## Are Students Getting Employed in Their Field of Study?

Updated March 2021

There are two primary metrics to indicate whether or not students are employed in their field of study: percentage in a job closely related to field of study and top five industries of employment. Both of these metrics can be found on the [LaunchBoard Community College Pipeline](https://www.calpassplus.org/LaunchBoard/Community-College-Pipeline.aspx) under the Employment tab. This information is displayed in easy‐to‐read charts and data tables and can be viewed by college, district, region, or statewide. Users can select program information by the Taxonomy of Program 6-digit code (TOP6) level, Taxonomy of Program 4-digit level (TOP4), industry sector or occupational cluster, all‐Career Technical Education (CTE) or non‐CTE, and all program levels. Looking at both metrics may help ascertain if the skills taught in a program lead to employment in a related field.

## Percentage in a Job Closely Related to Field of Study

The most well‐known metric on employment in a related field, which is incorporated into the Chancellor’s Office Vision for Success and the Strong Workforce Program, comes from a question on the CTE Outcomes Survey. Students self‐report whether they are employed in the same or similar field as their program of study. The metric is included in three LaunchBoard dashboards: [Student Success Metrics](https://www.calpassplus.org/LaunchBoard/Student-Success-Metrics.aspx), [Strong Workforce Program](https://www.calpassplus.org/LaunchBoard/SWP.aspx) and [Community College Pipeline](https://www.calpassplus.org/LaunchBoard/Community-College-Pipeline.aspx). The latest data available from the Student Success Metrics shows that 13,175 out of 18,615 students or 71% of CTE students who responded to the question reported working in a job related to their field of study in 2017-18.

Table

Description automatically generated  
Table 1

Survey data is useful because it allows for students to evaluate whether they are applying the skills that they learned in college. However, it does have some limitations. The CTE Outcomes Survey is only sent to career education students that have graduated or taken at least nine units, and responses represent only a subset of all exiting students, which means that results may be based on a small number of people especially at the sector or TOP code level.

For more information on the CTEOS, visit the [Santa Rosa Junior College CTE Outcomes Survey website](https://cteos.santarosa.edu/faqs).

## Top Five Industries of Employment

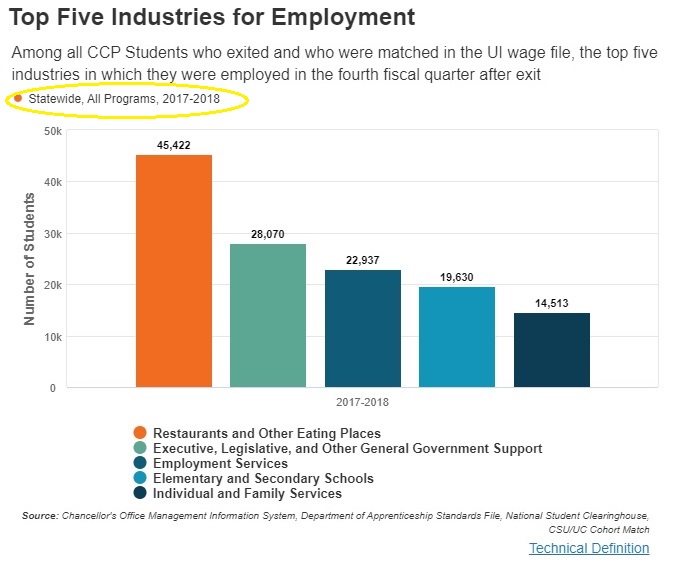
Another LaunchBoard metric identifies the top five industry sectors in which students are working as defined by the North American Industry Classification System (NAICS) code. Industry sectors reflect groupings of similar types of employers, such as construction or retail. NAICS code information comes from the Chancellor’s Office match with the California Unemployment Insurance (UI) Wage File, the same source used for other employment and earnings metrics.

NAICS codes are based on the activity that generates the majority of a business’ revenue. These codes are self‐assigned by employers and are usually provided on administrative, survey, or census reports collected by the government. Information from the UI file is only available for students who have exited all postsecondary institutions with valid social security numbers and is not used in the Vision for Success goal regarding students who are employed in their field of study. The UI wage match does not capture students who are self-employed, working in the cash economy, employed outside of California, employed by the Federal government or in the military. However, about 75-80% of exiting students are matched.

This metric is especially useful to consider if a program’s related occupations align with a specific industry sector or a limited number of sectors. For example, if a program trains medical assistants, then NAICS codes should include health‐related sectors. However, if a program trains business information workers, then students could work in many different industry settings including both construction and retail.

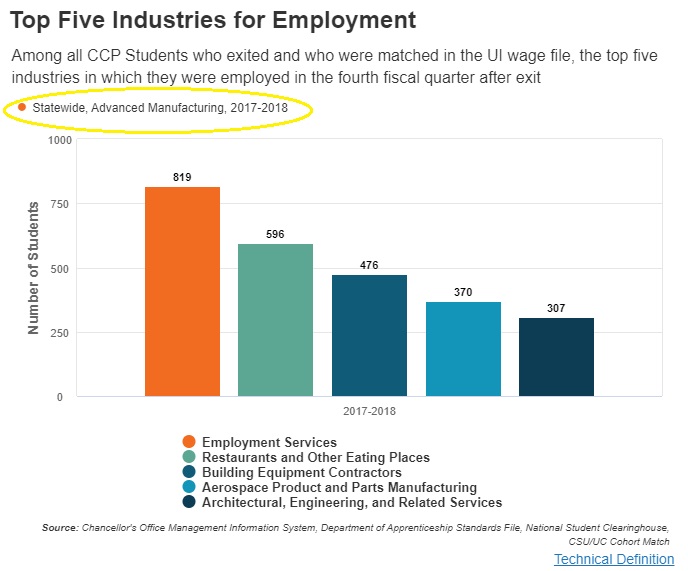
When a company reports earnings for a worker as part of the UI wage data to the state, that individual is considered to be employed in the sector without consideration of the occupation. If the student is a business information worker at a company with a utilities NAICS code, then that person is considered to be working in the utilities sector. A student could also graduate with an associate degree in telecommunications technology, get a job as an office clerk (not using skills acquired as part of the degree) and still be counted as working in the utilities sector.

Another complicating factor when considering NAICS codes is that some industry sectors may rely heavily on hiring workers through temporary agencies. Students hired through these types of third party employment agencies will be counted as working in code 5613 Employment Services (see table below) even though they may actually be working in a completely different sector like construction.

  
Table 1

The top five industry sectors when “All Programs” is selected on the Community College Pipeline for Statewide in 2017-18 include:

* Restaurants and Other Eating Places (7225)
* Executive, Legislative, and Other General Government Support (9211)
* Employment Services (5613)
* Elementary and Secondary Schools (6111)
* Individual and Family Services (6241)

  
Table 2

The top five industry sectors when “Advanced Manufacturing” is selected on the Community College Pipeline for Statewide in 2017-18 include:

* Employment Services (5613)
* Restaurants and Other Eating Places (7225)
* Building Equipment Contractors (2382)
* Aerospace Product and Parts Manufacturing (3364)
* Architectural, Engineering and Related Services (5413)

At the “All Programs” or “All CTE Programs” level, it is not entirely clear if students are employed in their field of study or related industry sector(s). However, if sectors or programs are selected, it becomes clearer whether or not students are getting employed in their field or related industry sector(s) as evident in the top five NAICS codes displayed for the Advanced Manufacturing sector. Sometimes, the titles of the four-digit NAICS codes displayed are not always clear. For NAICS code definitions at any level, go the Census Bureau website for the [2017 NAICS definitions document](https://www.census.gov/eos/www/naics/2017NAICS/2017_Definition_File.pdf).

## NAICS Codes

Just like TOP codes which can be expressed at the two, four and six-digit levels, NAICS codes can be expressed at different levels including two, three, four, five and six-digit. Beginning with the 2018-19 build of the Community College Pipeline, the top five industries for employment are expressed at the four-digit level. Please see table below for the 2017 US NAICS codes and titles for four-digit codes.

For more information on NAICS codes including descriptions, please refer to the Census Bureau website at <https://www.census.gov/naics/> including [downloadable versions](https://www.census.gov/eos/www/naics/downloadables/downloadables.html) and [NAICS code definitions](https://www.census.gov/eos/www/naics/2017NAICS/2017_Definition_File.pdf).

| **4-Digit Code** | **2017 NAICS US Title** |
| --- | --- |
| 1111 | Oilseed and Grain Farming |
| 1112 | Vegetable and Melon Farming |
| 1113 | Fruit and Tree Nut Farming |
| 1114 | Greenhouse, Nursery, and Floriculture Production |
| 1119 | Other Crop Farming |
| 1121 | Cattle Ranching and Farming |
| 1122 | Hog and Pig Farming |
| 1123 | Poultry and Egg Production |
| 1124 | Sheep and Goat Farming |
| 1125 | Aquaculture |
| 1129 | Other Animal Production |
| 1131 | Timber Tract Operations |
| 1132 | Forest Nurseries and Gathering of Forest Products |
| 1133 | Logging |
| 1141 | Fishing |
| 1142 | Hunting and Trapping |
| 1151 | Support Activities for Crop Production |
| 1152 | Support Activities for Animal Production |
| 1153 | Support Activities for Forestry |
| 2111 | Oil and Gas Extraction |
| 2121 | Coal Mining |
| 2122 | Metal Ore Mining |
| 2123 | Nonmetallic Mineral Mining and Quarrying |
| 2131 | Support Activities for Mining |
| 2211 | Electric Power Generation, Transmission and Distribution |
| 2212 | Natural Gas Distribution |
| 2213 | Water, Sewage and Other Systems |
| 2361 | Residential Building Construction |
| 2362 | Nonresidential Building Construction |
| 2371 | Utility System Construction |
| 2372 | Land Subdivision |
| 2373 | Highway, Street, and Bridge Construction |
| 2379 | Other Heavy and Civil Engineering Construction |
| 2381 | Foundation, Structure, and Building Exterior Contractors |
| 2382 | Building Equipment Contractors |
| 2383 | Building Finishing Contractors |
| 2389 | Other Specialty Trade Contractors |
| 3111 | Animal Food Manufacturing |
| 3112 | Grain and Oilseed Milling |
| 3113 | Sugar and Confectionery Product Manufacturing |
| 3114 | Fruit and Vegetable Preserving and Specialty Food Manufacturing |
| 3115 | Dairy Product Manufacturing |
| 3116 | Animal Slaughtering and Processing |
| 3117 | Seafood Product Preparation and Packaging |
| 3118 | Bakeries and Tortilla Manufacturing |
| 3119 | Other Food Manufacturing |
| 3121 | Beverage Manufacturing |
| 3122 | Tobacco Manufacturing |
| 3131 | Fiber, Yarn, and Thread Mills |
| 3132 | Fabric Mills |
| 3133 | Textile and Fabric Finishing and Fabric Coating Mills |
| 3141 | Textile Furnishings Mills |
| 3149 | Other Textile Product Mills |
| 3151 | Apparel Knitting Mills |
| 3152 | Cut and Sew Apparel Manufacturing |
| 3159 | Apparel Accessories and Other Apparel Manufacturing |
| 3161 | Leather and Hide Tanning and Finishing |
| 3162 | Footwear Manufacturing |
| 3169 | Other Leather and Allied Product Manufacturing |
| 3211 | Sawmills and Wood Preservation |
| 3212 | Veneer, Plywood, and Engineered Wood Product Manufacturing |
| 3219 | Other Wood Product Manufacturing |
| 3221 | Pulp, Paper, and Paperboard Mills |
| 3222 | Converted Paper Product Manufacturing |
| 3231 | Printing and Related Support Activities |
| 3241 | Petroleum and Coal Products Manufacturing |
| 3251 | Basic Chemical Manufacturing |
| 3252 | Resin, Synthetic Rubber, and Artificial and Synthetic Fibers and Filaments Manufacturing |
| 3253 | Pesticide, Fertilizer, and Other Agricultural Chemical Manufacturing |
| 3254 | Pharmaceutical and Medicine Manufacturing |
| 3255 | Paint, Coating, and Adhesive Manufacturing |
| 3256 | Soap, Cleaning Compound, and Toilet Preparation Manufacturing |
| 3259 | Other Chemical Product and Preparation Manufacturing |
| 3261 | Plastics Product Manufacturing |
| 3262 | Rubber Product Manufacturing |
| 3271 | Clay Product and Refractory Manufacturing |
| 3272 | Glass and Glass Product Manufacturing |
| 3273 | Cement and Concrete Product Manufacturing |
| 3274 | Lime and Gypsum Product Manufacturing |
| 3279 | Other Nonmetallic Mineral Product Manufacturing |
| 3311 | Iron and Steel Mills and Ferroalloy Manufacturing |
| 3312 | Steel Product Manufacturing from Purchased Steel |
| 3313 | Alumina and Aluminum Production and Processing |
| 3314 | Nonferrous Metal (except Aluminum) Production and Processing |
| 3315 | Foundries |
| 3321 | Forging and Stamping |
| 3322 | Cutlery and Handtool Manufacturing |
| 3323 | Architectural and Structural Metals Manufacturing |
| 3324 | Boiler, Tank, and Shipping Container Manufacturing |
| 3325 | Hardware Manufacturing |
| 3326 | Spring and Wire Product Manufacturing |
| 3327 | Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing |
| 3328 | Coating, Engraving, Heat Treating, and Allied Activities |
| 3329 | Other Fabricated Metal Product Manufacturing |
| 3331 | Agriculture, Construction, and Mining Machinery Manufacturing |
| 3332 | Industrial Machinery Manufacturing |
| 3333 | Commercial and Service Industry Machinery Manufacturing |
| 3334 | Ventilation, Heating, Air-Conditioning, and Commercial Refrigeration Equipment Manufacturing |
| 3335 | Metalworking Machinery Manufacturing |
| 3336 | Engine, Turbine, and Power Transmission Equipment Manufacturing |
| 3339 | Other General Purpose Machinery Manufacturing |
| 3341 | Computer and Peripheral Equipment Manufacturing |
| 3342 | Communications Equipment Manufacturing |
| 3343 | Audio and Video Equipment Manufacturing |
| 3344 | Semiconductor and Other Electronic Component Manufacturing |
| 3345 | Navigational, Measuring, Electromedical, and Control Instruments Manufacturing |
| 3346 | Manufacturing and Reproducing Magnetic and Optical Media |
| 3351 | Electric Lighting Equipment Manufacturing |
| 3352 | Household Appliance Manufacturing |
| 3353 | Electrical Equipment Manufacturing |
| 3359 | Other Electrical Equipment and Component Manufacturing |
| 3361 | Motor Vehicle Manufacturing |
| 3362 | Motor Vehicle Body and Trailer Manufacturing |
| 3363 | Motor Vehicle Parts Manufacturing |
| 3364 | Aerospace Product and Parts Manufacturing |
| 3365 | Railroad Rolling Stock Manufacturing |
| 3366 | Ship and Boat Building |
| 3369 | Other Transportation Equipment Manufacturing |
| 3371 | Household and Institutional Furniture and Kitchen Cabinet Manufacturing |
| 3372 | Office Furniture (including Fixtures) Manufacturing |
| 3379 | Other Furniture Related Product Manufacturing |
| 3391 | Medical Equipment and Supplies Manufacturing |
| 3399 | Other Miscellaneous Manufacturing |
| 4231 | Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers |
| 4232 | Furniture and Home Furnishing Merchant Wholesalers |
| 4233 | Lumber and Other Construction Materials Merchant Wholesalers |
| 4234 | Professional and Commercial Equipment and Supplies Merchant Wholesalers |
| 4235 | Metal and Mineral (except Petroleum) Merchant Wholesalers |
| 4236 | Household Appliances and Electrical and Electronic Goods Merchant Wholesalers |
| 4237 | Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers |
| 4238 | Machinery, Equipment, and Supplies Merchant Wholesalers |
| 4239 | Miscellaneous Durable Goods Merchant Wholesalers |
| 4241 | Paper and Paper Product Merchant Wholesalers |
| 4242 | Drugs and Druggists' Sundries Merchant Wholesalers |
| 4243 | Apparel, Piece Goods, and Notions Merchant Wholesalers |
| 4244 | Grocery and Related Product Merchant Wholesalers |
| 4245 | Farm Product Raw Material Merchant Wholesalers |
| 4246 | Chemical and Allied Products Merchant Wholesalers |
| 4247 | Petroleum and Petroleum Products Merchant Wholesalers |
| 4248 | Beer, Wine, and Distilled Alcoholic Beverage Merchant Wholesalers |
| 4249 | Miscellaneous Nondurable Goods Merchant Wholesalers |
| 4251 | Wholesale Electronic Markets and Agents and Brokers |
| 4411 | Automobile Dealers |
| 4412 | Other Motor Vehicle Dealers |
| 4413 | Automotive Parts, Accessories, and Tire Stores |
| 4421 | Furniture Stores |
| 4422 | Home Furnishings Stores |
| 4431 | Electronics and Appliance Stores |
| 4441 | Building Material and Supplies Dealers |
| 4442 | Lawn and Garden Equipment and Supplies Stores |
| 4451 | Grocery Stores |
| 4452 | Specialty Food Stores |
| 4453 | Beer, Wine, and Liquor Stores |
| 4461 | Health and Personal Care Stores |
| 4471 | Gasoline Stations |
| 4481 | Clothing Stores |
| 4482 | Shoe Stores |
| 4483 | Jewelry, Luggage, and Leather Goods Stores |
| 4511 | Sporting Goods, Hobby, and Musical Instrument Stores |
| 4512 | Book Stores and News Dealers |
| 4522 | Department Stores |
| 4523 | General Merchandise Stores, including Warehouse Clubs and Supercenters |
| 4531 | Florists |
| 4532 | Office Supplies, Stationery, and Gift Stores |
| 4533 | Used Merchandise Stores |
| 4539 | Other Miscellaneous Store Retailers |
| 4541 | Electronic Shopping and Mail-Order Houses |
| 4542 | Vending Machine Operators |
| 4543 | Direct Selling Establishments |
| 4811 | Scheduled Air Transportation |
| 4812 | Nonscheduled Air Transportation |
| 4821 | Rail Transportation |
| 4831 | Deep Sea, Coastal, and Great Lakes Water Transportation |
| 4832 | Inland Water Transportation |
| 4841 | General Freight Trucking |
| 4842 | Specialized Freight Trucking |
| 4851 | Urban Transit Systems |
| 4852 | Interurban and Rural Bus Transportation |
| 4853 | Taxi and Limousine Service |
| 4854 | School and Employee Bus Transportation |
| 4855 | Charter Bus Industry |
| 4859 | Other Transit and Ground Passenger Transportation |
| 4861 | Pipeline Transportation of Crude Oil |
| 4862 | Pipeline Transportation of Natural Gas |
| 4869 | Other Pipeline Transportation |
| 4871 | Scenic and Sightseeing Transportation, Land |
| 4872 | Scenic and Sightseeing Transportation, Water |
| 4879 | Scenic and Sightseeing Transportation, Other |
| 4881 | Support Activities for Air Transportation |
| 4882 | Support Activities for Rail Transportation |
| 4883 | Support Activities for Water Transportation |
| 4884 | Support Activities for Road Transportation |
| 4885 | Freight Transportation Arrangement |
| 4889 | Other Support Activities for Transportation |
| 4911 | Postal Service |
| 4921 | Couriers and Express Delivery Services |
| 4922 | Local Messengers and Local Delivery |
| 4931 | Warehousing and Storage |
| 5111 | Newspaper, Periodical, Book, and Directory Publishers |
| 5112 | Software Publishers |
| 5121 | Motion Picture and Video Industries |
| 5122 | Sound Recording Industries |
| 5151 | Radio and Television Broadcasting |
| 5152 | Cable and Other Subscription Programming |
| 5173 | Wired and Wireless Telecommunications Carriers |
| 5174 | Satellite Telecommunications |
| 5179 | Other Telecommunications |
| 5182 | Data Processing, Hosting, and Related Services |
| 5191 | Other Information Services |
| 5211 | Monetary Authorities-Central Bank |
| 5221 | Depository Credit Intermediation |
| 5222 | Nondepository Credit Intermediation |
| 5223 | Activities Related to Credit Intermediation |
| 5231 | Securities and Commodity Contracts Intermediation and Brokerage |
| 5232 | Securities and Commodity Exchanges |
| 5239 | Other Financial Investment Activities |
| 5241 | Insurance Carriers |
| 5242 | Agencies, Brokerages, and Other Insurance Related Activities |
| 5251 | Insurance and Employee Benefit Funds |
| 5259 | Other Investment Pools and Funds |
| 5311 | Lessors of Real Estate |
| 5312 | Offices of Real Estate Agents and Brokers |
| 5313 | Activities Related to Real Estate |
| 5321 | Automotive Equipment Rental and Leasing |
| 5322 | Consumer Goods Rental |
| 5323 | General Rental Centers |
| 5324 | Commercial and Industrial Machinery and Equipment Rental and Leasing |
| 5331 | Lessors of Nonfinancial Intangible Assets (except Copyrighted Works) |
| 5411 | Legal Services |
| 5412 | Accounting, Tax Preparation, Bookkeeping, and Payroll Services |
| 5413 | Architectural, Engineering, and Related Services |
| 5414 | Specialized Design Services |
| 5415 | Computer Systems Design and Related Services |
| 5416 | Management, Scientific, and Technical Consulting Services |
| 5417 | Scientific Research and Development Services |
| 5418 | Advertising, Public Relations, and Related Services |
| 5419 | Other Professional, Scientific, and Technical Services |
| 5511 | Management of Companies and Enterprises |
| 5611 | Office Administrative Services |
| 5612 | Facilities Support Services |
| 5613 | Employment Services |
| 5614 | Business Support Services |
| 5615 | Travel Arrangement and Reservation Services |
| 5616 | Investigation and Security Services |
| 5617 | Services to Buildings and Dwellings |
| 5619 | Other Support Services |
| 5621 | Waste Collection |
| 5622 | Waste Treatment and Disposal |
| 5629 | Remediation and Other Waste Management Services |
| 6111 | Elementary and Secondary Schools |
| 6112 | Junior Colleges |
| 6113 | Colleges, Universities, and Professional Schools |
| 6114 | Business Schools and Computer and Management Training |
| 6115 | Technical and Trade Schools |
| 6116 | Other Schools and Instruction |
| 6117 | Educational Support Services |
| 6211 | Offices of Physicians |
| 6212 | Offices of Dentists |
| 6213 | Offices of Other Health Practitioners |
| 6214 | Outpatient Care Centers |
| 6215 | Medical and Diagnostic Laboratories |
| 6216 | Home Health Care Services |
| 6219 | Other Ambulatory Health Care Services |
| 6221 | General Medical and Surgical Hospitals |
| 6222 | Psychiatric and Substance Abuse Hospitals |
| 6223 | Specialty (except Psychiatric and Substance Abuse) Hospitals |
| 6231 | Nursing Care Facilities (Skilled Nursing Facilities) |
| 6232 | Residential Intellectual and Developmental Disability, Mental Health, and Substance Abuse Facilities |
| 6233 | Continuing Care Retirement Communities and Assisted Living Facilities for the Elderly |
| 6239 | Other Residential Care Facilities |
| 6241 | Individual and Family Services |
| 6242 | Community Food and Housing, and Emergency and Other Relief Services |
| 6243 | Vocational Rehabilitation Services |
| 6244 | Child Day Care Services |
| 7111 | Performing Arts Companies |
| 7112 | Spectator Sports |
| 7113 | Promoters of Performing Arts, Sports, and Similar Events |
| 7114 | Agents and Managers for Artists, Athletes, Entertainers, and Other Public Figures |
| 7115 | Independent Artists, Writers, and Performers |
| 7121 | Museums, Historical Sites, and Similar Institutions |
| 7131 | Amusement Parks and Arcades |
| 7132 | Gambling Industries |
| 7139 | Other Amusement and Recreation Industries |
| 7211 | Traveler Accommodation |
| 7212 | RV (Recreational Vehicle) Parks and Recreational Camps |
| 7213 | Rooming and Boarding Houses, Dormitories, and Workers' Camps |
| 7223 | Special Food Services |
| 7224 | Drinking Places (Alcoholic Beverages) |
| 7225 | Restaurants and Other Eating Places |
| 8111 | Automotive Repair and Maintenance |
| 8112 | Electronic and Precision Equipment Repair and Maintenance |
| 8113 | Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance |
| 8114 | Personal and Household Goods Repair and Maintenance |
| 8121 | Personal Care Services |
| 8122 | Death Care Services |
| 8123 | Drycleaning and Laundry Services |
| 8129 | Other Personal Services |
| 8131 | Religious Organizations |
| 8132 | Grantmaking and Giving Services |
| 8133 | Social Advocacy Organizations |
| 8134 | Civic and Social Organizations |
| 8139 | Business, Professional, Labor, Political, and Similar Organizations |
| 8141 | Private Households |
| 9211 | Executive, Legislative, and Other General Government Support |
| 9221 | Justice, Public Order, and Safety Activities |
| 9231 | Administration of Human Resource Programs |
| 9241 | Administration of Environmental Quality Programs |
| 9251 | Administration of Housing Programs, Urban Planning, and Community Development |
| 9261 | Administration of Economic Programs |
| 9271 | Space Research and Technology |
| 9281 | National Security and International Affairs |