program objectives and occupational skills, focusing predominantly on middle-skill occupations, which must meet at least one of the following criteria for inclusion:

- All occupations listed as having some college or associate degree education requirement or requiring an apprenticeship
- All occupations with a bachelor’s degree with more than 1/3 of workers having completed some college to an associate degree
- All occupations requiring a high school diploma or equivalent or no formal education with long-term, on-the-job training
- All supervisory occupations (skills-builder qualified)
- Exceptions were made for occupations requiring a high school diploma or equivalent or no formal education with short- or moderate-term, on-the-job training where multiple community colleges have existing programs

The TOP programs for each Priority and Emerging sector were selected by the respective regional Deputy Sector Navigator and thus, may not align with the most recent version of the sector listing by TOP code. For sectors without a regional Deputy Sector Navigator, TOP programs were selected based on relevant middle-skill occupations with high demand and wage opportunities.

These sector profile reports primarily utilized the following data resources (see Appendix A for more detailed information on the data elements from each source):

Burning Glass Labor Insights:

Burning Glass is a real-time LMI tool that scours the web for online job postings. For this report, their skills-based search was utilized to access the top skills by occupation for all of 2017. These skills are specific to the 15 counties in the Central Valley/Mother Lode Region.

Economic Modeling Specialists, Inc. (EMSI):

All traditional labor market information was obtained from EMSI’s 2018.2 data release, including demand (job openings by occupation), wages, typical entry level education & training required, and the percentage of workers within an occupation that are 55 years or older (45 or older for public service occupations) in the Central Valley/Mother Lode Region. EMSI utilizes data from several publicly available sources.

METHODOLOGY AND DATA SOURCES

LaunchBoard:

Regional course enrollments, number of students who earned an award, employment outcomes after exiting the program, transfers to four-year institutions, as well as all data from the student demographic section was obtained via LaunchBoard. Program completions were confirmed via Data Mart. If discrepancy exists between LaunchBoard and Data Mart, Data Mart data was used.

Data Mart:

The number of awards conferred by each college in 2016–17 was used to corroborate the same data from LaunchBoard. The primary reason for using Data Mart data is because it can be updated at any time by the colleges, whereas LaunchBoard data is only refreshed quarterly.

Chancellor's Office Curriculum Inventory (COCI):

COCI is a centralized database of all California community college curricula. This database was used to determine which TOP programs and courses are offered at each college. In instances where COCI did not identify which type of award a college offers, individual course catalogs were consulted.















College Course Catalogs:

Individual course catalogs were consulted when there was missing award information in COCI and for all program statuses other than active.

The Central Valley/Mother Lode Region is comprised of the following counties and colleges:

Counties

Colleges







































Alpine	Kern	Mono	 Bakersfield	 Merced	 Sequoias
Amador	Kings	San Joaquin	 Cerro Coso	 Modesto Junior	 Taft
Calaveras	Madera	Stanislaus	 Clovis	 Porterville	 West Hills Coalinga
Fresno	Mariposa	Tulare	 Columbia	 Reedley	 West Hills Lemoore
Inyo	Merced	Tuolumne	 Fresno City	 San Joaquin Delta	














































The Advanced Manufacturing sector includes traditional manufacturing work in addition to jobs and careers dedicated to customization, scalability and technologies that improve the entire manufacturing process.

Strong Workforce Program Metrics, 2015–16 unless otherwise noted

Central Valley/ Mother Lode	Metric	CA Median
25,562	Course Enrollments (2016–17)	9,089
384	Students Who Got a Degree or Certificate (2016–17)	384
228	Students who Transferred	228
66%	Employed in the 2nd Quarter After Exit	66%
81%	Job Closely Related to Field of Study (2014–15)	74%
\$7,137	Median Earnings in the 2nd Quarter After Exit	\$8,118
65%	Employed in the 4th Quarter After Exit	66%
\$23,674	Median Annual Earnings	\$31,108
46%	Median Change in Annual Earnings	54%
54%	Attained Living Wage	57%

TOP Program	Colleges Offering	Catalog Name	Award Offered
0924.00 - Engineering Technology, General (requires Trigonometry)	Bakersfield	Engineering Technology	
	Merced	Engineering Technology	
0934.00 – Electronics and Electric Technology	Bakersfield	Electronics Technology	
		Industrial Technology: Electronics	
	Fresno City	Electrical Systems Technology	 
	Merced	Electronics Technician	 
	San Joaquin Delta	Apprenticeship: Electrical Technology	
		Electrical Technology	
		Electronics Technology	
0934.10 – Computer Electronics	Merced	Computer & Networking Technology	 
	Modesto Junior	Computer Electronics	 
0934.20 – Industrial Electronics	Fresno City	Electrical Systems Technology Control Systems	
		Electrical Systems Technology: Automation Control Technician	
	Modesto Junior	Industrial Electronics	 
0936.00 – Printing and Lithography	Fresno City	Graphic Communications	 
0943.00 – Instrumentation Technology	Merced	Instrumentation & Process Control Technology	 
	Modesto Junior	Electro-Mechanic	
0945.00 – Industrial Systems Technology and Maintenance (p.12)	Fresno City	Manufacturing Mechanic	
	Merced	Industrial Maintenance Technology	 
	San Joaquin Delta	Apprenticeship: Industrial Technology-Electrical	
		Apprenticeship: Industrial Technology-Maintenance	
		Apprenticeship: Industrial Technology-Mechanical	
		Apprenticeship: Industrial Technology-Operations	
		Fluid Power & Automation Technology	 
		Industrial Technology	
	Sequoias	Industrial Maintenance Technology	 
0950.00 – Aeronautical and Aviation Technology	Reedley	Aviation Maintenance Technology	 

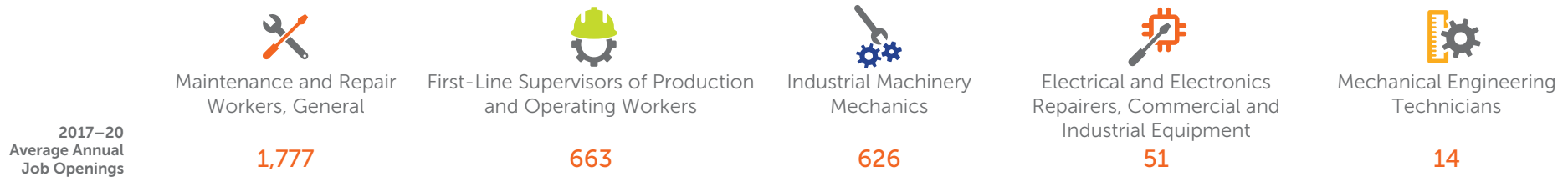
TOP Program	Colleges Offering	Catalog Name	Award Offered
0953.40 – Mechanical Drafting	Merced	CAD Drafting – Mechanical Design	 
		CAD Draftsman – Mechanical	 
		CAD Operator	
	San Joaquin Delta	Engineering Technology	 
	Sequoias	Autodesk AutoCAD for Drafting	
		Dassault Systemes SolidWorks	
0956.00 – Manufacturing and Industrial Technology (p.14)	Bakersfield	Industrial Tech: Manufacturing Technology	
		Industrial Technology (General)	
		Manufacturing Technology	
	Cerro Coso	Industrial Technology	 
	Fresno City	Computer Aided Manufacturing	 
		Industrial Technology: Manufacturing	
		Maintenance Mechanic	
	Modesto Junior	Manufacturing Technology (Interdisciplinary)	
	Porterville	Industrial Maintenance	
		Power Technician Utility Worker	
0956.30 – Machining and Machine Tools (p.16)	Reedley	Manufacturing 1	
		Manufacturing Maintenance Mechanic	 
	Bakersfield	Basic Machine Tool Operations – Lathe, Mill	
	Cerro Coso	Machine Tool Technology	
	Modesto Junior	Machine Tool Technology	 
		Maintenance Machinist	
	Reedley	Machine Tool Technology	
		Machinist	
	San Joaquin Delta	Computer Numerical Control (CNC) Operator/Programmer	
		Machining Technology	
		Machinist Entry-Level	
	Sequoias	Machining and Manufacturing	

TOP Program	Colleges Offering	Catalog Name	Award Offered
0956.50 – Welding Technology	Bakersfield	Industrial Technology: Welding	
		Welding	
	Cerro Coso	Welding Processes	
		Welding Technology	 
	Columbia	Welding Technology	
	Fresno City	Welding Design & Fabrication	
		Welding Multi-Process	
		Welding Technology: Metal Fabrication	 
		Welding Technology: Pipe & Structural Steel Certification	 
	Merced	Advanced Welding and Metal Fabrication	
		Welding Technology	
	Modesto Junior	Welding	
	Reedley	Welder	
		Welding Technology	
	San Joaquin Delta	Gas Metal Arc Welding (GMAW)/Flux Core Arc Welding (FCAW)	
		Gas Tungsten Arc Welding (GTAW)	
		Oxy-Fuel Processes and Shielded Metal Arc Welding (SMAW)	
		Welding Technology	
	Sequoias	Welding	
		Welding Technology	
	Taft	Pipe Code Welding	
		Structural Code Welding	
		Welding Technology	
	West Hills Coalinga	Welding Technology	

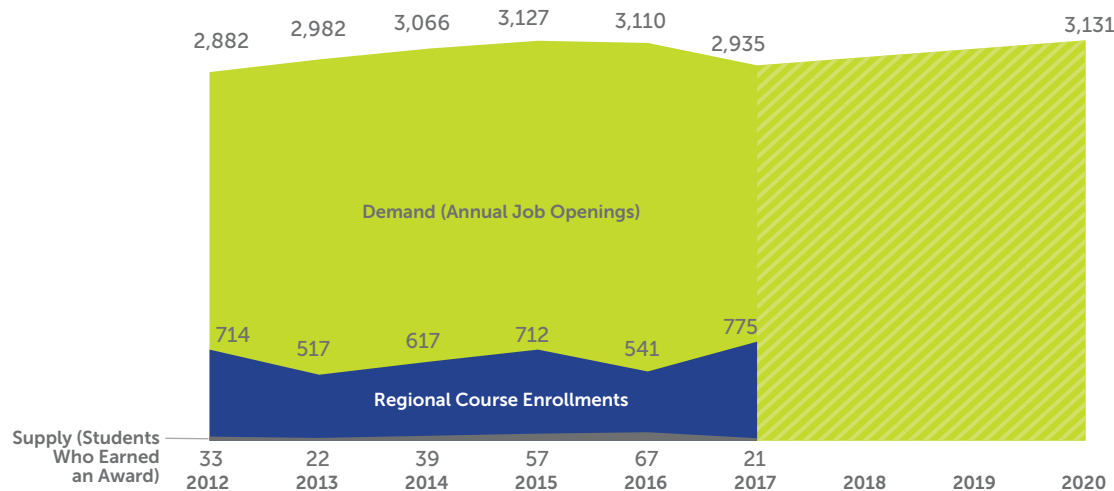
TOP Program	Colleges Offering	Catalog Name	Award Offered
0956.70 – Industrial and Occupational Safety and Health	Bakersfield	Occupational Safety and Risk Management, Agriculture	
		Occupational Safety and Risk Management, Business	
		Occupational Safety and Risk Management, Health Science	
		Occupational Safety and Risk Management, Industrial Technology	
	Taft	Industrial Health & Safety Midlevel Certificate	
		Industrial Health and Safety	
		Industrial Health and Safety Foundation	
1303.30 – Fashion Production	San Joaquin Delta	Apparel Industry Sewing	



Relevant Occupations:











Supply/Demand for Selected Occupations, 2012–20:





Strong Workforce Program Metrics, 2015–16:

Region	vs	California
72%	Employed in the 2nd Quarter After Exit	73%
80%	Job Closely Related to Field of Study (2014–15)	77%
\$8,407	Median Earnings in the 2nd Quarter After Exit	\$9,838
71%	Employed in the 4th Quarter After Exit	73%
\$24,803	Median Annual Earnings	\$31,903
79%	Median Change in Annual Earnings	63%
59%	Attained Living Wage	61%

Regional Colleges Offering Programs:

				
Programs Offered				
2016–17 Awards	9	1 1	- 2	3 7
2016–17 Course Enrollments	200	16	156	300

Regional Colleges Offering Courses:

	Modesto	59	2016–17 Enrollments
	West Hills Coalinga	44	2016–17 Enrollments

Industrial Systems Technology and Maintenance – 0945.00

Design, construction, maintenance, and operation of mechanical, hydraulic, pneumatic, and electrical equipment and related systems, such as production machinery. Includes building and plant maintenance.

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Sources: EMSI 2018.2, Burning Glass, LaunchBoard, MIS Data Mart, COE TOP-SOC Crosswalk

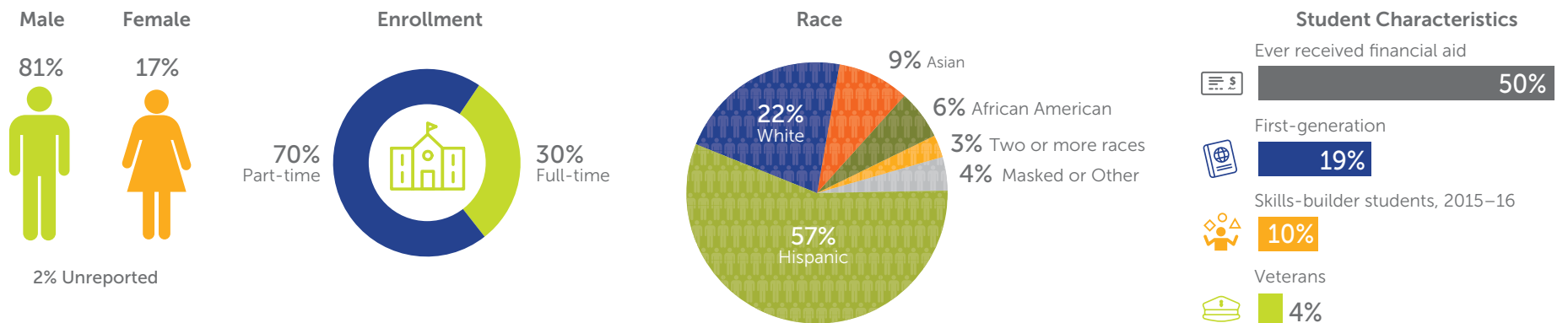
Occupation Data:

Occupation	3-Year 2017–20 Total Openings	Wage Range* (Entry, Median, Experienced Wage)		Typical Entry Level Education & Training Required	Sample of In-Demand Skills From Job Postings (2017)	% of Current Workers Age 55+
Maintenance and Repair Workers, General	5,331	\$10.98	<div><div>\$18.59</div><div>\$29.59</div></div>	High school diploma or equivalent & 1 to 12 months training	Plumbing, HVAC, Painting, Carpentry	30%
First-Line Supervisors of Production and Operating Workers	1,990	\$14.58	<div><div>\$25.38</div><div>\$45.99</div></div>	High school diploma or equivalent & none	Scheduling, Budgeting, Process Improvement	25%
Industrial Machinery Mechanics	1,879	\$16.02	<div><div>\$24.94</div><div>\$35.51</div></div>	High school diploma or equivalent & more than 12 months training	Repair, Predictive/Preventative Maintenance, Welding	28%
Electrical and Electronics Repairers, Commercial and Industrial Equipment	152	\$17.37	<div><div>\$26.70</div><div>\$36.95</div></div>	Postsecondary nondegree award & more than 12 months training	Hardware Experience, Project Management, Repair*	17%
Mechanical Engineering Technicians	41	\$18.92	<div><div>\$28.72</div><div>\$38.82</div></div>	Associate degree & none	Repair, Quality Assurance and Control, Wiring	~21%

*Entry hourly earnings is 10th percentile wage, experienced hourly earnings is 90th percentile wage.

*Due to low regional demand, these skills are based on statewide job postings.

Student Demographics, 2016–17 (396 Total Students):



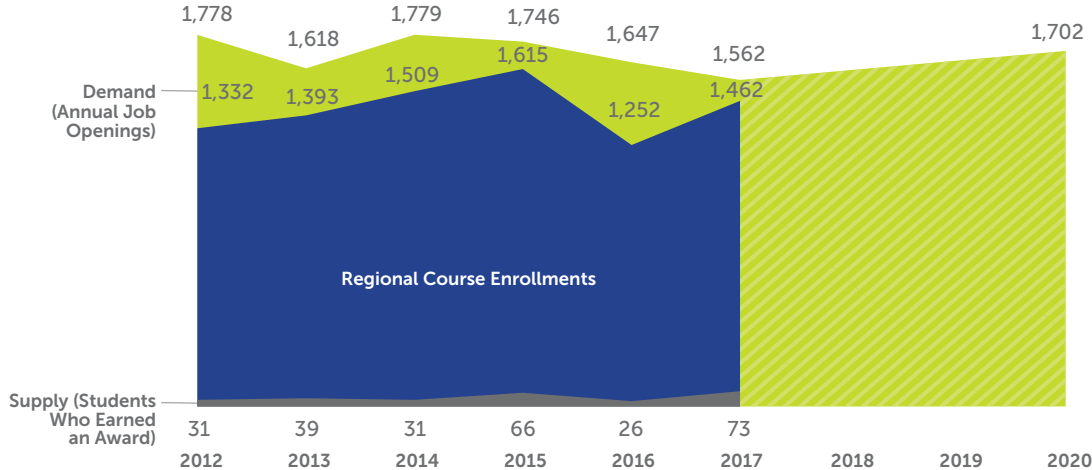
Central Valley/Mother Lode Region MANUFACTURING AND INDUSTRIAL TECHNOLOGY 0956.00



Relevant Occupations:



Supply/Demand for Selected Occupations, 2012–20:



Strong Workforce Program Metrics, 2015–16:

Region	vs	California
79%	Employed in the 2nd Quarter After Exit	78%
64%	Job Closely Related to Field of Study (2014–15)	66%
\$8,829	Median Earnings in the 2nd Quarter After Exit	\$9,357
79%	Employed in the 4th Quarter After Exit	76%
\$35,235	Median Annual Earnings	\$35,562
77%	Median Change in Annual Earnings	77%
68%	Attained Living Wage	62%

Regional Colleges Offering Programs:

	Bakersfield	Cerro Coso	Fresno City	Modesto Junior	Porterville	Reedley
Programs Offered						
2016–17 Awards	3 1*	- -	1 1 17	9	45*	- -
2016–17 Course Enrollments	183	23	169	23	76	425
2015–16 Transfers	-	-	<10	<10	-	<10

Regional Colleges Offering Courses:

	Merced	830	2016–17 Enrollments 2015–16 Transfers
	San Joaquin Delta	365<10	2016–17 Enrollments 2015–16 Transfers
	Taft	280	2016–17 Enrollments 2015–16 Transfers
	West Hills Lemoore	870	2016–17 Enrollments 2015–16 Transfers

Manufacturing and Industrial Technology – 0956.00

Engineering principles and technical skills for the manufacture of products and related industrial processes. Includes Computer Aided Manufacturing and robotics.

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Sources: EMSI 2018.2, Burning Glass, LaunchBoard, MIS Data Mart, COE TOP-SOC Crosswalk

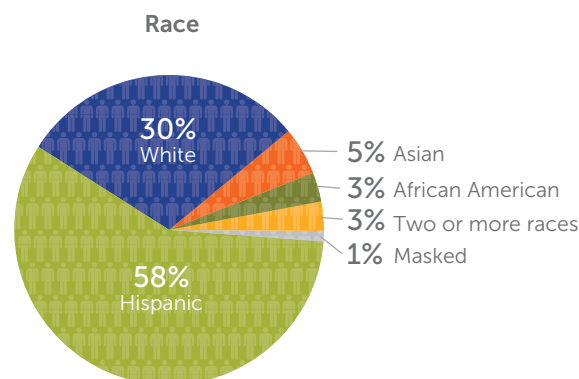
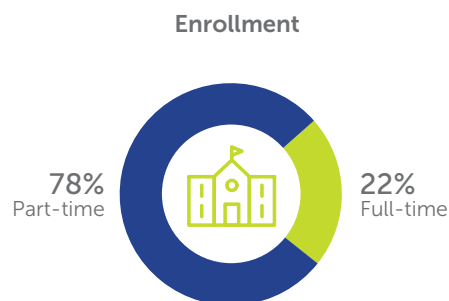
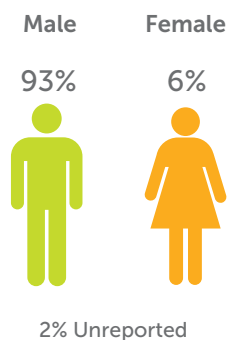
Occupation Data:

Occupation	3-Year 2017–20 Total Openings	Wage Range* (Entry, Median, Experienced Wage)		Typical Entry Level Education & Training Required	Sample of In Demand Skills From Job Postings (2017)	% of Current Workers Age 55+
Inspectors, Testers, Sorters, Samplers, and Weighers	1,989	\$10.22	\$16.30 \$30.21	High school diploma or equivalent & 1 to 12 months training	Quality Assurance and Control, Scheduling, Data Entry	26%
Industrial Machinery Mechanics	1, 879	\$16.02	\$24.94 \$35.51	High school diploma or equivalent & more than 12 months training	Repair, Predictive/Preventative Maintenance, Welding	28%
Machinists	805	\$11.76	\$19.15 \$30.66	High school diploma or equivalent & more than 12 months training	Computer Numerical Control (CNC), Lathes, Micrometers	28%
Computer-Controlled Machine Tool Operators, Metal and Plastic	179	\$11.58	\$17.19 \$28.55	High school diploma or equivalent & 1 to 12 months training	Computer Numerical Control (CNC), Lathes, Grinders	19%
Electrical and Electronics Repairers, Commercial and Industrial Equipment	152	\$17.37	\$26.70 \$36.95	Postsecondary nondegree award & more than 12 months training	Hardware Experience, Project Management, Repair*	17%
Industrial Engineering Technicians	55	\$19.52	\$34.79 \$49.80	Associate degree & none	Repair, Predictive/ Preventative Maintenance, Welding	~22%
Computer Numerically Controlled Machine Tool Programmers, Metal and Plastic	47	\$15.77	\$24.68 \$35.11	Postsecondary nondegree award & 1 to 12 months training	Lathes, Calipers, Micrometers	~16%

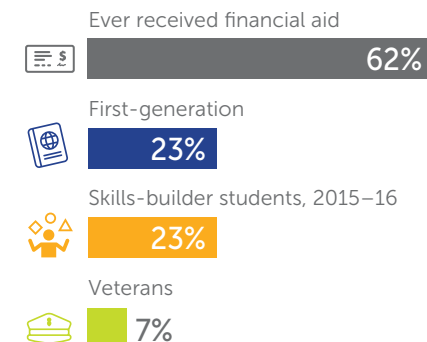
*Entry hourly earnings is 10th percentile wage, experienced hourly earnings is 90th percentile wage.

*Due to low regional demand, these skills are based on statewide job postings.

Student Demographics, 2016–17 (741 Total Students):



Student Characteristics



Central Valley/Mother Lode Region MACHINING AND MACHINE TOOLS

0956.30



Relevant Occupations:



Machinists

2017–20
Average Annual
Job Openings

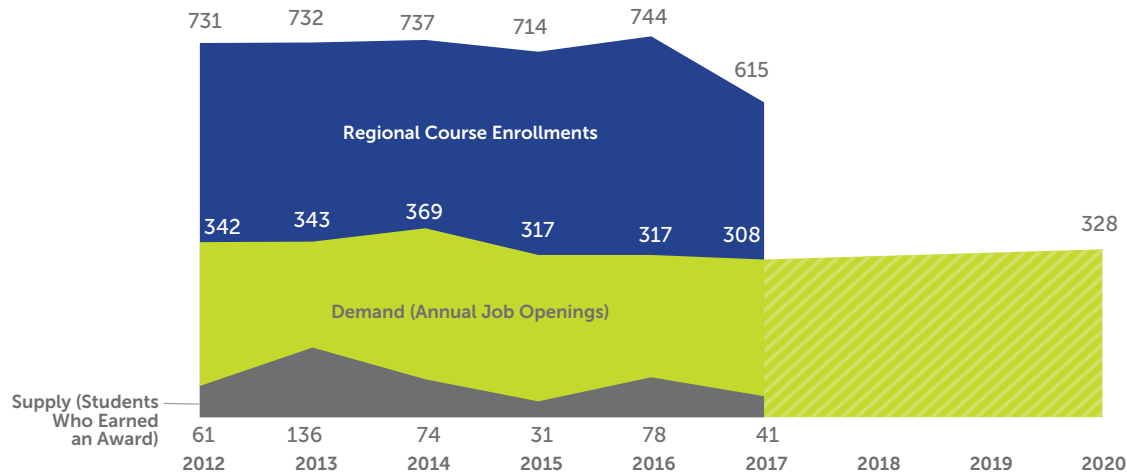
268



Computer-Controlled Machine Tool
Operators, Metal and Plastic

60

Supply/Demand for Selected Occupations, 2012–20:



Strong Workforce Program Metrics, 2015–16:

Region	vs	California
78%	Employed in the 2nd Quarter After Exit	75%
90%	Job Closely Related to Field of Study (2014–15)	78%
\$6,999	Median Earnings in the 2nd Quarter After Exit	\$9,732
76%	Employed in the 4th Quarter After Exit	76%
\$25,610	Median Annual Earnings	\$38,568
54%	Median Change in Annual Earnings	52%
71%	Attained Living Wage	67%

Regional Colleges Offering Programs:

	Bakersfield	Cerro Coso	Modesto Junior	Reedley	San Joaquin Delta	Sequoias
Programs Offered						
2016–17 Awards	15	-	5 19	- 9	1 7	-
2016–17 Course Enrollments	131	28	176	110	115	-

Regional Colleges Offering Courses:

Fresno City	55	2016–17 Enrollments
Associate Program		
Certificate Program		

Machining and Machine Tools – 0956.30

Fabrication, assembly and repair of parts and components or systems on machines, such as lathes, grinders, drill presses, milling machines, and shaping machines. Includes Computer Numerical Control and tool design.

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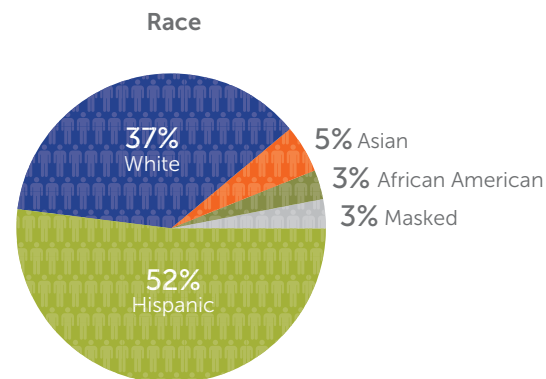
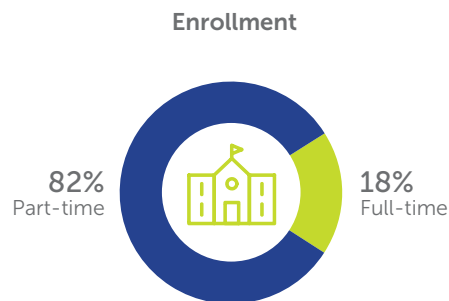
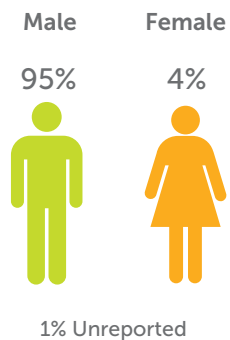
Sources: EMSI 2018.2, Burning Glass, LaunchBoard, MIS Data Mart, COE TOP-SOC Crosswalk

Occupation Data:

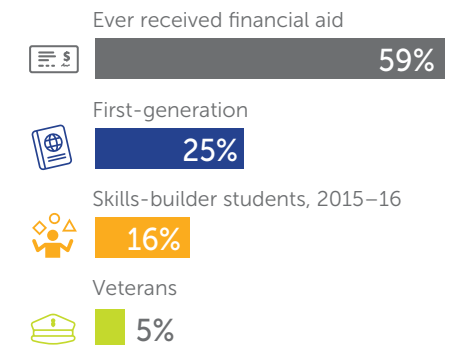
Occupation	3-Year 2017–20 Total Openings	Wage Range* (Entry, Median, Experienced Wage)		Typical Entry Level Education & Training Required	Sample of In Demand Skills From Job Postings (2017)	% of Current Workers Age 55+
Machinists	805	\$11.76	\$19.15 ▼ \$30.66	High school diploma or equivalent & more than 12 months training	Computer Numerical Control (CNC), Lathes, Micrometers	28%
Computer-Controlled Machine Tool Operators, Metal and Plastic	179	\$11.58	\$17.19 ▼ \$28.55	High school diploma or equivalent & 1 to 12 months training	Computer Numerical Control (CNC), Lathes, Grinders	19%

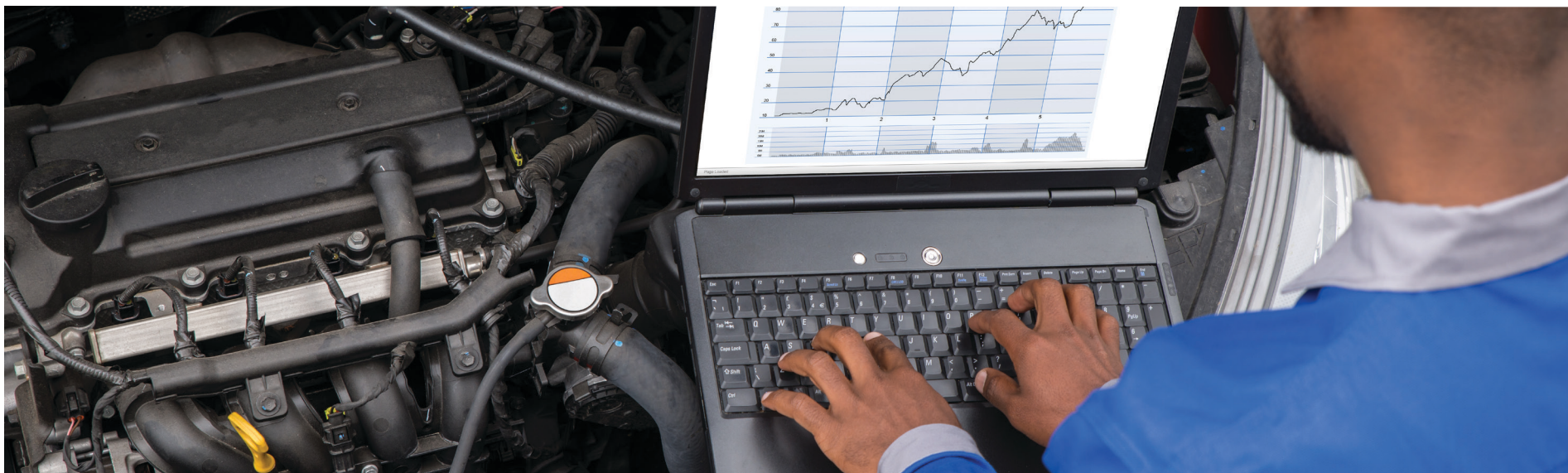
*Entry hourly earnings is 10th percentile wage,
experienced hourly earnings is 90th percentile wage.

Student Demographics, 2016–17 (487 Total Students):



Student Characteristics





































































Transportation is a vital part of the California economy, connecting businesses and communities across the state with highways, railways, shipping, and aviation routes. Logistics is primarily engaged in maintaining a sound supply chain through transporting and warehousing goods.

Strong Workforce Program Metrics, 2015–16 unless otherwise noted

Central Valley/ Mother Lode	Metric	CA Median
5,620	Course Enrollments (2016–17)	7,162
290	Students Who Got a Degree or Certificate (2016–17)	290
25	Students who Transferred	79
74%	Employed in the 2nd Quarter After Exit	68%
76%	Job Closely Related to Field of Study (2014–15)	73%
\$5,370	Median Earnings in the 2nd Quarter After Exit	\$6,542
72%	Employed in the 4th Quarter After Exit	69%
\$19,637	Median Annual Earnings	\$23,393
93%	Median Change in Annual Earnings	65%
52%	Attained Living Wage	52%

TOP Program	Colleges Offering	Catalog Name	Award Offered
0510.00 – Logistics and Materials Transportation (p.22)	Fresno City	Industrial Training	
	Modesto Junior	Logistics and Supply Chain Management	
	Porterville	Logistics Management	
	San Joaquin Delta	Logistics and Transportation Supervisor	
		Traffic Shipping & Receiving Technician	
0947.00 – Diesel Technology	San Joaquin Delta	Diesel Automotive Equipment Technician	
		Diesel Equipment Technician	
0947.20 – Heavy Equipment Maintenance (p.24)	San Joaquin Delta	Apprenticeship: Caterpillar Dealer Service Technician	
		Caterpillar Dealer Engine Technician Apprenticeship	
		Heavy Equipment Mechanic	
		Heavy Equipment Technician	
0947.30 – Heavy Equipment Operation	Bakersfield	Operating Engineer Apprenticeship	
	West Hills Coalinga	Heavy Equipment Operation	
0948.00 – Automotive Technology (p.26)	Bakersfield	Auto Engine Overhaul	
		Auto Tune-Up and Emissions	
		Automatic Transmissions	
		Automotive Heating and Air Conditioning	
		Automotive Management	
		Automotive Technology	
		Brake Systems	
		Electrical and Electronic Systems	
		Engine Overhaul and Repair	
		Engine Performance	
		Light Duty Diesel Performance	
		Manual Drive Train and Axles	
		Suspension and Steering	

TOP Program	Colleges Offering	Catalog Name	Award Offered
0948.00 – Automotive Technology cont. (p.26)	Columbia	Automotive Maintenance Technician	
		Automotive Maintenance Technician	
		Automotive Service Technician	 
		Engine Performance	
		Under Vehicle Service	
	Fresno City	Automotive Mechanics	
		Automotive Technology	 
		General Motors ASEP Program	
	Merced	Automotive Collision Repair	
		Automotive Technology Level 1	
		Automotive Technology Level 2	
		Master Auto Technician	 
		Master Auto Technology	
	Modesto Junior	Automotive Brakes and Suspension	
		Automotive Diagnosis	
		Automotive Engines and Transmissions	
		Automotive Service	
		Automotive Technician	
	Reedley	Automotive Technician	 
	San Joaquin Delta	Automotive Electric Technology	
		Automotive Lubrication Technician	
		Automotive Master Technician	
		Automotive Mechanics Technology	
		Automotive Technology	
	Sequoias	Automotive Technology (Basic)	 

TOP Program	Colleges Offering	Catalog Name	Award Offered
0949.00 – Automotive Collision Repair	Fresno City	Automotive Collision Repair	
		Automotive Collision Repair Technology	
	Merced	Automotive Collision Repair	
	Modesto Junior	Autobody Refinishing	
		Autobody/Collision Repair	
	San Joaquin Delta	Auto Body Advanced Repair and Restoration	
		Auto Body Basic Repair and Restoration	
		Auto Body Intermediate Repair and Restoration	

Central Valley/Mother Lode Region LOGISTICS AND MATERIALS TRANSPORTATION

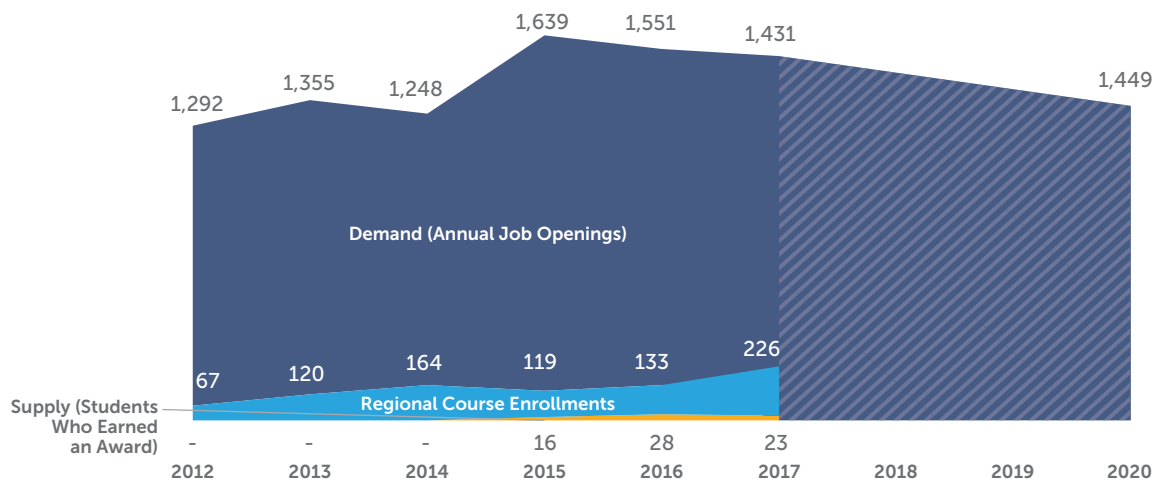
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Relevant Occupations:

							
	First-Line Supervisors of Helpers, Laborers, and Material Movers, Hand	Production, Planning, and Expediting Clerks	First-Line Supervisors of Transportation and Material-Moving Machine and Vehicle Operators	Transportation, Storage, and Distribution Managers	Industrial Production Managers	Logisticians	Cargo and Freight Agents
2017–20 Average Annual Job Openings	366	332	306	157	136	109	43












Supply/Demand for Selected Occupations, 2012–20:



Strong Workforce Program Metrics, 2015–16:

Region	vs	California
-	Employed in the 2nd Quarter After Exit	76%
-	Job Closely Related to Field of Study (2014–15)	61%
\$10,744	Median Earnings in the 2nd Quarter After Exit	\$10,641
-	Employed in the 4th Quarter After Exit	71%
\$31,633	Median Annual Earnings	\$36,063
22%	Median Change in Annual Earnings	22%
45%	Attained Living Wage	64%

Regional Colleges Offering Programs:

					
	Fresno City	Modesto Junior	Porterville	San Joaquin Delta	
Programs Offered					 Associate Program
2016–17 Awards	20	- 1	-	2	 Certificate Program
2016–17 Course Enrollments	86	82	33	25	 Noncredit award

Dash (-) indicates data are insufficient or have been suppressed.

Logistics and Materials Transportation – 0510.00

Theory, principles, functions, and procedures for the orderly and economic receiving, manufacturing, shipping, and servicing of products or services.

Central Valley/Mother Lode Region | coeccc.net | June 2018

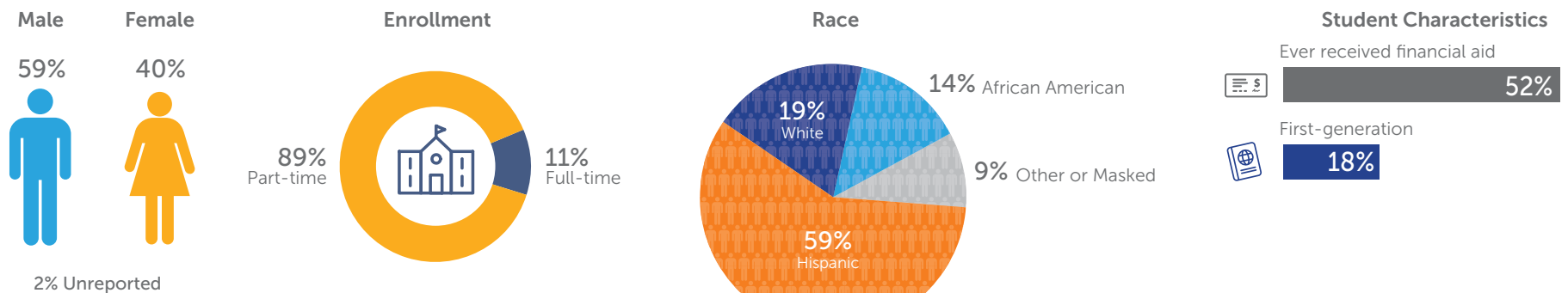
Sources: EMSI 2018.2, Burning Glass, LaunchBoard, MIS Data Mart, COE TOP-SOC Crosswalk

Occupation Data:

Occupation	3-Year 2017–20 Total Openings	Wage Range* (Entry, Median, Experienced Wage)			Typical Entry Level Education & Training Required	Sample of In-Demand Skills From Job Postings (2017)	% of Current Workers Age 55+
First-Line Supervisors of Helpers, Laborers, and Material Movers, Hand	1,098	\$14.59	\$25.57 ↓ \$37.70		High school diploma or equivalent & none	Customer Service, Scheduling, Forklift Operation	24%
Production, Planning, and Expediting Clerks	995	\$13.76	\$22.54 ↓ \$37.30		High school diploma or equivalent & 1 to 12 months training	Scheduling, Logistics, Data Entry	23%
First-Line Supervisors of Transportation and Material-Moving Machine and Vehicle Operators	919	\$14.07	\$25.43 ↓ \$41.19		High school diploma or equivalent & none	Scheduling, Customer Service, Repair	25%
Transportation, Storage, and Distribution Managers	470	\$25.50	\$38.92 ↓ \$62.56		High school diploma or equivalent & none	Logistics, Scheduling, Budgeting	24%
Industrial Production Managers	408	\$26.26	\$42.08 ↓ \$72.82		Bachelor's degree & none	Quality Assurance and Control, Hazard Analysis Critical Control Point (HACCP), Food Safety	26%
Logisticians	328	\$22.42	\$38.56 ↓ \$57.14		Bachelor's degree & none	Supply Chain Knowledge and Management, Scheduling, Teamwork/Collaboration	18%
Cargo and Freight Agents	129	\$13.90	\$20.14 ↓ \$29.80		High school diploma or equivalent & 1 month training	Customer Service, Receiving, Forklift Operation	21%

*Entry hourly earnings is 10th percentile wage, experienced hourly earnings is 90th percentile wage.

Student Demographics, 2016–17 (123 Total Students):



Central Valley/Mother Lode Region HEAVY EQUIPMENT MAINTENANCE

0947.20



Relevant Occupations:



Mobile Heavy Equipment
Mechanics, Except Engines

231



Farm Equipment Mechanics
and Service Technicians

189

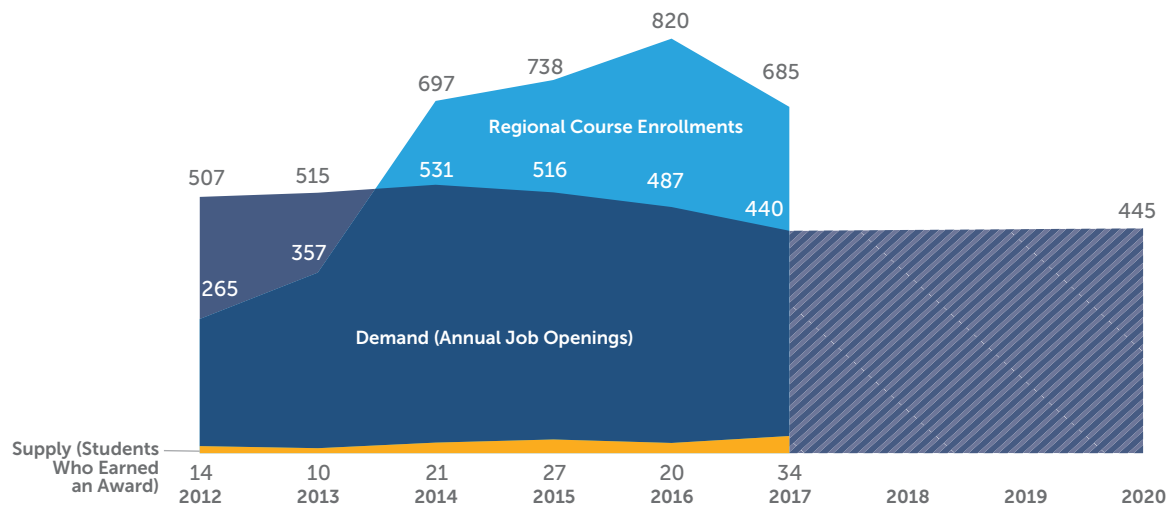


Rail Car Repairers

25

2017–20
Average Annual
Job Openings




Supply/Demand for Selected Occupations, 2012–20:



Strong Workforce Program Metrics, 2015–16:

Region	vs	California
88%	Employed in the 2nd Quarter After Exit	88%
100%	Job Closely Related to Field of Study (2014–15)	92%
\$13,136	Median Earnings in the 2nd Quarter After Exit	\$10,563
88%	Employed in the 4th Quarter After Exit	88%
\$48,993	Median Annual Earnings	\$38,806
254%	Median Change in Annual Earnings	254%
95%	Attained Living Wage	92%

Regional Colleges Offering Programs:

		San Joaquin Delta
Programs Offered	 	
2016–17 Awards	29	9
2016–17 Course Enrollments	685	



Associate
Program



Certificate
Program

Heavy Equipment Maintenance – 0947.20

Maintenance, repair, and overhaul of heavy equipment.

Central Valley/Mother Lode Region | coeccc.net | June 2018

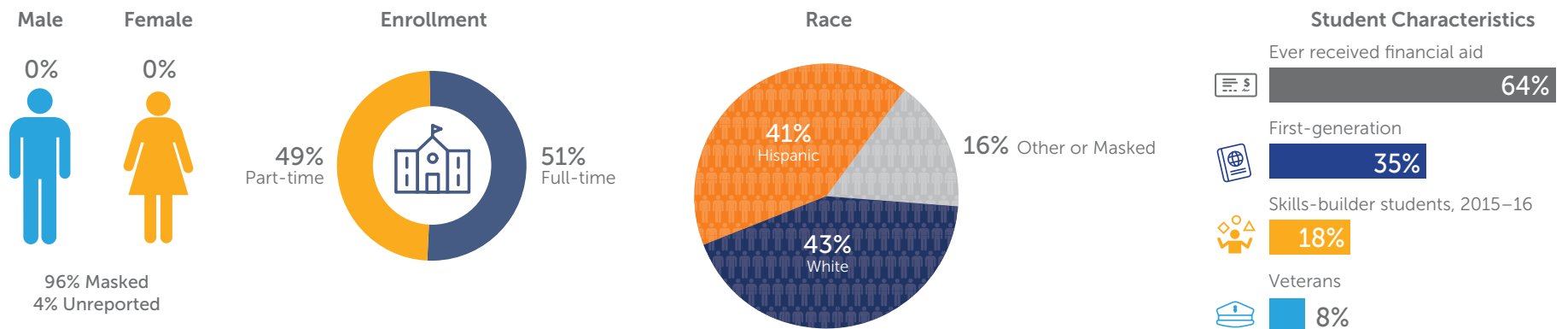
Sources: EMSI 2018.2, Burning Glass, LaunchBoard, MIS Data Mart, COE TOP-SOC Crosswalk

Occupation Data:

Occupation	3-Year 2017–20 Total Openings	Wage Range* (Entry, Median, Experienced Wage)		Typical Entry Level Education & Training Required	Sample of In-Demand Skills From Job Postings (2017)	% of Current Workers Age 45+
Mobile Heavy Equipment Mechanics, Except Engines	694	\$16.69	\$25.45 ▼ \$35.22	High school diploma or equivalent & more than 12 months training	Repair, Welding, Forklift Operation	26%
Farm Equipment Mechanics and Service Technicians	567	\$11.22	\$17.86 ▼ \$27.89	High school diploma or equivalent & more than 12 months training	Repair, Wiring, Customer Service	25%
Rail Car Repairers	75	\$16.56	\$29.14 ▼ \$38.82	High school diploma or equivalent & more than 12 months training	Repair, Hand Tools, Equipment Maintenance	~18%

*Entry hourly earnings is 10th percentile wage,
experienced hourly earnings is 90th percentile wage.

Student Demographics, 2016–17 (118 Total Students):



Central Valley/Mother Lode Region AUTOMOTIVE TECHNOLOGY

0948.00



Relevant Occupations:



Automotive Service
Technicians and Mechanics

976



Electrical and Electronics
Installers and Repairers,
Transportation Equipment

20

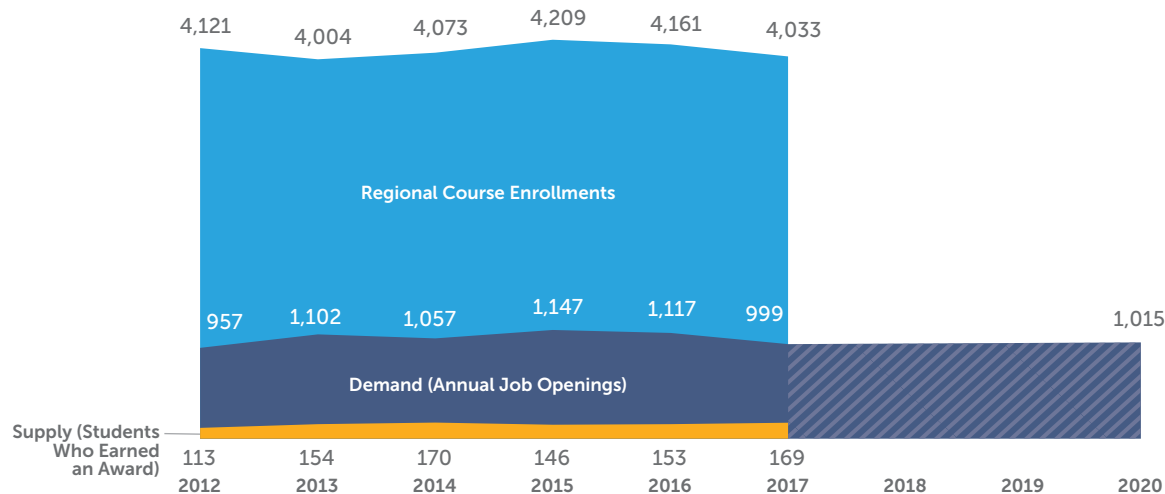


Electronic Equipment
Installers and Repairers,
Motor Vehicles

19

2017–20
Average Annual
Job Openings

Supply/Demand for Selected Occupations, 2012–20:



Strong Workforce Program Metrics, 2015–16:

Region	vs	California
72%	Employed in the 2nd Quarter After Exit	69%
67%	Job Closely Related to Field of Study (2014–15)	68%
\$5,370	Median Earnings in the 2nd Quarter After Exit	\$6,104
71%	Employed in the 4th Quarter After Exit	70%
\$19,161	Median Annual Earnings	\$22,687
93%	Median Change in Annual Earnings	66%
48%	Attained Living Wage	48%

Regional Colleges Offering Programs:

	Bakersfield	Columbia	Fresno City	Merced	Modesto Junior	Reedley	San Joaquin Delta	Sequoias	
Programs Offered									
2016–17 Awards	9 56*	2 45	9 1 11	7 17	4 34	6 38	8 34	3 27	Associate Program
2016–17 Course Enrollments	392	210	741	528	593	274	946	349	Certificate Program
2015–16 Transfers	<10	-	<10	<10	<10	<10	<10	<10	Noncredit award

*Discrepancy between LaunchBoard and Data Mart

Dash (-) indicates data are insufficient or have been suppressed.

Automotive Technology – 0948.00

The servicing, maintenance, and diagnosis of malfunctions, and repair and overhaul of components and systems in automotive vehicles.

Central Valley/Mother Lode Region | coeccc.net | June 2018

Sources: EMSI 2018.2, Burning Glass, LaunchBoard, MIS Data Mart, COE TOP-SOC Crosswalk

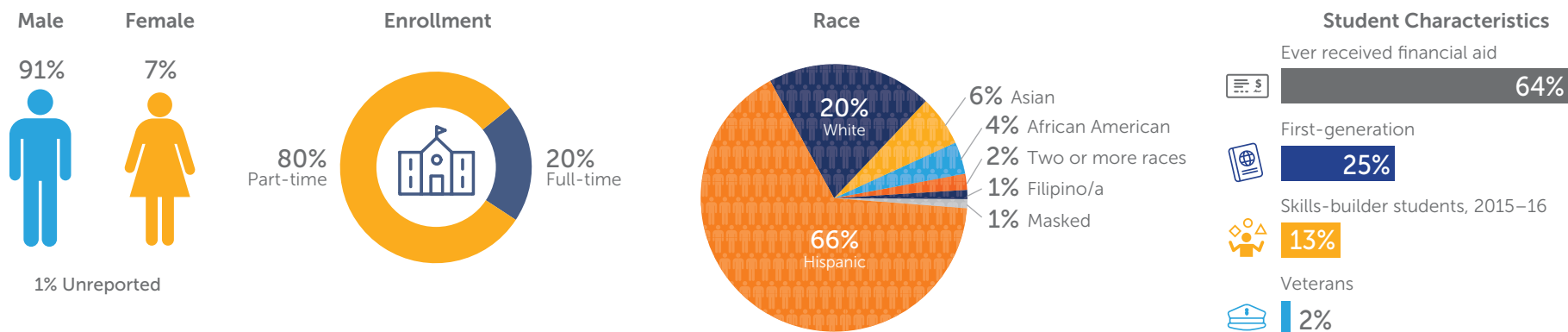
Occupation Data:

Occupation	3-Year 2017–20 Total Openings	Wage Range* (Entry, Median, Experienced Wage)		Typical Entry Level Education & Training Required	Sample of In-Demand Skills From Job Postings (2017)	% of Current Workers Age 55+
Automotive Service Technicians and Mechanics	2,928	\$10.63	\$16.13 ▼ \$28.12	Postsecondary nondegree award & less than 1 month training	Auto Repair, Customer Service, Vehicle Maintenance	17%
Electrical and Electronics Installers and Repairers, Transportation Equipment	59		\$21.31 \$30.96 ▼ \$44.89	Postsecondary nondegree award & more than 12 months training	Assembly and Fabrication of Wire Harnesses, Circuit Breakers, Soldering*	~15%
Electronic Equipment Installers and Repairers, Motor Vehicles	58	\$10.16	\$13.51 ▼ \$21.59	High school diploma or equivalent & 1 to 12 months training	Motherboards, Soldering, Scheduling, Sales	~13%

*Entry hourly earnings is 10th percentile wage, experienced hourly earnings is 90th percentile wage.

*Due to low regional demand, these skills are based on statewide job postings.

Student Demographics, 2016–17 (1,984 Total Students):































































































The Agriculture, Water and Environmental Technology initiative works to ensure the economic viability of California’s agriculture and natural resources industry, while maintaining our environmental integrity, especially in the area of water – our most precious resource. Modern agriculture and its associated sciences touch every aspect of American society – from health and safety to security and environmental sustainability.

































Strong Workforce Program Metrics, 2015–16 unless otherwise noted














Central Valley/ Mother Lode	Metric	CA Median
18,253	Course Enrollments (2016–17)	11,118
380	Students Who Got a Degree or Certificate (2016–17)	236
819	Students who Transferred	245
64%	Employed in the 2nd Quarter After Exit	64%
85%	Job Closely Related to Field of Study (2014–15)	73%
\$6,687	Median Earnings in the 2nd Quarter After Exit	\$7,693
64%	Employed in the 4th Quarter After Exit	64%
\$21,931	Median Annual Earnings	\$26,288
93%	Median Change in Annual Earnings	49%
50%	Attained Living Wage	56%

TOP Program	Colleges Offering	Catalog Name	Award Offered
0101.00 – Agriculture Technology and Sciences, General	Merced	General Agriculture	
		General Agriculture: Advanced	
	Modesto Junior	Agriculture Science	
	Porterville	Agriculture: Production	
	Reedley	Agriculture & Technology	
		General Agriculture	
	West Hills Coalinga	Agriculture Science Technology	
		Irrigation Engineering Technology	
		Precision Agriculture	
0102.00 – Animal Science	Bakersfield	Agriculture Animal Science	
		Animal Science	
	Merced	Animal Science	
		Agriculture Animal Sciences	
		Animal Science	
	Modesto Junior	Poultry Science	
		Agriculture Animal Science	
		Animal Husbandry	
		Animal Science	
0102.10 – Veterinary Technician (Licensed)	Reedley	Animal Science	
		Animal Science	
		Animal Science	
	Sequoias	Animal Science	
0102.20 – Artificial Inseminator (Licensed)	Modesto Junior	Large Animal Veterinary Technician	
		Veterinary Technician	
		Veterinary Technology	
	Sequoias	Veterinary Assistant	
0102.30 – Dairy Science	Modesto Junior	Dairy Science	

TOP Program	Colleges Offering	Catalog Name	Award Offered
0102.40 – Equine Science	Merced	Equine Science and Management	 
	Modesto Junior	Equine Science	
	Reedley	Equine	
	Sequoias	Equine Science	
0103.00 – Plant Science	Bakersfield	Agriculture Plant Science	
		Plant Science	 
	Merced	Agricultural Chemicals	
		Crop Science	 
	Modesto Junior	Agriculture Plant Science	
		Crop Science	
		Fruit Science	
	Reedley	Agriculture Plant Science	
		Irrigation, Fertility & Pest Management Technician	
		Pest Control Advisor	
		Plant and Soil Science	
		Plant Protection Intern	
		Production Agriculture Technician	
	San Joaquin Delta	Agriculture Business: Plant Science	
	Sequoias	Agriculture Plant Science	
		Plant Science	
0103.10 – Agricultural Pest Control Adviser and Operator (p.34)	West Hills Coalinga	Integrated Pest Management	
0104.00 – Viticulture, Enology, and Wine Business	Reedley	Enology	 


TOP Program	Colleges Offering	Catalog Name	Award Offered
0109.00 – Horticulture	Bakersfield	Environmental Horticulture	 
	Merced	Landscape Horticulture	 
	Modesto Junior	Environmental Horticultural Science	
		Landscape Design	
	Reedley	Environmental Horticulture	 
	Sequoias	Landscape Design	
		Ornamental Horticulture	 
0109.10 – Landscape Design and Maintenance	Modesto Junior	Landscape and Park Maintenance	
	San Joaquin Delta	Horticulture: Landscape Basics	
	Sequoias	Landscape Management	 
0109.20 – Floriculture / Floristry	Modesto Junior	Commercial Floristry Technician	
0109.30 – Nursery Technology	Modesto Junior	Nursery Production	
	San Joaquin Delta	Horticulture-Nursery Management	
0109.40 – Turfgrass Technology	San Joaquin Delta	Horticulture: Turf Grass	
0112.00 – Agriculture Business, Sales and Service	Bakersfield	Agriculture Business	
		Agriculture Business Management	
	Merced	Agriculture Business	 
	Modesto Junior	Agriculture Business	
		Agriculture: Sales, Service	
		Agriculture: Sales, Service Technician	
	Porterville	Agribusiness	
	Reedley	Agriculture Business	 
		Agriculture Business Management	
		Agriculture Business, Option A	
		Agriculture Business, Option B	
		Agriculture Education	
	San Joaquin Delta	Agriculture Business	
	Sequoias	Agricultural Business Management	 
		Agriculture Business	

TOP Program	Colleges Offering	Catalog Name	Award Offered
0113.00 – Food Processing and Related Technologies	Clovis	Food Safety and Quality Technician	
0114.00 – Forestry	Bakersfield	Forestry	 
	Columbia	Forestry	 
	Reedley	Forest Surveying Technology	
		Forestry	
		Forestry Technician Firefighting Emphasis	
		Forestry/Natural Resources	
0115.00 – Natural Resources (p.36)	Columbia	Natural Resources	 
		Water Resources Management	 
	Fresno City	Field Biologist	
	Reedley	Forestry and Natural Resources Training	
		Natural Resources	
0115.10 – Parks and Outdoor Recreation	Reedley	Recreation and Interpretation Techniques	
0116.00 – Agricultural Power Equipment Technology (p.38)	Merced	Compact Power Equipment	
		Diesel Equipment Technology	 
		Mechanized Agriculture Technology	 
	Modesto Junior	Advanced Heavy Equipment Technician	
		Basic Heavy Equipment Technician	
		Heavy Machinery Management	
		Irrigation Construction and Installation	
		Irrigation Design	
		Irrigation Management	
		Irrigation Technology	 
		Mechanized Agriculture	
		Mechanized Agriculture Technician	

TOP Program	Colleges Offering	Catalog Name	Award Offered
0116.00 – Agricultural Power Equipment Technology cont. (p.38)	Reedley	Agricultural Mechanics	 
		Equipment Technician Level I	
		Equipment Technician Level II	
		Mechanized Agriculture	 
		Medium/Heavy Duty Truck Service and Repair	
	San Joaquin Delta	Agriculture Mechanics	
0199.00 – Other Agriculture and Natural Resources	Sequoias	Agriculture Technology	 
	Modesto Junior	Agricultural Environmental Science	 
		Soil Science	




Relevant Occupations:



First-Line Supervisors of Farming, Fishing, and Forestry Workers

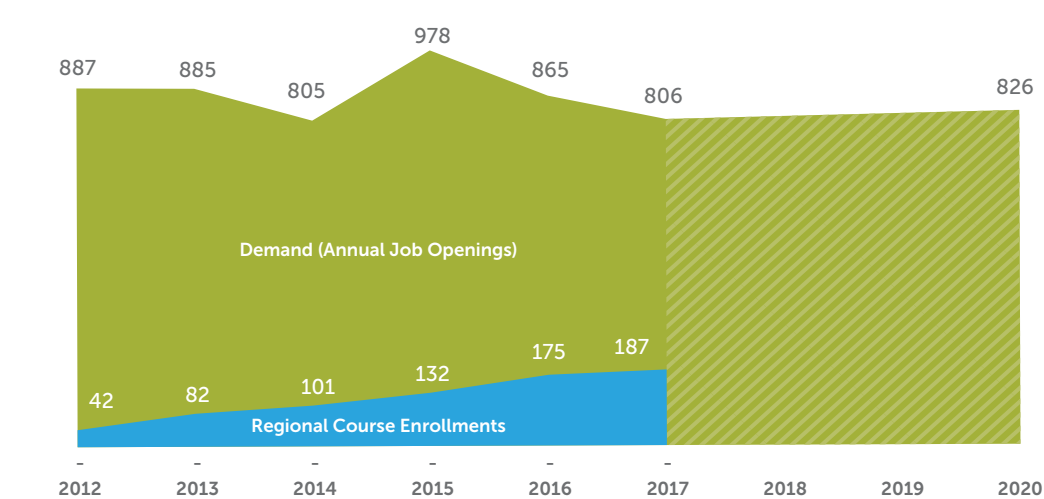
707



Pesticide Handlers, Sprayers, and Applicators, Vegetation

119





Supply/Demand for Selected Occupations, 2012–20:





Strong Workforce Program Metrics, 2015–16:

Region	vs	California
81%	Employed in the 2nd Quarter After Exit	81%
\$9,816	Median Earnings in the 2nd Quarter After Exit	\$8,092
88%	Employed in the 4th Quarter After Exit	81%
\$35,482	Median Annual Earnings	\$37,773
70%	Median Change in Annual Earnings	104%
81%	Attained Living Wage	84%

Regional Colleges Offering Programs:

	 Sequoias	 West Hills Coalinga
Programs Offered		
2016–17 Awards	3	-
2016–17 Course Enrollments	56	131

 Associate Program
 Certificate Program

*Inactive program. No longer in course catalog.

Dash (-) indicates data are insufficient or have been suppressed.

Agricultural Pest Control Advisor and Operator – 0103.10

Laws and regulations, principles and practices, and licensure requirements pertaining to pest control advisors and operators.

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Sources: EMSI 2018.2, Burning Glass, LaunchBoard, MIS Data Mart, COE TOP-SOC Crosswalk

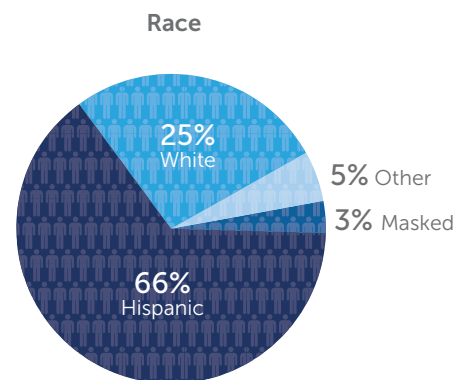
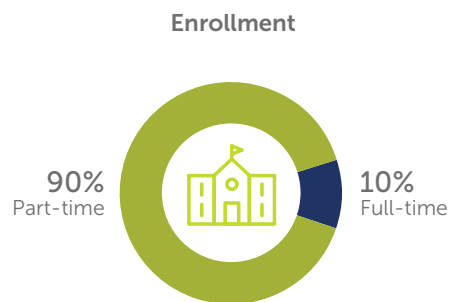
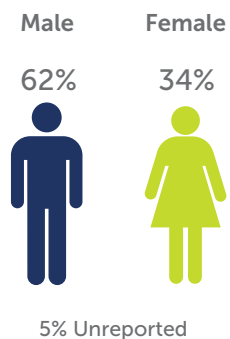
Occupation Data:

Occupation	3-Year 2017–20 Total Openings	Wage Range* (Entry, Median, Experienced Wage)		Typical Entry Level Education & Training Required	Sample of In-Demand Skills From Job Postings (2017)	% of Current Workers Age 55+
First-Line Supervisors of Farming, Fishing, and Forestry Workers	2,120	\$11.30	\$15.78 ▼ \$32.43	High school diploma or equivalent & none	Teamwork/Collaboration, Performance Management, Scheduling*	36%
Pesticide Handlers, Sprayers, and Applicators, Vegetation	357	\$10.71	\$15.72 ▼ \$27.25	High school diploma or equivalent & 1 to 12 months training	Herbicides, Fertilizers, Customer Service, Budgeting*	24%

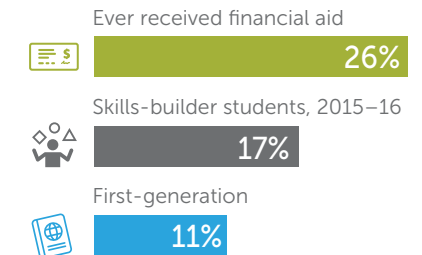
*Entry hourly earnings is 10th percentile wage,
experienced hourly earnings is 90th percentile wage.

*Due to low regional demand, these skills
are based on statewide job postings.

Student Demographics, 2016–17 (143 Total Students):



Student Characteristics





Relevant Occupations:



First-Line Supervisors of Farming,
Fishing, and Forestry Workers

707

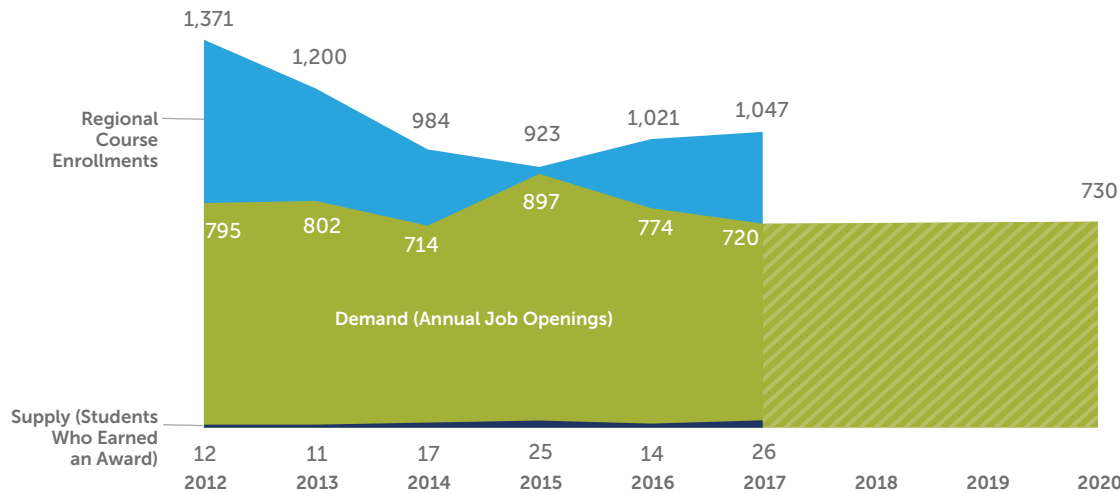
2017–20
Average Annual
Job Openings



Conservation Scientists

24


Supply/Demand for Selected Occupations, 2012–20:



Strong Workforce Program Metrics, 2015–16:

Region	vs	California
77%	Employed in the 2nd Quarter After Exit	67%
80%	Job Closely Related to Field of Study (2014–15)	65%
\$6,497	Median Earnings in the 2nd Quarter After Exit	\$7,005
72%	Employed in the 4th Quarter After Exit	72%
\$23,131	Median Annual Earnings	\$21,630
186%	Median Change in Annual Earnings	91%
57%	Attained Living Wage	47%

Regional Colleges Offering Programs:

	Columbia	Fresno City	Reedley
Programs Offered			
2016–17 Awards	16 11	-	- 3
2016–17 Course Enrollments	460	-	212
2015–16 Transfers	15	-	<10



Regional Colleges Offering Courses:

	Modesto Junior	150 40	2016–17 Enrollments 2015–16 Transfers
	San Joaquin Delta	225 17	2016–17 Enrollments 2015–16 Transfers

Dash (-) indicates data are insufficient or have been suppressed.

Natural Resources – 0115.00

Theories, principles, laws and regulations, and the application of skills to the use, management, and conservation of renewable natural resources, including wildlife and fisheries.

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Sources: EMSI 2018.2, Burning Glass, LaunchBoard, MIS Data Mart, COE TOP-SOC Crosswalk

Occupation Data:

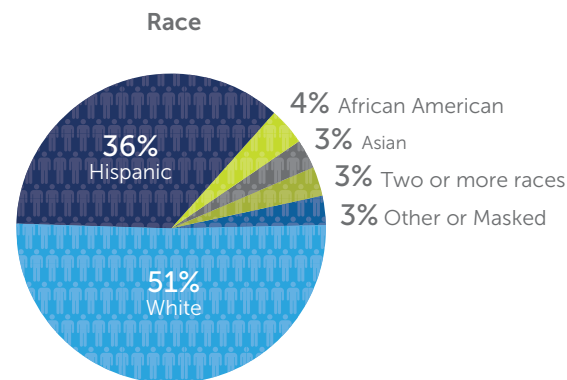
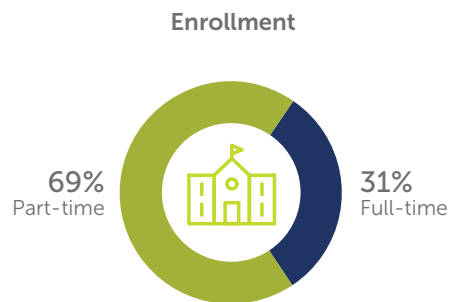
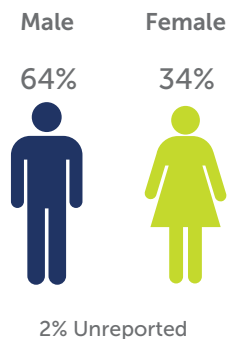
Occupation	3-Year 2017–20 Total Openings	Wage Range* (Entry, Median, Experienced Wage)		Typical Entry Level Education & Training Required	Sample of In-Demand Skills From Job Postings (2017)	% of Current Workers Age 55+
First-Line Supervisors of Farming, Fishing, and Forestry Workers	2,120	\$11.30	\$15.78 \$32.43	High school diploma or equivalent & none	Teamwork/Collaboration, Performance Management, Scheduling*	36%

Conservation Scientists	71	\$15.98	\$28.24 \$49.69	Bachelor's degree & none	Natural Resource Management, Environmental Education, Policy Implementation	26%
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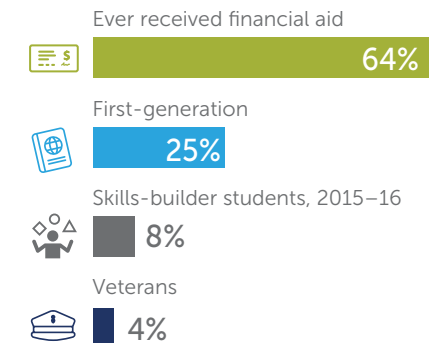
*Entry hourly earnings is 10th percentile wage,
experienced hourly earnings is 90th percentile wage.

*Due to low regional demand, these skills
are based on statewide job postings.

Student Demographics, 2016–17 (744 Total Students):



Student Characteristics





Relevant Occupations:



Mobile Heavy Equipment
Mechanics, Except Engines

231

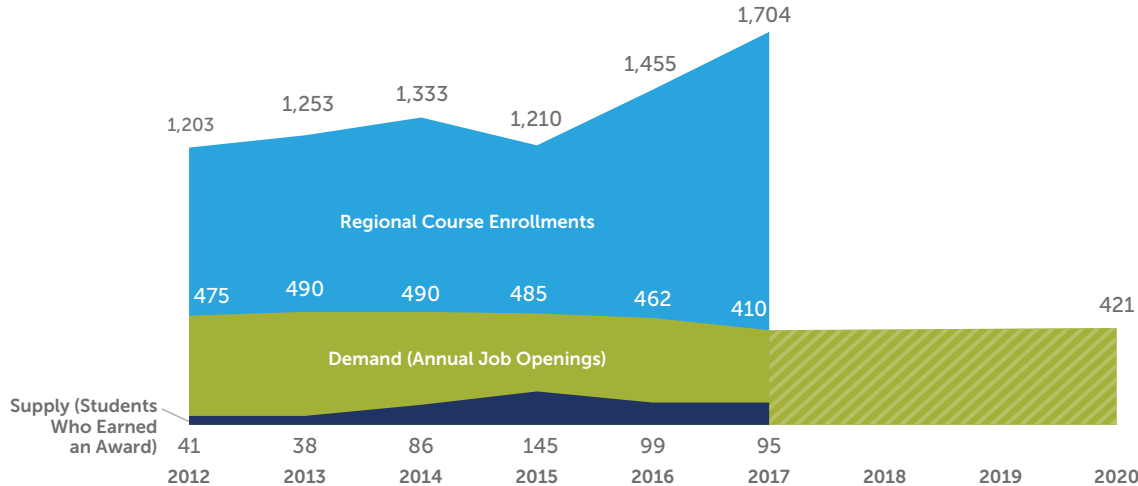


Farm Equipment Mechanics
and Service Technicians

189

2017–20
Average Annual
Job Openings















Supply/Demand for Selected Occupations, 2012–20:



Strong Workforce Program Metrics, 2015–16:

Region	vs	California
78%	Employed in the 2nd Quarter After Exit	62%
88%	Job Closely Related to Field of Study (2014–15)	69%
\$8,647	Median Earnings in the 2nd Quarter After Exit	\$7,423
76%	Employed in the 4th Quarter After Exit	61%
\$33,277	Median Annual Earnings	\$24,201
71%	Median Change in Annual Earnings	153%
73%	Attained Living Wage	52%

Regional Colleges Offering Programs:

	 Merced	 Modesto Junior	 Reedley	 San Joaquin Delta	 Sequoias
Programs Offered	 	 	 		 
2016–17 Awards	8 43	4 20	4 77	4	1 -
2016–17 Course Enrollments	402	456	718	59	37
2015–16 Transfers	13	32	<10	-	-

Regional Colleges Offering Courses:

 Bakersfield	32	2016–17 Enrollments
	<10	2015–16 Transfers

 Associate Program

 Certificate Program

Dash (-) indicates data are insufficient or have been suppressed.

Agricultural Power Equipment Technology – 0116.00

Theory and technical skills that apply to the selection, operation, servicing, maintenance, and repair of a variety of agricultural and forestry machinery and equipment.

Central Valley/Mother Lode Region | coeccc.net | June 2018

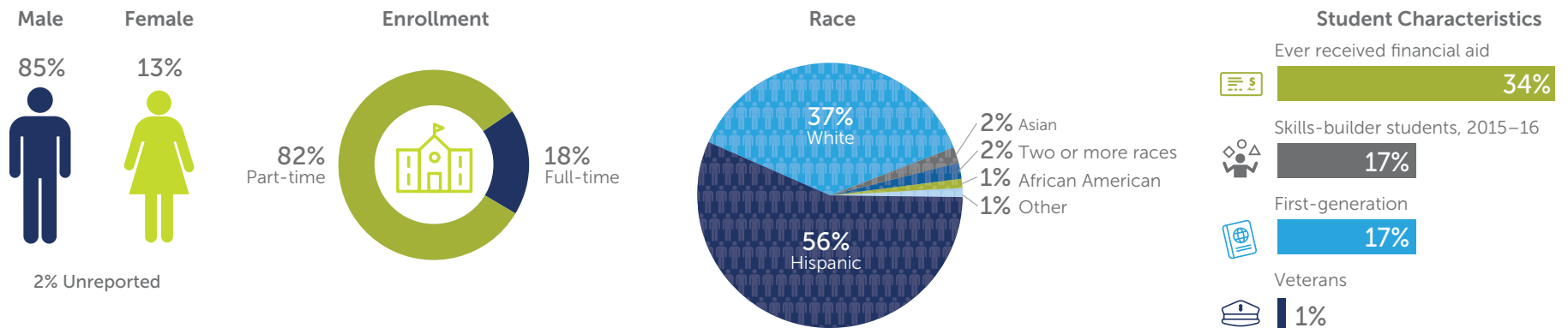
Sources: EMSI 2018.2, Burning Glass, LaunchBoard, MIS Data Mart, COE TOP-SOC Crosswalk

Occupation Data:

Occupation	3-Year 2017–20 Total Openings	Wage Range* (Entry, Median, Experienced Wage)	Typical Entry Level Education & Training Required	Sample of In-Demand Skills From Job Postings (2017)	% of Current Workers Age 55+
Mobile Heavy Equipment Mechanics, Except Engines	694	\$16.69 \$25.45 \$35.22	High school diploma or equivalent & more than 12 months training	Repair, Welding, Forklift Operation, Schematic Diagrams	26%
Farm Equipment Mechanics and Service Technicians	567	\$11.22 \$17.86 \$27.89	High school diploma or equivalent & more than 12 months training	Repair, Forklift Operation, Invoicing, Wiring	25%

*Entry hourly earnings is 10th percentile wage, experienced hourly earnings is 90th percentile wage.

Student Demographics, 2016–17 (1,142 Total Students):

































































































To help nurture the California entrepreneurial spirit and deliver a job-ready workforce to small businesses, the Business and Entrepreneurship Sector Navigator and Deputy Sector Navigators work with experts from industry and education to develop contextualized training for incumbent workers and specialized entrepreneurship and small business curriculum that can be infused into existing California Community Colleges programs.



























Strong Workforce Program Metrics, 2015–16 unless otherwise noted

Central Valley/ Mother Lode	Metric	CA Median
34,450	Course Enrollments (2016–17)	43,882
1,505	Students Who Got a Degree or Certificate (2016–17)	2,041
2,357	Students who Transferred	2,439
72%	Employed in the 2nd Quarter After Exit	66%
81%	Job Closely Related to Field of Study (2014–15)	73%
\$6,932	Median Earnings in the 2nd Quarter After Exit	\$7,866
71%	Employed in the 4th Quarter After Exit	64%
\$22,717	Median Annual Earnings	\$29,230
45%	Median Change in Annual Earnings	39%
63%	Attained Living Wage	59%

TOP Program	Colleges Offering	Catalog Name	Award Offered
0501.00 – Business and Commerce, General (p.64)	Cerro Coso	Business Administration	
	Clovis	Business Intern	
	Columbia	Business Management	
	Merced	General Business	 
	Porterville	Business	
	Reedley	Business Intern	
		General Business	
	San Joaquin Delta	Basic Business	 
	Sequoias	Business	 
0502.00 – Accounting (p.46)	Bakersfield	Accounting	
		Bookkeeping	
	Columbia	Account Clerk	
		Business Administration: Accounting	 
		Payroll Clerk	
	Fresno City	Accounting	 
		Computerized Accounting	
		Full Charge Bookkeeper	
	Merced	Accounting	 
	Modesto Junior	Accounting	 
		Accounting Clerk	
		Bookkeeping	 
	Porterville	Accounting	
	Reedley	Accounting	 
	San Joaquin Delta	Accounting	
		Bookkeeping	
	Sequoias	Accounting	 
	Taft	Accounting	 






TOP Program	Colleges Offering	Catalog Name	Award Offered
0502.00 – Accounting cont. (p.46)	West Hills Coalinga	Business: Bookkeeping	 
	West Hills Lemoore	Business: Bookkeeping	 
0502.10 – Tax Studies	Columbia	Tax Clerk	
0504.00 – Banking and Finance	Sequoias	Business Financial Recordkeeping	
0505.00 – Business Administration (p.48)	Bakersfield	Business Administration	
	Cerro Coso	Business	 
	Clovis	Business Administration	
		Business Administration Marketing	
		Business Administration, Entrepreneur	
		Business Administration: Accounting	
		Business Administration: General Business	
		Business Administration: Information Systems Management	
		Business Administration: Management	
	Columbia	Business Administration	
		Business Administration: Professional	
	Fresno City	Business Administration	
	Merced	Business Administration	
	Modesto Junior	Business Administration	
	Porterville	Business Administration	
		Human Resource Management	
	Reedley	Business Administration	
		Business Administration, Entrepreneur	
		Business Administration: Accounting	
		Business Administration: General Business	
		Business Administration: Management	
		Business Administration: Marketing	
		Business Administration-Information Systems Management	

TOP Program	Colleges Offering	Catalog Name	Award Offered
0505.00 – Business Administration cont. (p.48)	San Joaquin Delta	Business Administration	
	Sequoias	Business Administration	
	Taft	Business Administration	
	West Hills Coalinga	Business Administration	
	West Hills Lemoore	Business Administration	
0506.00 – Business Management (p.66)	Cerro Coso	Management	 
	Clovis	Management	
		Managerial Assistant	
	Columbia	Business Administration: Management	
		Small Business Management	
	Fresno City	Business Management	 
	Modesto Junior	Business Operations: Management	
	Porterville	Business Management-Accounting	
		Business Management-Entrepreneurship	
		Business Management-Human Resources	
		Business Management-Logistics	
	Reedley	Management	
		Managerial Assistant	
	West Hills Coalinga	Business: Business Management	 
	West Hills Lemoore	Business Information Worker	
		Business: Business Management	 
0506.30 – Management Development and Supervision (p.116)	Merced	Management/Supervisory Training	 
	Modesto Junior	Supervisory Management	 
	San Joaquin Delta	Supervision & Management	
	Taft	Management	 

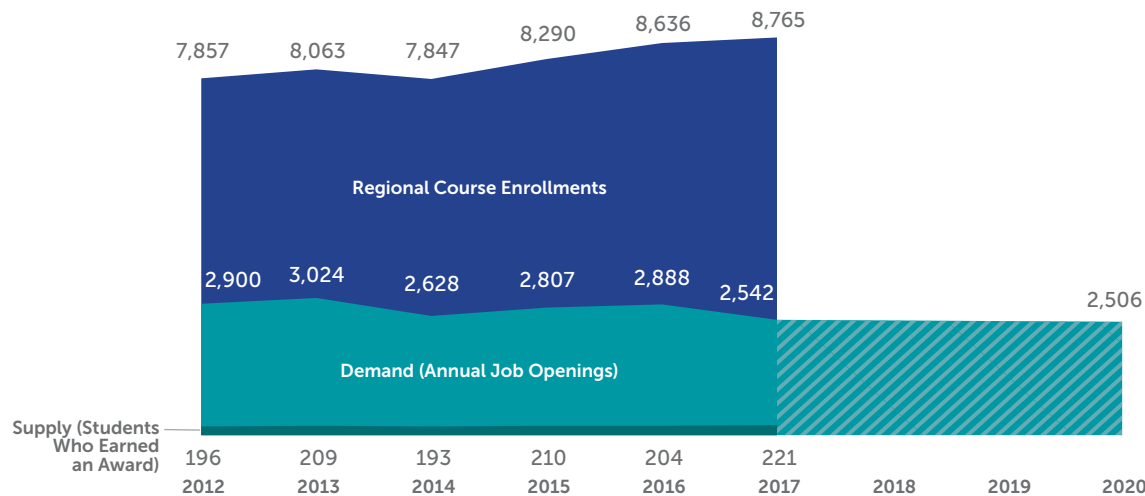
TOP Program	Colleges Offering	Catalog Name	Award Offered
0506.40 – Small Business and Entrepreneurship (p.50)	Clovis	Small Business Management	 
	Columbia	Entrepreneurship	
		Entrepreneurship	
		Organizational Behavior	
	Merced	Small Business Entrepreneurship	 
	Porterville	Entrepreneurship	
	Reedley	Small Business Management	 
	San Joaquin Delta	Entrepreneurship	
		Small Business	
0509.00 – Marketing and Distribution (p.68)	Fresno City	Marketing	 
	Merced	Marketing	 
	Modesto Junior	Marketing	
	San Joaquin Delta	Merchandising	
0511.00 – Real Estate	Modesto Junior	Real Estate	
		Real Estate Broker	
	San Joaquin Delta	Real Estate	 
0514.10 – Legal Office Technology	Fresno City	Business & Technology: Legal Office Professional	 
0599.00 – Other Business and Management	San Joaquin Delta	Municipal Clerk	
3007.00 – Cosmetology and Barbering	Sequoias	Cosmetology	



Relevant Occupations:

2017–20 Average Annual Job Openings					
	Bookkeeping, Accounting, and Auditing Clerks	Payroll and Timekeeping Clerks	Tax Examiners and Collectors, and Revenue Agents	Tax Preparers	Brokerage Clerks
	1,950	298	126	111	22

Supply/Demand for Selected Occupations, 2012–20:





























Strong Workforce Program Metrics, 2015–16:

Region	vs	California
71%	Employed in the 2nd Quarter After Exit	71%
70%	Job Closely Related to Field of Study (2014–15)	73%
\$7,118	Median Earnings in the 2nd Quarter After Exit	\$8,257
71%	Employed in the 4th Quarter After Exit	71%
\$25,054	Median Annual Earnings	\$32,472
46%	Median Change in Annual Earnings	52%
61%	Attained Living Wage	61%

Regional Colleges Offering Programs:

Regional Colleges Offering Courses:

													
Programs Offered													
2016–17 Awards	20 19*	- 3	10 15	17 3	21 6	2*	6 2	71 15	15 3	3 2	- 1	6 5	2016–17 Enrollments 365
2016–17 Course Enrollments	946	-	1,882	722	1,297	128	454	1,847	734	27	35	328	2015–16 Transfers 67
2015–16 Transfers	142	-	318	114	182	26	72	193	120	<10	<10	40	



Associate Program



Certificate Program

*Discrepancy between LaunchBoard and Data Mart

Dash (-) indicates data are insufficient or have been suppressed.

Accounting – 0502.00

Procedures to systematize information about transactions and activities into accounts and quantitative reports to verify accuracy of data by applying accounting, internal reporting, and decision making principles. Includes accounting and financial reporting that assists in making internal management decisions.

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Sources: EMSI 2018.2, Burning Glass, LaunchBoard, MIS Data Mart, COE TOP-SOC Crosswalk

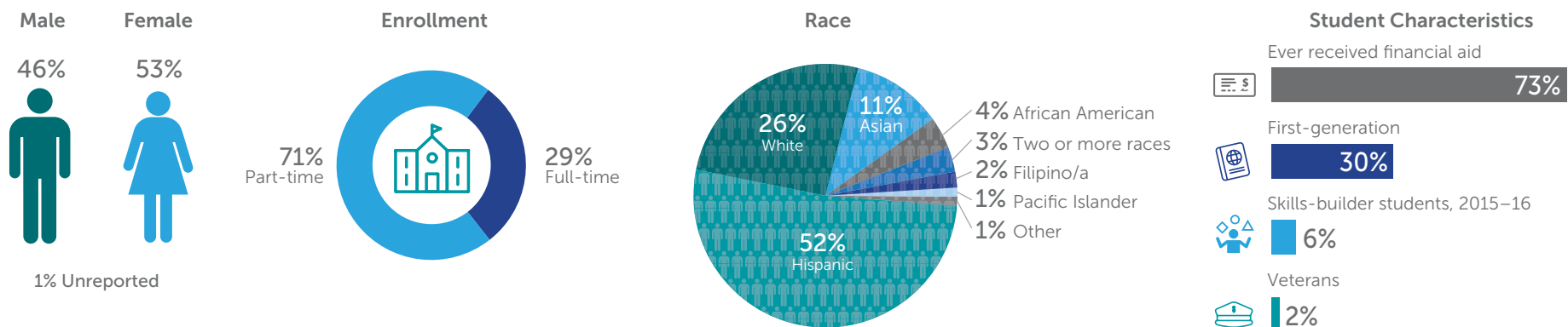
Occupation Data:

Occupation	3-Year 2017–20 Total Openings	Wage Range* (Entry, Median, Experienced Wage)	Typical Entry Level Education & Training Required	Sample of In-Demand Skills From Job Postings (2017)	% of Current Workers Age 55+
Bookkeeping, Accounting, and Auditing Clerks	5,851	\$12.09 \$18.66 \$27.65	Some college, no degree & 1 to 12 months training	Accounts Payable/Accounts Receivable, Data Entry, QuickBooks	38%
Payroll and Timekeeping Clerks	893	\$12.67 \$19.69 \$27.82	High school diploma or equivalent & 1 to 12 months training	Accounting, Data Entry, Calculations	30%
Tax Examiners and Collectors, and Revenue Agents	377	\$14.34 \$22.49 \$39.09	Bachelor's degree & 1 to 12 months training	Account Adjustment, Tax Law, Performance Appraisals	33%
Tax Preparers	332	\$11.09 \$20.53 \$30.48	High school diploma or equivalent & 1 to 12 months training	Tax Software, Customer Service, Audit Planning, Tax Law	53%
Brokerage Clerks	66	\$14.62 \$23.83 \$35.71	High school diploma or equivalent & 1 to 12 months training	Customer Service, Information Security, Real Estate Experience**	24%

*Entry hourly earnings is 10th percentile wage,
experienced hourly earnings is 90th percentile wage.

**Due to low regional demand, these skills are based on statewide job postings.

Student Demographics, 2016–17 (6,501 Total Students):





Relevant Occupations:



General and Operations
Managers

1,919



Cost Estimators

256



Administrative Services
Managers

254

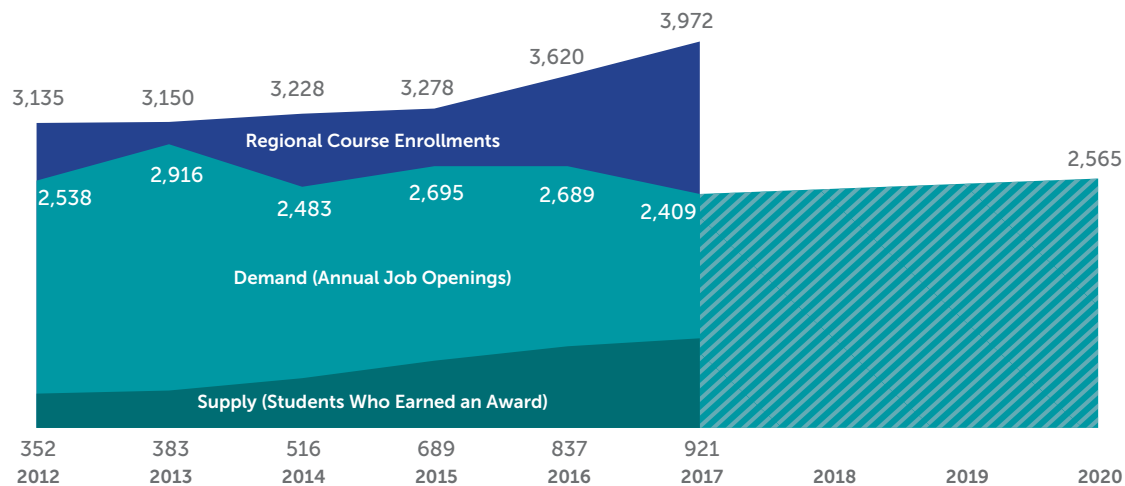


Industrial Production
Managers

136

2017–20
Average Annual
Job Openings

Supply/Demand for Selected Occupations, 2012–20:



Strong Workforce Program Metrics, 2015–16:

Region	vs	California
70%	Employed in the 2nd Quarter After Exit	66%
83%	Job Closely Related to Field of Study (2014–15)	80%
\$6,176	Median Earnings in the 2nd Quarter After Exit	\$7,104
66%	Employed in the 4th Quarter After Exit	66%
\$23,883	Median Annual Earnings	\$25,503
40%	Median Change in Annual Earnings	40%
50%	Attained Living Wage	44%

Regional Colleges Offering Programs:

	Bakersfield	Cerro Coso	Clovis	Columbia	Fresno City	Merced	Modesto Junior	Porterville	Reedley	San Joaquin Delta	Sequoias	Taft	West Hills Coalinga	West Hills Lemoore
Programs Offered														
2016–17 Awards	110	4 2*	69	6	197	94	119	36 -	90	42	69	26	19	53
2016–17 Course Enrollments	47	245	-	98	1,745	16	-	145	24	1,277	-	375	-	-
2015–16 Transfers	-	39	-	15	232	-	-	23	-	136	-	35	-	-



Associate Program



Certificate Program

*Discrepancy between LaunchBoard and Data Mart Dash (-) indicates data are insufficient or have been suppressed.

Business Administration – 0505.00

Programs designed to give a broad, balanced introduction to professional careers in business, usually including business law, economics, mathematics, managerial accounting and computer systems. Includes transfer programs.

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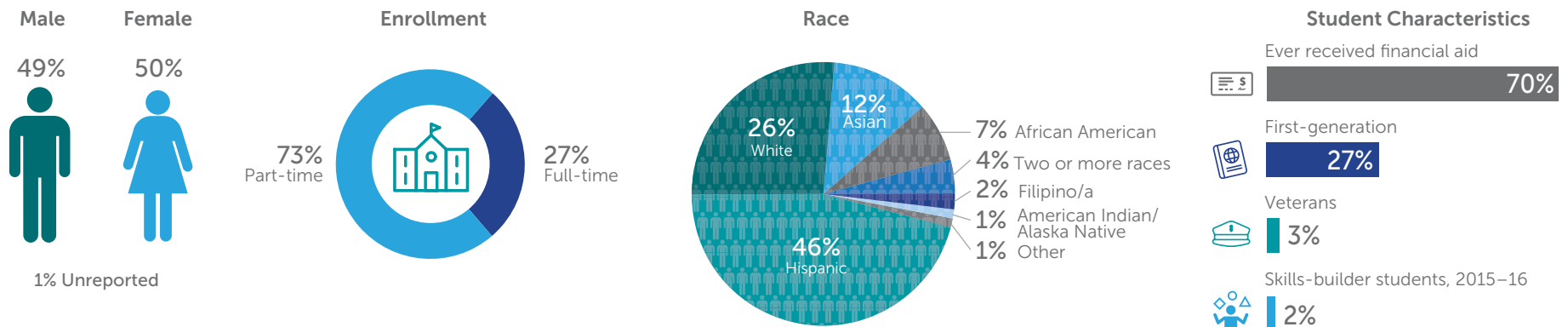
Sources: EMSI 2018.2, Burning Glass, LaunchBoard, MIS Data Mart, COE TOP-SOC Crosswalk

Occupation Data:

Occupation	3-Year 2017–20 Total Openings	Wage Range* (Entry, Median, Experienced Wage)		Typical Entry Level Education & Training Required	Sample of In-Demand Skills From Job Postings (2017)	% of Current Workers Age 55+
General and Operations Managers	5,756	\$21.22	\$42.43 ▼ \$89.82	Bachelor's degree & none	Budgeting, Scheduling, Teamwork/Collaboration	24%
Cost Estimators	767	\$17.03	\$29.77 ▼ \$49.11	Bachelor's degree & 1 to 12 months training	Scheduling, Project Management, Purchasing	36%
Administrative Services Managers	763	\$23.47	\$39.72 ▼ \$64.08	Bachelor's degree & none	Budgeting, Scheduling, Project Management, Teamwork/Collaboration	33%
Industrial Production Managers	408	\$26.26	\$42.08 ▼ \$72.82	Bachelor's degree & none	Quality Assurance and Control, Hazard Analysis Critical Control Point (HACCP), Food Safety	26%

*Entry hourly earnings is 10th percentile wage, experienced hourly earnings is 90th percentile wage.

Student Demographics, 2016–17 (3,430 Total Students):





Relevant Occupations:



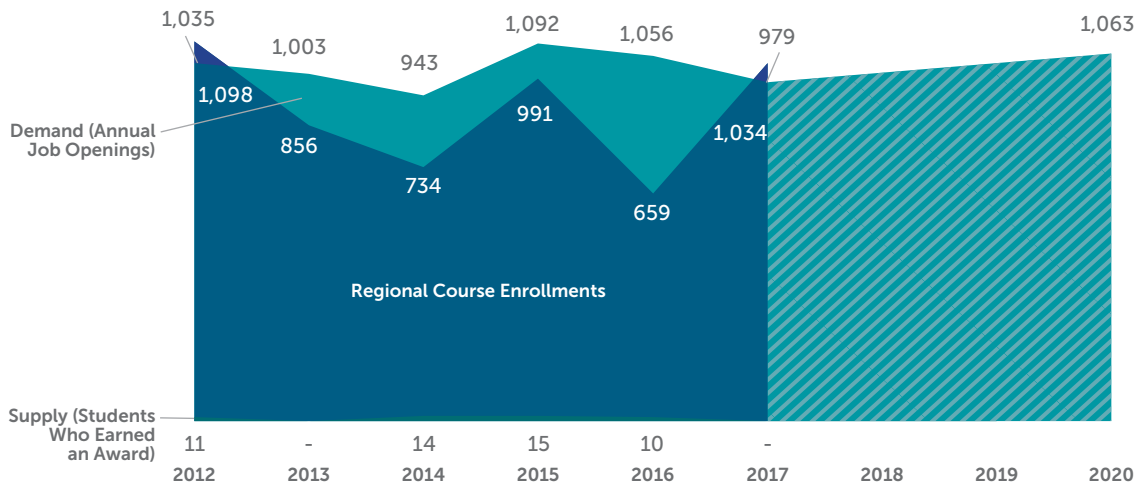
Business Operations
Specialists, All Other
809



Administrative Services
Managers
254

2017–20
Average Annual
Job Openings

Supply/Demand for Selected Occupations, 2012–20:



Strong Workforce Program Metrics, 2015–16:

Region	vs	California
55%	Employed in the 2nd Quarter After Exit	61%
-	Job Closely Related to Field of Study (2014–15)	78%
\$4,529	Median Earnings in the 2nd Quarter After Exit	\$6,651
53%	Employed in the 4th Quarter After Exit	58%
\$17,983	Median Annual Earnings	\$22,676
104%	Median Change in Annual Earnings	51%
45%	Attained Living Wage	48%

Regional Colleges Offering Programs:

	Clovis	Columbia	Merced	Porterville	Reedley	San Joaquin Delta
Programs Offered						
2016–17 Awards	- 1	- -	2 1	-	1 1	-
2016–17 Course Enrollments	26	88	20	88	32	417
2015–16 Transfers	<10	<10	-	<10	<10	15

Regional Colleges Offering Courses:

	Cerro Coso	36 <10	2016–17 Enrollments 2015–16 Transfers
	Fresno City	238 11	2016–17 Enrollments 2015–16 Transfers
	Sequoias	47 13	2016–17 Enrollments 2015–16 Transfers
	West Hills Lemoore	42 <10	2016–17 Enrollments 2015–16 Transfers

Small Business and Entrepreneurship – 0506.40

Principles, practices, and strategies of small business wholesale, retail, or service operations for owners/managers, and marketing principles and methods applicable to developing businesses.

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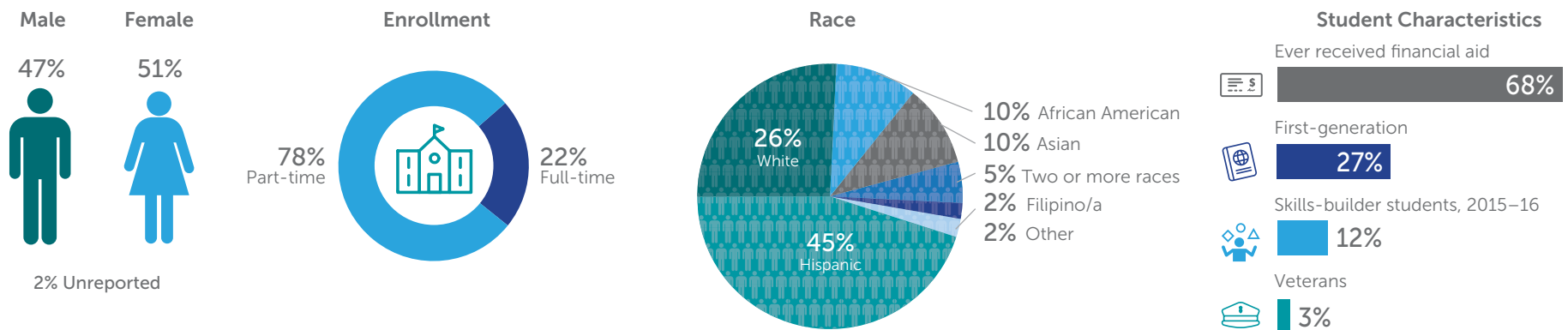
Sources: EMSI 2018.2, Burning Glass, LaunchBoard, MIS Data Mart, COE TOP-SOC Crosswalk

Occupation Data:

Occupation	3-Year 2017–20 Total Openings	Wage Range* (Entry, Median, Experienced Wage)		Typical Entry Level Education & Training Required	Sample of In-Demand Skills From Job Postings (2017)	% of Current Workers Age 55+
Business Operations Specialists, All Other	2,426	\$17.12	\$32.38 ▼ \$53.30	Bachelor's degree & none	E-Commerce, Budgeting, Customer Service	26%
Administrative Services Managers	763	\$23.47	\$39.72 ▼ \$64.08	Bachelor's degree & none	Budgeting, Scheduling, Project Management, Teamwork/Collaboration	33%

*Entry hourly earnings is 10th percentile wage,
experienced hourly earnings is 90th percentile wage.

Student Demographics, 2016–17 (871 Total Students):








































































The Energy, Construction and Utilities Sector is a collection of three industry clusters engaged in deploying and managing technologies related to the generation, distribution, storage and efficient use of energy in line with the state's legislation, which is requiring more alternative energy sources.

Strong Workforce Program Metrics, 2015–16 unless otherwise noted

Central Valley/ Mother Lode	Metric	CA Median
5,553	Course Enrollments (2016–17)	15,753
202	Students Who Got a Degree or Certificate (2016–17)	278
107	Students who Transferred	215
72%	Employed in the 2nd Quarter After Exit	72%
79%	Job Closely Related to Field of Study (2014–15)	81%
\$8,826	Median Earnings in the 2nd Quarter After Exit	\$10,496
73%	Employed in the 4th Quarter After Exit	71%
\$33,981	Median Annual Earnings	\$38,572
48%	Median Change in Annual Earnings	41%
64%	Attained Living Wage	68%

TOP Program	Colleges Offering	Catalog Name	Award Offered
0201.00 – Architecture and Architectural Technology	Bakersfield	Architecture/Architectural Drafting	
	Fresno City	Architecture	 
	San Joaquin Delta	Architectural Drafting	
	Sequoias	Architectural Design	
		Architectural Visual Communication	
		Architecture	 
0934.40 – Electrical Systems and Power Transmission	San Joaquin Delta	Solar Photovoltaic Installation Technician	
0935.00 – Electro-Mechanical Technology	Bakersfield	Industrial Automation	
	San Joaquin Delta	Automation Technician – Mechatronics	
		Automation Technology – Mechatronics	
0946.00 – Environmental Control Technology (HVAC) (p.56)	Fresno City	Air Conditioning	 
		Air Conditioning Technology Overview	
		Commercial Air Conditioning, Heating, and Duct Systems	
		Digital Air Conditioning Controls	
		Mechanical and Electrical Systems	
	Merced	Commercial Refrigeration Technician	 
		HVAC Technician	 
	San Joaquin Delta	Heating & Air Conditioning: Refrigeration	 
	Sequoias	Environmental Control Technology (HVAC)	 
0952.00 – Construction Crafts Technology	Bakersfield	Construction Technology	
		Industrial Technology: Construction	
	Fresno City	Construction	 
	Sequoias	Construction Technology	 
0952.10 – Carpentry	Bakersfield	Carpentry Apprenticeship	 

TOP Program	Colleges Offering	Catalog Name	Award Offered
0952.20 – Electrical (p.58)	Bakersfield	Electrician Apprenticeship	 
	Merced	Industrial Electrical Technician	 
	Modesto Junior	Electrician	
	San Joaquin Delta	Electrical Technology	
		Electrical Technology – General Electrician Trainee	
	Sequoias	NCCER Electrical Applications	
		NCCER Electrical Theory	
0952.30 – Plumbing, Pipefitting and Steamfitting	Bakersfield	Plumbers & Steamfitters Apprenticeship	 
0952.50 – Mill and Cabinet Work	Bakersfield	Industrial Technology: Woodworking & Cabinetmaking	 
0953.00 – Drafting Technology	Bakersfield	Industrial Drawing	
		Industrial Technology: Industrial Drawing	
	Fresno City	Computer Aided Drafting and Design	 
	Merced	CAD Drafting – Architectural Design	
		CAD Draftsman – Architectural	
	San Joaquin Delta	Engineering Computer-Aided Drafting	
		Engineering: Computer-Aided Drafter	
	Sequoias	Drafting Technology	
		Mechanical Drafting	
0953.10 – Architectural Drafting	Merced	CAD Drafting – Architectural Design	
	Sequoias	Architectural Drafting	
0956.40 – Sheet Metal and Structural Metal (p.60)	Bakersfield	Sheetmetal Apprenticeship	 
0957.00 – Civil and Construction Management Technology	Bakersfield	Construction Management	
	Fresno City	Industrial Technology: Construction	
0957.20 – Construction Inspection	Sequoias	Construction Inspection	 
0958.00 – Water and Wastewater Technology	Clovis	Drinking Water Treatment and Distribution	
		Wastewater Treatment	

ENERGY, CONSTRUCTION & UTILITIES

Central Valley/Mother Lode Region

ENVIRONMENTAL CONTROL TECHNOLOGY (HVAC) 0946.00



Relevant Occupations:



Heating, Air Conditioning, and
Refrigeration Mechanics and Installers

441

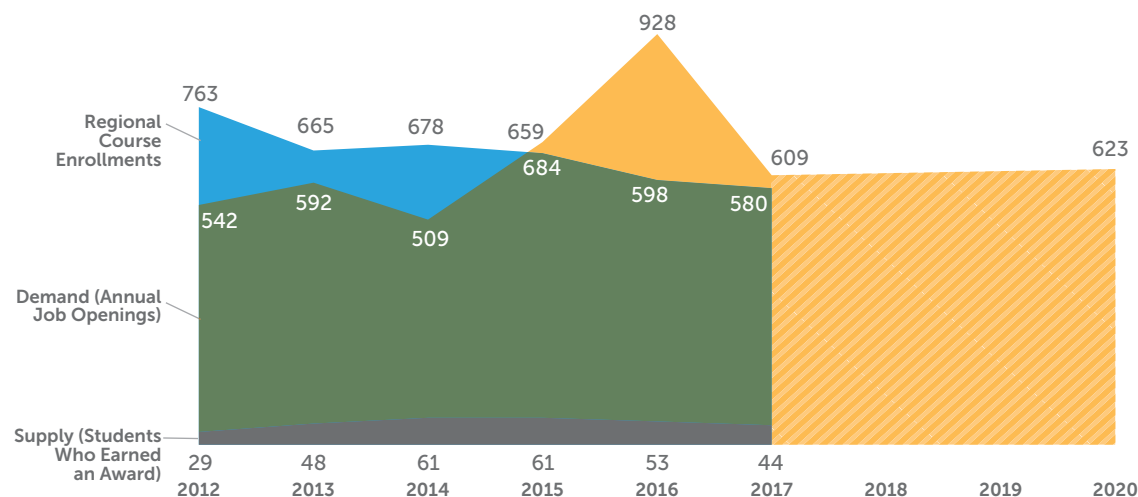


Sheet Metal Workers

181

2017–20
Average Annual
Job Openings













Supply/Demand for Selected Occupations, 2012–20:



Strong Workforce Program Metrics, 2015–16:

Region	vs	California
75%	Employed in the 2nd Quarter After Exit	75%
57%	Job Closely Related to Field of Study (2014–15)	75%
\$8,134	Median Earnings in the 2nd Quarter After Exit	\$10,252
72%	Employed in the 4th Quarter After Exit	75%
\$31,998	Median Annual Earnings	\$41,088
82%	Median Change in Annual Earnings	46%
74%	Attained Living Wage	70%

Regional Colleges Offering Programs:

	 Fresno City	 Merced	 San Joaquin Delta	 Sequoias
Programs Offered	 	 	 	 
2016–17 Awards	2 21	- 6	2 17	2 10
2016–17 Course Enrollments	185	61	179	155

 Associate Program
 Certificate Program

Dash (-) indicates data are insufficient or have been suppressed.

Environmental Control Technology (HVAC) – 0946.00

Assembly, installation, operation, maintenance, and repair of air conditioning, heating, and refrigeration systems.

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Sources: EMSI 2018.2, Burning Glass, LaunchBoard, MIS Data Mart, COE TOP-SOC Crosswalk

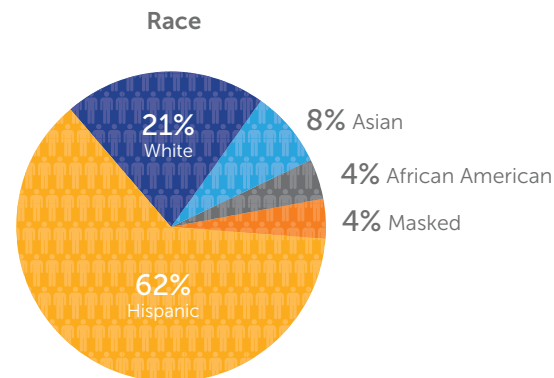
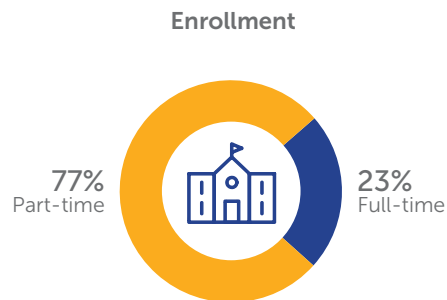
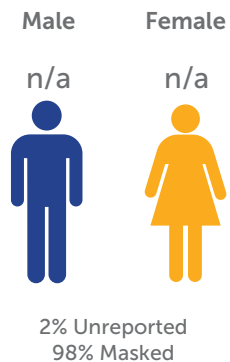
Occupation Data:

Occupation	3-Year 2017–20 Total Openings	Wage Range* (Entry, Median, Experienced Wage)	Typical Entry Level Education & Training Required	Sample of In-Demand Skills From Job Postings (2017)	% of Current Workers Age 55+
Heating, Air Conditioning, and Refrigeration Mechanics and Installers	1,324	\$13.35 \$20.02 \$31.84	Postsecondary nondegree award & more than 12 months training	Ventilation, Boilers, Plumbing, Customer Service, Welding	17%

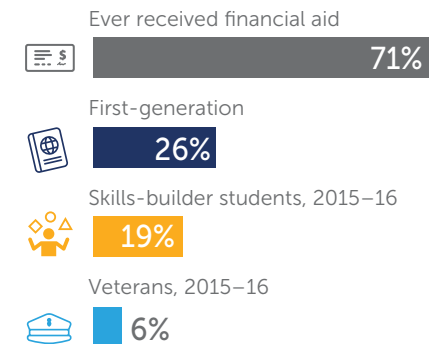
Sheet Metal Workers	544	\$14.46 \$21.62 \$36.47	High school diploma or equivalent & apprenticeship	Hand Tools, Welding, Grinders	18%
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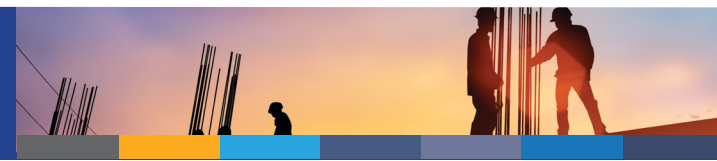
*Entry hourly earnings is 10th percentile wage, experienced hourly earnings is 90th percentile wage.

Student Demographics, 2016–17 (259 Total Students):



Student Characteristics





Relevant Occupations:



Electricians

2017–20
Average Annual
Job Openings

693



First-Line Supervisors
of Construction Trades
and Extraction Workers

608



First-Line Supervisors
of Mechanics, Installers,
and Repairers

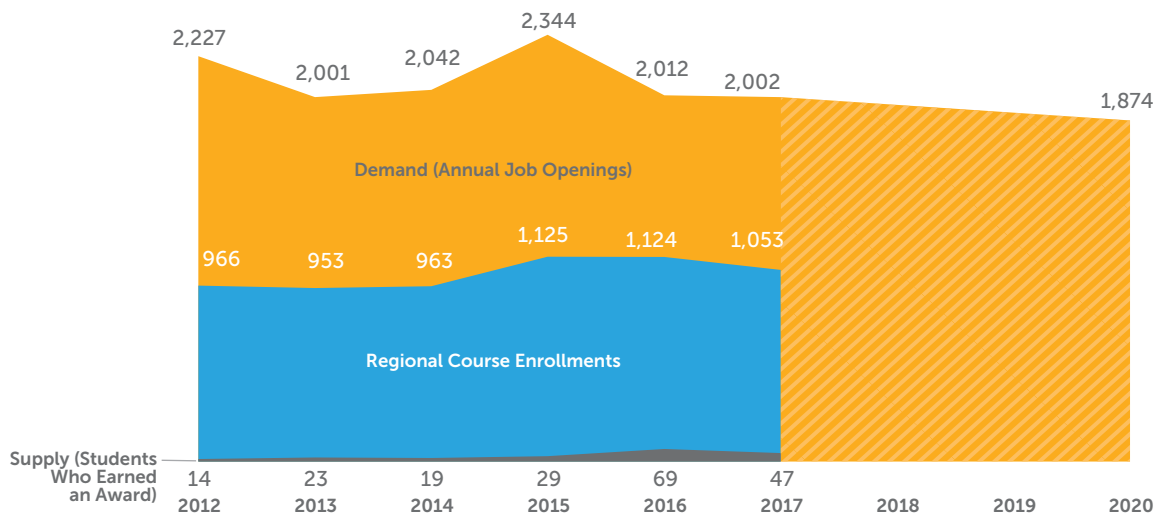
476



Electrical Power-Line
Installers and Repairers

97

Supply/Demand for Selected Occupations, 2012–20:



Strong Workforce Program Metrics, 2015–16:

Region	vs	California
80%	Employed in the 2nd Quarter After Exit	80%
100%	Job Closely Related to Field of Study (2014–15)	94%
\$11,660	Median Earnings in the 2nd Quarter After Exit	\$11,660
83%	Employed in the 4th Quarter After Exit	80%
\$44,535	Median Annual Earnings	\$45,845
78%	Median Change in Annual Earnings	65%
77%	Attained Living Wage	77%

Regional Colleges Offering Programs:

	Bakersfield	Merced	Modesto Junior	San Joaquin Delta	Sequoias
Programs Offered					
2016–17 Awards	- 14*	6 19	-	3 8	4
2016–17 Course Enrollments	166	35	123	578	19

Regional Colleges Offering Courses:

	Fresno City	132	2016–17 Enrollments
--	-------------	-----	---------------------



*Discrepancy between LaunchBoard and Data Mart

Dash (-) indicates data are insufficient or have been suppressed.

Electrical – 0952.20

Installation, operation, maintenance and repair of electrical systems in buildings, including residential, commercial, and industrial electric power wiring and motors, controls, and electrical-distribution panels.

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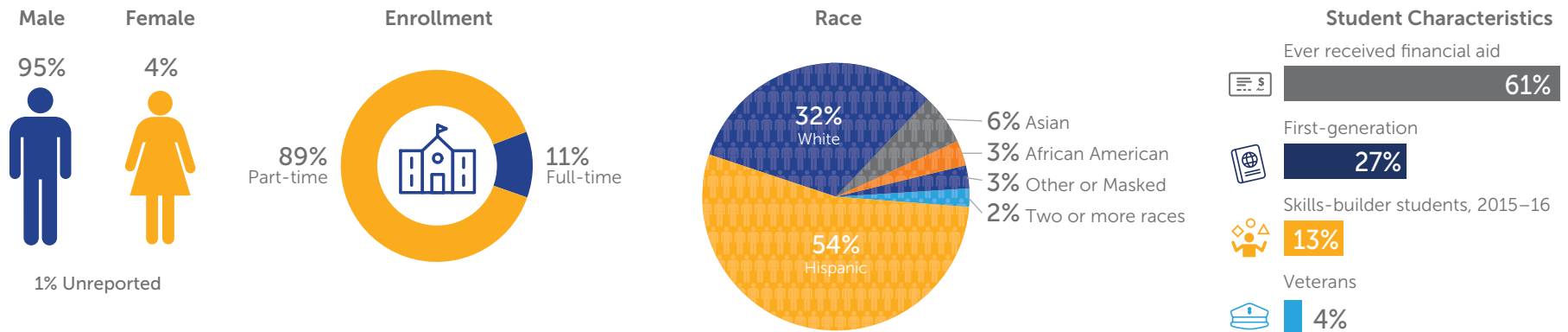
Sources: EMSI 2018.2, Burning Glass, LaunchBoard, MIS Data Mart, COE TOP-SOC Crosswalk

Occupation Data:

Occupation	3-Year 2017–20 Total Openings	Wage Range* (Entry, Median, Experienced Wage)	Typical Entry Level Education & Training Required	Sample of In-Demand Skills From Job Postings (2017)	% of Current Workers Age 55+
Electricians	2,079	\$15.64 \$27.60 \$44.69	High school diploma or equivalent & apprenticeship	Repair, Electrical Diagrams/Schematics, Wiring	18%
First-Line Supervisors of Construction Trades and Extraction Workers	1,823	\$14.85 \$28.27 \$46.14	High school diploma or equivalent & none	Scheduling, Project Management, Quality Assurance and Control	27%
First-Line Supervisors of Mechanics, Installers, and Repairers	1,429	\$19.21 \$32.47 \$54.56	High school diploma or equivalent & none	Scheduling, Budgeting, Predictive/Preventative Maintenance	29%
Electrical Power-Line Installers and Repairers	292	\$26.10 \$47.13 \$60.30	High school diploma or equivalent & more than 12 months training	Transformers, Telecommunications, Power Tools	16%

*Entry hourly earnings is 10th percentile wage, experienced hourly earnings is 90th percentile wage.

Student Demographics, 2016–17 (680 Total Students):



Central Valley/Mother Lode Region

SHEET METAL AND STRUCTURAL METAL

0956.40



Relevant Occupations:



Sheet Metal
Workers

181



Structural Iron and
Steel Workers

73

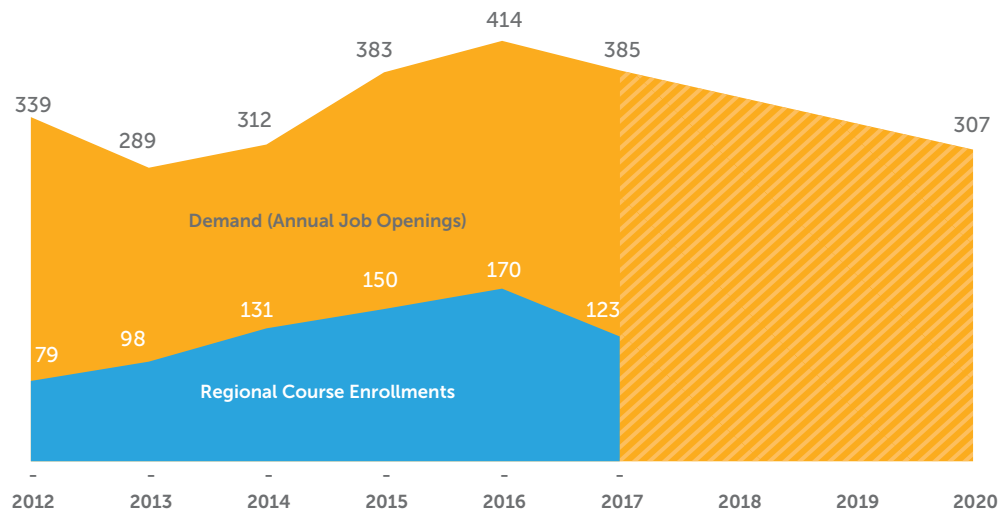


Reinforcing Iron and
Rebar Workers

53

2017–20
Average Annual
Job Openings




Supply/Demand for Selected Occupations, 2012–20:



Strong Workforce Program Metrics, 2015–16:

Region	vs	California
94%	Employed in the 2nd Quarter After Exit	83%
-	Job Closely Related to Field of Study (2014–15)	87%
\$6,126	Median Earnings in the 2nd Quarter After Exit	\$11,652
89%	Employed in the 4th Quarter After Exit	80%
\$30,100	Median Annual Earnings	\$38,596
246%	Median Change in Annual Earnings	73%
93%	Attained Living Wage	90%



Regional Colleges Offering Programs:

		Bakersfield
Programs Offered	 	
2016–17 Awards	-	5*
2016–17 Course Enrollments		39

 Associate Program
 Certificate Program

*Discrepancy between LaunchBoard and Data Mart

Regional Colleges Offering Courses:

	Modesto Junior	65 3	2016–17 Enrollments 2015–16 Certificates
	San Joaquin Delta	19	2016–17 Enrollments

Dash (-) indicates data are insufficient or have been suppressed.

Sheet Metal and Structural Metal – 0956.40

Theories, principles, methods, technical skills, and equipment used in sheet metal occupations and ironworking occupations.

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Sources: EMSI 2018.2, Burning Glass, LaunchBoard, MIS Data Mart, COE TOP-SOC Crosswalk

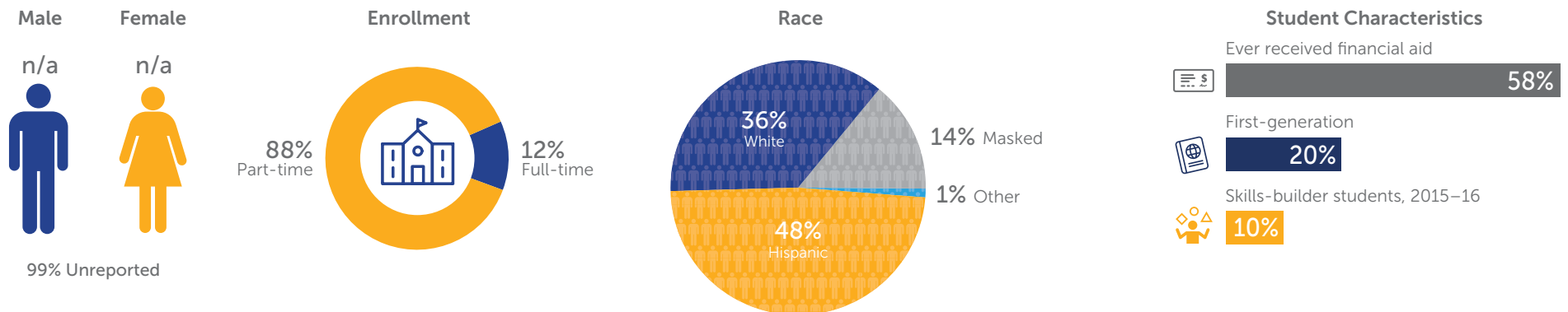
Occupation Data:

Occupation	3-Year 2017–20 Total Openings	Wage Range* (Entry, Median, Experienced Wage)		Typical Entry Level Education & Training Required	Sample of In-Demand Skills From Job Postings (2017)	% of Current Workers Age 55+
Sheet Metal Workers	544	\$14.46	\$21.62 ▼ \$36.47	High school diploma or equivalent & apprenticeship	Hand Tools, Welding, Grinders	18%
Structural Iron and Steel Workers	218	\$13.59	\$21.35 ▼ \$38.24	High school diploma or equivalent & apprenticeship	Welding, Forklift Operation, Hoisting Equipment*	16%
Reinforcing Iron and Rebar Workers	160	\$13.08	\$20.24 ▼ \$34.68	High school diploma or equivalent & apprenticeship	Hand Tools, Concrete Forming, New Construction*	16%

*Entry hourly earnings is 10th percentile wage, experienced hourly earnings is 90th percentile wage.

*Due to low regional demand, these skills are based on statewide job postings.

Student Demographics, 2016–17 (91 Total Students):







The Global Trade sector is heavily involved in international trade, which involves the exchange of capital, goods, and services across international borders. Supply chain activities create important support systems and linkages for international trade to take place.

Strong Workforce Program Metrics, 2015–16 unless otherwise noted

Central Valley/ Mother Lode	Metric	CA Median
49	Course Enrollments (2016–17)	285
\$4,176	Median Earnings in the 2nd Quarter After Exit	\$7,896
\$17,547	Median Annual Earnings	\$28,385
314%	Median Change in Annual Earnings	31%

TOP Program	Colleges Offering	Catalog Name	Award Offered
0508.00 – International Business and Trade	Modesto Junior	International Business	
	San Joaquin Delta	International Business	

The following TOP codes are detailed in this sector, but are technically claimed by the Business and Entrepreneurship Sector:

- 0501.00 – Business and Commerce, General (p.64)
- 0506.00 – Business Management (p.66)
- 0509.00 – Marketing and Distribution (p.68)

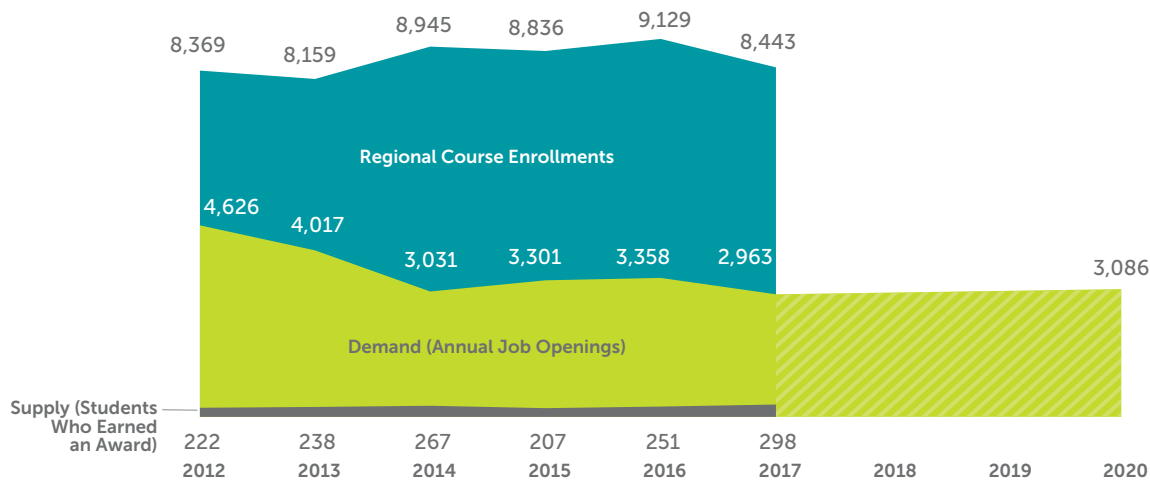
Central Valley/Mother Lode Region BUSINESS AND COMMERCE, GENERAL

0501.00

Relevant Occupations:



Supply/Demand for Selected Occupations, 2012–20:



Strong Workforce Program Metrics, 2015–16:

Region	vs	California
71%	Employed in the 2nd Quarter After Exit	66%
85%	Job Closely Related to Field of Study (2014–15)	67%
\$7,344	Median Earnings in the 2nd Quarter After Exit	\$7,344
70%	Employed in the 4th Quarter After Exit	66%
\$24,880	Median Annual Earnings	\$26,957
29%	Median Change in Annual Earnings	44%
62%	Attained Living Wage	54%

Regional Colleges Offering Programs:

	Cerro Coso	Clovis	Columbia	Merced	Porterville	Reedley	San Joaquin Delta	Sequoias	Taft
Programs Offered									
2016–17 Awards	19	1	4	14	-	-	174	69	9
2016–17 Course Enrollments	410	231	290	1,020	-	280	1,338	1,749	153
2015–16 Transfers	52	72	16	121	-	72	79	166	19

Regional Colleges Offering Courses:

	Bakersfield	1,439	2016–17 Enrollments
		136	2015–16 Transfers
		22	2015–16 Certificates
	Modesto Junior	1,511	2016–17 Enrollments
		161	2015–16 Transfers
	West Hills Coalinga	13	2016–17 Enrollments
		<10	2015–16 Transfers
	West Hills Lemoore	<10	2016–17 Enrollments
		<10	2015–16 Transfers



Business and Commerce, General – 0501.00

Processes, principles, and procedures of purchasing, selling, producing, and interchanging goods, commodities, and services to prepare a person for a position of responsibility, management, and/or ownership.

Central Valley/Mother Lode Region | coeccc.net | June 2018

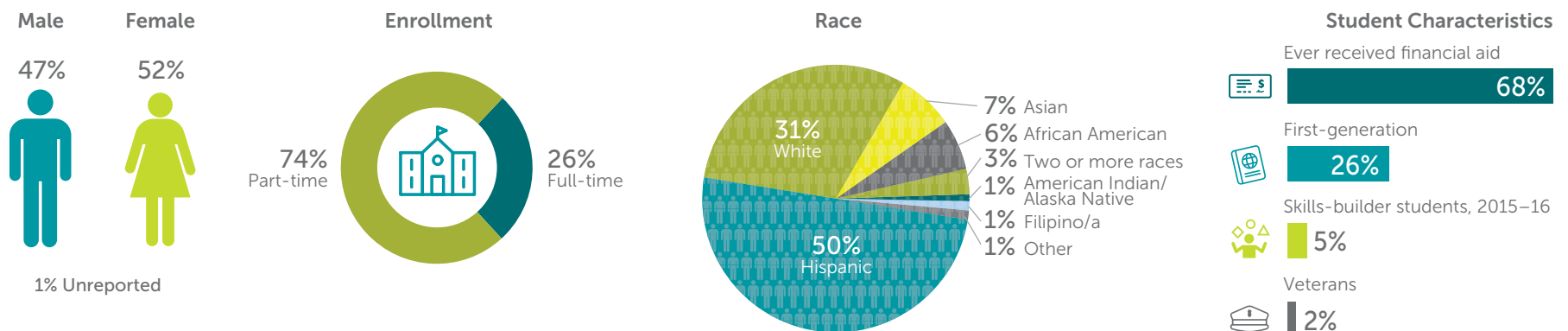
Sources: EMSI 2018.2, Burning Glass, LaunchBoard, MIS Data Mart, COE TOP-SOC Crosswalk

Occupation Data:

Occupation	3-Year 2017–20 Total Openings	Wage Range* (Entry, Median, Experienced Wage)		Typical Entry Level Education & Training Required	Sample of In-Demand Skills From Job Postings (2017)	% of Current Workers Age 55+
General and Operations Managers	5,756	\$21.22	<div><div></div><div>\$42.43</div><div></div></div> <div>\$89.82</div>	Bachelor's degree & none	Budgeting, Scheduling, Teamwork/Collaboration	24%
Social and Community Service Managers	784	\$17.82	<div><div></div><div>\$30.29</div><div></div></div> <div>\$48.89</div>	Bachelor's degree & none	Budgeting, Case Management, Psychology	33%
Construction Managers	780	\$13.88	<div><div></div><div>\$28.20</div><div></div></div> <div>\$60.42</div>	Bachelor's degree & 1 to 12 months training	Project Management, Scheduling, Budgeting	30%
Cost Estimators	767	\$17.03	<div><div></div><div>\$29.77</div><div></div></div> <div>\$49.11</div>	Bachelor's degree & 1 to 12 months training	Scheduling, Project Management, Purchasing	36%
Administrative Services Managers	763	\$23.47	<div><div></div><div>\$39.72</div><div></div></div> <div>\$64.08</div>	Bachelor's degree & none	Budgeting, Scheduling, Project Management, Teamwork/Collaboration	33%
Industrial Production Managers	408	\$26.26	<div><div></div><div>\$42.08</div><div></div></div> <div>\$72.82</div>	Bachelor's degree & none	Quality Assurance and Control, Hazard Analysis Critical Control Point (HACCP), Food Safety	26%

*Entry hourly earnings is 10th percentile wage, experienced hourly earnings is 90th percentile wage.

Student Demographics, 2016–17 (6,968 Total Students):



Central Valley/Mother Lode Region BUSINESS MANAGEMENT

0506.00



Relevant Occupations:



General and Operations
Managers

1,919



Cost Estimators

256



Administrative Services
Managers

254

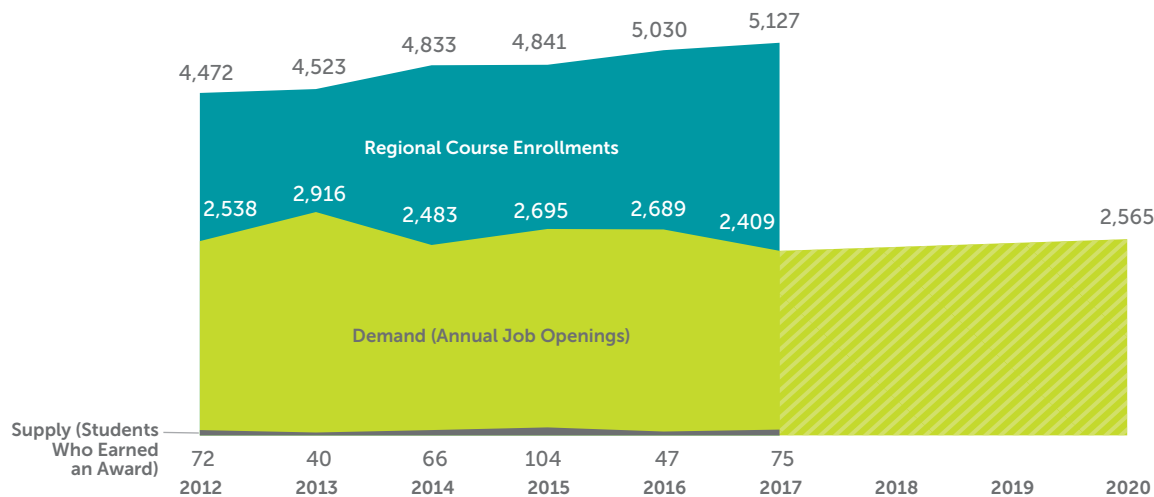


Industrial Production
Managers

136

2017–20
Average Annual
Job Openings

Supply/Demand for Selected Occupations, 2012–20:



Strong Workforce Program Metrics, 2015–16:

Region	vs	California
69%	Employed in the 2nd Quarter After Exit	69%
71%	Job Closely Related to Field of Study (2014–15)	80%
\$6,598	Median Earnings in the 2nd Quarter After Exit	\$7,940
68%	Employed in the 4th Quarter After Exit	68%
\$22,629	Median Annual Earnings	\$30,709
62%	Median Change in Annual Earnings	43%
53%	Attained Living Wage	60%

Regional Colleges Offering Programs:

	Cerro Coso	Clovis	Columbia	Fresno City	Modesto Junior	Porterville	Reedley	West Hills Coalinga	West Hills Lemoore
Programs Offered									
2016–17 Awards	1 2*	- 1	26	7 5	13	-	9 -	1 3	5 5
2016–17 Course Enrollments	-	825	556	471	428	162	1,270	531	511
2015–16 Transfers	-	141	<10	35	30	20	200	47	53

Regional Colleges Offering Courses:

	Bakersfield	267 14	2016–17 Enrollments 2015–16 Transfers
	San Joaquin Delta	14 <10	2016–17 Enrollments 2015–16 Transfers
	Sequoias	92 <10	2016–17 Enrollments 2015–16 Transfers



Business Management – 0506.00

Planning, organizing, directing, and controlling business operations. Includes various theories, tools, and practical applications used to maintain business sustainability through the management of capital, financial, and human resources.

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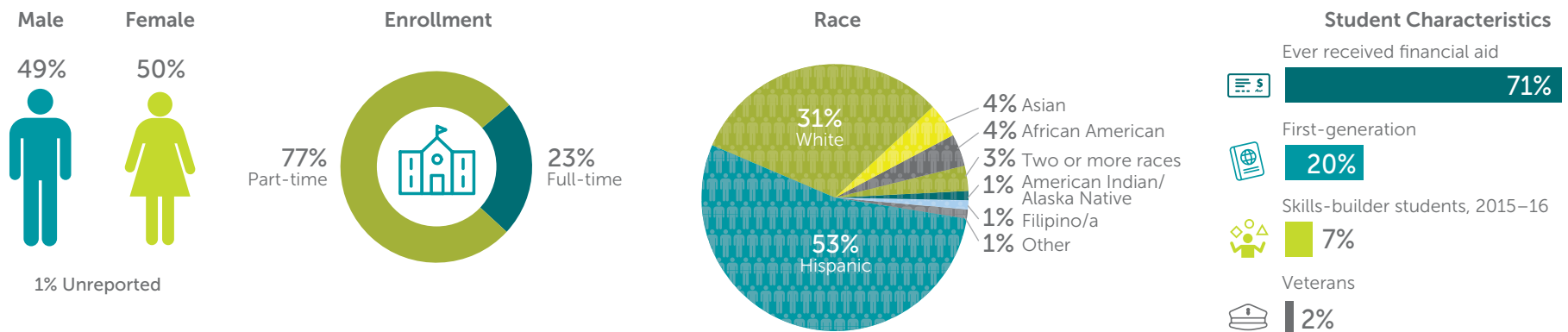
Sources: EMSI 2018.2, Burning Glass, LaunchBoard, MIS Data Mart, COE TOP-SOC Crosswalk

Occupation Data:

Occupation	3-Year 2017–20 Total Openings	Wage Range* (Entry, Median, Experienced Wage)		Typical Entry Level Education & Training Required	Sample of In Demand Skills From Job Postings (2017)	% of Current Workers Age 55+
General and Operations Managers	5,756	\$21.22	<div><div>\$42.43</div></div>	\$89.82 Bachelor's degree & none	Budgeting, Scheduling, Teamwork/Collaboration	24%
Cost Estimators	767	\$17.03	<div><div>\$29.77</div></div>	\$49.11 Bachelor's degree & 1 to 12 months training	Scheduling, Project Management, Purchasing	36%
Administrative Services Managers	763	\$23.47	<div><div>\$39.72</div></div>	\$64.08 Bachelor's degree & none	Budgeting, Scheduling, Project Management, Teamwork/Collaboration	33%
Industrial Production Managers	408	\$26.26	<div><div>\$42.08</div></div>	\$72.82 Bachelor's degree & none	Quality Assurance and Control, Hazard Analysis Critical Control Point (HACCP), Food Safety	26%

*Entry hourly earnings is 10th percentile wage, experienced hourly earnings is 90th percentile wage.








Student Demographics, 2016–17 (3,953 Total Students):



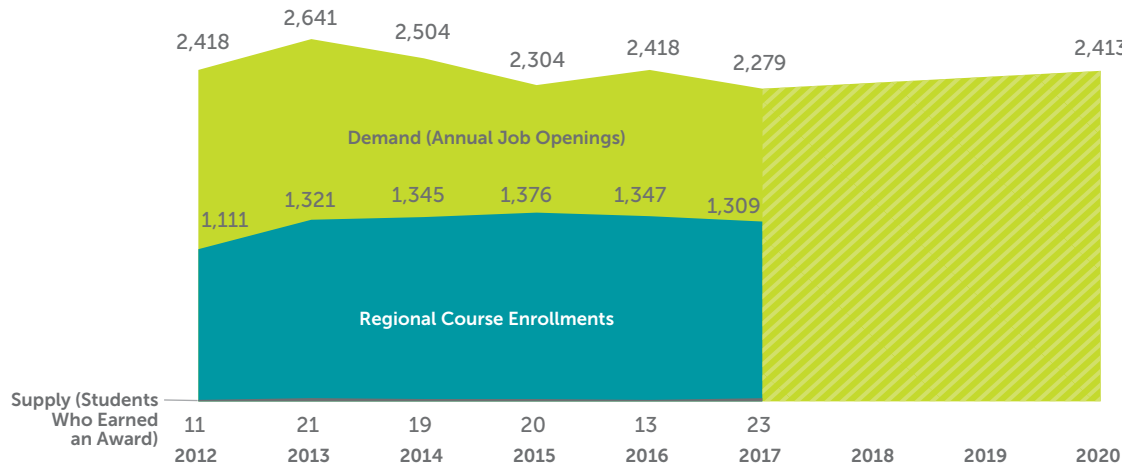
Central Valley/Mother Lode Region MARKETING AND DISTRIBUTION

0509.00

Relevant Occupations:

2017–20 Average Annual Job Openings							
	Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	Sales Managers	Market Research Analysts and Marketing Specialists	Purchasing Agents, Except Wholesale, Retail, and Farm Products	Wholesale and Retail Buyers, Except Farm Products	Marketing Managers	Advertising and Promotions Managers
	1,256	400	327	183	133	99	14









Supply/Demand for Selected Occupations, 2012–20:



Strong Workforce Program Metrics, 2015–16:





Region	vs	California
68%	Employed in the 2nd Quarter After Exit	64%
-	Job Closely Related to Field of Study (2014–15)	83%
\$7,981	Median Earnings in the 2nd Quarter After Exit	\$6,935
67%	Employed in the 4th Quarter After Exit	62%
\$28,226	Median Annual Earnings	\$26,175
37%	Median Change in Annual Earnings	57%
63%	Attained Living Wage	51%

Regional Colleges Offering Programs:

				
	Fresno City	Merced	Modesto Junior	San Joaquin Delta
Programs Offered				
2016–17 Awards	8	-	7	2
2016–17 Course Enrollments	263	18	304	536
2015–16 Transfers	11	<10	29	40

 Associate Program
 Certificate Program

Regional Colleges Offering Courses:

	Bakersfield	24 2/5 <10	2016–17 Enrollments 2015–16 Awards 1* Certificate, 5 Associate Degrees 2015–16 Transfers
	Clovis	12 <10	2016–17 Enrollments 2015–16 Transfers
	Porterville	16 <10	2016–17 Enrollments 2015–16 Transfers
	Reedley	136 27	2016–17 Enrollments 2015–16 Transfers

Dash (-) indicates data are insufficient or have been suppressed.

Marketing and Distribution – 0509.00

Marketing functions and tasks that facilitate the flow of goods and services to customers and/or ultimate consumers.

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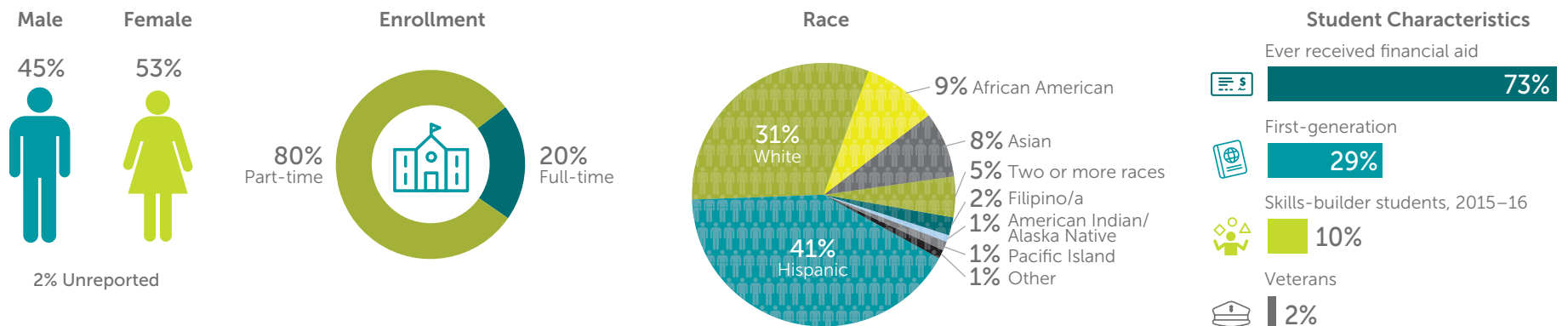
Sources: EMSI 2018.2, Burning Glass, LaunchBoard, MIS Data Mart, COE TOP-SOC Crosswalk

Occupation Data:

Occupation	3-Year 2017–20 Total Openings	Wage Range* (Entry, Median, Experienced Wage)		Typical Entry Level Education & Training Required	Sample of In Demand Skills From Job Postings (2017)	% of Current Workers Age 55+
Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	3,768	\$12.87	\$26.09 \$41.22 \$54.29	High school diploma or equivalent & 1 to 12 months training	Sales, Customer Service, Outside Sales	27%
Sales Managers	1,199	\$20.38	\$41.22 \$89.38	Bachelor's degree & none	Sales, Business Development, Customer Service	18%
Market Research Analysts and Marketing Specialists	982	\$13.88	\$25.34 \$42.62	Bachelor's degree & none	Marketing, Social Media, Sales	15%
Purchasing Agents, Except Wholesale, Retail, and Farm Products	548	\$16.96	\$29.03 \$47.89	Bachelor's degree & 1 to 12 months training	Purchasing, Procurement, Inventory Management	30%
Wholesale and Retail Buyers, Except Farm Products	400	\$13.69	\$22.33 \$39.23	Bachelor's degree & 1 to 12 months training	Packaging, Logistics, Purchasing	26%
Marketing Managers	298	\$26.21	\$50.55 \$93.84	Bachelor's degree & none	Marketing, Sales, Market Strategy	19%
Advertising and Promotions Managers	43	\$21.23	\$40.51 \$75.05	Bachelor's degree & none	Advertising, Broadcast Industry Knowledge, Customer Service	~13%

*Entry hourly earnings is 10th percentile wage, experienced hourly earnings is 90th percentile wage.

Student Demographics, 2016–17 (1,140 Total Students):







































































































The healthcare sector is one of the largest employers in California, and with a growing population and longer life expectancy, this sector should remain strong for quite some time. Healthcare employment refers to careers in hospitals, ambulatory services, and nursing and residential care facilities.

Strong Workforce Program Metrics, 2015–16 unless otherwise noted

Central Valley/ Mother Lode	Metric	CA Median
45,803	Course Enrollments (2016–17)	35,194
2,222	Students Who Got a Degree or Certificate (2016–17)	1,664
1,312	Students who Transferred	1,347
76%	Employed in the 2nd Quarter After Exit	75%
89%	Job Closely Related to Field of Study (2014–15)	86%
\$7,180	Median Earnings in the 2nd Quarter After Exit	\$7,803
75%	Employed in the 4th Quarter After Exit	75%
\$24,664	Median Annual Earnings	\$28,728
103%	Median Change in Annual Earnings	79%
62%	Attained Living Wage	61%

TOP Program	Colleges Offering	Catalog Name	Award Offered
0514.20 – Medical Office Technology	Columbia	Medical Office Specialist	 
	Fresno City	Business & Technology: Medical Office Professional	 
		Medical Billing Assistant	
	Merced	Administrative Medical Office Professional	 
	Reedley	Medical Administrative Assistant	 
	San Joaquin Delta	Medical Office Assistant	
1201.00 – Health Occupations, General	Bakersfield	Public Health Science	
	Clovis	Rehabilitation Aide	
	Columbia	Allied Health	
		Public Health Science	
	Modesto Junior	Public Health Science	
	San Joaquin Delta	Health Science	
	Taft	Liberal Arts Allied Health	
1208.00 – Medical Assisting	Cerro Coso	Medical Assisting	
	Merced	Medical Assistant	
	Modesto Junior	Medical Assisting	 
1208.10 – Clinical Medical Assisting	Cerro Coso	Clinical Medical Assisting	
	Fresno City	Medical Assistant – Clinician	 
1208.20 – Administrative Medical Assisting	Cerro Coso	Administrative Medical Assisting	
1210.00 – Respiratory Care/Therapy	Fresno City	Respiratory Care Practitioner	
	Modesto Junior	Respiratory Care	
1220.00 – Speech/Language Pathology and Audiology	Reedley	Speech Aide	
		Speech-Language Pathology Assistant	
	San Joaquin Delta	Speech Language Pathology Assistant (SLPA)	
		Speech Language Pathology Assistant Advanced Placement	
1222.00 – Physical Therapist Assistant (p.74)	Sequoias	Physical Therapist Assistant	
1223.00 – Health Information Technology	Bakersfield	Health Information Technology	
	Fresno City	Health Information Technology	

TOP Program	Colleges Offering	Catalog Name	Award Offered
1223.10 – Health Information Coding	Fresno City	Medical Coding	
1225.00 – Radiologic Technology	Bakersfield	Radiologic Technology	
	Fresno City	Radiologic Technology	
	Merced	Diagnostic Radiologic Technology	 
	San Joaquin Delta	Radiological Technology	
1227.00 – Diagnostic Medical Sonography	Merced	Diagnostic Medical Sonography	
1228.00 – Athletic Training and Sports Medicine	Modesto Junior	Athletic Training/Sports Medicine	
	Sequoias	Sports Medicine/Athletic Trainer	
1230.10 – Registered Nursing (p.76)	Bakersfield	LVN to Nurse	
		Registered Nursing	
	Fresno City	Nursing, Registered	
	Merced	Nursing, Registered	
	Modesto Junior	Nursing Associate Degree Nursing Program (RN)	
	Porterville	LVN to ADN	
		LVN to RN 30-Unit Option	
		Nursing	
	Reedley	LVN-RN	 
	San Joaquin Delta	Nursing R.N.	
	Sequoias	Registered Nursing	
	West Hills Lemoore	30-unit LVN to RN	
		LVN to Nursing (RN)	
		Nursing	
1230.20 – Licensed Vocational Nursing (p.78)	Bakersfield	Vocational Nursing	
	Cerro Coso	Vocational Nursing	 
	Merced	Nursing, Vocational	 
	Reedley	Licensed Vocational Nursing	 
1230.30 – Certified Nurse Assistant	Reedley	Nursing Assistant Training	

TOP Program	Colleges Offering	Catalog Name	Award Offered
1239.00 – Psychiatric Technician	Porterville	Psychiatric Technology	
	San Joaquin Delta	Psychiatric Technician	
		Psychiatric Technology	
	West Hills Coalinga	Psychiatric Technician	 
1240.10 – Dental Assistant	Reedley	Dental Assisting	 
1240.20 – Dental Hygienist	Fresno City	Dental Hygiene	
	Taft	Dental Hygiene	
1250.00 – Emergency Medical Services	Columbia	Emergency Medical Services	 
1251.00 – Paramedic	Bakersfield	Paramedic Program	 
	Fresno City	Prehospital Emergency Medical Care : Paramedic	
	West Hills Lemoore	Paramedic	 
1306.00 – Nutrition, Foods, and Culinary Arts	Fresno City	Food and Nutrition	 
		Nutrition and Dietetics	
	Merced	Nutrition and Dietetics	
1306.20 – Dietetic Services and Management	Bakersfield	Child Nutrition Management	
		Dietetic Services	
	Fresno City	Child Nutrition	
		Dietetic Service Supervisor	
	Merced	Dietetic Services Supervisor	
	Sequoias	Food Services, Advanced Skills	
2104.40 – Alcohol and Controlled Substances	Fresno City	Human Services: Alcoholism & Drug Abuse Counseling	 
	Modesto Junior	Chemical Dependency Counseling	 
	Porterville	Human Services: Mental Health/Substance Abuse	
	San Joaquin Delta	Substance Abuse Counselor	

Central Valley/Mother Lode Region PHYSICAL THERAPY ASSISTANT

1222.00



Relevant Occupations:

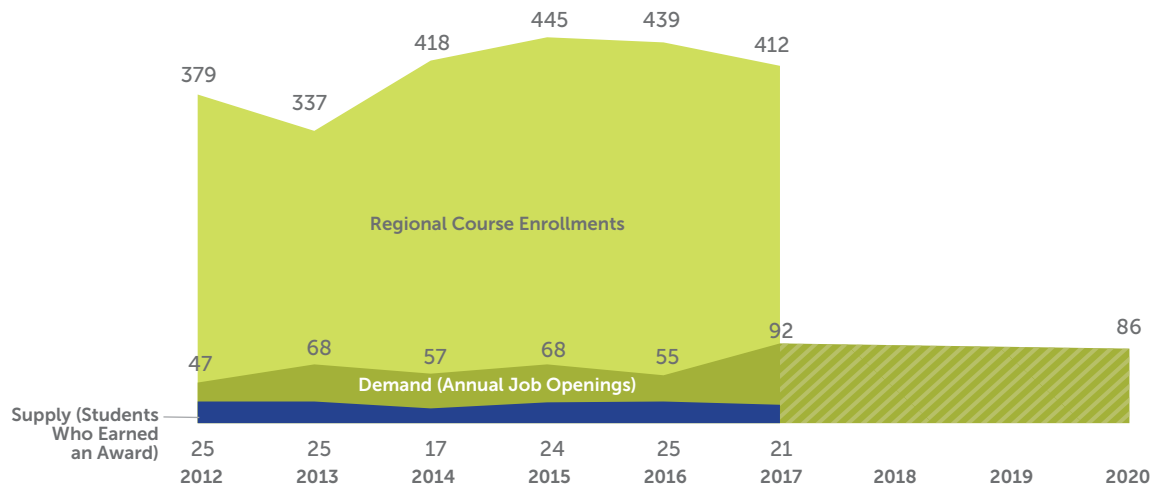


Physical Therapist Assistants

86

2017–20
Average Annual
Job Openings



Supply/Demand for Selected Occupations, 2012–20:





Strong Workforce Program Metrics, 2015–16:

Region	vs	California
78%	Employed in the 2nd Quarter After Exit	81%
100%	Job Closely Related to Field of Study (2014–15)	100%
\$12,115	Median Earnings in the 2nd Quarter After Exit	\$9,674
93%	Employed in the 4th Quarter After Exit	85%
\$39,850	Median Annual Earnings	\$37,065
157%	Median Change in Annual Earnings	106%
76%	Attained Living Wage	76%

Regional Colleges Offering Programs:

	 Sequoias
Programs Offered	
2016–17 Awards	21
2016–17 Course Enrollments	412

 Associate Program
 Certificate Program

Physical Therapy Assistant – 1222.00

Principles and procedures used to assist a physical therapist in implementing a prescribed plan of therapy for a patient, including patient instruction and administration of treatments.

Central Valley/Mother Lode Region | coeccc.net | June 2018

Sources: EMSI 2018.2, Burning Glass, LaunchBoard, MIS Data Mart, COE TOP-SOC Crosswalk

Occupation Data:

Occupation	3-Year 2017–20 Total Openings	Wage Range* (Entry, Median, Experienced Wage)	Typical Entry Level Education & Training Required	Sample of In-Demand Skills From Job Postings (2017)	% of Current Workers Age 55+
Physical Therapist Assistants	257	\$17.83 \$29.47 \$39.98	Associate degree & none	Rehabilitation, Treatment Planning, Patient Care	~8%

*Entry hourly earnings is 10th percentile wage, experienced hourly earnings is 90th percentile wage.

Student Demographics, 2016–17 (49 Total Students):

Male

41%



Female

59%



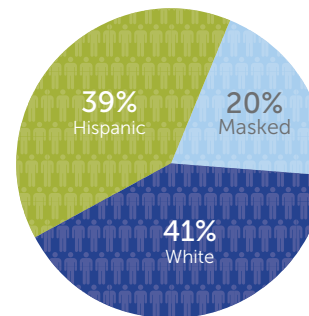
Enrollment

98%
Part-time



2%
Full-time

Race



Student Characteristics

Ever received financial aid



78%

First-generation, 2015–16



21%

Central Valley/Mother Lode Region REGISTERED NURSING

1230.10



Relevant Occupations:

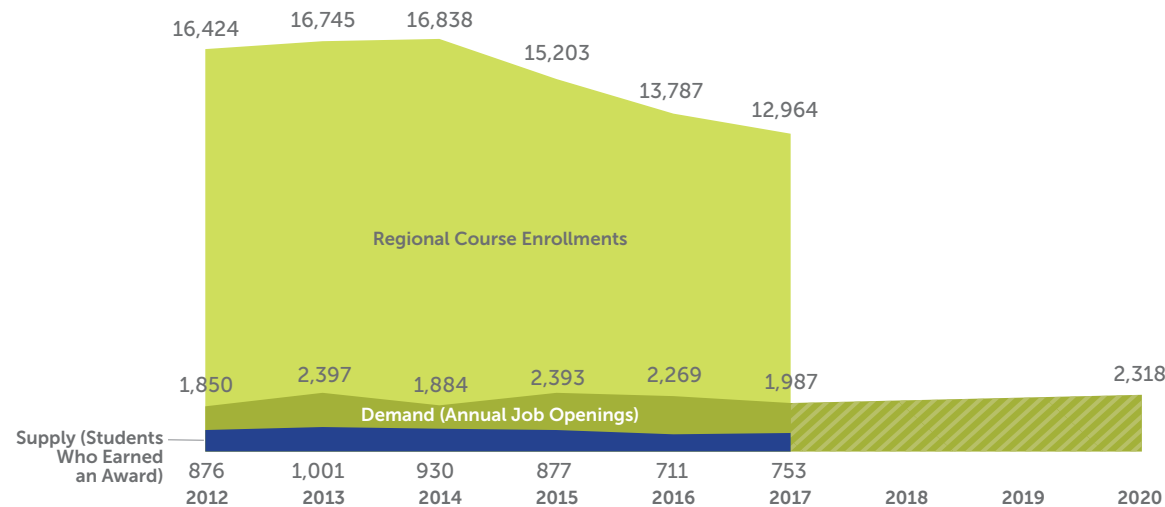


Registered Nurses

2,318

2017–20
Average Annual
Job Openings

Supply/Demand for Selected Occupations, 2012–20:



Strong Workforce Program Metrics, 2015–16:

Region	vs	California
84%	Employed in the 2nd Quarter After Exit	84%
96%	Job Closely Related to Field of Study (2014–15)	96%
\$16,827	Median Earnings in the 2nd Quarter After Exit	\$15,794
87%	Employed in the 4th Quarter After Exit	85%
\$61,166	Median Annual Earnings	\$56,556
226%	Median Change in Annual Earnings	131%
87%	Attained Living Wage	83%

Regional Colleges Offering Programs:

	Bakersfield	Fresno City	Merced	Modesto Junior	Porterville	Reedley	San Joaquin Delta	Sequoias	West Hills Lemoore
Programs Offered									
2016–17 Awards	125	222	56	107	21 -	10 -	105	72	35 -
2016–17 Course Enrollments	2,275	5,171	293	2,121	303	116	1,343	745	597
2015–16 Transfers	39	35	<10	47	<10	-	<10	24	14

Associate Program
 Certificate Program

Dash (-) indicates data are insufficient or have been suppressed.

Registered Nursing – 1230.10

Programs leading to licensure by the Board of Registered Nursing. Includes nursing care in specialty areas.

Central Valley/Mother Lode Region | coeccc.net | June 2018

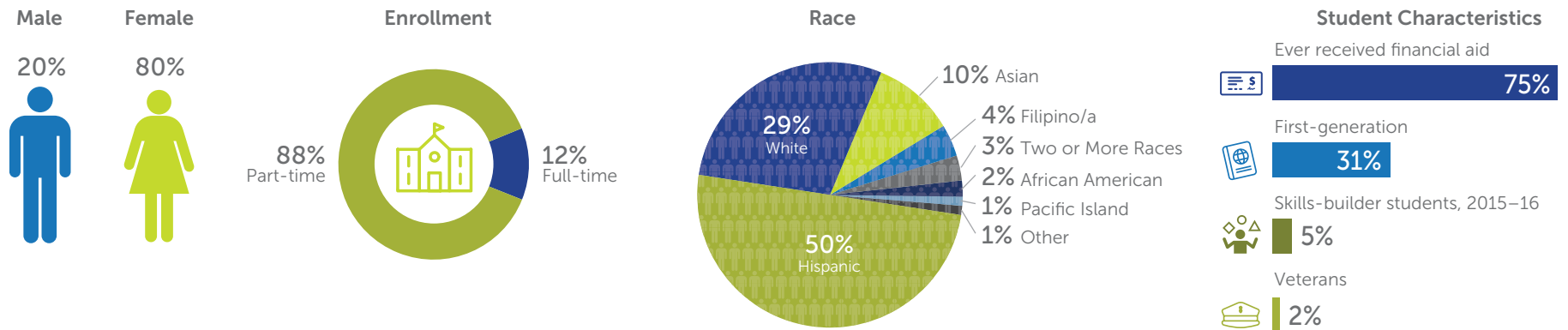
Sources: EMSI 2018.2, Burning Glass, LaunchBoard, MIS Data Mart, COE TOP-SOC Crosswalk

Occupation Data:

Occupation	3-Year 2017–20 Total Openings	Wage Range* (Entry, Median, Experienced Wage)		Typical Entry Level Education & Training Required	Sample of In-Demand Skills From Job Postings (2017)	% of Current Workers Age 55+
Registered Nurses	6,953	\$30.32	<div><div></div><div>\$44.62</div><div></div></div> \$61.93	Bachelor's degree & none	Advanced Cardiac Life Support (ACLS), Patient Care, Treatment Planning, Cardiopulmonary Resuscitation (CPR)	24%

*Entry hourly earnings is 10th percentile wage, experienced hourly earnings is 90th percentile wage.

Student Demographics, 2016–17 (3,497 Total Students):



Central Valley/Mother Lode Region LICENSED VOCATIONAL NURSING

1230.20



Relevant Occupations:

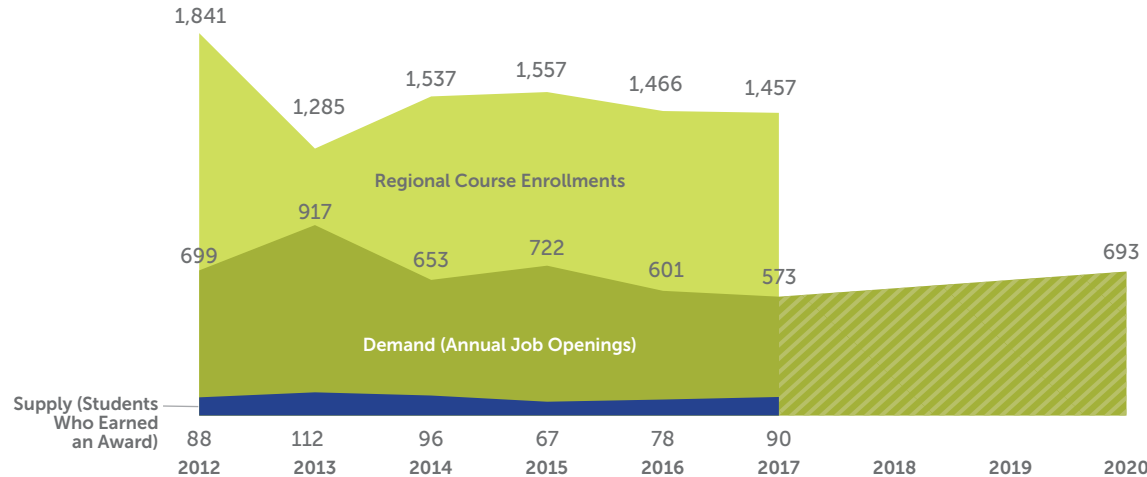


Licensed Practical and
Licensed Vocational Nurses

693

2017–20
Average Annual
Job Openings

Supply/Demand for Selected Occupations, 2012–20:



Strong Workforce Program Metrics, 2015–16:

Region	vs	California
76%	Employed in the 2nd Quarter After Exit	78%
80%	Job Closely Related to Field of Study (2014–15)	97%
\$6,194	Median Earnings in the 2nd Quarter After Exit	\$7,474
76%	Employed in the 4th Quarter After Exit	79%
\$23,403	Median Annual Earnings	\$28,786
56%	Median Change in Annual Earnings	89%
59%	Attained Living Wage	59%

Regional Colleges Offering Programs:

	Bakersfield	Cerro Coso	Merced	Reedley
Programs Offered				
2016–17 Awards	23*	15 23*	15 32	1 4
2016–17 Course Enrollments	300	400	245	124
2015–16 Transfers	<10	<10	10	-

Regional Colleges Offering Courses:

	Porterville	239 2016–17 Enrollments <10 2015–16 Transfers
	West Hills Coalinga	149 2016–17 Enrollments <10 2015–16 Transfers



*Discrepancy between LaunchBoard and Data Mart

Dash (-) indicates data are insufficient or have been suppressed.

Licensed Vocational Nursing – 1230.20

Programs leading to vocational nurse licensure by the Board of Vocational Nursing and Psychiatric Technicians. Technical and manual nursing skills, practiced under the direction of a registered nurse, physician, or other medical staff, specific to the scope of practice of the licensed vocational nurse.

Central Valley/Mother Lode Region | coeccc.net | June 2018

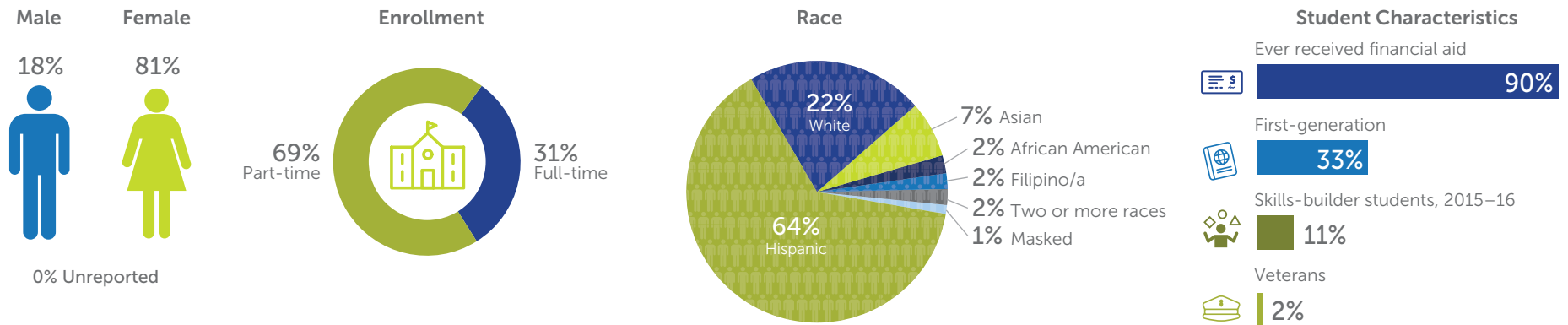
Sources: EMSI 2018.2, Burning Glass, LaunchBoard, MIS Data Mart, COE TOP-SOC Crosswalk

Occupation Data:

Occupation	3-Year 2017–20 Total Openings	Wage Range* (Entry, Median, Experienced Wage)	Typical Entry Level Education & Training Required	Sample of In-Demand Skills From Job Postings (2017)	% of Current Workers Age 55+
Licensed Practical and Licensed Vocational Nurses	2,079	\$19.31 \$24.76 \$30.31	Postsecondary nondegree award & none	Cardiopulmonary Resuscitation (CPR), Patient Care, Treatment Planning	23%

*Entry hourly earnings is 10th percentile wage,
experienced hourly earnings is 90th percentile wage.

Student Demographics, 2016–17 (581 Total Students):









































































































The Information and Communication Technologies/ Digital Media sector identifies, verifies and promotes effective strategies and pathways necessary to build the pipeline of information technology workers, and contributes to accelerated student outcomes by helping colleges acquire the technology to train students remotely and providing faculty development and system support. Information Communications Technologies have permeated every aspect of life – how people work, communicate, organize and manage their lives, and more.































**Strong Workforce Program Metrics,
2015–16 unless otherwise noted**






























Central Valley/ Mother Lode	Metric	CA Median
37,332	Course Enrollments (2016–17)	47,873
546	Students Who Got a Degree or Certificate (2016–17)	799
2,183	Students who Transferred	2,643
63%	Employed in the 2nd Quarter After Exit	63%
51%	Job Closely Related to Field of Study (2014–15)	65%
\$5,935	Median Earnings in the 2nd Quarter After Exit	\$6,944
63%	Employed in the 4th Quarter After Exit	63%
\$17,820	Median Annual Earnings	\$23,561
45%	Median Change in Annual Earnings	43%
44%	Attained Living Wage	53%











TOP Program	Colleges Offering	Catalog Name	Award Offered
0514.00 – Office Technology/Office Computer Applications	Bakersfield	Administrative Office Assistant	
		Office Assistant	
	Cerro Coso	Administrative Office Assistant	
		Business Office Technology	 
		Office Clerk	
	Columbia	Administrative Office Professional	 
		Virtual Office Professional (COA)	
	Fresno City	Business & Technology: Office Professional II	
		Business & Technology: Office Professional I	 
		Business & Technology: Office Professional II	
		Clerical Training	
	Merced	Administrative Office Professional	 
	Modesto Junior	Clerical	 
		Office Administration	 
		Office Computer Applications	
		Office Support	
		Records Management Data Entry Specialist	
	Porterville	Office Technology	
	Reedley	Administrative Assistant	 
		Office Assistant	
		Receptionist	
	San Joaquin Delta	Administrative Assistant	
		General Office	
		Office Assistant	
	Taft	Administrative Services	 
		Administrative Services II	

TOP Program	Colleges Offering	Catalog Name	Award Offered
0514.00 – Office Technology/Office Computer Applications cont.	West Hills Coalinga	Clerk Typist	 
		Office Management & Technologies	 
		Secretary/Word Processing	 
	West Hills Lemoore	Clerk Typist	 
		Office Management & Technologies	 
		Secretary/Word Processing	 
0602.00 – Journalism	Bakersfield	Journalism	
	Fresno City	Journalism	
	San Joaquin Delta	Journalism	
	Sequoias	Journalism	
	Taft	Journalism	
		Multi-Media Journalism	
0604.00 – Radio and Television	San Joaquin Delta	Radio/Television	
0604.10 – Radio	San Joaquin Delta	Media Studies – Radio	
0604.20 – Television (including combined TV/Film/Video)	San Joaquin Delta	Media Studies: Television	
0614.00 – Digital Media	Columbia	Digital Media Technician – Web Development	
		Multimedia Technician – Digital Media	
		Multimedia Technology	
0614.10 – Multimedia	Bakersfield	Media Arts	
	San Joaquin Delta	Multimedia	 
0614.30 – Website Design and Development	Cerro Coso	Web Fundamentals	
		Web Professional	 
	Clovis	Information Systems – Web Design	 
	Fresno City	Web Design	
0614.60 – Computer Graphics and Digital Imagery	Modesto Junior	Computer Graphics Applications	 

TOP Program	Colleges Offering	Catalog Name	Award Offered
0701.00 – Information Technology, General (p.88)	Merced	Technical Office Occupations	
	Modesto Junior	Computer Information Systems	
	Porterville	Business Information Systems	
		Computer Information Systems	
	San Joaquin Delta	Computer Support Technician	
0702.00 – Computer Information Systems	Cerro Coso	Computer Information Systems	 
		Data Analyst I	
		Information Technology Plus	
	Clovis	Information Systems	
		Information Technology Support Technician	
	Columbia	Business Digital Media Development	
		CCT-Business Emphasis	
		Computer Information Systems	
		Programming	
	Fresno City	Computer Information Systems	
		Microcomputer Software Specialist	 
	Merced	Management Information Systems	
	Porterville	Advanced Information Systems	
		Information Systems	 
	Reedley	Information Systems	
		Information Technology Support Technician	
	San Joaquin Delta	Computer Operations	
		Computer Science	 
	Sequoias	Computer Programming & Information Systems	 
	Taft	Information Management and Technology	
		Information Technology and Management	

TOP Program	Colleges Offering	Catalog Name	Award Offered
0702.10 – Software Applications	Modesto Junior	Computer Applications Specialist	
	San Joaquin Delta	Computer Support	
	Sequoias	Computer Applications	
	West Hills Coalinga	CIS: Microcomputer Applications Specialist	 
	West Hills Lemoore	CIS: Microcomputer Applications Specialist	 
0707.10 – Computer Programming (p.90)	Clovis	Information Systems – Programming for the Web	 
	Modesto Junior	Computer Programming Specialist	
	Reedley	Information Systems, Programming for the Web	
		Information Systems, Web Programming and Design Option	
	San Joaquin Delta	Computer Programming	
		Computer Programming Essentials	
		Computer Programming-Competence	
		Computer Web Developer	
	West Hills Lemoore	Introduction to Programming	
0708.00 – Computer Infrastructure and Support	Bakersfield	CompTIA	
	Fresno City	Cisco CCNA Preparation	
0708.10 – Computer Networking (p.92)	Cerro Coso	Cyber Security Technology	 
	Clovis	Information Systems – Networking	 
	Fresno City	MCSE Networking	
		Networking/Computer Technician	 
	Modesto Junior	Computer Network Administration	
		Computer Network Technician	
	Reedley	Information Systems, Networking	 

TOP Program	Colleges Offering	Catalog Name	Award Offered
0708.10 – Computer Networking cont. (p.92)	San Joaquin Delta	Computer Information Systems	
		Computer Network Security Technician	
		Computer Network Security Technology	
		Computer Network Technician	
		Computer Networking Essentials	
		Computer Networking Software	
		Computer Networking Technician	
		Computer Networking-Competence	
	West Hills Lemoore	Computer Networking	 
		Networking Fundamentals	
0708.20 – Computer Support	Clovis	Information Systems – Help Desk	
		Information Technician Support	
	Reedley	Information Systems, Information Technology Support Option	
0709.00 – World Wide Web Administration	Fresno City	Webmaster	
	San Joaquin Delta	Computer Web Developer Technician	
0934.30 – Telecommunications Technology	Fresno City	Electrical Systems Technology Communication Technology	
1005.00 – Commercial Music	Bakersfield	Commercial Music	
	Fresno City	Commercial Music	 
1012.00 – Applied Photography	Bakersfield	Photography	
	Fresno City	Commercial Photography	
		Digital Photography	
		Fine Art Photography	
		Photography, Professional	 
		Photojournalism	
	Merced	Photography	
	San Joaquin Delta	Photography	

TOP Program	Colleges Offering	Catalog Name	Award Offered
1013.00 – Commercial Art	Porterville	Art: Commercial	 
1030.00 – Graphic Art and Design	Bakersfield	Graphic Design	
	Fresno City	Graphic Design	 
	San Joaquin Delta	Graphic Arts	
	Sequoias	Graphic Design	 
2206.10 – Geographic Information Systems	Columbia	Geographic Information Systems	 

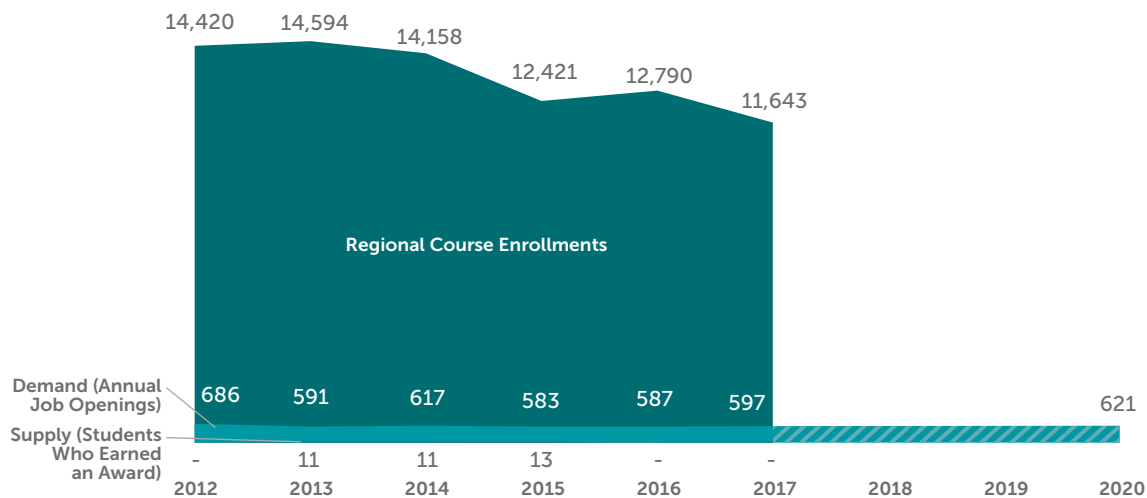
Central Valley/Mother Lode Region INFORMATION TECHNOLOGY, GENERAL 0701.00



Relevant Occupations:

Computer Systems Analysts	Network and Computer Systems Administrators	Computer Occupations, All Other	Computer Programmers	Database Administrators	Computer Network Architects
2017–20 Average Annual Job Openings					
187	154	136	68	40	36

Supply/Demand for Selected Occupations, 2012–20:



Strong Workforce Program Metrics, 2015–16:

Region	vs	California
64%	Employed in the 2nd Quarter After Exit	66%
-	Job Closely Related to Field of Study (2014–15)	75%
\$6,122	Median Earnings in the 2nd Quarter After Exit	\$8,221
65%	Employed in the 4th Quarter After Exit	66%
\$18,887	Median Annual Earnings	\$28,227
44%	Median Change in Annual Earnings	48%
52%	Attained Living Wage	55%

Regional Colleges Offering Programs:

	Merced	Modesto Junior	Porterville	San Joaquin Delta
Programs Offered				
2016–17 Awards	-	-	-	1
2016–17 Course Enrollments	478	2,276	440	1,327
2015–16 Transfers	19	162	33	134

Regional Colleges Offering Courses:

Bakersfield	324 52	2016–17 Enrollments 2015–16 Transfers	Reedley	1,461 132	2016–17 Enrollments 2015–16 Transfers
Clovis	845 83	2016–17 Enrollments 2015–16 Transfers	Sequoia	1,088 138	2016–17 Enrollments 2015–16 Transfers
Columbia	220 19	2016–17 Enrollments 2015–16 Transfers	Taft	191 18	2016–17 Enrollments 2015–16 Transfers
Fresno City	2,520 184	2016–17 Enrollments 2015–16 Transfers	West Hills Coalinga	186 28	2016–17 Enrollments 2015–16 Transfers
			West Hills Lemoore	287 43	2016–17 Enrollments 2015–16 Transfers

Information Technology, General – 0701.00

Information technology concepts, theories, principles, methods and related computer capabilities and applications related to business, technical, and scientific problems.

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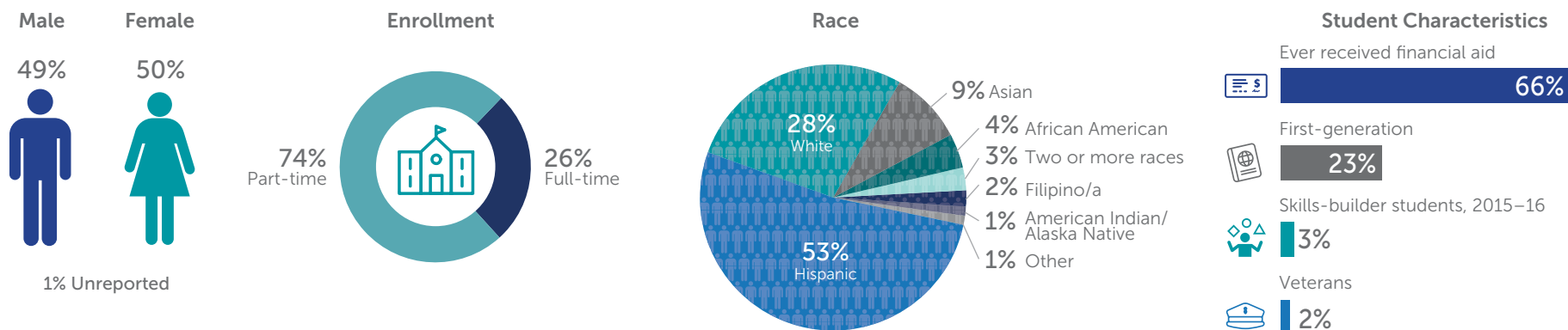
Sources: EMSI 2018.2, Burning Glass, LaunchBoard, MIS Data Mart, COE TOP-SOC Crosswalk

Occupation Data:

Occupation	3-Year 2017–20 Total Openings	Wage Range* (Entry, Median, Experienced Wage)			Typical Entry Level Education & Training Required	Sample of In-Demand Skills From Job Postings (2017)	% of Current Workers Age 55+
Computer Systems Analysts	561	\$23.34	<div><div>\$35.74</div></div>	\$53.85	Bachelor's degree & none	Project Management, Business Systems Analysis, SQL	19%
Network and Computer Systems Administrators	461	\$21.77	<div><div>\$36.72</div></div>	\$54.40	Bachelor's degree & none	Microsoft Active Directory, Technical Support, Hardware and Software Installation	14%
Computer Occupations, All Other	409	\$20.94	<div><div>\$36.52</div></div>	\$55.61	Bachelor's degree & none	SQL, Project Management, Budgeting	17%
Computer Programmers	204	\$20.97	<div><div>\$33.33</div></div>	\$51.10	Bachelor's degree & none	SQL, Software Development, Java	19%
Database Administrators	121	\$18.03	<div><div>\$37.88</div></div>	\$59.86	Bachelor's degree & none	SQL, Oracle, Database Design	19%
Computer Network Architects	107	\$30.26	<div><div>\$46.75</div></div>	\$68.26	Bachelor's degree & none	Network Engineering, Cisco, Wide Area Network (WAN)	~12%

*Entry hourly earnings is 10th percentile wage, experienced hourly earnings is 90th percentile wage.

Student Demographics, 2016–17 (10,092 Total Students):



Central Valley/Mother Lode Region COMPUTER PROGRAMMING

0707.10



Relevant Occupations:



Software Developers,
Applications

138



Computer Network
Support Specialists

94



Computer
Programmers

68



Web
Developers

67

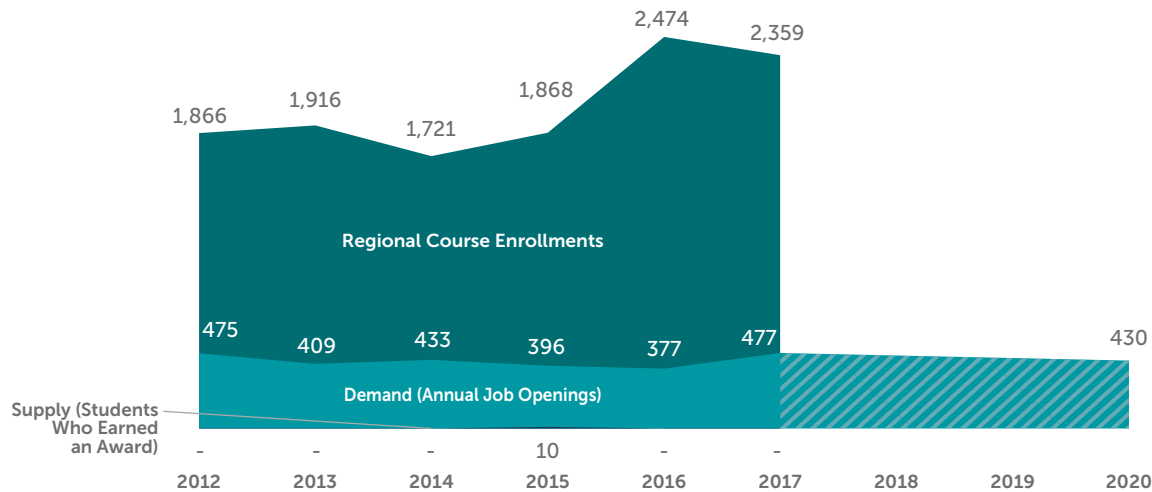


Software Developers,
Systems Software

63

2017–20
Average Annual
Job Openings













Supply/Demand for Selected Occupations, 2012–20:









Strong Workforce Program Metrics, 2015–16:

Region	vs	California
59%	Employed in the 2nd Quarter After Exit	61%
-	Job Closely Related to Field of Study (2014–15)	65%
\$6,542	Median Earnings in the 2nd Quarter After Exit	\$7,170
64%	Employed in the 4th Quarter After Exit	64%
\$22,174	Median Annual Earnings	\$31,391
46%	Median Change in Annual Earnings	50%
52%	Attained Living Wage	56%

Regional Colleges Offering Programs:

	 Clovis	 Modesto Junior	 Reedley	 San Joaquin Delta	 West Hills Lemoore
Programs Offered	 		 		
2016–17 Awards	- -	5	- -	3	-
2016–17 Course Enrollments	29	124	10	758	126
2015–16 Transfers	12	17	<10	81	10

Regional Colleges Offering Courses:

	Bakersfield	535 1 41	2016–17 Enrollments 2015–16 Associate Degree 2015–16 Transfers
	Fresno City	147 18	2016–17 Enrollments 2015–16 Transfers
	Merced	437 83	2016–17 Enrollments 2015–16 Transfers
	Porterville	15 <10	2016–17 Enrollments 2015–16 Transfers
	Sequoias	155 13	2016–17 Enrollments 2015–16 Transfers
	West Hills Coalinga	23 -	2016–17 Enrollments 2015–16 Transfers

Dash (-) indicates data are insufficient or have been suppressed.



Associate Program



Certificate Program

Computer Programming – 0707.10

Entry-level programming, including methods, procedures, symbols and rules used in planning and writing instruction in computer language for the solution of a problem. Includes programming for the World Wide Web.

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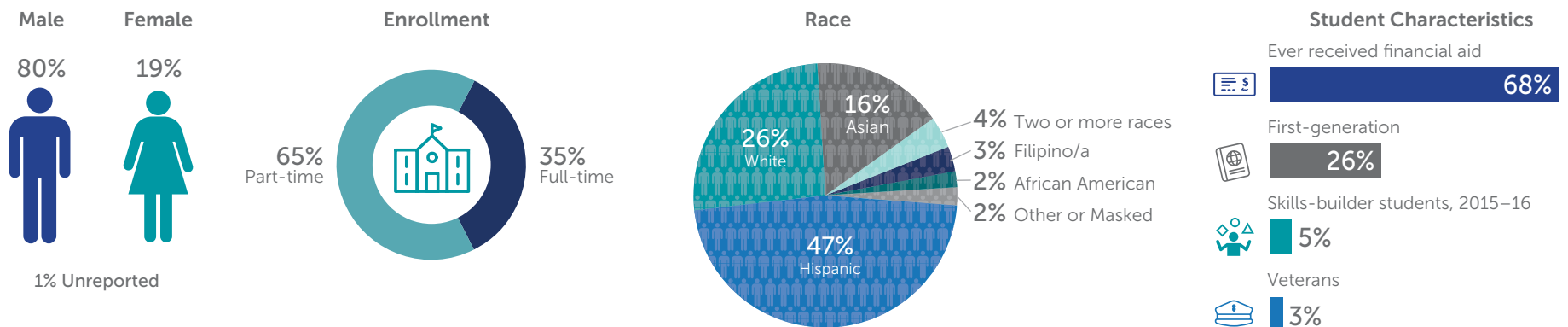
Sources: EMSI 2018.2, Burning Glass, LaunchBoard, MIS Data Mart, COE TOP-SOC Crosswalk

Occupation Data:

Occupation	3-Year 2017–20 Total Openings	Wage Range* (Entry, Median, Experienced Wage)			Typical Entry Level Education & Training Required	Sample of In-Demand Skills From Job Postings (2017)	% of Current Workers Age 55+
Software Developers, Applications	414	\$28.17	\$46.27	\$73.27	Bachelor's degree & none	SQL, Microsoft C#, JavaScript	14%
Computer Network Support Specialists	281	\$15.57	\$28.96	\$45.39	Associate degree & none	Technical Support, Repair, System/Network Configuration	17%
Computer Programmers	204	\$20.97	\$33.33	\$51.10	Bachelor's degree & none	SQL, Software Development, Java	19%
Web Developers	201	\$16.00	\$21.82	\$45.41	Associate degree & none	JavaScript, SQL, jQuery, HTML5, Web Site Design	10%
Software Developers, Systems Software	188	\$29.54	\$47.24	\$74.46	Bachelor's degree & none	SQL, UNIX, Oracle	14%








*Entry hourly earnings is 10th percentile wage, experienced hourly earnings is 90th percentile wage.

Student Demographics, 2016–17 (1,837 Total Students):

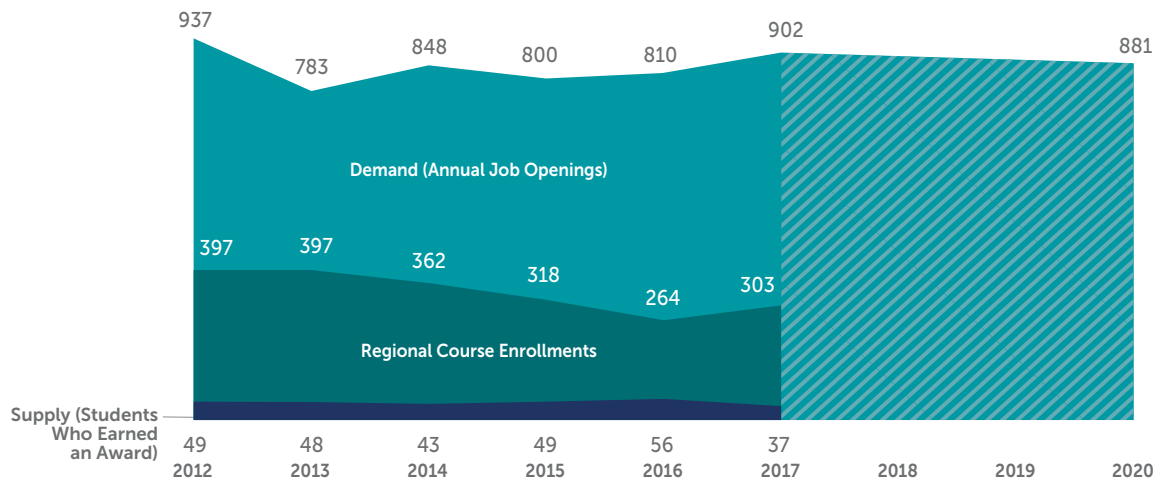




Relevant Occupations:

2017–20 Average Annual Job Openings	 Computer User Support Specialists	 Computer Systems Analysts	 Network and Computer Systems Administrators	 Computer Network Support Specialists	 Database Administrators	 Computer Network Architects	 Information Security Analysts
	351	187	154	94	40	36	20






















Supply/Demand for Selected Occupations, 2012–20:



Strong Workforce Program Metrics, 2015–16:

Region	vs	California
69%	Employed in the 2nd Quarter After Exit	74%
-	Job Closely Related to Field of Study (2014–15)	69%
\$6,498	Median Earnings in the 2nd Quarter After Exit	\$9,029
65%	Employed in the 4th Quarter After Exit	73%
\$23,335	Median Annual Earnings	\$37,643
105%	Median Change in Annual Earnings	51%
59%	Attained Living Wage	64%

Regional Colleges Offering Programs:

	 Cerro Coso	 Clovis	 Fresno City	 Modesto Junior	 Reedley	 San Joaquin Delta	 West Hills Lemoore
Programs Offered	 	 	 	 	 	 	 
2016–17 Awards	- -	1 -	4 4	- 8	3 2	9 19	- -
2016–17 Course Enrollments	23	-	40	-	-	163	44

Regional Colleges Offering Courses:

 Sequoias	11	2016–17 Enrollments
 Porterville	22	2016–17 Enrollments
 Associate Program		
 Certificate Program		

Computer Networking – 0708.10

Principles of local, metropolitan, and wide area computer networking design, installation, maintenance, and troubleshooting.

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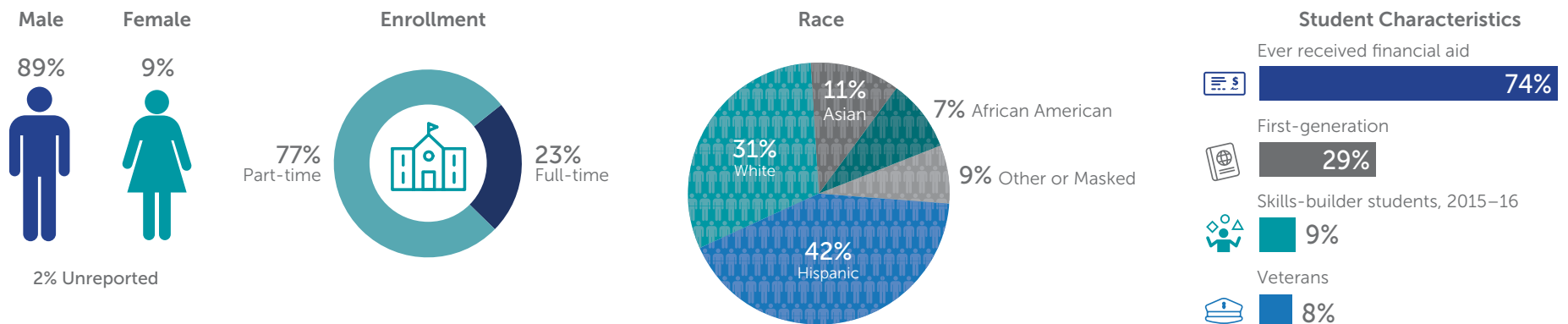
Sources: EMSI 2018.2, Burning Glass, LaunchBoard, MIS Data Mart, COE TOP-SOC Crosswalk

Occupation Data:

Occupation	3-Year 2017–20 Total Openings	Wage Range* (Entry, Median, Experienced Wage)		Typical Entry Level Education & Training Required	Sample of In-Demand Skills From Job Postings (2017)	% of Current Workers Age 55+
Computer User Support Specialists	1,054	\$14.36	\$22.69 \$34.10	Some college, no degree & none	Technical Support, Customer Service, Repair	16%
Computer Systems Analysts	561	\$23.34	\$35.74 \$53.85	Bachelor's degree & none	Project Management, Business Systems Analysis, SQL	19%
Network and Computer Systems Administrators	461	\$21.77	\$36.72 \$54.40	Bachelor's degree & none	Microsoft Active Directory, Technical Support, Hardware and Software Installation	14%
Computer Network Support Specialists	281	\$15.57	\$28.96 \$45.39	Associate degree & none	Technical Support, Repair, System/Network Configuration	17%
Database Administrators	121	\$18.03	\$37.88 \$59.86	Bachelor's degree & none	SQL, Oracle, Database Design	19%
Computer Network Architects	107	\$30.26	\$46.75 \$68.26	Bachelor's degree & none	Network Engineering, Cisco, Wide Area Network (WAN)	~12%
Information Security Analysts	59	\$25.86	\$42.17 \$61.04	Bachelor's degree & none	Information Systems, Data Security, Risk and Mitigation Analysis	~17%

*Entry hourly earnings is 10th percentile wage, experienced hourly earnings is 90th percentile wage.

Student Demographics, 2016–17 (202 Total Students):













Life Sciences/Biotechnology encompasses a group of diverse industries that all share a common link: the application of biological scientific knowledge to make products that are useful to humans.

Strong Workforce Program Metrics, 2015–16 unless otherwise noted

Central Valley/ Mother Lode	Metric	CA Median
339	Course Enrollments (2016–17)	738
19	Students Who Got a Degree or Certificate (2016–17)	53
71%	Employed in the 2nd Quarter After Exit	72%
\$6,227	Median Earnings in the 2nd Quarter After Exit	\$8,577
81%	Employed in the 4th Quarter After Exit	74%
\$19,591	Median Annual Earnings	\$29,432
160%	Median Change in Annual Earnings	74%
61%	Attained Living Wage	59%






TOP Program	Colleges Offering	Catalog Name	Award Offered
0430.00 – Biotechnology and Biomedical Technology (p.96)	Merced	Biotechnology	
		Biotechnology Pre-Professional	
		Biotechnology-Industry	
0934.70 – Electron Microscopy (p.98)	San Joaquin Delta	Electron Microscopy – Biological	
		Electron Microscopy – Materials	
		Electron Microscopy: Biological	
		Electron Microscopy: Crystalline Material	
0955.00 – Laboratory Science Technology (p.100)	Fresno City	Chemistry	

Central Valley/Mother Lode Region

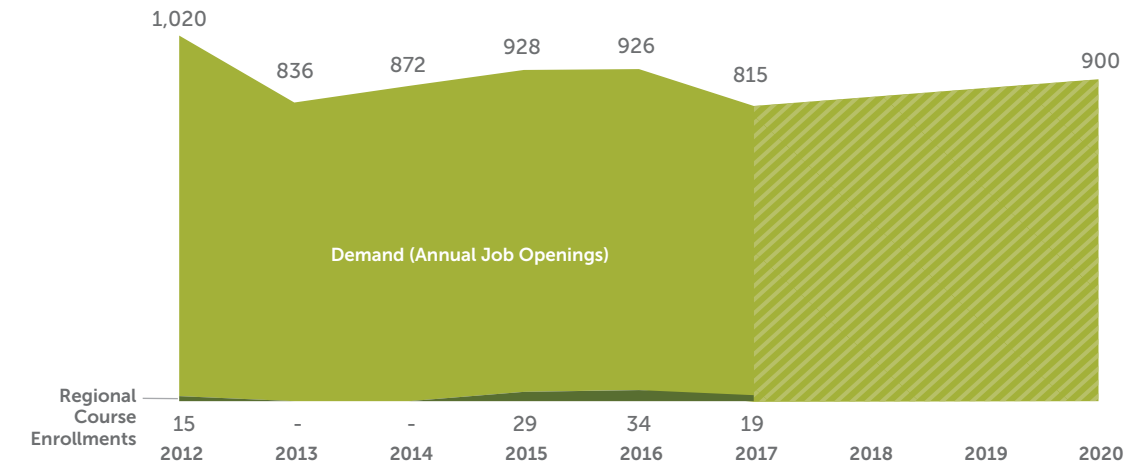
BIOTECHNOLOGY AND BIOMEDICAL TECHNOLOGY 0430.00



Relevant Occupations:

					
	Inspectors, Testers, Sorters, Samplers, and Weighers	Medical and Clinical Laboratory Technicians	Biological Technicians	Medical Equipment Repairers	Biomedical Engineers
2017–20 Average Annual Job Openings	663	127	66	34	11




Supply/Demand for Selected Occupations, 2012–20:





Strong Workforce Program Metrics, 2015–16:

Region	vs	California
-	Employed in the 2nd Quarter After Exit	73%
-	Job Closely Related to Field of Study (2014–15)	80%
\$5,320	Median Earnings in the 2nd Quarter After Exit	\$8,577
-	Employed in the 4th Quarter After Exit	73%
\$12,484	Median Annual Earnings	\$28,470
152%	Median Change in Annual Earnings	76%
-	Attained Living Wage	59%

Regional Colleges Offering Programs:

	
	Merced
Programs Offered	 
2016–17 Awards	5 2
2016–17 Course Enrollments	19

 Associate Program
 Certificate Program

Biotechnology and Biomedical Technology – 0430.00

Theories, operations, and technical skills used to assist researchers and engineers engaged in developing or manufacturing biological, biotechnical, or medical systems or products.

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Sources: EMSI 2018.2, Burning Glass, LaunchBoard, MIS Data Mart, COE TOP-SOC Crosswalk

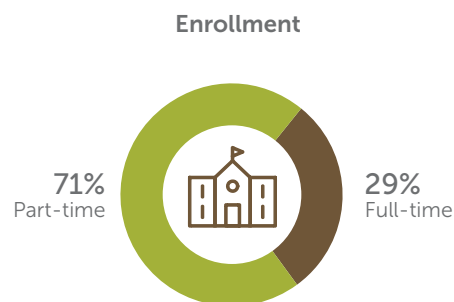
Occupation Data:

Occupation	3-Year 2017–20 Total Openings	Wage Range* (Entry, Median, Experienced Wage)		Typical Entry Level Education & Training Required	Sample of In-Demand Skills From Job Postings (2017)	% of Current Workers Age 55+
Inspectors, Testers, Sorters, Samplers, and Weighers	1,989	\$10.22	\$16.30 ▼ \$30.21	High school diploma or equivalent & 1 to 12 months training	Quality Assurance and Control, Scheduling, Data Entry	26%
Medical and Clinical Laboratory Technicians	380	\$15.24	\$21.41 ▼ \$30.78	Associate degree & none	Phlebotomy, Chemistry, Patient Care	21%
Biological Technicians	197	\$12.25	\$16.99 ▼ \$29.25	Bachelor's degree & none	Biology, Botany, Entomology, Chemistry	16%
Medical Equipment Repairers	101	\$13.86	\$21.77 ▼ \$36.06	Associate degree & 1 to 12 months training	Electronics Industry Knowledge, Technical Training, Calibration	25%
Biomedical Engineers	34	\$28.90	\$46.99 ▼ \$71.06	Bachelor's degree & none	Repair, Data Analysis, MATLAB, Physics*	~15%

*Entry hourly earnings is 10th percentile wage,
experienced hourly earnings is 90th percentile wage.

*Due to low regional demand, these skills
are based on statewide job postings.

Student Demographics, 2016–17 (14 Total Students):





Relevant Occupations:



Medical and Clinical
Laboratory Technicians

2017–20
Average Annual
Job Openings

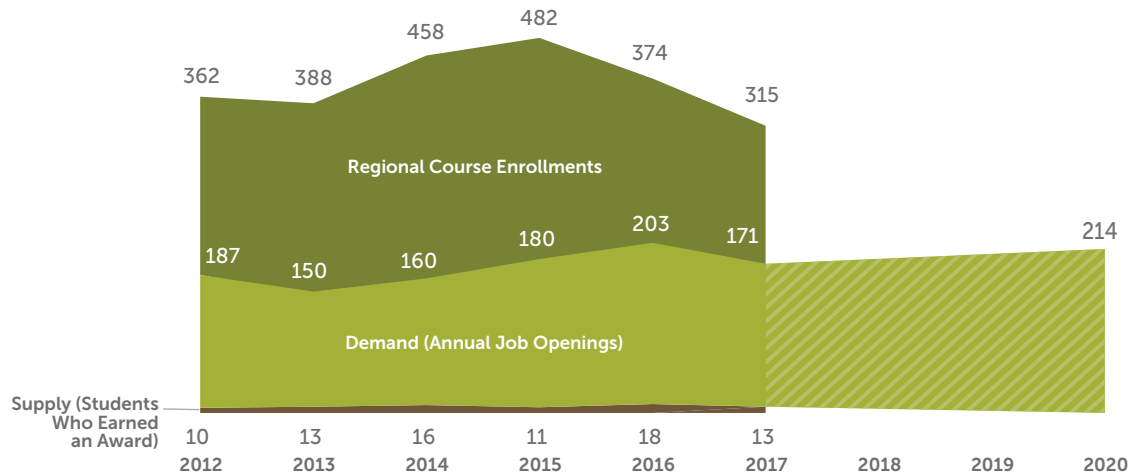
127



Medical and Clinical
Laboratory Technologists

87

Supply/Demand for Selected Occupations, 2012–20:



Strong Workforce Program Metrics, 2015–16:

Region	vs	California
78%	Employed in the 2nd Quarter After Exit	78%
-	Job Closely Related to Field of Study (2014–15)	-
\$7,134	Median Earnings in the 2nd Quarter After Exit	\$7,863
83%	Employed in the 4th Quarter After Exit	83%
\$26,697	Median Annual Earnings	\$28,064
168%	Median Change in Annual Earnings	125%
67%	Attained Living Wage	67%

Regional Colleges Offering Programs:

298

Programs Offered	
2016–17 Awards	16 9
2016–17 Course Enrollments	315

Associate Program
 Certificate Program

Electron Microscopy – 0934.70

Principles, procedures, and techniques associated with electron microscopes.

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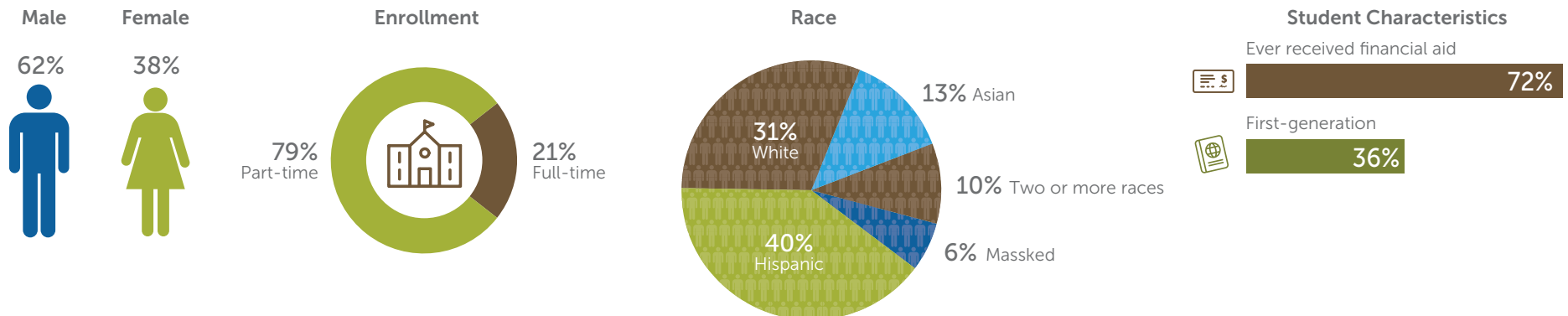
Sources: EMSI 2018.2, Burning Glass, LaunchBoard, MIS Data Mart, COE TOP-SOC Crosswalk

Occupation Data:

Occupation	3-Year 2017–20 Total Openings	Wage Range* (Entry, Median, Experienced Wage)		Typical Entry Level Education & Training Required	Sample of In-Demand Skills From Job Postings (2017)	% of Current Workers Age55+
Medical and Clinical Laboratory Technicians	380	\$15.24	\$21.41 ▼ \$30.78	Associate degree & none	Phlebotomy, Chemistry, Patient Care	21%
Medical and Clinical Laboratory Technologists	260	\$26.91	\$41.46 ▼ \$54.55	Bachelor's degree & none	Microbiology, Quality Assurance and Control Customer Service	23%

*Entry hourly earnings is 10th percentile wage,
experienced hourly earnings is 90th percentile wage.

Student Demographics, 2016–17 (98 Total Students):



Central Valley/Mother Lode Region LABORATORY SCIENCE TECHNOLOGY

0955.00



Relevant Occupations:



Inspectors, Testers,
Sorters, Samplers,
and Weighers

663



Medical and Clinical
Laboratory Technicians

127



Biological
Technicians

66



Chemical
Technicians

60

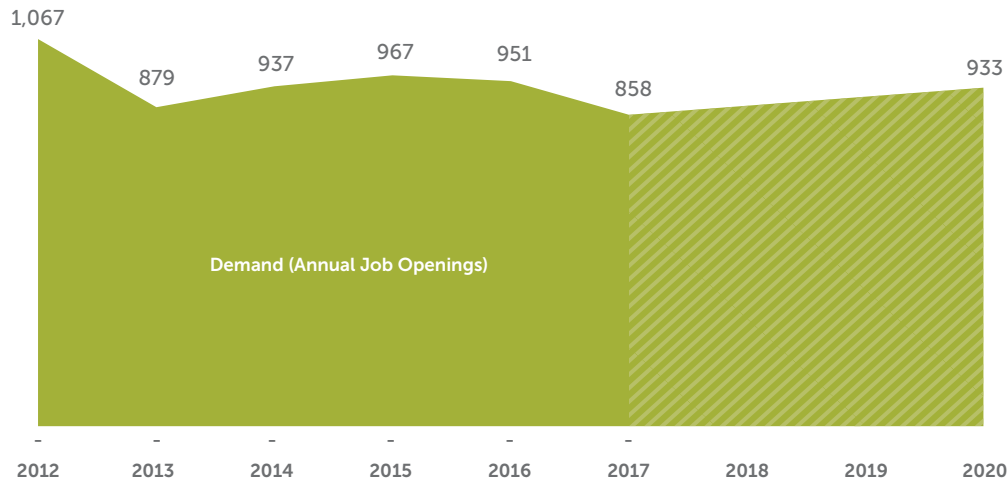


Chemical Plant
and System Operators

17

2017–20
Average Annual
Job Openings



Supply/Demand for Selected Occupations, 2012–20:



Strong Workforce Program Metrics, 2015–16:

Region	vs	California
-	Job Closely Related to Field of Study (2014–15)	100%
-	Median Earnings in the 2nd Quarter After Exit	\$7,748
-	Median Annual Earnings	\$29,639
-	Median Change in Annual Earnings	42%

Regional Colleges Offering Programs:

	 Fresno City
Programs Offered	
2016–17 Awards	-
2016–17 Course Enrollments	-

 Associate Program
 Certificate Program

Laboratory Science Technology – 0955.00

Practical analytical applications of inorganic chemistry, biochemistry, and other physical and biological sciences in laboratory, testing, and quality control settings in industry and science.

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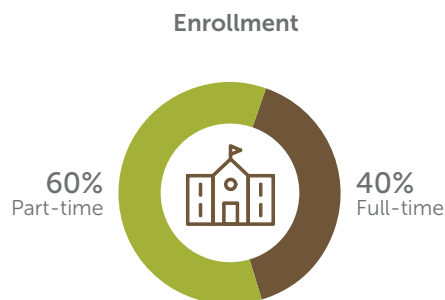
Sources: EMSI 2018.2, Burning Glass, LaunchBoard, MIS Data Mart, COE TOP-SOC Crosswalk

Occupation Data:

Occupation	3-Year 2017–20 Total Openings	Wage Range* (Entry, Median, Experienced Wage)			Typical Entry Level Education & Training Required	Sample of In-Demand Skills From Job Postings (2017)	% of Current Workers Age 55+
Inspectors, Testers, Sorters, Samplers, and Weighers	1,989	\$10.22	\$16.30 ▼	\$30.21	High school diploma or equivalent & 1 to 12 months training	Quality Assurance and Control, Scheduling, Data Entry	26%
Medical and Clinical Laboratory Technicians	380	\$15.24	\$21.41 ▼	\$30.78	Associate degree & none	Phlebotomy, Chemistry, Patient Care	21%
Biological Technicians	197	\$12.25	\$16.99 ▼	\$29.25	Bachelor's degree & none	Biology, Botany, Entomology, Chemistry	16%
Chemical Technicians	181	\$11.45	\$15.49 ▼	\$26.55	Associate degree & 1 to 12 months training	Chemistry, Quality Assurance and Control, Gas Chromatography	23%
Chemical Plant and System Operators	52	\$19.59	\$28.23 ▼	\$41.86	High school diploma or equivalent & 1 to 12 months training	No Job Postings	~20%

*Entry hourly earnings is 10th percentile wage,
experienced hourly earnings is 90th percentile wage.

Student Demographics, 2016–17 (5 Total Students):





































































Students looking for a career that allows them to be involved in their community and work in making a difference, not only directly with their community, but also with their fellow citizens.

Strong Workforce Program Metrics, 2015–16 unless otherwise noted

Central Valley/ Mother Lode	Metric	CA Median
40,986	Course Enrollments (2016–17)	26,926
1,599	Students Who Got a Degree or Certificate (2016–17)	1,133
1,316	Students who Transferred	955
82%	Employed in the 2nd Quarter After Exit	83%
63%	Job Closely Related to Field of Study (2014–15)	64%
\$7,215	Median Earnings in the 2nd Quarter After Exit	\$6,914
79%	Employed in the 4th Quarter After Exit	81%
\$27,106	Median Annual Earnings	\$27,474
64%	Median Change in Annual Earnings	58%
67%	Attained Living Wage	76%

TOP Program	Colleges Offering	Catalog Name	Award Offered
2105.00 – Administration of Justice	Bakersfield	Administration of Justice	
		Criminal Justice	
	Cerro Coso	Administration of Justice	 
	Clovis	Administration of Justice	
		Criminal Justice: Law Enforcement	
		Criminology – Law Enforcement	
	Fresno City	Administration of Justice	
		Criminology	 
		Law Enforcement	 
		Pre-Academy Training	
	Merced	Administration of Justice	
		Criminal Justice	 
	Modesto Junior	Administration of Justice	
	Porterville	Administration of Justice	 
	Reedley	Administration of Justice	
		Criminology-Law Enforcement	 
	San Joaquin Delta	Administration of Justice	
		Law Enforcement	 
	Sequoias	Administration of Justice	
		Administration of Justice: Law Enforcement	
	Taft	Administration of Justice	
		Criminal Justice Administration	
	West Hills Coalinga	Administration of Justice	
	West Hills Lemoore	Administration of Justice	
		Administration of Justice: Law Enforcement	

TOP Program	Colleges Offering	Catalog Name	Award Offered
2105.10 – Corrections	Bakersfield	Correctional Administration	
	Clovis	Criminology – Corrections	 
	Fresno City	Correctional Science	 
	Reedley	Criminology – Corrections	 
	San Joaquin Delta	Correctional Science	 
	Sequoias	Administration of Justice-Corrections	
	Taft	Criminal Justice Administration: Corrections	 
	West Hills Coalinga	Administration of Justice: Correctional Science	
	West Hills Lemoore	Administration of Justice: Correctional Science	
		Correctional Rehabilitation	
2105.40 – Forensics, Evidence, and Investigation	Fresno City	Forensic Evidence	 
		Liberal Arts: Anthropology/Criminology	
2105.50 – Police Academy (p.106)	Fresno City	Basic Police Academy	
	San Joaquin Delta	Basic Peace Officer Academy	
		Police Science	
	Sequoias	POST Certified Basic Police Academy	
2133.00 – Fire Technology	Bakersfield	Executive Chief Fire Officer	
		Fire Technology	 
	Columbia	Fire Science	
		Fire Technology	 
	Fresno City	Fire Technology	 
	Merced	Fire Technology	 
	Modesto Junior	Fire Science	 
	Porterville	Fire Technology Structural Firefighter	
2133.10 – Wildland Fire Technology	Bakersfield	Wildland Fire Technology	

TOP Program	Colleges Offering	Catalog Name	Award Offered
2133.50 – Fire Academy (p.108)	Bakersfield	Fire Fighter I Academy	
	Fresno City	Basic Fire Academy	
	Modesto Junior	Fire Science (Fire Academy)	
2199.00 – Other Public and Protective Services	Porterville	Public Safety	

Central Valley/Mother Lode Region POLICE ACADEMY

2105.50



Relevant Occupations:

2017–20
Average Annual
Job Openings



Police and Sheriff's
Patrol Officers

564



Detectives and Criminal
Investigators

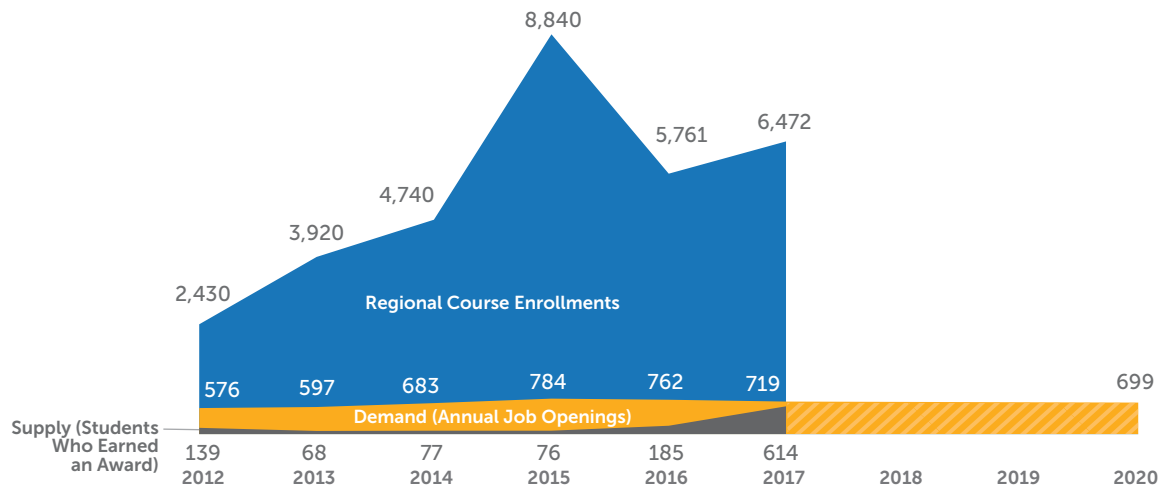
68



Private Detectives and
Investigators

67








Supply/Demand for Selected Occupations, 2012–20:



Strong Workforce Program Metrics, 2015–16:

Region	vs	California
92%	Employed in the 2nd Quarter After Exit	91%
79%	Job Closely Related to Field of Study (2014–15)	80%
\$16,405	Median Earnings in the 2nd Quarter After Exit	\$16,405
91%	Employed in the 4th Quarter After Exit	90%
\$54,352	Median Annual Earnings	\$64,788
27%	Median Change in Annual Earnings	34%
87%	Attained Living Wage	90%

Regional Colleges Offering Programs:

	 Fresno City	 San Joaquin Delta	 Sequoias
Programs Offered		 	
2016–17 Awards	27	6 486	101
2016–17 Course Enrollments	4,847	413	612
2015–16 Transfers	86	<10	18

Regional Colleges Offering Courses:

 Bakersfield	591 11	2016–17 Enrollments 2015–16 Transfers
 Cerro Coso	- <10	2016–17 Enrollments 2015–16 Transfers



Dash (-) indicates data are insufficient or have been suppressed.

Police Academy – 2105.50

Principles and techniques of law enforcement specific to the requirements of the California Commission on Peace Officer Standards and Training (POST).

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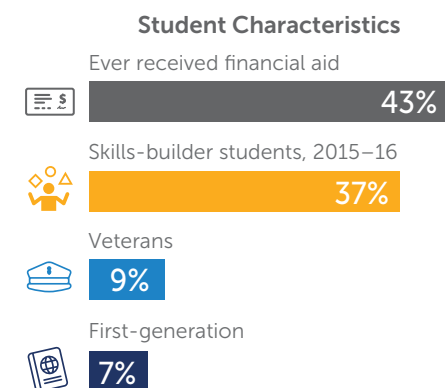
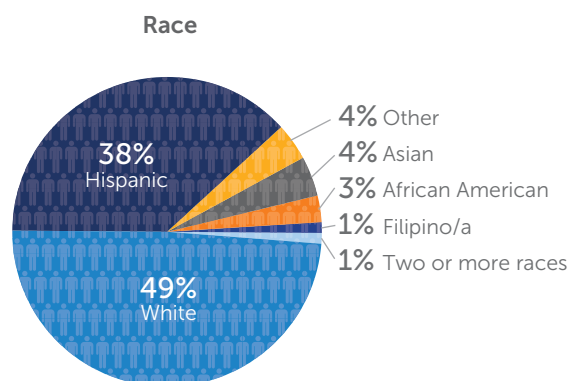
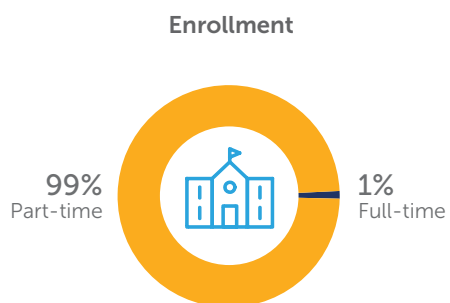
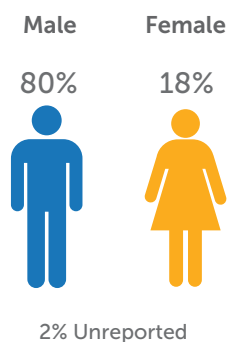
Sources: EMSI 2018.2, Burning Glass, LaunchBoard, MIS Data Mart, COE TOP-SOC Crosswalk

Occupation Data:

Occupation	3-Year 2017–20 Total Openings	Wage Range* (Entry, Median, Experienced Wage)	Typical Entry Level Education & Training Required	Sample of In Demand Skills From Job Postings (2017)	% of Current Workers Age 45+
Police and Sheriff's Patrol Officers	1,692	\$23.82 \$34.64 \$54.35	High school diploma or equivalent & 1 to 12 months training	Cardiopulmonary Resuscitation (CPR), Crowd Control, Record Keeping	33%
Detectives and Criminal Investigators	203	\$26.62 \$40.46 \$62.26	High school diploma or equivalent & 1 to 12 months training	Warrants, Surveillance, Case Presentation	43%
Private Detectives and Investigators	202	\$16.01 \$30.19 \$43.34	High school diploma or equivalent & 1 to 12 months training	Criminal Justice, Surveillance, Accurate Transcription	47%

*Entry hourly earnings is 10th percentile wage,
experienced hourly earnings is 90th percentile wage.

Student Demographics, 2016–17 (3,389 Total Students):



Central Valley/Mother Lode Region FIRE ACADEMY

2133.50



Relevant Occupations:



Firefighters

305

2017–20
Average Annual
Job Openings



Fire Inspectors and
Investigators

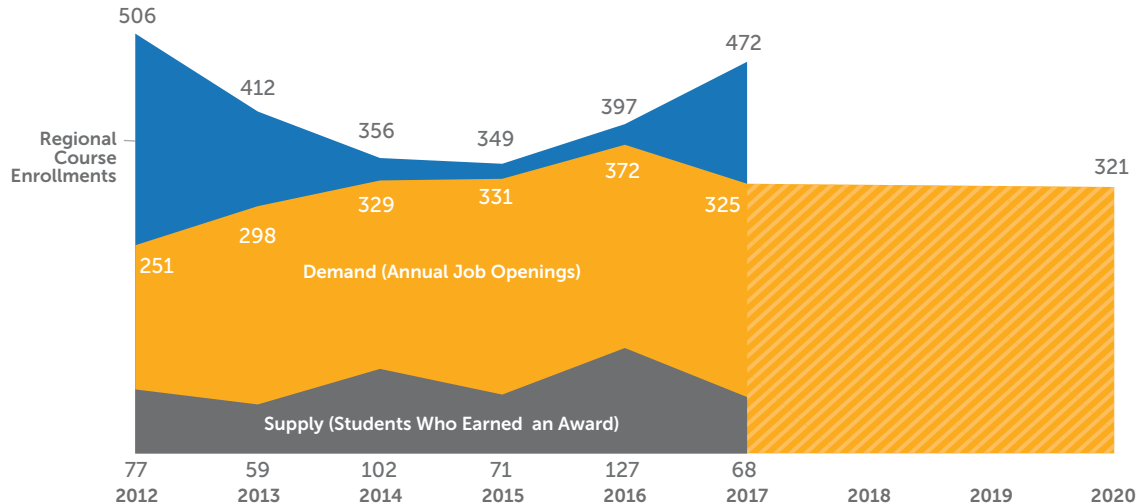
11



Forest Fire Inspectors and
Prevention Specialists

4

Supply/Demand for Selected Occupations, 2012–20:



Strong Workforce Program Metrics, 2015–16:

Region	vs	California
92%	Employed in the 2nd Quarter After Exit	85%
93%	Job Closely Related to Field of Study (2014–15)	83%
\$9,082	Median Earnings in the 2nd Quarter After Exit	\$9,293
82%	Employed in the 4th Quarter After Exit	83%
\$39,568	Median Annual Earnings	\$33,091
95%	Median Change in Annual Earnings	68%
66%	Attained Living Wage	76%

Regional Colleges Offering Programs:

	Bakersfield	Fresno City	Modesto Junior
Programs Offered			
2016–17 Awards	-	33	35
2016–17 Course Enrollments	10	211	192

*Program designated as "Skills Recognition Award" in 2017–18 course catalog.

Regional Colleges Offering Courses:

	Sequoias	59	2016–17 Enrollments
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Fire Academy – 2133.50

Studies specific to local and state training requirements for employment and post-employment advancement.

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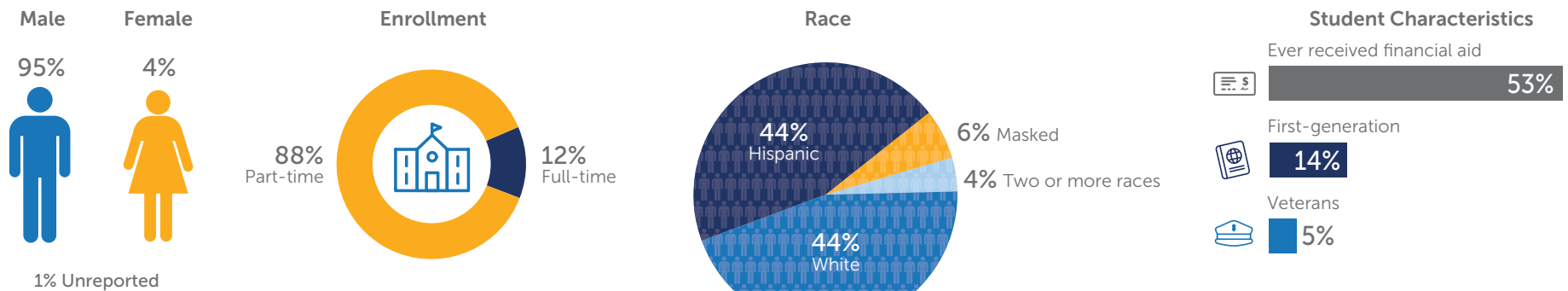
Sources: EMSI 2018.2, Burning Glass, LaunchBoard, MIS Data Mart, COE TOP-SOC Crosswalk

Occupation Data:

Occupation	3-Year 2017–20 Total Openings	Wage Range* (Entry, Median, Experienced Wage)		Typical Entry Level Education & Training Required	Sample of In-Demand Skills From Job Postings (2017)	% of Current Workers Age 45+
Firefighters	915	\$16.93	\$27.83 \$46.40	Postsecondary nondegree award & more than 12 months training	HAZMAT, Emergency Services, Fire Suppression	33%
Fire Inspectors and Investigators	33	\$24.24	\$46.57 \$63.98	Postsecondary nondegree award & 1 to 12 months training	Fire Protection, Budgeting, Prevention Programs	56%
Forest Fire Inspectors and Prevention Specialists	13	\$24.44	\$32.19 \$56.12	High school diploma or equivalent & 1 to 12 months training	Customer Service, Fire Suppression	n/a

*Entry hourly earnings is 10th percentile wage, experienced hourly earnings is 90th percentile wage.

Student Demographics, 2016–17 (234 Total Students):










































The retail, hospitality, and tourism sector includes training in lodging, restaurants, retail stores, theme parks, cruise lines, and in transportation and other tourism services. This sector supports employers through specific programs teaching highly valued interpersonal and soft skills, advanced workplace skills, technical knowledge and industry-specific skills.

Strong Workforce Program Metrics, 2015–16 unless otherwise noted

Central Valley/ Mother Lode	Metric	CA Median
7,036	Course Enrollments (2016–17)	7,675
174	Students Who Got a Degree or Certificate (2016–17)	185
240	Students who Transferred	240
61%	Employed in the 2nd Quarter After Exit	66%
79%	Job Closely Related to Field of Study (2014–15)	71%
\$4,956	Median Earnings in the 2nd Quarter After Exit	\$5,709
63%	Employed in the 4th Quarter After Exit	67%
\$18,085	Median Annual Earnings	\$21,557
84%	Median Change in Annual Earnings	61%
36%	Attained Living Wage	40%

TOP Program	Colleges Offering	Catalog Name	Award Offered
0506.50 – Retail Store Operations and Management	Bakersfield	Retail Management	
	Fresno City	Marketing, Retail Management	 
	Modesto Junior	Retail Management (WAFC)	
	San Joaquin Delta	Retail Management	
		Retail Management and Merchandising	
	West Hills Coalinga	Business: Retail Business Management	 
0514.40 – Office Management	San Joaquin Delta	Office Management	 
1301.00 – Family and Consumer Sciences, General	San Joaquin Delta	Family and Consumer Sciences	
1302.00 – Interior Design and Merchandising	San Joaquin Delta	Interior Design	
1303.10 – Fashion Design	San Joaquin Delta	Apparel Design	 
	Sequoias	Fashion Design	 
1303.20 – Fashion Merchandising	Fresno City	Fashion Merchandising (Marketing/Home Economics)	 
	San Joaquin Delta	Fashion Merchandising	 
	Sequoias	Fashion Merchandising	 
1306.30 – Culinary Arts (p.116)	Bakersfield	Culinary Arts	 
	Columbia	Baking and Pastry Arts	
		Chef	
		Hospitality Management: Culinary Arts	
		Pantry & Dessert Chef	
	Merced	Foods and Nutrition	 
	San Joaquin Delta	Advanced Culinary Arts	
		Baking & Pastry	
		Culinary Arts	 

TOP Program	Colleges Offering	Catalog Name	Award Offered
1307.10 – Restaurant and Food Services and Management (p.118)	Bakersfield	Food Service Management	
	Columbia	Hospitality Management: Hotel and Restaurant Management	
		Hotel and Restaurant Management	
		Restaurant Management	
	Fresno City	Food Services Management	 
	West Hills Lemoore	Chef Apprentice	
		Restaurant Management	
1307.20 – Lodging Management	West Hills Lemoore	Hotel Management	
1307.30 – Resort and Club Management	West Hills Lemoore	Casino Management	
		Hotel, Restaurant, & Casino Management	

The following TOP code is detailed in this sector, but is technically claimed by the Business and Entrepreneurship Sector:

- 0506.30 – Management Development and Supervision (p.114)

Central Valley/Mother Lode Region MANAGEMENT DEVELOPMENT AND SUPERVISION

0506.30



Relevant Occupations:



First-Line Supervisors of Office and
Administrative Support Workers

1,689



Food Service Managers

493



Administrative Services
Managers

254

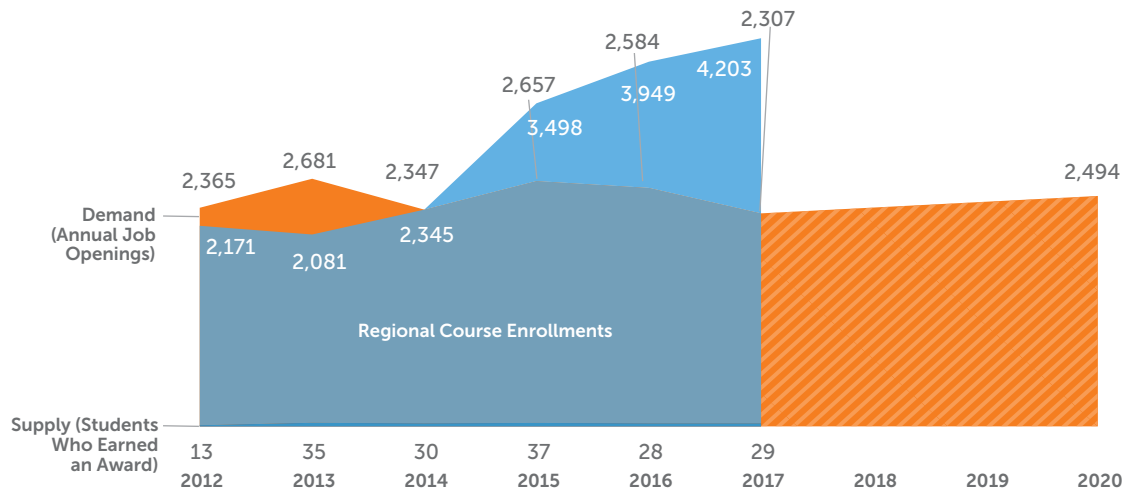


Lodging Managers

57

2017–20
Average Annual
Job Openings

Supply/Demand for Selected Occupations, 2012–20:



Strong Workforce Program Metrics, 2015–16:

Region	vs	California
82%	Employed in the 2nd Quarter After Exit	82%
100%	Job Closely Related to Field of Study (2014–15)	92%
\$10,213	Median Earnings in the 2nd Quarter After Exit	\$10,210
82%	Employed in the 4th Quarter After Exit	83%
\$40,655	Median Annual Earnings	\$38,745
42%	Median Change in Annual Earnings	32%
81%	Attained Living Wage	70%

Regional Colleges Offering Programs:

	Merced	Modesto Junior	San Joaquin Delta	Taft
Programs Offered				
2016–17 Awards	2 -	1 2	7	2 21
2016–17 Course Enrollments	2,900	100	431	598
2015–16 Transfers	55	12	23	16

Regional Colleges Offering Courses:

	Cerro Coso	97 <10	2016–17 Enrollments 2015–16 Transfers
	Porterville	77 <10	2016–17 Enrollments 2015–16 Transfers



Dash (-) indicates data are insufficient or have been suppressed.

Management Development and Supervision – 0506.30

Supervising employees; budgeting, analysis, and coordinating clerical activities; evaluating, organizing, and revising office operations; design of facilities to provide maximum production; evaluating employee records; and coordinating activities of clerical departments and workers, dispute resolution, and mediation.

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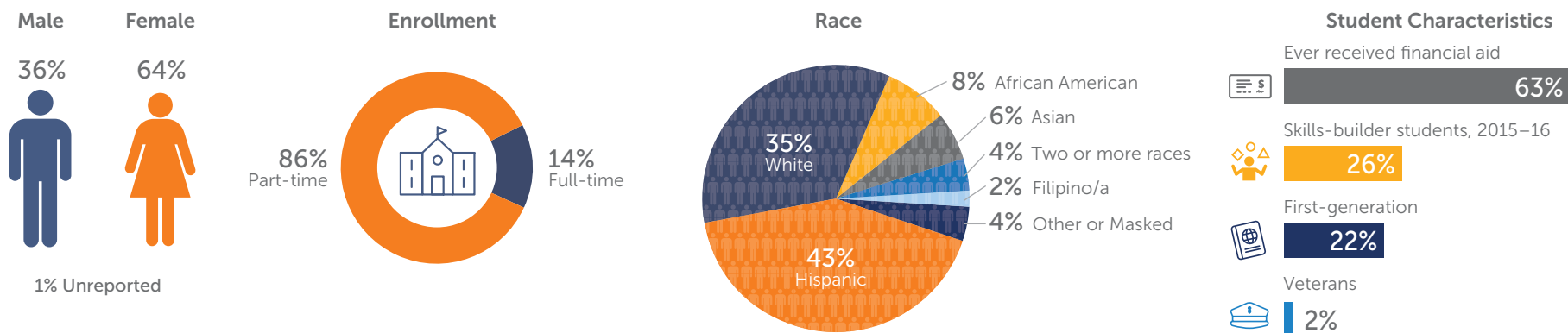
Sources: EMSI 2018.2, Burning Glass, LaunchBoard, MIS Data Mart, COE TOP-SOC Crosswalk

Occupation Data:

Occupation	3-Year 2017–20 Total Openings	Wage Range* (Entry, Median, Experienced Wage)		Typical Entry Level Education & Training Required	Sample of In-Demand Skills From Job Postings (2017)	% of Current Workers Age 55+
First-Line Supervisors of Office and Administrative Support Workers	5,068	\$15.53	\$24.54 ▼ \$37.52	High school diploma or equivalent & none	Customer Service, Scheduling, Accounting	25%
Food Service Managers	1,480	\$9.78	\$16.06 ▼ \$32.49	High school diploma or equivalent & none	Scheduling, Cost Control, Guest Services	18%
Administrative Services Managers	763	\$23.47	\$39.72 ▼ \$64.08	Bachelor's degree & none	Budgeting, Scheduling, Project Management, Teamwork/Collaboration	33%
Lodging Managers	170	\$12.87	\$18.64 ▼ \$36.35	High school diploma or equivalent & none	Budgeting, Community Relations, Guest Services	27%

*Entry hourly earnings is 10th percentile wage,
experienced hourly earnings is 90th percentile wage.

Student Demographics, 2016–17 (1,548 Total Students):



Central Valley/Mother Lode Region CULINARY ARTS

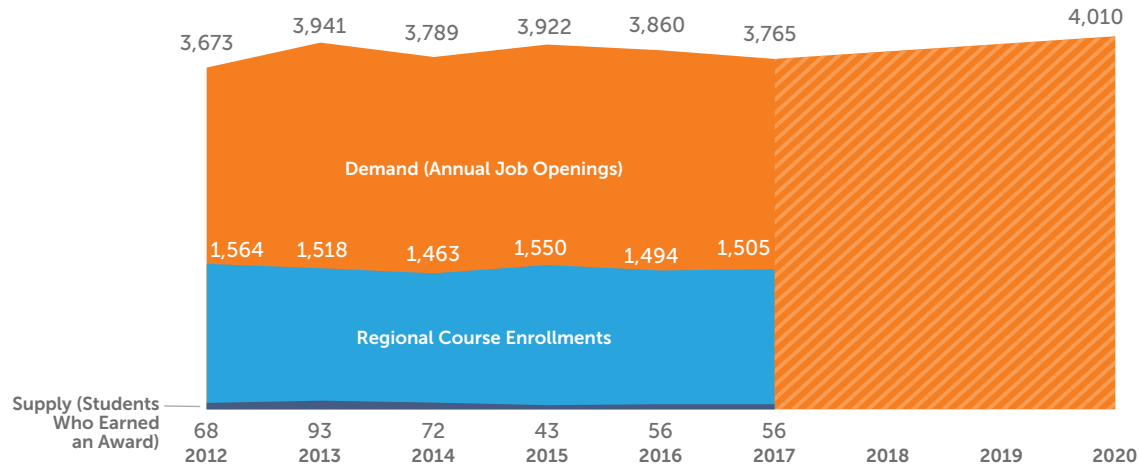
1306.30



Relevant Occupations:

					
	First-Line Supervisors of Food Preparation and Serving Workers	Cooks, Restaurant	Cooks, Institution and Cafeteria	Chefs and Head Cooks	Cooks, All Other
2017–20 Average Annual Job Openings	1,584	1,558	645	200	23













Supply/Demand for Selected Occupations, 2012–20:






Strong Workforce Program Metrics, 2015–16:

Region	vs	California
59%	Employed in the 2nd Quarter After Exit	69%
80%	Job Closely Related to Field of Study (2014–15)	72%
\$5,188	Median Earnings in the 2nd Quarter After Exit	\$5,608
61%	Employed in the 4th Quarter After Exit	68%
\$16,988	Median Annual Earnings	\$20,119
54%	Median Change in Annual Earnings	70%
38%	Attained Living Wage	39%

Regional Colleges Offering Programs:

				
	Bakersfield	Columbia	Merced	San Joaquin Delta
Programs Offered	 	 	 	 
2016–17 Awards	9 15*	3 4	7 1	15 22
2016–17 Course Enrollments	564	-	32	575
2015–16 Transfers	<10	-	<10	10

Regional Colleges Offering Courses:

	Fresno City	249 11	2016–17 Enrollments 2015–16 Transfers
	Sequoias	69 <10	2016–17 Enrollments 2015–16 Transfers
	West Hills Lemoore	16 -	2016–17 Enrollments 2015–16 Transfers



Culinary Arts – 1306.30

Selection, storage, preparation, and service of food in quantity, including the culinary techniques used by chefs, institutional cooks, bakers, and catering services.

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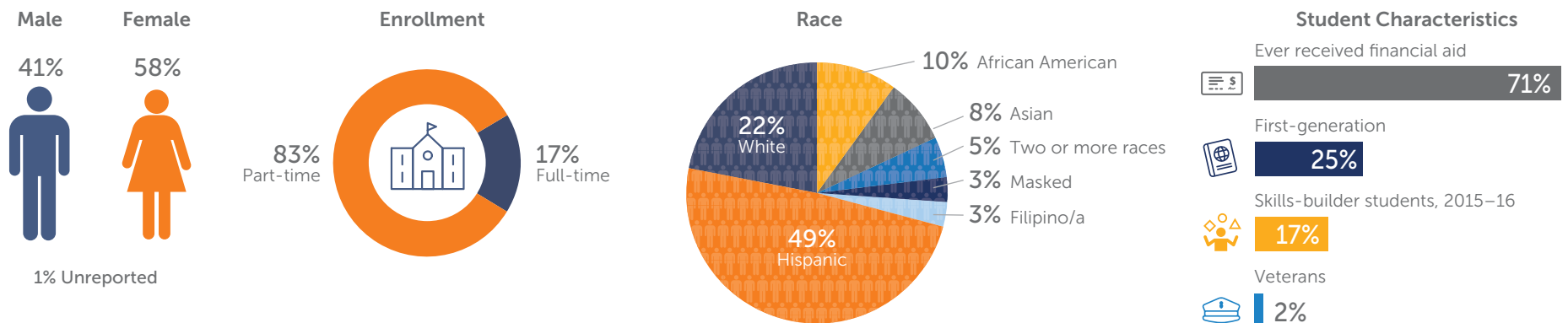
Sources: EMSI 2018.2, Burning Glass, LaunchBoard, MIS Data Mart, COE TOP-SOC Crosswalk

Occupation Data:

Occupation	3-Year 2017–20 Total Openings	Wage Range* (Entry, Median, Experienced Wage)		Typical Entry Level Education & Training Required	Sample of In-Demand Skills From Job Postings (2017)	% of Current Workers Age 55+
First-Line Supervisors of Food Preparation and Serving Workers	4,752	\$10.57	<div><div>\$14.38</div></div> \$24.69	High school diploma or equivalent & none	Customer Service Retail Industry Knowledge, Store Operations	12%
Cooks, Restaurant	4,674	\$10.03	<div><div>\$12.11</div></div> \$15.99	No formal education credential & 1 to 12 months training	Food Preparation and Safety, Cleaning, Scheduling	13%
Cooks, Institution and Cafeteria	1,936	\$10.84	<div><div>\$14.47</div></div> \$20.14	No formal education credential & less than 1 month training	Meal Preparation, Scheduling, Child Care	23%
Chefs and Head Cooks	599	\$10.39	<div><div>\$17.38</div></div> \$33.21	High school diploma or equivalent & none	Food Preparation, Cost Control, Nutrition, Scheduling	17%
Cooks, All Other	70	\$11.90	<div><div>\$14.82</div></div> \$22.10	No formal education credential & 1 to 12 months training	No Job Postings	~14%

*Entry hourly earnings is 10th percentile wage,
experienced hourly earnings is 90th percentile wage.

Student Demographics, 2016–17 (671 Total Students):



Central Valley/Mother Lode Region

RESTAURANT AND FOOD SERVICES AND MANAGEMENT 1307.10



Relevant Occupations:



First-Line Supervisors of Food Preparation and Serving Workers

1,584



Food Service Managers

493

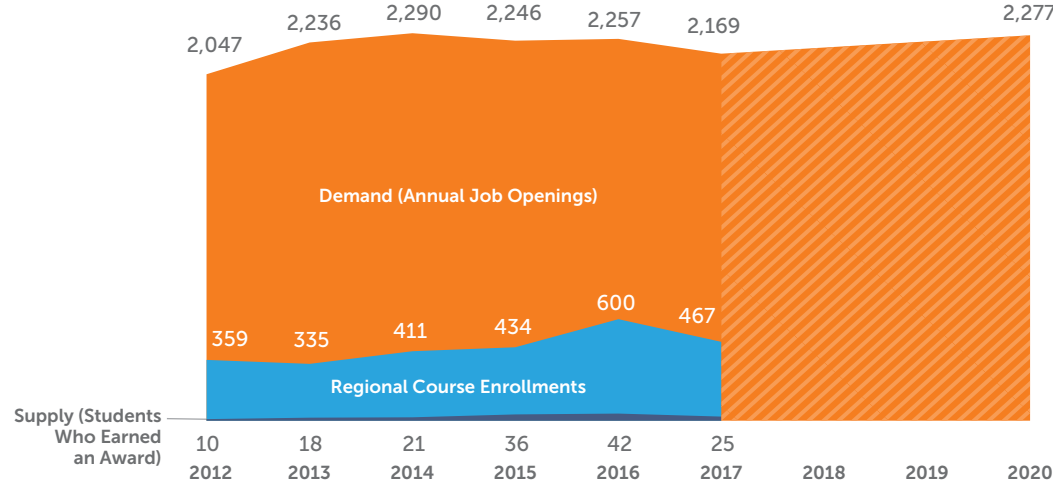


Chefs and Head Cooks

200

2017–20
Average Annual
Job Openings











Supply/Demand for Selected Occupations, 2012–20:



Strong Workforce Program Metrics, 2015–16:

Region	vs	California
54%	Employed in the 2nd Quarter After Exit	71%
100%	Job Closely Related to Field of Study (2014–15)	74%
\$4,724	Median Earnings in the 2nd Quarter After Exit	\$5,984
56%	Employed in the 4th Quarter After Exit	71%
\$17,300	Median Annual Earnings	\$20,490
150%	Median Change in Annual Earnings	111%
24%	Attained Living Wage	43%

Regional Colleges Offering Programs:

	 Bakersfield	 Columbia	 Fresno City	 West Hills Lemoore
Programs Offered		 	 	
2016–17 Awards	3	4 4*	- -	42
2016–17 Course Enrollments	-	-	-	464

*Columbia also awarded 5 other credit awards <6 semester units in 2016–17.

 Associate Program
 Certificate Program

Dash (-) indicates data are insufficient or have been suppressed.

Restaurant and Food Services and Management – 1307.10

Management and supervision of food and beverage service operations. Includes server and bartender training.

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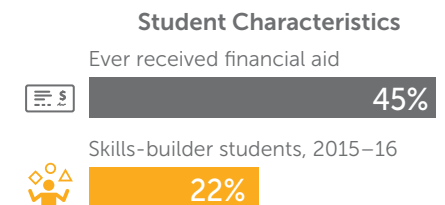
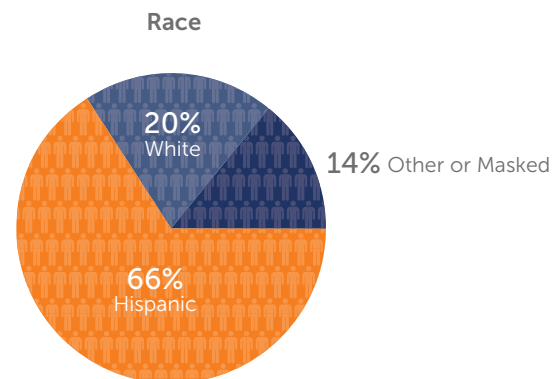
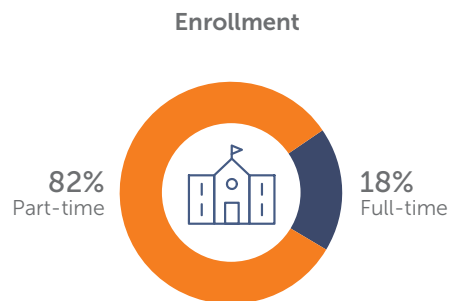
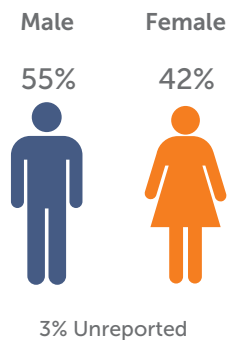
Sources: EMSI 2018.2, Burning Glass, LaunchBoard, MIS Data Mart, COE TOP-SOC Crosswalk

Occupation Data:

Occupation	3-Year 2017–20 Total Openings	Wage Range* (Entry, Median, Experienced Wage)		Typical Entry Level Education & Training Required	Sample of In-Demand Skills from Job Postings (2017)	% of Current Workers Age 55+
First-Line Supervisors of Food Preparation and Serving Workers	4,752	\$10.57	<div><div>\$14.38</div><div></div></div> \$24.69	High school diploma or equivalent & none	Customer Service, Retail Industry Knowledge, Store Operations	12%
Food Service Managers	1,480	\$9.78	<div><div>\$16.06</div><div></div></div> \$32.49	High school diploma or equivalent & none	Scheduling, Cost Control, Guest Services	18%
Chefs and Head Cooks	599	\$10.39	<div><div>\$17.38</div><div></div></div> \$33.21	High school diploma or equivalent & none	Food Preparation, Cost Control, Nutrition, Scheduling	17%

*Entry hourly earnings is 10th percentile wage,
experienced hourly earnings is 90th percentile wage.

Student Demographics, 2016–17 (152 Total Students):



APPENDIX A: DATA ELEMENT DICTIONARY

LaunchBoard Data Elements:

Regional Course Enrollments (2012–17): The number of registrations in courses assigned to the TOP code in the selected year.

Supply (Students Who Earned an Award) (2012–17): Number of distinct students who earned a locally-issued certificate, Chancellor's Office approved certificate, associate degree, and/or applied baccalaureate degree in the selected TOP code.

2016–17 Awards: Count of locally-issued certificates, Chancellor's Office approved certificates, associate degrees, and/or applied baccalaureate degrees awarded in the selected year in the selected TOP code.

2016–17 Course Enrollments: The number of registrations in courses assigned to the TOP code in the selected year.

2015–16 Transfers: Number of students who last took a course in the selected TOP code in the selected year, did not take a course at any community college the following year, and enrolled for the first time in a four-year institution the following year.

Employed in the 2nd Quarter After Exit (2015–16): Among all exiting students, the percentage who were employed two quarters after exiting the community college system.

Job Closely Related to Field of Study (2014–15): Among students who last took a course in the selected TOP code in the selected year and did not enroll in either a community college or four-year institution the following year, and responded to the CTE Outcomes Survey, the percentage who reported that they were employed in the same or similar field as their program of study.

Median Earnings in the 2nd Quarter After Exit (2015–16): Among exiting students, the median sum of wages earned two quarters after exiting the California community college system.

Employed in the 4th Quarter After Exit (2015–16): Among exiting students, the percentage who were employed four quarters after exiting the community college system.

Median Annual Earnings (2015–16): Among all exiting students, the median sum of wages in the first, second, third, and fourth quarters after exiting the community college system.

Median Change in Annual Earnings (2015–16): Among exiting students, the percentage change in earnings one year before and one year after exiting the California community college system.

APPENDIX A: DATA ELEMENT DICTIONARY

Attained Living Wage (2015–16): Among completers and skills-builder students who last took a course in the selected TOP code in the selected year and did not enroll in either a community college or four-year institution the following year, the proportion of students who had attained a living wage.

Gender (2016–17): Among students who enrolled in at least one course in the TOP code in the selected year, the unduplicated proportion who were in specific gender categories.

Part-Time students (2016–17): Among students who enrolled in at least one course in the TOP code in the selected year, the proportion who were part time in any term they were enrolled during the year at the selected institution.

Full-Time students (2016–17): Among students who enrolled in at least one course in the TOP code in the selected year, the proportion who were full time in each term they were enrolled during the year at the selected institution.

Race/Ethnicity (2016–17): Among students who enrolled in at least one course in the TOP code in the selected year, the unduplicated proportion who are in the Integrated Post-Secondary Education Data System ethnicity categories.

Ever received financial aid (2016–17): Among students who enrolled in at least one course in the TOP code in the selected year, the number who ever received a California Board of Governor's Fee-Waiver, Cal Grant, Federal Financial Aid Pell grant(s), and/or any other federal financial aid, excluding loans, at any California community college.

First-generation students (2016–17): Among students who enrolled in at least one course in the TOP code in the selected year, the proportion who reported that none of their parents/guardians attended college.

Skills-BUILDER students (2015–16): Proportion of students who took 0.5 or more non-introductory credit units in the selected TOP code in the selected year, passed all vocational courses in the selected year, did not receive a locally-issued certificate, Chancellor's Office approved certificate, or degree in the selected year, and did not enroll in any credit or noncredit community college or four-year institution the following year.

Veterans (2016–17): Among students who enrolled in at least one course in the TOP code in the selected year, the proportion who were ever flagged as veterans at any California community college.

For more detailed information, please see LaunchBoard's Data Element Dictionary: https://www.calpassplus.org/MediaLibrary/calpassplus/Launchboard/Documents/LaunchBoard_Program_DED_020117.pdf

APPENDIX A: DATA ELEMENT DICTIONARY

EMSI Data Elements:

2017–20 Annual Average Job Openings: Estimated employment change and turnover for an occupation for a given year. Openings are a combination of two types of data:

Job Growth an employer experiences greater demand for its products and hires new employees to increase production. If job growth is zero or negative, any and all openings are due to replacement needs.

Replacement Needs an employer hires replacement workers for employees who leave the workforce or change occupations. Replacement rates are derived from national ten-year, occupation-specific percentages published by the BLS Employment Projections (EP) program.

Openings data includes the new BLS “Separations” methodology in its calculation of replacement needs job opportunities.

Demand (Annual Job Openings) (2012–17): The total of annual openings for all the occupations combined.

Occupation: A set of activities or tasks that an employee performs. Employees that perform the same task are in the same occupation, whether or not they are in the same industry.

Wage Range (Entry, Median, Experienced Wage): A payment, usually money, for labor or services performed. The 10th percentile hourly earnings are often used as a proxy for entry-level wages, as 90% of workers within an occupation make more than this figure. The median wage is the middle reported wage. The 90th percentile wage is often used as a proxy for experienced workers, as only 10% of workers in an occupation make more than this.

Typical Entry-Level Education & Training Required: Typical entry-level education required represents the education level most often needed to enter an occupation. Training required indicates the on-the-job training most often needed to attain competency in the occupation.

Burning Glass Data Elements:

Sample of In-Demand Skills From Job Postings (2017): The top specialized skills appearing in job postings for the Central Valley/Mother Lode Region during the full year 2017. Specialized skills include professional and occupation-specific skills requested in job postings, including software and programming skills. When there were too few postings in the region from which to extract data, statewide data was used.

APPENDIX A: DATA ELEMENT DICTIONARY

Other Data Sources:

Data Mart: The number of awards conferred by each college in 2016–17 was used to corroborate the same data from LaunchBoard. The primary reason for using Data Mart data is because it can be updated at any time by the colleges, whereas LaunchBoard data is only refreshed quarterly.

Chancellor’s Office Curriculum Inventory (COCI, version 2.0): COCI is a centralized database of all California community college curricula. This database was used to determine which TOP programs and courses are offered at each college. In instances where COCI did not identify which type of award a college offers, individual course catalogs were consulted.

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