



To: Indiana State Board of Education (SBOE)

Date: December 4, 2019

Subject: SY 20/21 Career & Technical Education Program Categorizations and Funding Recommendations

Pursuant to Indiana Code (IC) [20-43-8-7.5](#), the Indiana Department of Workforce Development (DWD), in consultation with the Governor’s Workforce Cabinet (GWC), submits the following report, providing recommendations to the Indiana State Board of Education (SBOE) on Career and Technical Education (CTE) program designations.

Funding Methodology Overview

CTE courses are statutorily funded at the following levels:

Advanced CTE Course Funding Levels – Enrollment Reimbursement Rates Per Credit Hour	
High Value Program – Level 1	\$680
High Value Program – Level 2	\$1,020
Moderate Value Program – Level 1	\$400
Moderate Value Program – Level 2	\$600
Less than Moderate Value Program – Level 1	\$200
Less than Moderate Value Program – Level 2	\$300

Other CTE Course Funding Levels – Enrollment Reimbursement Rates Per Pupil	
Apprenticeship Program	\$500
Work Based Learning Program	\$500
Cooperative Education Program	\$150
Introductory Course	\$300
Planning for College and Careers Course	\$150
*Area Participation Program	\$150

InTERS, Indiana's CTE student data collection portal, is used to verify the amount of Additional Pupil Count (APC) funds schools receive via state tuition support for CTE program needs. The Office of CTE provides the Indiana Department of Education all data necessary for the calculation of the CTE grant amount found at IC 20-43-8, generally referred to as 30A data for inclusion in state tuition support to schools. These counts are generated by reported student enrollments for the current school year in state approved CTE courses. Beginning with the 2020-2021 school year, the Office of CTE will enact business rules within InTERS to match course requirements as found in the state approved 2020-2021 Course Titles and Descriptions to enrollments. **Enrollments in the InTERS system that do not match the course requirements will be flagged; flagged enrollments will not qualify for APC funding.** Course requirements include, but are not limited to, the required semesters for the course and the required prerequisites. During this transition period, concurrent enrollments in required prerequisites will be allowed to meet course requirements. Language in the state approved 2020-2021 Course Titles and Descriptions will take precedent over language in any other CTE course documentation, including course standards and frameworks.

CIP-SOC Crosswalk

In 2017, representatives from the private sector, DOE, DWD, secondary/postsecondary education, and other interest groups developed a crosswalk of CTE courses (CIP) to relevant occupations (SOC). The standards of each course were evaluated to determine what skills would be gained by the students from the CTE instruction that most directly aligned to skills necessary to enter and be prepared for certain occupations. The occupations associated with each course in the crosswalk were then scored per the occupational ranking methodology (referenced below) to determine a value for the course and its subsequent funding level.

The same CIP-SOC crosswalk was used for SY 20/21 CTE course recommendations as was utilized and adopted by the SBOE for SY 18/19 courses unless standards for a course changed or a new CTE course was adopted by SBOE.¹

Occupational Ranking Methodology

DWD used the IN Demand Ranking methodology to evaluate demand and wage for occupations associated with CTE courses per IC 20-43-8. Each occupation was evaluated on a decile scoring system across five variables, which was then summarized to equate to an overall value of between 1 and 5.² This was the same methodology that was used and adopted by the SBOE for SY18/19 CTE course designations.

Scoring Mechanism

IN Demand Ranking scores of each occupation were summed and averaged to equate to an overall CTE course score. Less than moderate value CTE courses scored within a 0.00-2.99 threshold. Moderate value CTE courses scored within a 3.00-3.49 threshold, and high value CTE courses scored between 3.5 and 5.00.

Flame Funding Levels with Flames Threshold		
Course Designation	Flame Threshold	Reimbursement Rate (per Credit, Max of 3)
Less than Moderate Value	0.00-2.99	\$200
Moderate Value	3.00-3.49	\$400
High Value	3.50-5.00	\$680

¹ 2017 CTE Course Recommendations [Memo](#) provides more information on the process used to develop the CIP-SOC crosswalk. ²

[IN Demand Ranking Methodology](#): Each occupation in Indiana is designated a 1-10 score in 5 categories: Total Openings (X2), Growth Openings for both short term and long term outlook, Percentage Change, Real Time Labor Market Information, and Wages using 2016-2018 Short Term Projections and 2014-2024 Long Term Projections and Bureau of Labor Statistics Occupational Employment Statistics wage estimates. The scoring method is determined by deciles or, in other words, a percentile system ranging from the 90th percentile down to the 10th percentile and under. The averaged total for each occupation is then divided by two to produce an Indiana Demand Ranking in both outlooks. Lastly, both the short term and long term outlook Indiana Demand Ranking scores for each occupation are averaged to calculate the occupation's final rating. Because occupational demand drives the ranking of occupations, median wage levels can vary within each scoring threshold, however wage rules are in place to prevent low wage, high demand occupations from scoring highly. Any occupation scoring 3 or 4 (out of 10) in the wage category cannot score higher than 3 flames, and any occupation scoring 1 or 2 (out of 10) in the wage category cannot score higher than 2 flames.

2020-21 State CTE Funding Recommendations

IDOE Course Code	IDOE Course Name	Cluster/Subject Area	Credits Per Semester	Max Credits Allowed	CTE Funding Threshold	CTE Funding Level
5530	3-D Computer Animation and Visualization	AV	1-3	6	Less Than Moderate Value	\$200
5268	Administrative and Office Management	BME	1-2	4	High Value	\$680
4522	Advanced Accounting	BME	1	2	High Value	\$680
6146	Advanced CTE College Credit: Advanced Manufacturing (NEW)	ADV MAN	1-3	6	Pilot	\$300
6130	Advanced CTE College Credit: Agriculture (NEW)	AG	1-3	6	Pilot	\$300
6132	Advanced CTE College Credit: Architecture and Construction (NEW)	A&C	1-3	6	Pilot	\$300
6134	Advanced CTE College Credit: Arts, AV Tech and Communication (NEW)	AV	1-3	6	Pilot	\$300
6142	Advanced CTE College Credit: Business, Marketing and Entrepreneurship (NEW)	BME	1-3	6	Pilot	\$300
6140	Advanced CTE College Credit: Education and Training (NEW)	ED &TN	1-3	6	Pilot	\$300
6138	Advanced CTE College Credit: Health Science (NEW)	HS	1-3	6	Pilot	\$300
6120	Advanced CTE College Credit: Hospitality and Human Services (NEW)	HHS	1-3	6	Pilot	\$300
6022	Advanced CTE College Credit: Information Technology (NEW)	IT	1-3	6	Pilot	\$300
6136	Advanced CTE College Credit: Public Safety (NEW)	PS	1-3	6	Pilot	\$300

6126	Advanced CTE College Credit: STEM (NEW)	STEM	1-3	6	Pilot	\$300
6128	Advanced CTE College Credit: Transportation (NEW)	T&L	1-3	6	Pilot	\$300
5360	Advanced Child Development	ED & TN	1	2	Introductory	\$300
5070	Advanced Life Science: Animals (L)	AG	1	2	Moderate Value	\$400
5072	Advanced Life Science: Foods (L)	AG	1	2	Moderate Value	\$400
5074	Advanced Life Science: Plants and Soils (L)	AG	1	2	Less Than Moderate Value	\$200
5608	Advanced Manufacturing I	ADV MAN	1-3	6	High Value (Level 1)	\$680
5606	Advanced Manufacturing II	ADV MAN	1-3	6	High Value (Level 2)	\$1,020
4880	Advanced Manufacturing: Special Topics (NEW)	ADV MAN	1-3	6	Pilot	\$300
5340	Advanced Nutrition and Wellness	HHS	1	2	Introductory	\$300
5518	Aerospace Engineering	STEM	1	2	Moderate Value Level 2	\$600
5002	Agribusiness Management	AG	1	2	Moderate Value	\$400
5088	Agriculture Power, Structure and Technology	AG	1-3	6	High Value	\$680
6150	Agriculture: Special Topics (NEW)	AG	1-3	6	Pilot	\$300
5276	Anatomy & Physiology	HS	1	2	High Value	\$680
5008	Animal Science	AG	1	2	Moderate Value	\$400
6148	Apprenticeship (NEW)	CTE WBL	1-3	6	Apprenticeship	\$500
5654	Architecture and Construction: Special Topics (NEW)	A&C	1-3	6	Pilot	\$300
5640	Architectural Drafting and Design I	A&C	1-3	6	Moderate Value	\$400

					Level 1	
5652	Architectural Drafting and Design II	A&C	1-3	6	Moderate Value Level 2	\$600
4576	Arts, AV Tech and Communication: Special Topics (NEW)	AV	1-3	6	Pilot	\$300
5514	Automotive Collision Repair I	T&L	1-3	6	Moderate Value Level 1	\$400
5544	Automotive Collision Repair II	T&L	1-3	6	Moderate Value Level 2	\$600
5510	Automotive Services Technology I	T&L	1-3	6	Moderate Value Level 1	\$400
5546	Automotive Services Technology II	T&L	1-3	6	Moderate Value Level 2	\$600
5524	Aviation Flight	T&L	1-3	6	High Value	\$680
5520	Aviation Maintenance I	T&L	1-3	6	Moderate Value Level 1	\$400
5522	Aviation Maintenance II	T&L	1-3	6	Moderate Value Level 2	\$600
5528	Aviation Operations	T&L	1-3	6	Moderate Value	\$400
5258	Banking and Investment Capstone	BME	1-3	6	Moderate Value Level 2	\$600
5344	Biochemistry of Foods	HHS	1	2	Moderate Value	\$400
5219	Biomedical Innovation	HS	1	2	High Value Level 2	\$1,020
5593	Building & Facilities Maintenance I	A&C	1-3	6	Moderate Value Level 1	\$400
5594	Building & Facilities Maintenance II	A&C	1-3	6	Moderate Value Level 2	\$600
5592	Building and Facilities Management I	A&C	1-3	6	High Value Level 1	\$680

5595	Building and Facilities Management II	A&C	1-3	6	High Value Level 2	\$1,200
4560	Business Law and Ethics	BME	1	2	Less Than Moderate Value	\$200
5968	Business, Marketing and Entrepreneurship: Special Topics (NEW)	BME	1-3	6	Pilot	\$300
5239	Career & Technical Education Pilot Course	CTE	1-3	6	Pilot	\$300
5650	Civil Engineering and Architecture	STEM	1	2	High Value Level 2	\$1,020
5570	Commercial Photography	AV	1-3	6	Less than Moderate Value	\$200
5534	Computer Integrated Manufacturing	STEM	1	2	High Value Level 2	\$1,020
4801	Computer Science I	STEM	1 -3	6	High Value Level 1	\$680
5236	Computer Science II	STEM	1-3	6	High Value Level 2	\$1,020
5253	Computer Science III: Cybersecurity Capstone	STEM	1-3	6	High Value Level 2	\$1,020
5250	Computer Science III: Databases	STEM	1-3	6	High Value Level 2	\$1,020
5251	Computer Science III: Informatics	STEM	1-3	6	High Value Level 2	\$1,020
5249	Computer Science III: Software Development	STEM	1-3	6	High Value Level 2	\$1,020
5252	Computer Science III: Special Topics	STEM	1-3	6	Pilot	\$300
4800	Computers in Design and Production	ADV MAN	1	2	Introductory	\$300
5496	Construction Trades: HVAC I	A&C	1-3	6	High Value Level 1	\$680
5498	Construction Trades: HVAC II	A&C	1-3	6	High Value Level 2	\$1,020
5580	Construction Trades I	A&C	1-3	6	Moderate Value Level 1	\$400

5578	Construction Trades II	A&C	1-3	6	Moderate Value Level 2	\$600
4830	Construction Trades: Electrical I	A&C	1-3	6	High Value Level 1	\$680
4832	Construction Trades: Electrical II	A&C	1-3	6	High Value Level 2	\$1,020
5497	Construction Trades: Heavy Equipment I	A&C	1-3	6	High Value Level 1	\$680
5495	Construction Trades: Heavy Equipment II	A&C	1-3	6	High Value Level 2	\$1,200
6162	Cooperative Education	WBL			Cooperative Education	\$150
5802	Cosmetology I	HHS	1-3	6	Less Than Moderate Value Level 1	\$200
5806	Cosmetology II	HHS	1-3	6	Less Than Moderate Value Level 2	\$300
5822	Criminal Justice I	PS	1-3	6	Less than Moderate Value Level 1	\$200
5824	Criminal Justice II	PS	1-3	6	Less than Moderate Value Level 2	\$300
5440	Culinary Arts and Hospitality I	HHS	1-3	6	Less Than Moderate Value Level 1	\$200
5346	Culinary Arts and Hospitality II: Culinary Arts	HHS	1-3	6	Less Than Moderate Value Level 2	\$300
5458	Culinary Arts and Hospitality II: Hospitality Management	HHS	1-3	6	Moderate Value Level 2	\$600
5203	Dental Careers I	HS	1-3	6	High Value Level 1	\$680
5204	Dental Careers II	HS	1-3	6	High Value Level 2	\$1,200
4834	Design Fundamentals	AV	1	2	Introductory	\$300

5620	Diesel Service Technology I	T&L	1-3	6	High Value Level 1	\$680
5624	Diesel Service Technology II	T&L	1-3	6	High Value Level 2	\$1,020
5538	Digital Electronics	STEM	1	2	Moderate Value Level 2	\$600
5412	Early Childhood Education I	ED & TRN	1-3	6	Moderate Value Level 1	\$400
5406	Early Childhood Education II	ED & TRN	1-3	6	Moderate Value Level 2	\$600
5976	Education and Training: Special Topic (NEW)	ED & TRN	1-3	12	Pilot	\$300
5408	Education Professions I	ED & TRN	1-3	6	High Value Level 1	\$680
5404	Education Professions II	ED & TRN	1-3	6	High Value Level 2	\$1,020
5684	Electronics and Computer Technology I	STEM	1-3	6	Moderate Value Level 1	\$400
5694	Electronics and Computer Technology II	STEM	1-3	6	Moderate Value Level 2	\$600
5210	Emergency Medical Services	PS	1-3	6	High Value	\$680
5616	Energy Industry I	A&C	1-3	6	Less Than Moderate Value Level 1	\$200
5618	Energy Industry II	A&C	1-3	6	Less Than Moderate Value Level 2	\$300
4788	Engineering and Technology: Special Topics (NEW)	STEM	1-3	6	Pilot	\$300
5698	Engineering Design and Development	STEM	1	2	Moderate Value	\$400
5966	Entrepreneurship and New Ventures Capstone	BME	1-3	6	Moderate Value Level 2	\$600

4818	Environmental Sustainability	STEM	1	2	Moderate Value Level 2	\$600
5420	Fashion and Textiles Careers I	AV	1-3	6	Less Than Moderate Value Level 1	\$200
5421	Fashion and Textiles Careers II	AV	1-3	6	Less Than Moderate Value Level 2	\$300
5820	Fire and Rescue I	PS	1-3	6	Moderate Value Level 1	\$400
5826	Fire and Rescue II	PS	1-3	6	Moderate Value Level 2	\$600
5102	Food Science	AG	1	2	Moderate Value	\$400
5550	Graphic Design and Layout	AV	1-3	6	Moderate Value	\$400
5572	Graphic Imaging Technology	AV	1-3	6	Less Than Moderate Value	\$200
5282	Health Science Education I	HS	1-3	6	High Value Level 1	\$680
5290	Health Science Education II: Athletic Training	HS	1-3	6	Moderate Value Level 2	\$600
5288	Health Science Education II: Medical Forensics	HS	1-3	6	Moderate Value Level 2	\$600
5284	Health Science Education II: Nursing	HS	1-3	6	High Value Level 2	\$1,020
5214	Health Science II: Pharmacy	HS	1-3	6	High Value Level 2	\$1,020
5215	Health Science II: Physical Therapy	HS	1-3	6	High Value Level 2	\$1,020
5286	Health Science II: Special Topics	HS	1-3	6	Pilot	\$300
5132	Horticultural Science	AG	1-3	6	Less than Moderate Value	\$200

6152	Hospitality and Human Services: Special Topics (New)	HHS	1-3	12	Pilot	\$300
5352	Housing and Interior Design Careers I	A&C	1-3	6	Moderate Value Level 1	\$400
5460	Housing and Interior Design Careers II	A&C	1-3	6	Moderate Value Level 2	\$600
5336	Human and Social Services I	HHS	1-3	6	High Value Level 1	\$680
5462	Human and Social Services II	HHS	1-3	6	High Value Level 2	\$1,020
5216	Human Body Systems	HS	1	2	High Value	\$680
5366	Human Development and Wellness	FACS/CTE	1	2	Introductory	\$300
5610	Industrial Automation and Robotics I	ADV MAN	1-3	6	High Value Level 1	\$680
5612	Industrial Automation and Robotics II	ADV MAN	1-3	6	High Value Level 2	\$1,020
5686	Industrial Technical Maintenance I	ADV MAN	1-3	6	Moderate Value Level 1	\$400
5688	Industrial Technical Maintenance II	ADV MAN	1-3	6	Moderate Value Level 2	\$600
4578	Information Technology: Special Topics (NEW)	IT	1-3	12	Pilot	\$300
5230	Information Technology Support I	IT	1-3	6	Moderate Value Level 1	\$400
5231	Information Technology Support II	IT	1-3	6	Moderate Value Level 2	\$600
5232	Interactive Media	AV	1-3	6	Less Than Moderate Value	\$200
4524	Introduction to Accounting	BME	1	2	Introductory	\$300

4796	Introduction to Advanced Manufacturing and Logistics	ADV MAN	1	2	Introductory	\$300
5056	Introduction to Agriculture, Food and Natural Resources	AG	1	2	Introductory	\$300
4518	Introduction to Business	BME	1	2	Introductory	\$300
4790	Introduction to Communication	AV	1	2	Introductory	\$300
4803	Introduction to Computer Science	STEM	1	2	Introductory	\$300
4792	Introduction to Construction	A&C	1	2	Introductory	\$300
5438	Introduction to Culinary Arts and Hospitality	HHS	1	2	Introductory	\$300
4794	Introduction to Design Processes	STEM	1	2	Introductory	\$300
4802	Introduction to Engineering Design	STEM	1	2	Introductory	\$300
5967	Introduction to Entrepreneurship	BME	1	2	Introductory	\$300
5380	Introduction to Fashion and Textiles	AV	1	2	Introductory	\$300
5272	Introduction to Health Science Careers	HS	1	2	Introductory	\$300
5350	Introduction to Housing and Interior Design	A&C	1	2	Introductory	\$300
4784	Introduction to Manufacturing	ADV MAN	1	2	Introductory	\$300
5614	Introduction to the Energy Industry	A&C	1	2	Introductory	\$300
4798	Introduction to Transportation	T&L	1	2	Introductory	\$300
5136	Landscape Management I	AG	1-3	6	Moderate Value Level 1	\$400

5137	Landscape Management II	AG	1-3	6	Moderate Value Level 2	\$600
5982	Marketing in Hospitality and Tourism	BME	1	2	Moderate Value	\$400
4836	Mechanical Drafting and Design I	ADV MAN	1-3	6	High Value Level 1	\$680
4838	Mechanical Drafting and Design II	ADV MAN	1-3	6	High Value Level 2	\$1,020
5217	Medical Interventions	HS	1	2	High Value Level 2	\$1,020
5274	Medical Terminology	HS	1	2	Introductory	\$300
5962	Merchandising	BME	1	2	Moderate Value	\$400
5180	Natural Resources	AG	1	2	Moderate Value	\$400
5234	Networking I	IT	1-3	6	High Value Level 1	\$680
5245	Networking II: Cybersecurity Capstone	IT	1-3	6	High Value Level 2	\$1,020
4588	Networking II: Infrastructure	IT	1-3	6	High Value Level 2	\$1,020
5257	Networking II: Servers	IT	1-3	6	High Value Level 2	\$1,020
5456	Nutrition Science Careers I	HHS	1-3	6	Less Than Moderate Value Level 1	\$200
5457	Nutrition Science Careers II	HHS	1-3	6	Less Than Moderate Value Level 2	\$300
5170	Plant and Soil Science	AG	1	2	Moderate Value	\$400
5782	Precision Machining I	ADV MAN	1-3	6	High Value Level 1	\$680
5784	Precision Machining II	ADV MAN	1-3	6	High Value Level 2	\$1,200
5394	Preparing for College and Careers	CTE	1	1	PCC	\$150

5218	Principles of Biomedical Sciences	HS	1	2	High Value	\$680
4562	Principles of Business Management	BME	1	2	High Value	\$680
5644	Principles of Engineering	STEM	1	2	Moderate Value Level 1	\$400
5914	Principles of Marketing	BME	1	2	Moderate Value	\$400
6154	Public Safety: Special Topics	PS	1-3	12	Pilot	\$300
5986	Radio and Television I	AV	1-3	6	Less Than Moderate Value Level 1	\$200
5992	Radio and Television II	AV	1-3	6	Less Than Moderate Value Level 2	\$300
5842	Recreational and Mobile Equipment I	T&L	1-3	6	Less Than Moderate Value Level 1	\$200
5844	Recreational and Mobile Equipment II	T & L	1-3	6	Less Than Moderate Value Level 2	\$300
5472	Residential Property Management Careers I	HHS	1-3	6	High Value Level 1	\$680
5858	Residential Property Management Careers II	HHS	1-3	6	High Value Level 2	\$1,020
4728	Robotics Design and Innovation	ADV MAN	1	2	Introductory	\$300
5984	Sports and Entertainment Marketing	BME	1	2	Moderate Value	\$400
5918	Strategic Marketing	BME	1-2	4	Moderate Value	\$400
5601	Supply Chain Management and Logistics	T&L	1-3	6	High Value	\$680

5229	Sustainable Energy Alternatives	AG	1	2	Less than Moderate Value	\$200
5622	Tractor/Trailer Operation	T&L	1-3	3	High Value	\$680
6156	Transportation: Special Topics (NEW)	T&L	1-3	12	Pilot	\$300
5211	Veterinary Careers I	HS	1-3	6	High Value Level 1	\$680
5212	Veterinary Careers II	HS	1-3	6	High Value Level 2	\$1,020
5602	Warehouse Operations and Materials Handling	T&L	1-3	6	Moderate Value	\$400
5776	Welding Technology I	ADV MAN	1-3	6	High Value Level 1	\$680
577	Welding Technology II	ADV MAN	1-3	6	High Value Level 2	\$1,020
5974	Work Based Learning Capstone	CTE WBL	1-3	6	Work Based Learning	\$500

***Area Participation** -number of pupils who travel from the school in which they are currently enrolled to another school to participate in a career and technical education program in which pupils from multiple schools are served at a common location