

**Revised: October 27, 2021**

## **Career-Technical Assurance Guide (CTAG) Guidance Document**

This CTAG Guidance Document may be used as a resource by secondary career-technical education (CTE) institutions, Ohio Technical Centers, and institutions of higher education to learn about statewide articulated career-technical credit transfer opportunities which are available to students that successfully complete approved coursework/programs and meet all applicable requirements in order to access CTAG credit. The document is organized into the following sections:

### **Section I**

This section represents those CTAGs/CTANs where there is a direct alignment between an Ohio Department of Education (ODE) course and a CTAG/CTAN. Information in this section includes: CTAG area, CTAN name, CTAN number, credit hours available, EMIS code, ODE course, the ODE career field pathway in which the course is available, and student requirements in order to access the credit (e.g., WebXam score, pre-requisites, etc.).

Approval of CTAGs/CTANs in these areas will be accomplished through Phase II of the Career-Technical Articulation Verification (CTAV) program. Manual submission of these ODE courses (including the submission of a Certificate of Affirmation) in the department's Course Equivalency Management System (CEMS) is no longer required. Approvals for these CTAGs/CTANs will automatically be created in CEMS based on annual program approval data that the department receives from the Ohio Department of Education. Courses and matches will be created through ODE's CTE-26 application process for any ODE course that is aligned to a CTAG/CTAN and that is available within a career field pathway approved for a secondary CTE institution.

In the "Requirements" column in this section, there may be instances where the required WebXam score for a given academic year may be blacked out or state "full course review" or "field testing." If the cell is blacked out, the CTAG/CTAN was not available during that academic year. If the cell states "full course review," a WebXam score was not established for the CTAG/CTAN that academic year and a student must have passed the course with a grade of "C" or better (and meet other requirements if applicable) in order to be eligible to access the credit. If the cell states "field testing," a new or revised WebXam was field tested in that academic year to determine the appropriate minimum score required of students to access the credit. For WebXams currently undergoing field testing, the required minimum score will be updated at the end of the academic year.

### **Section II**

This section represents those CTAGs/CTANs where there is not a direct alignment between an ODE course and the CTAG/CTAN, and those CTAGs/CTANs that are available for submission by an Ohio Technical Center. Information in this section includes: CTAG area, CTAN name, CTAN number, credit hours available, submission requirements, and student requirements in order to access the credit (e.g., credentials, licenses, etc.).

Manual submission in CEMS is required for CTAG/CTAN approval. If the CTE institution intends to seek approval for any of these CTAGs/CTANs, please contact Ohio Articulation and Transfer Network (OATN) staff for guidance.

### Section III

This section represents those CTAGs/CTANs that are currently under revision or inactive. Institutions will not be able to make submissions for approval for these CTAGs/CTANs at this time. However, students may still be eligible to access credit for the CTAGs/CTANs listed in this section provided they met all applicable requirements during the academic years listed.

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Institutions may view current CTAG/CTAN approvals on the department's [Course Reporting System site](#). Secondary CTE institutions should note the following changes in the Course Reporting System for ODE courses that directly align to a CTAG/CTAN as a result of Phase II of CTAV:

- CTAG/CTAN approvals may appear for ODE courses that are not currently offered by the institution. As previously mentioned under Section I above, an approval will be created in CEMS through ODE's CTE-26 application process for an ODE course that aligns to a CTAG/CTAN and is available in a career field pathway that has been approved.
- Approved locations may appear for the CTE institution where an ODE course may not be currently offered. This is the result of district/location relationship and program approval data that is received from ODE.
- An approval that was once associated with a compact name may now be associated with the actual school district that participates in the compact and has CTE-26 approval from ODE. A list of compact/district/school participants may be viewed [here](#).
- An expiration term of SP2019 may be listed for an approval of an ODE course that directly aligns to a CTAG/CTAN. This date aligns with annual program approval data received from ODE for a given academic year. Phase II was initially implemented using program approval data from the 2017, 2018, and 2019 academic years. The 2019 expiration term includes students that completed coursework through the 2018-2019 school year. AY20 program approval data will be received and uploaded into CEMS in early 2020, at which time the expiration term for these courses will be updated to SP2020; these data will include students completing coursework through the 2019-2020 school year. The expiration term will be updated annually as subsequent program approval data is received.

Questions about this document or CTAGs in general may be directed to the following OATN staff members:

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## SECTION I

ODE courses that directly align to a CTAG/CTAN

| Career-Technical Assurance Guide (CTAG) Technology |  | Career-Technical Articulation Numbers (CTANs) | Credit Hours | EMIS Code | ODE Course   | Career Field Pathway                                    | Requirements/Credentials/Licenses Needed to Access CTAG Credit (Students must successfully complete the course and meet all applicable requirements in order to be eligible to access CTAG credit. Students must access CTAG credit within three years of graduating from the career-technical education institution.) |                         |                         |                         |                         |
|--|--|---|--------------|-----------|--|---|--|-------------------------|-------------------------|-------------------------|-------------------------|
|  |  |   |              |           |  |   | (AY22) WebXam 2021-2022  | (AY21) WebXam 2020-2021 | (AY20) WebXam 2019-2020 | (AY19) WebXam 2018-2019 | (AY18) WebXam 2017-2018 |
| Administrative and Professional Support            | Office Procedures                              | CTAPS001                                      | 3            | 142005    | Office Management  | C4 - Business and Administrative Services               | 54 or higher   | 54 or higher            | 54 or higher            | 54 or higher            | 54 or higher            |
| Agribusiness and Production Systems                | Crop Production                                | CTAGP001                                      | 3            | 010620    | Agronomic Systems  | A0 - Agribusiness and Production Systems                | 50 or higher   | 50 or higher            | 50 or higher            | 50 or higher            | 50 or higher            |
|  | Soil Fertility and Fertilizers                 | CTAGP002                                      | 3            | 010610    | Greenhouse and Nursery Management                              | A0 - Agribusiness and Production Systems                | 63 or higher   | 63 or higher            | 63 or higher            | 63 or higher            | 63 or higher            |
|  |  |   |              |           |  | A5 - Horticulture                                       |  |                         |                         |                         |                         |
|  | Agribusiness Management                        | CTAGP003                                      | 3            | 010115    | Business Management for Agricultural and Environmental Systems | A0 - Agribusiness and Production Systems                | 63 or higher   | 63 or higher            | 63 or higher            | 63 or higher            | 63 or higher            |
|  |  |   |              |           |  | A1 - Industrial Power Technology                        |  |                         |                         |                         |                         |
|  |  |   |              |           |  | A2 - Animal Science and Management                      |  |                         |                         |                         |                         |
|  |  |   |              |           |  | A3 - Agriculture, Food and Natural Resources Bioscience |  |                         |                         |                         |                         |
| A5 - Horticulture                                  |  |   |              |           |  |   |  |                         |                         |                         |                         |
| A6 - Natural Resource Management                   |  |   |              |           |  |   |  |                         |                         |                         |                         |
| Air Transportation                                 | Air Transportation                             | CTAIR001                                      | 3            | 177020    | Aviation Airport Management                                    | TA - Air Transportation                                 | 73 or higher   | 73 or higher            | 73 or higher            | 73 or higher            | 73 or higher            |
|  | Aircraft Ground Operations                     | CTAIR002                                      | 3            | 177014    | Aviation Maintenance General                                   | TA - Air Transportation                                 | 71 or higher   | 71 or higher            | 71 or higher            | 71 or higher            | 71 or higher            |
|  | Aviation Meteorology                           | CTAIR003                                      | 3            | 177019    | Aviation Meteorology   | TA - Air Transportation                                 | 72 or higher   | 72 or higher            | 72 or higher            | 72 or higher            | 72 or higher            |
|  | Introduction to Aviation                       | CTAIR004                                      | 3            | 177013    | Aviation   | F6 - Engineering and Design                             | 74 or higher   | 74 or higher            | 74 or higher            | 74 or higher            | 74 or higher            |
| TA - Air Transportation                            |  |   |              |           |  |   |  |                         |                         |                         |                         |
| Animal Science and Management                      | Introduction to Animal Science                 | CTASM001                                      | 3            | 010910    | Animal Science and Technology                                  | A2 - Animal Science and Management                      | 50 or higher   | 50 or higher            | 50 or higher            | 50 or higher            | 50 or higher            |
| Behavioral Health                                  | Mental Health                                  | CTBH001                                       | 3            | 072065    | Mental Health  | JM - Allied Health and Nursing                          | Field testing  |                         |                         |                         |                         |
|  | Chemical Dependency                            | CTBH002                                       | 3            | 072066    | Integrated Behavioral Health                                   | JM - Allied Health and Nursing                          | Field testing  |                         |                         |                         |                         |
| Biotechnology for Health                           | Biotechnology Principles                       | CTBTC001                                      | 3            | 072125    | Biotechnology of Health and Disease                            | J0 - Medical Bioscience                                 | Field testing  |                         |                         |                         |                         |
| Biotechnology for Food, Plant and Animal Science   | Biotechnology Principles                       | CTBTC001                                      | 3            | 012010    | Animal and Plant Biotechnology                                 | A0 - Agribusiness and Production Systems                | 60 or higher   | 60 or higher            | 60 or higher            | 60 or higher            | 60 or higher            |
|  |  |   |              |           |  | A3 - Agriculture, Food and Natural Resources Bioscience |  |                         |                         |                         |                         |
|  | Bioinformatics                                 | CTBTC002                                      | 3            | 012025    | Bioresearch  | A3 - Agriculture, Food and Natural Resources Bioscience | 48 or higher   | 48 or higher            | 48 or higher            | 48 or higher            | 48 or higher            |
| Clinical/Medical Laboratory Technology             | Intro to Medical (Clinical) Laboratory Science | CTMLT001 (OAN OHL008)                         | 2-3          | 072100    | Clinical Laboratory Techniques                                 | JM - Allied Health and Nursing                          | Field testing  | 65 or higher            | 65 or higher            | 65 or higher            | Full course review      |

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|--|---|---|--------------|--|---|--|--|-------------------------|-------------------------|-------------------------|-------------------------|
|  |   |   |              |  |   |  | (AY22) WebXam 2021-2022  | (AY21) WebXam 2020-2021 | (AY20) WebXam 2019-2020 | (AY19) WebXam 2018-2019 | (AY18) WebXam 2017-2018 |
| Construction Technology                            | Plan Reading                              | CTCON001                                      | 3            | 178019                                 | Plan Reading                              | DD - Structural Systems                          | 60 or higher   | 60 or higher            | 64 or higher            | 64 or higher            | 64 or higher            |
|  |   |   |              |  |   | DE - Mechanical, Electrical and Plumbing         |  |                         |                         |                         |                         |
|  |   |   |              |  |   | DF - Construction Design and Management          |  |                         |                         |                         |                         |
|  | Construction Safety (OSHA 30 Hour Safety) | CTCON002                                      | 3            | 178018                                 | Construction Safety and Crew Leadership   | DD - Structural Systems                          | 60 or higher   | 60 or higher            | 64 or higher            | 64 or higher            | 64 or higher            |
|  |   |   |              |  |   | DE - Mechanical, Electrical and Plumbing         |  |                         |                         |                         |                         |
|  |   |   |              |  |   | DF - Construction Design and Management          |  |                         |                         |                         |                         |
| Construction Methods and Materials                 | CTCON003 (OAN OET016)                     | 3   | 178001       | Carpentry and Masonry Technical Skills | DD - Structural Systems                   | 65 or higher                                     | 65 or higher   | 75 or higher            | 75 or higher            | 75 or higher            |                         |
|  |   |   |              |  | DE - Mechanical, Electrical and Plumbing  |  |  |                         |                         |                         |                         |
|  |   |   |              |  | DF - Construction Design and Management   |  |  |                         |                         |                         |                         |
| Criminal Justice                                   | Introduction to Criminal Justice          | CTCJ001 (OAN OSS031)                          | 3            | 170911                                 | The American Criminal Justice System      | P1 - Criminal Justice                            | 47 or higher   | 47 or higher            | 47 or higher            | 47 or higher            | 47 or higher            |
|  |   |   |              |  |   | P6 - Firefighting and Emergency Medical Services |  |                         |                         |                         |                         |
|  |   |   |              | 170913                                 | Police Work and Practice in Public Safety | P1 - Criminal Justice                            | 56 or higher   | 56 or higher            | 56 or higher            | 56 or higher            | 56 or higher            |
|  |   |   |              |  |   | P6 - Firefighting and Emergency Medical Services |  |                         |                         |                         |                         |
|  |   |   |              | 170915                                 | Correctional System and Services          | P1 - Criminal Justice                            | 60 or higher   | 60 or higher            | 60 or higher            | 60 or higher            | 60 or higher            |
|  |   |   |              |  |   | P6 - Firefighting and Emergency Medical Services |  |                         |                         |                         |                         |
| Cybersecurity                                      | Cybersecurity Fundamentals                | CTCYB001                                      | 3            | 146010                                 | Cybersecurity Defense and Reinforcement   | N4 - Cybersecurity                               | 60 or higher   | 60 or higher            | 60 or higher            | 60 or higher            |                         |
| Dental Assisting                                   | Introduction to Dental Assisting          | CTDA001                                       | 2            | 072075                                 | Dental Technology                         | JM - Allied Health and Nursing                   | Field testing  |                         |                         |                         |                         |
|  | Dental Radiography                        | CTDA002                                       | 1            | 072076                                 | Dental Radiography                        | JM - Allied Health and Nursing                   | Field testing  |                         |                         |                         |                         |
| Early Childhood Education                          | Introduction to Early Childhood Education | CTECE001                                      | 3            | 350205                                 | Early Childhood Education Principles      | E0 - Early Childhood Education                   | 50 or higher   | 50 or higher            | 50 or higher            | 50 or higher            | 50 or higher            |
|  | Health, Safety and Nutrition              | CTECE002                                      | 2            | 350230                                 | Health, Safety and Nutrition              | E0 - Early Childhood Education                   | 65 or higher   | 65 or higher            | 65 or higher            | 65 or higher            | 65 or higher            |
|  | Infant and Toddler Curriculum             | CTECE003                                      | 3            | 350210                                 | Infant and Toddler Education              | E0 - Early Childhood Education                   | 57 or higher   | 57 or higher            | 57 or higher            | 57 or higher            | 57 or higher            |
| Education  | Introduction to Education                 | CTEDU007 (OAN OED007)                         | 3            | 350010                                 | Education Principles                      | E1 - Teaching Professions                        | 68 or higher*  | 68 or higher*           | 68 or higher*           | 68 or higher*           | 68 or higher*           |
| Engineering Technology                             | Introduction to Engineering               | CTEGT001 (OAN OES001)                         | 1            | 175002                                 | Engineering Principles                    | F6 - Engineering and Design                      | 65 or higher   | 65 or higher            | 66 or higher            |                         |                         |

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|--|----------------------------------|---|--------------|--|--|---|--|-------------------------|-------------------------|-------------------------|-------------------------|--|--|--|
|  |                                  |   |              |  |  |   | (AY22) WebXam 2021-2022  | (AY21) WebXam 2020-2021 | (AY20) WebXam 2019-2020 | (AY19) WebXam 2018-2019 | (AY18) WebXam 2017-2018 |  |  |  |
|  | Engineering Graphics             | CTEGT002                                      | 3            | 175001   | Engineering Design                         | F6 - Engineering and Design   | 65 or higher   | 65 or higher            | 65 or higher            |                         |                         |  |  |  |
| Engineering Technology: Electrical                 | DC Circuits                      | CTEET001 (OAN OET001)                         | 3            | 175105   | DC Electronic Circuits                     | F6 - Engineering and Design   | 65 or higher   | 65 or higher            | 69 or higher            |                         |                         |  |  |  |
|  | Digital Electronics              | CTEET002 (OAN OET002)                         | 4            | 175007   | Digital Electronics                        | F6 - Engineering and Design<br>R7 - Manufacturing Operations  | 60 or higher   | 60 or higher            | 62 or higher            | 56 or higher            | Full course review      |  |  |  |
| Engineering Technology: Mechanical                 | Manufacturing Processes          | CTMET004 (OAN OET010)                         | 3            | 175003   | Manufacturing Operations                   | F6 - Engineering and Design   | 60 or higher   | 60 or higher            | 62 or higher            | 73 or higher            | Full course review      |  |  |  |
|  |                                  |   |              |  |  | R7 - Manufacturing Operations   |  |                         |                         |                         |                         |  |  |  |
|  | CADD                             | CTMET005 (OAN OET012)                         | 3            | 175006   | Computer Integrated Manufacturing          | F6 - Engineering and Design   | 55 or higher   | 55 or higher            | 59 or higher            | 60 or higher            | Full course review      |  |  |  |
|  |                                  |   |              |  |  | R7 - Manufacturing Operations   |  |                         |                         |                         |                         |  |  |  |
| CNC Programming/Machining                          | CTMET006                         | 3   | 176007       | Computer Numerical Control Technology with Industrial Mills and Lathes | F6 - Engineering and Design                | 70 or higher  | 70 or higher   | 72 or higher            |                         |                         |                         |  |  |  |
|  |                                  |   |              |  | R7 - Manufacturing Operations              |   |  |                         |                         |                         |                         |  |  |  |
| Entrepreneurship                                   | Introduction to Entrepreneurship | CTENTR001                                     | 3            | 141030   | Strategic Entrepreneurship                 | C4 - Business and Administrative Services   | 56 or higher   | 56 or higher            | 56 or higher            | 56 or higher            | 56 or higher            |  |  |  |
|  |                                  |   |              |  |  | G2 - Finance  |  |                         |                         |                         |                         |  |  |  |
|  |                                  |   |              |  |  | S5 - Marketing  |  |                         |                         |                         |                         |  |  |  |
| Exercise Science                                   | Introduction to Exercise Science | CTES001                                       | 3            | 072000   | Exercise and Athletic Training             | J6 - Exercise and Sports Medicine   | Field testing  | 56 or higher            | 56 or higher            | 56 or higher            | 56 or higher            |  |  |  |
|  | Fitness and Health Foundations   | CTES002                                       | 3            | 072020   | Fitness Evaluation and Assessment          | J6 - Exercise and Sports Medicine   | Field testing  | 61 or higher            | 61 or higher            | 61 or higher            | 61 or higher            |  |  |  |
| Food Science                                       | Introduction to Food Processing  | CTFSC001                                      | 3            | 011010   | Science and Technology of Food             | A0 - Agribusiness and Production Systems<br>A3 - Agriculture, Food and Natural Resources Bioscience | 61 or higher   | 61 or higher            | 61 or higher            | 61 or higher            | 61 or higher            |  |  |  |
| Graphics   | Raster Graphics                  | CTGRPH001                                     | 3            | 145100   | Creating and Editing Digital Graphics      | N1 - Interactive Media  | 55 or higher   | 55 or higher            | 55 or higher            |                         |                         |  |  |  |
|  |                                  |   |              | OR   |  |   |  |                         |                         |                         |                         |  |  |  |
|  |                                  |   |              | 340120   | Digital Image Editing                      | B0 - Media Arts<br>B2 - Visual Design and Imaging   | 44 or higher   | 44 or higher            | 44 or higher            |                         |                         |  |  |  |
|  | Vector Graphics                  | CTGRPH002                                     | 3            | 145105   | Multimedia and Image Management Techniques | N1 - Interactive Media<br>N3 - Programming and Software Development                                 | 60 or higher   | 60 or higher            | 60 or higher            |                         |                         |  |  |  |
|  |                                  |   |              | OR   |  |   |  |                         |                         |                         |                         |  |  |  |
|  |                                  |   |              | 340330   | Visual Distribution                        | B2 - Visual Design and Imaging  | 38 or higher   | 38 or higher            | 38 or higher            |                         |                         |  |  |  |

|   |  |                       |   |        |                                       |                                    |               |              |              |              |              |
|---|--|-----------------------|---|--------|---------------------------------------|------------------------------------|---------------|--------------|--------------|--------------|--------------|
| Health Information Management           | Intro to Health Information Management                                       | CTHIM001              | 3 | 072135 | Health Information Technology         | J7 - Health Information Management | Field testing | 62 or higher | 62 or higher | 62 or higher | 62 or higher |
|   | Legal and Ethical Aspects of Health Information Management                   | CTHIM002 (OAN OHL021) | 2 | 072140 | Health Information Management         | JM - Allied Health and Nursing     | Field testing | 57 or higher | 57 or higher | 57 or higher | 57 or higher |
| Horticulture                            | Floral Design and Marketing  | CTHOR001              | 3 | 010625 | Floral Design and Marketing           | A5 - Horticulture                  | 64 or higher  | 64 or higher | 64 or higher | 64 or higher | 64 or higher |
|   | Landscape Maintenance  | CTHOR002              | 3 | 010640 | Landscapes Hardscapes                 | A5 - Horticulture                  | 56 or higher  | 56 or higher | 56 or higher | 56 or higher | 56 or higher |
|   | Equipment Operation and Maintenance  | CTHOR003              | 3 | 010615 | Landscape Systems Management          | A5 - Horticulture                  | 64 or higher  | 64 or higher | 64 or higher | 64 or higher | 64 or higher |
|   | Plant and Horticulture Science   | CTHOR004              | 3 | 010155 | Plant and Horticulture Science        | A2 - Animal Science and Management | 64 or higher  | 64 or higher | 64 or higher | 64 or higher | 64 or higher |
|   | Turf-Grass Management  | CTHOR005              | 3 | 010635 | Turf Science and Management           | A5 - Horticulture                  | 60 or higher  | 60 or higher | 60 or higher | 60 or higher | 60 or higher |
| Hospitality, Tourism, and Culinary Arts | Introduction to Hospitality and Tourism                                      | CTCF002               | 2 | 330000 | Hospitality Fundamentals              | L0 - Culinary Arts                 | 68 or higher  | 68 or higher | 68 or higher | 68 or higher | 68 or higher |
|   | Basic Food Production  | CTCF005               | 4 | 330100 | Fundamentals of Food Production       | L0 - Culinary Arts                 | 76 or higher  | 76 or higher | 76 or higher | 76 or higher | 76 or higher |
|   | Technology in the Hospitality Industry                                       | CTCF007               | 2 | 330035 | Hospitality Management                | L1 - Hospitality                   | 64 or higher  | 64 or higher | 64 or higher | 64 or higher | 64 or higher |
|   | Front Office Operations and Housekeeping Operations for the Lodging Industry | CTCF008               | 3 | 330030 | Front Office Management and Operation | L1 - Hospitality                   | 77 or higher  | 77 or higher | 77 or higher | 77 or higher | 77 or higher |
|   | Food Principles and Purchasing   | CTCF009               | 3 | 330120 | Restaurant Management                 | L0 - Culinary Arts                 | 66 or higher  | 66 or higher | 66 or higher | 66 or higher | 66 or higher |
| Industrial Power Technology             | Hydraulics and Pneumatics Systems  | CTAIE001              | 2 | 010225 | Hydraulics and Pneumatics             | A1 - Industrial Power Technology   | 61 or higher  | 61 or higher | 61 or higher | 61 or higher | 61 or higher |
|   |  |                       |   |        | A6 - Natural Resource Management      |                                    |               |              |              |              |              |
|   |  |                       |   |        | F6 - Engineering and Design           |                                    |               |              |              |              |              |
|   |  |                       |   |        | R7 - Manufacturing Operations         |                                    |               |              |              |              |              |
|   |  |                       |   |        |                                       | T9 - Ground Transportation         |               |              |              |              |              |

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|--|---|---|----------------------|--------------------|---|---|--|-------------------------|-------------------------|-------------------------|-------------------------|
|  |   |   |                      |                    |   |   | (AY22) WebXam 2021-2022  | (AY21) WebXam 2020-2021 | (AY20) WebXam 2019-2020 | (AY19) WebXam 2018-2019 | (AY18) WebXam 2017-2018 |
| Interactive Media                                  | 2-D Animation                             | CTIM001                                       | 3                    | 145115             | Animation                                 | N1 - Interactive Media                    | 55 or higher   | 55 or higher            | 55 or higher            | 55 or higher            | 60 or higher            |
|  |   |   |                      |                    |   | N3 - Programming and Software Development |  |                         |                         |                         |                         |
|  | Internet and Web Languages                | CTIM004                                       | 3                    | 145010             | Web Design                                | N0 - Information Support and Services     | 55 or higher   | 55 or higher            | 55 or higher            | 55 or higher            | 62 or higher            |
|  |   |   |                      |                    |   | N1 - Interactive Media                    |  |                         |                         |                         |                         |
|  |   |   |                      |                    |   | N2 - Network Systems                      |  |                         |                         |                         |                         |
|  | Graphical Website Design                  | CTIM005                                       | 3                    | 145125             | Interactive Application Development       | N1 - Interactive Media                    | 55 or higher   | 55 or higher            | 55 or higher            | 55 or higher            | 65 or higher            |
|  |   |   |                      |                    |   | N3 - Programming and Software Development |  |                         |                         |                         |                         |
|  | Digital Video Production                  | CTIM006                                       | 3                    | 145110             | Video and Sound                           | N0 - Information Support and Services     | 60 or higher   | 60 or higher            | 60 or higher            | 60 or higher            | 60 or higher            |
| N1 - Interactive Media                             |   |   |                      |                    |   |   |  |                         |                         |                         |                         |
| N2 - Network Systems                               |   |   |                      |                    |   |   |  |                         |                         |                         |                         |
| 3-D Modeling and Animation                         | CTIM007                                   | 3   | 145120               | 3-D Techniques     | N1 - Interactive Media                    | 55 or higher                              | 55 or higher   | 55 or higher            | 55 or higher            | 56 or higher            |                         |
|  |   |   |                      |                    | N3 - Programming and Software Development |   |  |                         |                         |                         |                         |
| Electronic Publishing                              | CTIM008                                   | 3   | 145095               | Design Techniques  | N1 - Interactive Media                    | 55 or higher                              | 55 or higher   | 55 or higher            | 55 or higher            | 56 or higher            |                         |
| Information Support Services/Network Systems       | Networking/ CompTIA Network +             | CTIT002                                       | 3                    | 145035             | Networking                                | N0 - Information Support and Services     | 60 or higher   | 60 or higher            | 60 or higher            | 60 or higher            | 67 or higher            |
|  |   |   |                      |                    |   | N2 - Network Systems                      |  |                         |                         |                         |                         |
|  |   |   |                      | N4 - Cybersecurity |   |   |  |                         |                         |                         |                         |
|  | 145045                                    | Network Management                            | N2 - Network Systems | 50 or higher       | 50 or higher                              | 50 or higher                              | 50 or higher   | 56 or higher            |                         |                         |                         |
|  |   |   | N4 - Cybersecurity   |                    |   |   |  |                         |                         |                         |                         |
|  | Introduction to Desktop Operating Systems | CTIT005                                       | 3                    | 145030             | Computer Software                         | F6 - Engineering and Design               | 60 or higher   | 60 or higher            | 60 or higher            | 60 or higher            | 73 or higher            |
| N0 - Information Support and Services              |   |   |                      |                    |   |   |  |                         |                         |                         |                         |
| N2 - Network Systems                               |   |   |                      |                    |   |   |  |                         |                         |                         |                         |
| N4 - Cybersecurity                                 |   |   |                      |                    |   |   |  |                         |                         |                         |                         |



| Career-Technical Assurance Guide (CTAG) Technology  |  | Career-Technical Articulation Numbers (CTANs) | Credit Hours | EMIS Code         | ODE Course                            | Career Field Pathway                  | Requirements/Credentials/Licenses Needed to Access CTAG Credit (Students must successfully complete the course and meet all applicable requirements in order to be eligible to access CTAG credit. Students must access CTAG credit within three years of graduating from the career-technical education institution.) |                         |                         |                         |                         |              |
|---|--|---|--------------|-------------------|---------------------------------------|---------------------------------------|--|-------------------------|-------------------------|-------------------------|-------------------------|--------------|
|   |  |   |              |                   |                                       |                                       | (AY22) WebXam 2021-2022  | (AY21) WebXam 2020-2021 | (AY20) WebXam 2019-2020 | (AY19) WebXam 2018-2019 | (AY18) WebXam 2017-2018 |              |
| Information Support Services/Network Systems (cont) | Introduction to User Support                             | CTIT006                                       | 3            | 145050            | Network Security                      | N0 - Information Support and Services | 55 or higher   | 55 or higher            | 55 or higher            | 55 or higher            | 63 or higher            |              |
|   |  |   |              |                   |                                       | N2 - Network Systems                  |  |                         |                         |                         |                         |              |
|   |  |   |              |                   |                                       | N4 - Cybersecurity                    |  |                         |                         |                         |                         |              |
|   | CompTIA Security +                                       | CTIT015                                       | 3            | 145050            | Network Security                      | N0 - Information Support and Services | 55 or higher   | 55 or higher            | 55 or higher            | 55 or higher            | 63 or higher            |              |
|   |  |   |              |                   |                                       | N2 - Network Systems                  |  |                         |                         |                         |                         |              |
|   |  |   |              |                   |                                       | N4 - Cybersecurity                    |  |                         |                         |                         |                         |              |
|   | Microsoft Windows Desktop Operating System               | CTIT011                                       | 3            | 145030            | Computer Software                     | F6 - Engineering and Design           | 60 or higher   | 60 or higher            | 60 or higher            | 60 or higher            | 73 or higher            |              |
|   |  |   |              |                   |                                       | N0 - Information Support and Services |  |                         |                         |                         |                         |              |
|   |  |   |              |                   |                                       | N2 - Network Systems                  |  |                         |                         |                         |                         |              |
|   |  |   |              | 145040            | Network Operating Systems             | N0 - Information Support and Services | 55 or higher   | 55 or higher            | 55 or higher            | 55 or higher            | 55 or higher            | 64 or higher |
|   |  |   |              |                   |                                       | N2 - Network Systems                  |  |                         |                         |                         |                         |              |
|   |  |   |              |                   |                                       | N4 - Cybersecurity                    |  |                         |                         |                         |                         |              |
|   | Microsoft Server Administrator                           | CTIT013                                       | 3            | 145040            | Network Operating Systems             | N0 - Information Support and Services | 55 or higher   | 55 or higher            | 55 or higher            | 55 or higher            | 64 or higher            |              |
|   |  |   |              |                   |                                       | N2 - Network Systems                  |  |                         |                         |                         |                         |              |
|   |  |   |              |                   |                                       | N4 - Cybersecurity                    |  |                         |                         |                         |                         |              |
|   | Linux  | CTIT016                                       | 3            | 145040            | Network Operating Systems             | N0 - Information Support and Services | 55 or higher   | 55 or higher            | 55 or higher            | 55 or higher            | 64 or higher            |              |
|   |  |   |              |                   |                                       | N2 - Network Systems                  |  |                         |                         |                         |                         |              |
|   |  |   |              |                   |                                       | N4 - Cybersecurity                    |  |                         |                         |                         |                         |              |
|   | Operating System, Hardware Operation and Maintenance/ A+ | CTIT014                                       | 3            | 145030            | Computer Software                     | F6 - Engineering and Design           | 60 or higher   | 60 or higher            | 60 or higher            | 60 or higher            | 73 or higher            |              |
|   |  |   |              |                   |                                       | N0 - Information Support and Services |  |                         |                         |                         |                         |              |
| N2 - Network Systems                                |  |   |              |                   |                                       |                                       |  |                         |                         |                         |                         |              |
| N4 - Cybersecurity                                  |  |   |              |                   |                                       |                                       |  |                         |                         |                         |                         |              |
| 145025  |  |   |              | Computer Hardware | F6 - Engineering and Design           | 55 or higher                          | 55 or higher   | 55 or higher            | 55 or higher            | 55 or higher            | 72 or higher            |              |
|   |  |   |              |                   | N0 - Information Support and Services |                                       |  |                         |                         |                         |                         |              |
|   |  |   |              |                   | N2 - Network Systems                  |                                       |  |                         |                         |                         |                         |              |
|   |  |   |              |                   | N4 - Cybersecurity                    |                                       |  |                         |                         |                         |                         |              |

| Career-Technical Assurance Guide (CTAG) Technology |  | Career-Technical Articulation Numbers (CTANs) | Credit Hours | EMIS Code                  | ODE Course  | Career Field Pathway                                    | Requirements/Credentials/Licenses Needed to Access CTAG Credit (Students must successfully complete the course and meet all applicable requirements in order to be eligible to access CTAG credit. Students must access CTAG credit within three years of graduating from the career-technical education institution.) |                         |                         |                         |                         |
|--|--|---|--------------|----------------------------|---|---|--|-------------------------|-------------------------|-------------------------|-------------------------|
|  |  |   |              |                            |   |   | (AY22) WebXam 2021-2022  | (AY21) WebXam 2020-2021 | (AY20) WebXam 2019-2020 | (AY19) WebXam 2018-2019 | (AY18) WebXam 2017-2018 |
| Media Arts   | Intro to Digital Media Arts and Media Design | CTMDA001                                      | 3            | 340325                     | Digital Media Art   | B2 - Visual Design and Imaging                          | 49 or higher   | 49 or higher            | 49 or higher            | 49 or higher            | 49 or higher            |
|  | Intro to Audio Production                    | CTMDA002 (OAN OCM007)                         | 3            | 340130                     | Audio Broadcast   | B0 - Media Arts   | 77 or higher   | 77 or higher            | 77 or higher            | 77 or higher            | 77 or higher            |
|  | Intro to Single Camera Video Production      | CTMDA003 (OAN OCM008)                         | 3            | 340145                     | Video Production  | B0 - Media Arts   | 59 or higher   | 59 or higher            | 59 or higher            | 59 or higher            | 59 or higher            |
|  |  |   |              |                            |   | B1 - Performing Arts                                    |  |                         |                         |                         |                         |
| Multi-Media Production for the Web                 | CTMDA004                                     | 3   | 340160       | Multi-Media Web Production | B0 - Media Arts   | 53 or higher  | 53 or higher   | 53 or higher            | 53 or higher            | 53 or higher            |                         |
|  |  |   |              |                            | B2 - Visual Design and Imaging                              |   |  |                         |                         |                         |                         |
| Medical Management and Support                     | Medical Office Procedures                    | CTMMS001                                      | 3            | 142015                     | Medical Office Management                                   | C4 - Business and Administrative Services               | 67 or higher   | 67 or higher            | 67 or higher            | 67 or higher            | 67 or higher            |
| Medical Terminology                                | Medical Terminology                          | CTMT001 (OAN OHL020)                          | 3            | 072150                     | Medical Terminology   | A2 - Animal Science and Management                      | Field testing  | 61 or higher            | 61 or higher            | 61 or higher            | 61 or higher            |
|  |  |   |              |                            |   | C4 - Business and Administrative Services               |  |                         |                         |                         |                         |
|  |  |   |              |                            |   | J0 - Medical Bioscience                                 |  |                         |                         |                         |                         |
|  |  |   |              |                            |   | J6 - Exercise and Sports Medicine                       |  |                         |                         |                         |                         |
|  |  |   |              |                            |   | J7 - Health Information Management                      |  |                         |                         |                         |                         |
|  |  |   |              |                            |   | JM - Allied Health and Nursing                          |  |                         |                         |                         |                         |
|  |  |   |              |                            |   | P1 - Criminal Justice                                   |  |                         |                         |                         |                         |
| P6 - Firefighting and Emergency Medical Services   |  |   |              |                            |   |   |  |                         |                         |                         |                         |
| Natural Resource Management                        | Environmental Science                        | CTNRM001                                      | 3            | 010720                     | Environmental Science for Agriculture and Natural Resources | A0 - Agribusiness and Production Systems                | 59 or higher   | 59 or higher            | 59 or higher            | 59 or higher            | 59 or higher            |
|  |  |   |              |                            |   | A2 - Animal Science and Management                      |  |                         |                         |                         |                         |
|  |  |   |              |                            |   | A3 - Agriculture, Food and Natural Resources Bioscience |  |                         |                         |                         |                         |
|  | Field Botany                                 | CTNRM002                                      | 3            | 010710                     | Natural Resources   | A6 - Natural Resource Management                        | 68 or higher   | 68 or higher            | 68 or higher            | 68 or higher            | 68 or higher            |
| Field Zoology                                      | CTNRM003                                     | 3   | 010745       | Wildlife and Fisheries     | A6 - Natural Resource Management                            | 65 or higher  | 65 or higher   | 65 or higher            | 65 or higher            | 65 or higher            |                         |
| Performance Arts                                   | Dance Performance Practicum                  | CTPAT002                                      | 1-3          | 340220                     | Choreography  | B1 - Performing Arts                                    | 68 or higher   | 68 or higher            | 68 or higher            | 68 or higher            | 68 or higher            |
| Personal Finance                                   | Personal Finance                             | CTPF001                                       | 3            | 091052                     | Personal Financial Management                               | 00 - FCS GRADS  | 55 or higher   | 55 or higher            | 55 or higher            | 55 or higher            |                         |

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|--|--|---|--------------|-----------|------------------------------------|---|--|-------------------------|-------------------------|-------------------------|-------------------------|
|  |  |   |              |           |                                    |   | (AY22) WebXam 2021-2022  | (AY21) WebXam 2020-2021 | (AY20) WebXam 2019-2020 | (AY19) WebXam 2018-2019 | (AY18) WebXam 2017-2018 |
| Programming  | Computer Logic                                     | CTPROG001                                     | 3            | 145060    | Programming                        | N0 - Information Support and Services     | 55 or higher   | 55 or higher            | 55 or higher            | 55 or higher            | 64 or higher            |
|  |  |   |              |           |                                    | N1 - Interactive Media                    |  |                         |                         |                         |                         |
|  |  |   |              |           |                                    | N2 - Network Systems                      |  |                         |                         |                         |                         |
|  |  |   |              |           |                                    | N3 - Programming and Software Development |  |                         |                         |                         |                         |
|  |  |   |              |           |                                    | N4 - Cybersecurity                        |  |                         |                         |                         |                         |
|  | Java Programming                                   | CTPROG002                                     | 3            | 145065    | Object Oriented Programming        | N0 - Information Support and Services     | 55 or higher   | 55 or higher            | 55 or higher            | 55 or higher            | 63 or higher            |
|  |  |   |              |           |                                    | N1 - Interactive Media                    |  |                         |                         |                         |                         |
|  |  |   |              |           |                                    | N2 - Network Systems                      |  |                         |                         |                         |                         |
|  |  |   |              |           |                                    | N3 - Programming and Software Development |  |                         |                         |                         |                         |
|  | C++ Programming                                    | CTPROG003                                     | 3            | 145065    | Object Oriented Programming        | N0 - Information Support and Services     | 55 or higher   | 55 or higher            | 55 or higher            | 55 or higher            | 63 or higher            |
|  |  |   |              |           |                                    | N1 - Interactive Media                    |  |                         |                         |                         |                         |
|  |  |   |              |           |                                    | N2 - Network Systems                      |  |                         |                         |                         |                         |
|  |  |   |              |           |                                    | N3 - Programming and Software Development |  |                         |                         |                         |                         |
|  | Microsoft .Net Fundamentals                        | CTIT012                                       | 3            | 145070    | Visual Programming                 | N0 - Information Support and Services     | 50 or higher   | 50 or higher            | 50 or higher            | 50 or higher            | 62 or higher            |
|  |  |   |              |           |                                    | N1 - Interactive Media                    |  |                         |                         |                         |                         |
|  |  |   |              |           |                                    | N2 - Network Systems                      |  |                         |                         |                         |                         |
| N3 - Programming and Software Development          |  |   |              |           |                                    |   |  |                         |                         |                         |                         |
| Renewable Energy                                   | Introduction to Alternative and Renewable Energy   | CTAE001 (OAN ORE001)                          | 3            | 010715    | Energy Systems Management          | A0 - Agribusiness and Production Systems  | 68 or higher   | 68 or higher            | 68 or higher            | 68 or higher            | 68 or higher            |
|  |  |   |              |           |                                    | A6 - Natural Resource Management          |  |                         |                         |                         |                         |
|  |  |   |              |           |                                    | F6 - Engineering and Design               |  |                         |                         |                         |                         |
|  | Wind Energy  | CTAE002 (OAN ORE005)                          | 3            | 010717    | Solar and Wind Energy              | A6 - Natural Resource Management          | 52 or higher   | 52 or higher            | 52 or higher            | 52 or higher            | 52 or higher            |
|  | Solar Photovoltaic                                 | CTSP001 (OAN ORE003)                          | 3            | 010717    | Solar and Wind Energy              | A6 - Natural Resource Management          | 52 or higher   | 52 or higher            | 52 or higher            | 52 or higher            | 52 or higher            |
| Supply Chain Management                            | Introduction to Supply Chain Management Technology | CTSCM001                                      | 3            | 142025    | Supply Chain Management Technology | C4 - Business and Administrative Services | 73 or higher   | 73 or higher            | 73 or higher            | 73 or higher            | 73 or higher            |
|  |  |   |              |           |                                    | S5 - Marketing                            |  |                         |                         |                         |                         |
|  | Logistics and Transportation                       | CTSCM002                                      | 3            | 142030    | Logistics Management               | C4 - Business and Administrative Services | 65 or higher   | 65 or higher            | 65 or higher            | 65 or higher            | 65 or higher            |
|  |  |   |              |           |                                    | S5 - Marketing                            |  |                         |                         |                         |                         |
|  | Purchasing, Sourcing, and Supplier Management      | CTSCM003                                      | 3            | 142020    | Operations Management              | C4 - Business and Administrative Services | 60 or higher   | 60 or higher            | 60 or higher            | 60 or higher            | 60 or higher            |
|  |  |   |              |           |                                    | S5 - Marketing                            |  |                         |                         |                         |                         |

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|--|---|---|--------------|-----------|-------------------------------|--------------------------------|--|-------------------------|-------------------------|-------------------------|-------------------------|
|  |   |   |              |           |                               |                                | (AY22) WebXam 2021-2022  | (AY21) WebXam 2020-2021 | (AY20) WebXam 2019-2020 | (AY19) WebXam 2018-2019 | (AY18) WebXam 2017-2018 |
| Visual Design and Imaging                          | Design and Typography Fundamentals            | CTVDI001                                      | 3            | 340320    | Digital Print Design          | B2 - Visual Design and Imaging | 49 or higher   | 49 or higher            | 49 or higher            | 49 or higher            | 49 or higher            |
|  |   |   |              | OR        |                               |                                |  |                         |                         |                         |                         |
|  |   |   |              |           | 340315                        | Visual Creation                | B2 - Visual Design and Imaging   | 52 or higher            | 52 or higher            | 52 or higher            | 52 or higher            |
|  | Fundamentals of Advertising and Communication | CTVDI002                                      | 3            | 340340    | Advertising and Communication | B2 - Visual Design and Imaging | 44 or higher   | 44 or higher            | 44 or higher            | 44 or higher            | 44 or higher            |

## SECTION II

CTAGs/CTANs where there is not an alignment with an ODE course  
CTAGs/CTANs that are available for submission by an Ohio Technical Center

| Career-Technical Assurance Guide (CTAG) Technology |  | Career-Technical Articulation Numbers (CTANs) | Credit Hours | Submission Requirements (Requires manual entry into CEMS)   | Requirements/Credentials/Licenses Needed to Access CTAG Credit (Students must successfully complete the course and meet all applicable requirements in order to be eligible to access CTAG credit. Students must access CTAG credit within three years of graduating from the career-technical education institution.) |
|--|--|---|--------------|---|--|
| Automotive Technology                              | Introduction to Automotive Service and Repair                        | CTAUT005                                      | 2            | Secondary CTE institutions: submission via manual entry into CEMS is required. Please contact OATN staff for submission guidance. Institutions must provide evidence that is teaching ODE course 177000 (Ground Transportation Maintenance) and possesses National Automotive Technicians Education Foundation (NATEF) program accreditation.   | The student must provide proof to the receiving institution that they: 1) successfully completed ODE course 177000; and 2) passed the ASE/NATEF examination for Maintenance and Light Repair or Automotive Service and Technology.   |
|  |  |   |              | Ohio Technical Centers: program submission via manual entry into CEMS is required. Please contact OATN staff for submission guidance. Institutions must provide evidence that is possesses National Automotive Technicians Education Foundation (NATEF) program accreditation.  | The student must provide proof to the receiving institution that they: 1) successfully completed a NATEF accredited program at an approved OTC; and 2) passed the ASE/NATEF examination for Maintenance and Light Repair or Automotive Service and Technology.   |
|  | Introduction to Medium and Heavy Transportation Equipment Technology | CTAUT006                                      | 2            | Secondary CTE institutions: submission via manual entry into CEMS is required. Please contact OATN staff for submission guidance. Institutions must provide evidence that is teaching ODE course 177000 (Ground Transportation Maintenance) and possesses National Automotive Technicians Education Foundation (NATEF) program accreditation.   | The student must provide proof to the receiving institution that they: 1) successfully completed ODE course 177000; and 2) passed the ASE/NATEF examination for Medium/Heavy Truck Service and Repair.   |
|  |  |   |              | Ohio Technical Centers: program submission via manual entry into CEMS is required. Please contact OATN staff for submission guidance. Institutions must provide evidence that is possesses National Automotive Technicians Education Foundation (NATEF) program accreditation.  | The student must provide proof to the receiving institution that they: 1) successfully completed a NATEF accredited program at an approved OTC; and 2) passed the ASE/NATEF examination for Medium/Heavy Truck Service and Repair.   |
| Emergency Medical Services*                        | Emergency Medical Responder  | CTEMS001                                      | 2            | Ohio Technical Centers and secondary CTE institutions: program submission via manual entry into CEMS is required. Please contact OATN staff for submission guidance. Institutions must submit evidence that the program is approved at each program level by the appropriate agency (Ohio Department of Public Safety, Division of Emergency Medical Services, and the National Highway Traffic Safety Administration). | The student must provide proof to the receiving institution that they: 1) successfully completed an approved program; and 2) possess a current and valid Emergency Medical Responder Certificate.  |
|  | Emergency Medical Technician   | CTEMS002                                      | 7            |   | The student must provide proof to the receiving institution that they: 1) successfully completed an approved program; and 2) possess a current and valid Emergency Medical Technician Certificate.   |
|  | Advanced Emergency Medical Technician                                | CTEMS003                                      | 8            |   | The student must provide proof to the receiving institution that they: 1) successfully completed an approved program; and 2) possess a current and valid Advanced Emergency Medical Technician Certificate.  |
|  | Paramedic  | CTEMS004                                      | 30           |   | The student must provide proof to the receiving institution that they: 1) successfully completed an approved program; and 2) possess a current and valid Ohio Paramedic Certificate.   |

\*EMT curricula leading to the various credentials are separate endeavors. That is, the EMT-B curriculum does not replace any portion of the EMT-I or P curriculum. The same is true for the EMT-I curriculum. It does not replace any portion of either the EMT-B or P curriculum. Thus, students holding EMT-B certificates desiring to advance to EMT-I or EMT-P are required to take all portions of the EMT-I or EMT-P curriculum and would earn credits assigned to each curriculum by the college or university. However, the state statute allows medical and program directors to award "previous training credit" for those holding EMT-I certificates who desire to enter an EMT-P training program. As a result, students could earn 30 Semester hours for EMT-P, in addition to 8 Semester hours toward EMT-I.

| Career-Technical Assurance Guide (CTAG) Technology  |                         | Career-Technical Articulation Numbers (CTANs) | Credit Hours | Submission Requirements (Requires manual entry into CEMS)   | Requirements/Credentials/Licenses Needed to Access CTAG Credit (Students must successfully complete the course and meet all applicable requirements in order to be eligible to access CTAG credit. Students must access CTAG credit within three years of graduating from the career-technical education institution.) |
|---|-------------------------|---|--------------|---|--|
| Engineering Technology: Electrical  | DC Circuits             | CTEET001 (OAN OET001)                         | 3            | Ohio Technical Centers: program submission via manual entry into CEMS is required. Please contact OATN staff for submission guidance.   | Adult career-technical students must successfully complete an approved Electronics program at an Ohio Technical Center. Students must also complete the requirement for College Algebra at the matriculating institution in order to receive credit for DC Circuits.   |
| Fire Science Technology**   | Volunteer Fire Fighter  | CTVFF001                                      | 1            | Ohio Technical Centers and secondary CTE institutions: program submission via manual entry into CEMS is required. Please contact OATN staff for submission guidance. Institutions must submit evidence that the program is state chartered in each area by the Ohio Department of Public Safety, Division of Emergency Medical Services, or Office of Fire Science. | The student must provide proof to the receiving institution that they: 1) successfully completed an approved program; and 2) possess a current and valid Ohio Volunteer Fire Fighter Certification.  |
|   | Fire Fighter I          | CTFF002                                       | 7            |   | The student must provide proof to the receiving institution that they: 1) successfully completed an approved program; and 2) possess a current and valid Ohio Fire Fighter I Certification (NIMS 100 and 700 are required).  |
|   | Fire Fighter II         | CTFF003                                       | 11           |   | The student must provide proof to the receiving institution that they: 1) successfully completed an approved program; and 2) possess a current and valid current Ohio Fire Fighter I and II certifications or an Ohio Fire Fighter II Certification.   |
|   | Fire Safety Inspector   | CTFINSP001                                    | 3            |   | The student must provide proof to the receiving institution that they: 1) successfully completed an approved program; 2) possess a current and valid current Ohio Fire Fighter Certification as a Fire Safety Inspector; and 3) be employed as a firefighter in Ohio.  |
|   | Fire Service Instructor | CTFSI001                                      | 3            |   | The student must provide proof to the receiving institution that they: 1) successfully completed an approved program; and 2) possess a current and valid Ohio Fire Fighter Certification as a Fire Service Instructor.   |
| **Credit hours listed for each CTAN for Fire Fighter programs are maximum hours awarded up to each level of training. For example, if a student has successfully completed and earned credit for Volunteer Fire Fighter, four semester credits will be awarded for Fire Fighter I. If a student has successfully completed and earned credit for Fire Fighter I (or Volunteer Fire Fighter and Fire Fighter I), five semester credits will be awarded toward Fire Fighter II. |                         |   |              |   |  |
| Hospitality, Tourism, and Culinary Arts   | Sanitation and Safety   | CTCF001                                       | 2            | Secondary CTE institutions: program submission via manual entry into CEMS is required. Please contact OATN staff for submission guidance. The institution must currently offer the ServSafe--National Restaurant Association Program and provide documentation for an instructor who is ServSafe certified.   | The student must hold a current ServSafe Manager certification offered through the National Restaurant Association to receive credit.  |

|  |  |                     |              |   |  |
|--|--|---------------------|--------------|---|--|
| Information Support Services/Network Systems | Cisco I: CCNA-7 Introduction to Networks                                 | CTIT017             | 3-4          | Secondary CTE institutions: program submission via manual entry into CEMS is required. Please contact OATN staff for submission guidance. The institution must submit evidence that it is offering an approved CISCO curriculum.  | The student must successfully complete the CISCO course and pass applicable semester tests in Cisco I curriculum OR hold current Cisco certification (CCNA certificate, CCT certificate).  |
|  | Cisco II: CCNA-7 Switching, Routing, and Wireless Essentials (SRWE)      | CTIT018             | 3-4          |   | The student must successfully complete the CISCO course and pass applicable semester tests in Cisco II/III curriculum OR hold current Cisco certification (CCNA certificate).  |
|  | Cisco III: CCNA-7 Enterprise Networking, Security, and Automation (ENSA) | CTIT019             | 3-4          |   |  |
| Medical Assisting                            | Basic Administrative Functions   | CTMAT004            | 1            | Ohio Technical Centers and secondary CTE institutions: program submission via manual entry into CEMS is required. Please contact OATN staff for submission guidance. Institutions must submit evidence that Ohio Department of Education approved programs are accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP) or programs with documentation from the American Medical Technologist that completers are eligible for the RMA examination. | The student must provide proof to the receiving institution that they: 1) hold the Certified Medical Assistant credential by the Certifying Board of the American Association of Medical Assistants (CMA-AAMA) or the Registered Medical Assistant credential by the American Medical Technologists (RMA-AMT), and 2) that they have completed a medical assisting program approved by the Ohio Department of Education. |
|  | Perform Bookkeeping Functions  | CTMAT005            | 2            |   |  |
|  | Process Insurance Claims   | CTMAT006            | 3            |   |  |
|  | Fundamental Procedures   | CTMAT008            | 3            |   |  |
|  | Specimen Collection  | CTMAT009            | 2            |   |  |
|  | Diagnostic Testing   | CTMAT010            | 2            |   |  |
|  | Patient Care   | CTMAT011            | 5            |   |  |
| Nursing                                      | Practical Nursing  | CTLPRN001           | 10 (minimum) | Ohio Technical Centers and secondary CTE institutions: program submission via manual entry into CEMS is required. Please contact OATN staff for submission guidance. Institutions must submit evidence that the program is a pre-licensure practical nurse education program approved by the Ohio Board of Nursing.   | The student must provide proof to the receiving institution that they: 1) hold a current license to practice as a Licensed Practical/Vocational Nurse, and 2) have completed a pre-licensure practical nurse education program approved by the Ohio Board of Nursing.  |
| OSHA Safety                                  | 10 Hour Safety   | CTS001 (OAN ORE004) | 1            | Ohio Technical Centers and secondary CTE institutions: program submission via manual entry into CEMS is required. Please contact OATN staff for submission guidance. Institutions must submit evidence that it is offering an approved OSHA 10-hour curriculum.   | The student must provide proof to the receiving institution that they hold a current and valid OSHA 10-hour safety card.   |



|                     |   |         |   |  |   |
|---------------------|---|---------|---|--|---|
| Pharmacy Technician | Introduction to Pharmacy Technician     | CTPT001 | 5 | Ohio Technical Centers and secondary CTE institutions: program submission via manual entry into CEMS is required. Please contact OATN staff for submission guidance. A pharmacy program must contain 350 hours of instruction. CTPT001 must contain at least 75 hours.   | Current and valid Pharmacy Technician Certification Board (PTCB) Certification is required in order to access CTAG credit.  |
|                     | Pharmacy Concepts                       | CTPT002 | 5 | Ohio Technical Centers and secondary CTE institutions: program submission via manual entry into CEMS is required. Please contact OATN staff for submission guidance. A pharmacy program must contain 350 hours of instruction. CTPT002 must contain at least 75 hours.   |   |
|                     | Pharmacy Laboratory/Clinical Experience | CTPT003 | 3 | Ohio Technical Centers and secondary CTE institutions: program submission via manual entry into CEMS is required. Please contact OATN staff for submission guidance. A pharmacy program must contain 350 hours of instruction. CTPT003 must contain at least 225 clock hours of psychomotor experiences.   |   |
| Phlebotomy          |   | CTP001  | 3 | Ohio Technical Centers and secondary CTE institutions: program submission via manual entry into CEMS is required. Please contact OATN staff for submission guidance. Institutions must provide evidence that the program is approved by the National Accrediting Agency for Clinical Lab Sciences or evidence that the program contains 40 hours of didactic and 100 hours of clinical training. | The American Society for Clinical Pathology (ASCP) phlebotomy credential is required. Eligibility for this credential is high school diploma and completion of a program approved by the National Accreditation Agency for Clinical Lab Sciences or high school diploma and completion of a course with 40 hours of didactic and 100 hours of clinical training. Based on ASCP requirements, students must have "a minimum of 100 successful unaided blood collections, including venipuncture's and skin punctures." |

## SECTION III

CTAGs/CTANs currently under review

Inactive CTAGs/CTANs for which students may still access credit

| Career-Technical Assurance Guide (CTAG) Technology           |   | Career-Technical Articulation Numbers (CTANs)               | EMIS Code | Credit Hours | ODE Course                                 | Requirements/Credentials/licenses Needed to Access CTAG Credit<br>(Students must successfully complete the course and meet all applicable requirements in order to be eligible to access CTAG credit. Students must access CTAG credit within three years of graduating from the career-technical education institution.) |                         |                         |   |
|--|---|---|-----------|--------------|--|---|-------------------------|-------------------------|---|
|  |   |   |           |              |  | (AY19) WebXam 2018-2019   | (AY18) WebXam 2017-2018 | (AY17) WebXam 2016-2017 | Other Requirements  |
| Basic Police Officer   |   | Currently unavailable for submission. CTAG is under review. |           |              |  |   |                         |                         |   |
| Education  | Introduction to Education               | CTED001   | 350010    | 3            | Education Principles                       |   |                         | 85 or higher*           | The student must provide the following in order to access the credit: 1) evidence that they successfully completed the course; and 2) evidence that they received an exam score of 85 or higher on the required portfolio.  |
| Engineering Technology: Electrical                           | DC Circuits                             | CETE001 (OAN OET001)  | 175011    | 3            | DC and AC Electronic Circuits              | 61 or higher  | Full course review      | Full course review      | Secondary CTE students must meet all applicable requirements for DC and AC Electronic Circuits (175011), or meet all applicable requirements for Engineering Principles (175002), or meet all applicable requirements for Robotics (175004), from an approved secondary career-technical institution. Ohio Technical Center students must successfully complete an approved program at an Ohio Technical Center. Students must also complete the requirement for Algebra at the matriculating institution in order to receive credit for DC Circuits. |
|  |   |   |           |              | OR   |   |                         |                         |   |
|  |   |   | 175002    |              | Engineering Principles                     | 48 or higher  | Full course review      | Full course review      |   |
|  |   |   | OR        |              |  |   |                         |                         |   |
|  | Programmable Logic Controls             | CETE003 (OAN OET22)   | 175004    | 3            | Robotics                                   | 64 or higher  | Full course review      | Full course review      | Secondary CTE students must meet all applicable requirements for Robotics (175004) from an approved secondary career-technical institution. Ohio Technical Center students must successfully complete an approved program at an Ohio Technical Center.  |
| Heating Ventilation Air Conditioning/ Refrigeration (HVAC/R) |   | Currently unavailable for submission. CTAG is under review. |           |              |  |   |                         |                         |   |
| Interactive Media  | Raster Graphics                         | CTIM002   | 145100    | 3            | Creating and Editing Digital Graphics      | 55 or higher  | 64 or higher            | 64 or higher            | N/A   |
|  | Vector Graphics                         | CTIM003   | 145105    | 3            | Multimedia and Image Management Techniques | 60 or higher  | 66 or higher            | 66 or higher            | N/A   |
| Visual Design and Imaging                                    | Beginning Digital Image Editing         | CTVDI003  | 340120    | 3            | Digital Image Editing                      | 44 or higher  | 44 or higher            | 44 or higher            | N/A   |
|  | Fundamentals of Illustration and Layout | CTVDI004  | 340330    | 3            | Visual Distribution                        | 38 or higher  | 38 or higher            | 38 or higher            | N/A   |