

# The 2015 Rank List

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# Overview

- Why do we need a rank list of Michigan's CTE programs? How often is it run?
- How is the rank list determined? What are the factors that go into it?
- What are the data sources?
- What are the implications based on the 2015 rank list?
- Does the rank list make sense to you?  
Questions?

# Why do we need a Rank List?

- Section 61a(1) of the State Aid Act states that

“.... there is allocated an amount not to exceed \$36,611,300.00 for 2015-2016 to reimburse on an added cost basis districts.....The department shall determine the added cost for each career and technical education program area....added cost funds shall be prioritized based on ....the program rank in student placement, job openings, and wages..”

# Distribution of Added Cost Funds

- Sixty percent (60%) of state added cost funding is allocated to local districts using the State Rank List.
- Forty percent (40%) of added cost funds is divided among the 54 CEPDs. These funds are proportionately distributed.

# What Factors are in the Rank List

- Employment Demand
- Wages
- Related Placement
- Each of the factors is weighted equally in determining the overall rank

# Brief History of Rank List

- First done in 2001 by Upjohn Institute
- Created a database that could be run once appropriate data inputs were determined

# Employment Demand

- State of Michigan LMI occupational projections data (<http://milmi.org>)
- Job openings by SOC code downloaded on April 1<sup>st</sup>, 2015
- 2010-2020 job projections
- Census of agriculture report also used (<http://www.agcensus.usda.gov> )
- If no job openings in Michigan, data set to 0



# Wages

- Median wage for Michigan SOC codes (<http://www.bls.gov/oes/>)
- US national data substituted only where Michigan data is unavailable
- Oesm14nat & Oesm14st files

# Related Placement

- Placement data by CIP code from 2014
- Related placement total used to rank
- XO610 summary is source table

# CIP Codes

- Classification of instructional programs (CIPs)
- Introduced by the US Dept. of Ed.'s National Center for Education Statistics in 1980
- Last revised in 2010

# Michigan's 2015 CIP Codes

- 48 in total (not including FCS)
- List has changed compared to 2014

1.0000	Agriculture, Agricultural Operations and Related Sciences
1.0601	Applied Horticulture and Horticultural Operations
1.0903	Animal Health & Veterinary Sciences
3.0000	Natural Resources and Conservation
10.0202	Radio & TV Broadcasting Technology
10.0301	Graphics and Printing Technology and Communications
11.0201	Computer Programming/Programmer
11.0801	Digital/Multimedia and Information Resources Design
11.0901	Computer Systems Networking and Telecommunications
11.1001	System Administration/Administrator
12.0400	Cosmetology
12.0500	Personal and Culinary Services
13.0000	Education General
14.4201	Mechatronics

# SOC Codes

- Standard Occupational Classification (SOC), latest from 2010 (2018)
- Used by federal statistical agencies to classify workers into occupational categories (840 detailed occupations)
- Detailed occupations are combined to form 461 occupations, 97 minor groups, 23 major groups

# 2010 CIP-SOC Crosswalk

- 2010 CIP-SOC crosswalk connects the 2 disparate systems
- <http://nces.ed.gov/ipeds/cipcode/resources.aspx?y=55>
- Many possible uses for CIP-SOC crosswalk

# Potential Uses of CIP-SOC List

- Analyzing labor market supply-demand conditions and trends
- Analyzing relationships between education and training programs to the labor market
- Providing LMI for use in making education and training program funding decisions
- Providing information to individuals in making decisions about careers and or training choices
- For mapping CIP and SOC to career clusters and career pathways

# Level of Education: A Caveat

- “Users should take into account the level of education required for entry into the occupation.....It may not be appropriate, for example, to consider the number of completers of programs at the Associate’s level as supply to occupations where a bachelor’s or higher degree is required.”
- Job Zones
  - Job Zone 1 to Job Zone 5



# Job Zones

- Job Zone 1: Occupations that may require
  - high school diploma or
  - GED certificate
  - E.g. taxi drivers, waiters/waitresses, cashiers etc.
- Job Zone 2: Occupations that usually require
  - a high school diploma and
  - may require some vocational training or job related course work
  - E.g. forest fire fighters, pharmacy technicians, tellers etc.

# Job Zones

- Job Zone 3: Most occupations that require
  - training in vocational schools
  - related on the job experience or
  - an associate's degree
  - E.g. electricians, legal secretaries, forest technicians etc.
- Job Zone 4: Most occupations that require
  - a four year bachelor's degree but some do not
  - E.g. accountants, teachers, chemists etc.
- Job Zone 5: Minimum requirement
  - is a bachelor's degree but many require graduate school
  - Physicists, surgeons, lawyers, aerospace engineers etc.

# 2015 Rank List

- All Job Zone 5 and 1 were excluded, 4 (most removed)
- Job Zones 3 and 2 only used
- Program consultants picked CIP-SOC's with duplication within CIPs
- List was validated by teachers

# 2015 Rank List

- 429 CIP-SOC's in validated list
- De-duplication and removal of job zone 5 and 4 (most)
- 184 CIP-SOCs used in calculating 2015 rank list
- Average of 3.8 SOC codes per CIP

# 2015 Rank List

- An Example of CIP-SOC list

CIP Code	CIP Title	SOC Code	Occupation
01.0000	Agriculture, Agricultural Operations and Related Sciences	11-9013	Farmers, Ranchers, and Other Agricultural Managers
		19-1012	Food Scientists and Technologists
		11-9012	Farmers and Ranchers
		17-3025	Environmental Technicians
		13-1074	Farm Labor Contractor
		19-4099	Precision Agriculture Technicians
		29-9012	Occupational Health and Safety Technicians
		45-2011	Agricultural Inspectors
		45-2021	Animal Breeders

# 2015 Rank List

- Other Examples in the CIP-SOC list

46.0000	Construction Trades	47-4011	Construction and Building Inspectors
		47-2031	Construction carpenters
		17-3022	Civil Engineering Technicians
		47-1011	First-Line Supervisors of Construction Trades and Extraction Workers
46.0301	Electrical and Power Transmission Installation	49-2095	Electrical and electronics Repairers, Powerhouse
		47-2111	Electricians
		49-9051	Electrical Power-Line Installers and Repairers
		49-1011	First-Line Supervisors of Mechanics, Installers, and Repairers
46.0503	Plumbing Technology	47-2152	Plumbers, Pipefitters, and Steamfitters
		47-1011	First-Line Supervisors of Construction Trades and Extraction Workers

# 2015 Rank List Implications

- Top 7 CIP codes on Rank List get a weight of 10
- CIP codes 8-14 get a weight of 5
- CIP codes 15-20 get a weight of 2.5
- CIP codes 21-48 do not get funded under the 60%
- CIP codes 21-48, generate monies under CEPD Options

# What Do The Weights Mean?

- If we make some **Major Incorrect Assumptions**
  - Costs of programs are equal
  - Equal number of completers, concentrators, and enrollees across CIP Codes
- \$1,000,000 to be divided **Major Incorrect Assumptions**
  - \$583,333 will go to the top 7
  - \$291,667 will go to the CIP codes 8-14
  - \$125,000 will go to CIP codes 14-20



# What Do The Weights Mean

- $(7 * 10) + (7 * 5) + (6 * 2.5) = 120$
- $\$1,000,000 / 120 = \$8,333.33$
- $70 * \$8,333.33 = \$583,333$
- $35 * \$8,333.33 = \$291,667$
- $15 * \$8,333.33 = \$125,000$

# The 2015 Rank List

CIPCODE	Program Name	Median Wage Rank	Related Placement Rank	Job Openings Rank	Overall Weight	Overall Rank 2015	Overall Rank 2014	Rank List Factor
52.1999	Specialized Merchandising, Sales, and Marketing Operations, Other.	5	2	6	13	1	2	10
01.0000	Agriculture, Agricultural Operations and Related Sciences	11	11	3	25	2	13	10
43.0100	Public Safety/Protective Services	10	8	8	26	3	11	10
51.0000	Therapeutic Services	25	1	1	27	4	3	10
52.0299	Business Administration, Management and Operations	18	3	9	30	5	1	10
11.0201	Computer Programming/Programmer	4	20	7	31	6	9	10
46.0000	Construction Trades	20	6	12	38	7	5	10

# The 2015 Rank List

CIPCODE	Program Name	Median Wage Rank	Related Placement Rank	Job Openings Rank	Overall Weight	Overall Rank 2015	Overall Rank 2014	Rank List Factor
11.0901	Computer Systems Networking and Telecommunications	1	17	22	40	8	4	5
14.4201	Mechatronics	6	20	18	44	9	n/a	5
52.0800	Finance and Financial Management Services	31	9	5	45	10	7	5
13.0000	Education General	12	33	2	47	11	7	5
11.1001	System Administration/Administrator	2	27	20	49	12	8	5
46.0301	Electrical and Power Transmission Installation	7	33	11	51	13	18	5
12.0500	Cooking and Related Culinary Arts, General	44	4	4	52	14	15	5

# The 2015 Rank List

CIPCODE	Program Name	Median Wage Rank	Related Placement Rank	Job Openings Rank	Overall Weight	Overall Rank 2015	Overall Rank 2014	Rank List Factor
47.0604	Automotive Technician (ASE Certified)	34	7	15	56	15	19	2.5
48.0501	Machine Tool Technology/Machinist.	35	14	10	59	16	28	2.5
11.0801	Digital/Multimedia and Information Resources Design	22	16	24	62	17	10	2.5
15.0000	Engineering Technology	14	24	28	66	18	14	2.5
15.1301	Drafting and Design Technology/Architectural	19	12	38	69	19	27	2.5
48.0508	Welding, Brazing and Soldering	36	10	25	71	20	31	2.5

# Contact Information

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# The 2015 Rank List

*Thank You!*

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