



## **NAPE METHODOLOGY FOR UPDATING NONTRADITIONAL CROSSWALK TO 2010 CIPS (January 2013)**

### **Overview**

In 2007, a set of seven tables was produced with the goal of providing a comprehensive and standardized mapping of Classification of Instructional Program (CIP) codes and Standard Occupational Classification (SOC) occupational codes into Career Clusters and Career Pathways.<sup>1</sup> This project was coordinated by DTI Associates, Inc., under contract with the Office of Vocational and Adult Education (OVAE) at the U.S. Department of Education.

Starting in 2010, the National Research Center for Career and Technical Education (NRCCTE) at the University of Louisville, with the input of the National Association of State Directors of Career-Technical Education Consortium (NASDCTEc), undertook the task of revising and updating the original 2007 crosswalks, specifically focusing on decision rules that connect the SOCs to the CIPs. The NRCCTE also sought to re-examine the underlying relationships between the SOCs, CIPs, Career Clusters, and associated Career Pathways. The overall purpose of the NRCCTE's Crosswalk Validation Project<sup>2</sup> was to create a national<sup>3</sup> crosswalk that links educational programs (CIPs) to occupations (SOCs) with Career Clusters and Career Pathways. The project also sought to capture the evolving multi-state, multi-institutional collaborative efforts being made to bring greater consistency and clarity to Perkins secondary and postsecondary data collection and reporting. The resulting crosswalks produced by this project have created a foundation for more standardized accountability requirements, which we believe should be a major focus of future Perkins legislation.

As part of the original national effort in 2007 to build different crosswalks, the National Alliance for Partnerships in Equity (NAPE)<sup>4</sup> published a crosswalk that identified CIP codes/titles that were associated with occupations considered nontraditional for men and women. A nontraditional occupation is one that employs less than 25.0% of males or females. NAPE updated the nontraditional designations for the 2010 SOCs and CIPs for incorporation into the Crosswalk Validation Project's master crosswalk, using the process described below.

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<sup>1</sup> CIP codes are assigned to postsecondary educational programs by the U.S. Department of Education. The latest version of these codes is referred to as CIP 2010, although many are still using CIP 2000. SOCs provide a coding structure for all occupations within U.S. industry. The U.S. Department of Labor is responsible for developing SOC codes and is currently engaged in updating them.

<sup>2</sup> See <http://www.nrccte.org/resources/studies/crosswalk-validation-project> for more information.

<sup>3</sup> The revised tables produced by the Crosswalk Validation project are based on national data. The corresponding Excel tables provided on the NRCCTE ([www.nrccte.org](http://www.nrccte.org)) and NASDCTEc ([www.careertech.org](http://www.careertech.org)) websites can be downloaded by individual states. These crosswalks can be customized to reflect the relationships between education programs, occupational information, Career Clusters, and Career Pathways specific to individual states.

<sup>4</sup> See <http://www.napequity.org>.

## Methodology

To develop the original 2007 nontraditional crosswalk, NAPE used the 2006 employment data from the Bureau of Labor Statistics (BLS). The same 2006 BLS data was used to develop the newly updated nontraditional crosswalk. The reason for continuing to use the 2006 BLS data was to maintain the baseline and therefore give states the ability to consistently track performance through the duration of the current authorization of Carl D. Perkins federal legislation funding CTE (more commonly known as Perkins IV). To update to the more recent data (2011) would move occupations in or out of the nontraditional category, affecting calculations and reporting of the nontraditional performance indicators. NAPE intends to update, as appropriate, the nontraditional crosswalk to the most recent BLS employment data when the Perkins legislation is reauthorized.

The following steps describe the methodology used for developing the nontraditional crosswalk:

**Step 1:** Identify occupations that employ less than 25.0% and greater than 75.0% of women.

*Source:* Current Population Survey Table 1. Employed and experienced unemployed persons by detailed occupation, sex, race, and Hispanic or Latino ethnicity, Annual Average 2006. Available at <http://www.napequity.org/nontraditional-occupations-crosswalk/>.

*Note:* If only a broad group is reported in Table 1, then all detailed occupations within that group were assigned the broad group's percentage of women employed.

**Step 2:** Find the six-digit SOC code for each occupation identified in Step 1.

*Source:* Bureau of Labor Statistics Standard Occupational Classification System (2010). Available at [http://www.bls.gov/soc/soc\\_majo.htm](http://www.bls.gov/soc/soc_majo.htm).

*Note:* Because the 2006 BLS data table aligns with the 2000 SOC classification system, for some occupations there was no longer a direct match, particularly in the 15-1000/Computer Specialist series.

**Step 3:** Find the six-digit CIP code and title that crosswalks to each SOC code identified in Step 2.

*Source:* Perkins IV Crosswalk Table 7, Career Cluster Primary Occupation and CIP in Pathway (revised August 2012), available at <http://www.careertech.org/career-clusters/resources/crosswalks.html>.

*Note:* The six-digit CIP code does not always make a one-to-one match to a single SOC code. In many instances, a CIP code crosswalks to more than one SOC code.

**Step 4:** For CIP codes that crosswalk to multiple SOC codes that represent a mixture of nontraditional and not nontraditional occupations, one of the following processes was used to determine the best match:

1. Compare the occupation titles and descriptions from the U.S. Department of Labor and National Center for Education Statistics (NCES) websites for the best match (e.g., “Computer Programming/Programmer, General” crosswalks to several SOCs, the closest being “Computer Programmers”).
2. Select the SOC that employs the most people.
3. For large, catch-all, or multidisciplinary CIPs (e.g., Nutrition Sciences, Computer Sciences, Business/Commerce, General) for which it is impossible to select just one SOC, divide the number of women employed in all of those SOCs by the total number of people employed in all of those SOCs.

**Step 5:** Incorporate the nontraditional designations (F or M) or gender neutral designation (N) into the SOC-Cluster crosswalk (Table 1) prepared by the Crosswalk Validation Project and rename as Table 3.

NAPE identified several CIP codes/titles that have moved in or out of the nontraditional designation, either because of improvements to the crosswalk by the Crosswalk Validation Project or because of corrections to the original 2007 work (see Table A). In addition, several CIP codes that were not reportable in 2007 can now be designated as nontraditional or gender neutral (see Table A). Table 3 presents the new designations followed by a “2/”. **Please be aware that states who adopt these new designations may see significant changes in their calculated measures due to the resulting changes to the dataset used to calculate the measures rather than actual changes in performance itself.**

In addition, certain CIPs cannot be matched to a particular occupation and are excluded from the SOC-CIP crosswalk (Table 7). Therefore, there were no data to determine whether or not the CIP is nontraditional. These CIPs are called out with “1/” in Table 3. Please note that several of these CIPs were identified as nontraditional in 2007(.xx99 or .9999 codes). These codes can be identified by comparing the new crosswalk to the 2007 crosswalk posted at <http://www.napequity.org/nontraditional-occupations-crosswalk/>.

**Table A: CIPs That Have Moved In/Out of the Nontraditional Designation**

<b>CIP Code and Title</b>	From Nontraditional for Females to Not Nontraditional	From Nontraditional for Males to Not Nontraditional	From Not Nontraditional to Nontraditional for Females	From Not Nontraditional to Nontraditional for Males	From Nontraditional for Males to Nontraditional for Females	From Not Reportable to Nontraditional for Males or Females <sup>a</sup>
<b>010802</b> Agricultural Communication/Journalism	x					
<b>030299</b> Natural Resources Management and Policy, Other	x					
<b>011299</b> Soil Sciences, Other						x
<b>039999</b> Natural Resources and Conservation, Other	x					
<b>040301</b> City/Urban, Community and Regional Planning	x					
<b>090404</b> Photojournalism	x					
<b>090701</b> Radio and Television	x					
<b>110101</b> Computer and Information Sciences General	x					
<b>110301</b> Data Processing and Data Processing Technology/Technician	x					
<b>110501</b> Computer Systems Analysis/Analyst	x					
<b>110701</b> Computer Science	x					
<b>120399</b> Funeral Service and Mortuary Science, General						x
<b>120409</b> Aesthetician/Esthetician and Skin Care Specialist						x
<b>120412</b> Salon/Beauty Salon Management/Manager		x				
<b>120505</b> Food Preparation/Professional Cooking/Kitchen Assistant	x					
<b>120507</b> Food Service, Waiter/Waitress & Dining Room Management/Manager		x				
<b>131014</b> Education/Teaching of Individuals Who Are Developmentally Delayed						x
<b>131015</b> Education/Teaching of Individuals in Early Childhood Special Education						x
<b>140501</b> Biomedical/Medical Engineering	x					

140999 Computer Engineering, Other	x					
150403 Electromechanical Technology/Electromechanical Engineering Technology				x		
150405 Robotics Technology/Technician				x		
151203 Computer Hardware Technology/Technician				x		
151204 Computer Software Technology/Technician				x		
190505 Food Service Systems Administration/Management		x				
190605 Home Furnishings and Equipment Installers	x					
250301 Library Assistant		x				
270101 Mathematics General	x					
301901 Nutrition Sciences		x				
430102 Corrections	x					
430110 Juvenile Corrections		x				
430111 Criminalistics and Criminal Science	x					
430112 Securities Services Administration/Management	x					
440201 Community Organization and Advocacy		x				
440401 Public Administration	x					
440501 Public Policy Analysis	x					
440799 Social Work, Other						x
460000 Construction Trades, General						x
470408 Watchmaking and Jewelry Making	x					
510904 Emergency Management Technology/Technician	x					
510908 Respiratory Care Therapy/Therapist		x				
511501 Substance Abuse/Addiction Counseling (incorrectly coded in 2007)		x				
511503 Clinical/Medical Social Work					x	
511506 Clinical Pastoral Counseling/Patient Counseling	x					

<b>512202</b> Environmental Health			x			
<b>513602</b> Yoga Teacher Training/Yoga Therapy		x				
<b>513701</b> Aromatherapy		x				
<b>513702</b> Herbalism/Herbalist		x				
<b>513703</b> Polarity Therapy		x				
<b>513704</b> Reiki		x				
<b>520101</b> Business/Commerce, General	x					
<b>520201</b> Business Administration and Management, General	x					
<b>520202</b> Purchasing, Procurement/Acquisitions & Contracts Management	x					
<b>520411</b> Customer Service Support/Call Center/Teleservice Operation		x				
<b>521905</b> Tourism and Travel Services Marketing Operations				x		
<b>522001</b> Construction Management						x

<sup>a</sup> CIP codes that were not reportable in 2007 but are designated as gender neutral in the updated crosswalk are not specifically called out.