



ODE EMIS MANUAL

Course Records

The Course Records EMIS Manual Sections contained in this document.¹

§			Version, Posted Date
4.1	Course Records Overview	N/A	4.0, 7/26/17
4.2	Course Master Record	CN	5.0, 6/13/17
4.3	Staff Course Record	CU	5.0, 7/26/17
4.4	Student Course Record	GN	5.0, 8/30/17
4.5	Career-Technical Education Correlated Class Record	CV	5.0, 8/30/17
4.6	Mapped Local Classroom Code Record	CM	4.0, 8/30/17
4.7	Subject Codes	N/A	6.1, 6/9/17

¹ It is important to note that—in rare instances—the sections contained within this document may not be those most recently published for the given fiscal year. Be sure to make note of the posted date of this document compared to the posted dates in the content area tables on the EMIS Manual webpage.

ODE EMIS MANUAL

Section 4.1: Course Records Overview



Version 4.0
July 26, 2017

REVISION HISTORY

The revision history sections of the EMIS Manual provide a means for readers to easily navigate to the places where updates have occurred. Significant changes and updates are indicated through red text for additions and strikethroughs for deletions. Minor changes—such as typos, formatting, and grammar corrections or updates—are not marked.

Version	Date	Effective Date (FY & Data Set)	Change #	Description
<u>4.0</u>	<u>7/26/17</u>	<u>FY17</u>	<u>NA</u>	<u>No FY17 changes.</u>
3.0	8/19/16	FY16		Added Coming Changes section.
2.0	9/28/15	FY15L		Updated language to reflect shift from reporting periods to FY15 reporting.

COMING CHANGES

The coming changes sections of the EMIS Manual provide a means to share with the field currently known information about upcoming changes. The final details of these changes have not all been determined at this time, however, those currently known are included here. Once all relevant details of the change(s) are known, the main text of the EMIS Manual section will be updated and the change(s) will be removed from this list.

At this time, there are no additional FY17 EMIS changes known to impact the Course Records Overview Section of the EMIS Manual.

TABLE OF CONTENTS

REVISION HISTORY	II
COMING CHANGES	II
TABLE OF CONTENTS.....	III
4.1 COURSE RECORDS OVERVIEW	3
<i>General Guidelines</i>	3
OVERVIEW OF DATA.....	3
REPORTING RESPONSIBILITY	3
<i>City/Local/Exempted Village School Districts, JVSDs, ODYS, OSB, OSD, and STEM Districts</i>	3
<i>Educational Service Centers</i>	4
SPECIAL REPORTING SITUATIONS.....	4
COURSE-LEVEL RECORDS	6

4.1 COURSE RECORDS OVERVIEW

General Guidelines

The Course Records sections in the ODE EMIS Manual provide instructions in relation to reporting course-level data records and elements. Some examples of how course-level data is used include CTE funding and performance reports, early childhood funding, the gifted report, and other information needed for federal and state reports.

OVERVIEW OF DATA

The following are general categories of course data covered in the Course Records sections of the ODE EMIS Manual.

- Student course data (subject area for credit, subject code, curriculum code, etc.)
- Staff course data (local classroom code, staff provider IRN, staff role code, etc.)
- CTE course data (anchor/lab/co-op local classroom code, etc.)

REPORTING RESPONSIBILITY

During the Initial and Final Staff/Course (L) Collection Requests, report the Course Master (CN), Staff Course (CU), and Student Course (GN) Records for all courses in accordance with the instructions in Section 4 of the EMIS Manual, including:

- Year-long courses (i.e., courses offered for the entire school year) and
- Any other courses offered during the school year, such as courses offered during the second semester only or courses that span five or six-week periods.

Courses taken during the summer (after the last day of the school year and prior to the start of the following school year) are not reported to the Ohio Department of Education.

City/Local/Exempted Village School Districts, JVSDs, ODYS, OSB, OSD, and STEM Districts

Course Master (CN) Record. A separate Course Master (CN) Record is required to be reported for each class a teacher is teaching. Every Course Master (CN) Record must have at least one Staff Course (CU) Record reported with a matching Local Classroom Code. See Section 4.2 for more details.

Staff Course (CU) Record. At least one Staff Course (CU) Record is required to be reported for each teacher who is responsible for a course between the course start and end dates. See Section 4.3 for more details.

Student Course (GN) Record. It is mandatory to report all courses separately for students in grades K-12. Therefore, a separate Student Course (GN) Record will have to be reported for every course in which the student is participating, even if two or more courses are being taught by the same teacher. See Section 4.4 Student Course (GN) Record for more details.

Career-Technical Education Correlated Class Record. This record is only reported for Career Technical courses. See Section 4.5 Career-Technical Education Correlated Class (CV) Record for more details.

Mapped Local Classroom Code Record. This record is only reported for Career Technical courses. See Section 4.6 Mapped Local Classroom Code (CM) Record for more details.

Educational Service Centers

With the exception of preschool courses, the Educational Service Center reports neither the Student Course (GN) Record nor the Course Master (CN) Record for students attending the ESC. It is the sending district’s responsibility to report Student Course (GN) Records for students who are educated by employees of the ESC and Course Master (CN) Records for teachers who are employees of the ESC.

SPECIAL REPORTING SITUATIONS

Preschool courses are to be reported as self-contained courses. Do not report separate Course Master (CN) and Student Course (GN) Records for each course/subject in which the preschool student is participating, such as reading, math, etc. The following self-contained subject codes are applicable for preschool students/teachers:

180050	Early Childhood Education (Ages 0-2)
180108	Preschool program in a self-contained classroom, this includes courses related to ECE, Federal Head Start, and other local programs.
180280	Preschool program funded with Title I funds.
196095	Early Education of the Handicapped (Ages 3-6)

Reporting Special Education Preschool Courses. A center-based preschool special education class is to be reported with a 196095 in the *Course Subject Code Element* and a D8 or DP in the *Student Population Element*. All students scheduled into the class are to be scheduled with the local classroom code that matches the value reported on the Staff Course (CU) Record for the special education teacher. The following students may also be scheduled into a class with the subject code of 196095.

- Regular or “Typically Developing Peers” in the same class as preschoolers with disabilities, being taught by a preschool special education teacher, should be scheduled with the same Local Classroom Code of the preschool special education teacher found on that teacher’s Staff Course (CU) Record. The subject code on the Master Course (CN) Record should be 196095.

Exceptions for Itinerant Teachers. If a teacher provides preschool itinerant services and also teaches a center-based special education preschool class (also known as a ‘combination teacher’), then it is necessary to report a Student Course (GN) and Course Master (CN) Record for the center-based class which he/she is teaching. However, only those students who are receiving center-based services are to be scheduled into the class. A student who is receiving only itinerant services (and not receiving preschool special education center-based services) is not to be scheduled into the center-based class.

Reporting Regular Preschool Courses. Each non-disabled student reported with a “PS” in the Grade Level Element is required to have at least one Student Course (GN) Record reported with an ap-

appropriate local classroom code. All regular preschool courses are to be reported with a Student Population of “PR”.

A teacher who is teaching a regular preschool class (non-special ed class) is reported with position code 230 and assignment area 999270 Preschool General Education. He/she is to have one Staff Course (CU) Record attached to each preschool Course Master (CN) class he/she is teaching. The Subject Code Element is reported with the appropriate “180xxx” code, and the Student Population Element is reported as “PR.” See Section 4.7 for descriptions of the 180xxx preschool subject codes.

Students Without Disabilities, K-12. Course Master (CN), Staff Course (CU), and Student Course (GN) Records must be submitted for each course/subject in which students are taught. Regular education courses for students in grades K-12 are reported with the Student Population Element option as “RG.” These are courses that are primarily designed to provide regular instruction to a group of students. Postsecondary courses are reported as “PS” or “PI” in the Curriculum Element.

Students with Disabilities, K-12. Courses primarily designed for students with disability conditions require separate Course Master (CN), Staff Course (CU), and Student Course (GN) Records to be reported for each course. The appropriate option is to be reported in the Subject Code Element (see Section 4.7 for a complete list of options). Report the “SE” or “SP” option in the Student Population Element only for courses that were primarily designed for students with disabilities or if the majority of the students are students with disabilities.

Course Master (CN) and Student Course (GN) Records are not required to be reported when a student with a disability condition is either pulled out of the regular classroom to receive special education services or is receiving supplemental instruction within the regular classroom (i.e., tutoring, speech and language therapy, etc.). This includes services provided by staff reported with the “212 – Supplemental Service Teaching Assignment (special education)” option in the Position Code Element. Only position code 230 with assignment area 999414 can be used to report a “teacher of record” for students with a disability condition.

Gifted Students. Gifted courses taught to gifted students in grades K-12 are required to be reported separately. Course Master (CN), Staff Course (CU), and Student Course (GN) Records are required for each subject in which students receive instruction. The appropriate gifted Student Population (Gx) is to be reported on the Course Master (CN) Record for which a gifted instructor is considered to be the teacher of record. This includes submitting a Student Course (GN) Record for students who are gifted and receiving instruction in the arts.

Educational Option Delivery. If the course will be offered for credit toward graduation and delivered through an educational option, report a Course Master (CN) Record with the appropriate options in the Subject Code, Curriculum, Delivery Method, and Student Population Elements. The Educational Option Element would always be reported as “YS”. A credentialed staff member at the district identified as the “teacher of record” is to be identified for these courses. This individual is responsible for reviewing the instructional plan, providing or supervising instruction, and evaluating student performance. The district must report a Staff Course (CU) and associated Course Master (CN) Record with a credentialed staff member at the district identified as the “teacher of record.” A Student Course (GN) Record is submitted

for each student enrolled in courses that are offered for graduation credit and are also delivered through an Educational Option.

Home Instruction: Students Without Disabilities. A student without disabilities receiving home instruction from a tutor is reported as though he/she is scheduled into his/her courses at school. He/she should be reported in his/her regular classes, or the normal course he/she would be taking if he/she was physically in school, and a *Delivery Method Element* option of “HI” would not be reported. A separate Course Master (CN) Record is not reported.

Home Instruction: Students With Disabilities. A student with a disability receiving home instruction is to be reported with the Delivery Method Element option as “HI”, the Student Population Element option as “SE” or “SP,” and the appropriate subject code in the Subject Code Element of the Course Master connected to the Staff Course for the special education teacher. In general, this refers to students who are individually served at their place of residence by a special education teacher. A “teacher of record” is to be reported with a position code of 230 with assignment area 999414.

COURSE-LEVEL RECORDS

Several records are submitted to ODE from ITCs that contain course data. Below is a list of each record and its record indicator as they are submitted from the ITCs to ODE. Data elements on each record are defined in the following sections of the Course Records.

Record Indicator	Record Name
CN	Course Master (CN) Record
CU	Staff Course (CU) Record
GN	Student Course (GN) Record
CV	Career-Technical Education Correlated Class Record
CM	Mapped Local Classroom Code Record

ODE EMIS MANUAL

Section 4.2: Course Master (CN) Record



Version 5.0
June 13, 2017

REVISION HISTORY

The revision history sections of the EMIS Manual provide a means for readers to easily navigate to the places where updates have occurred. Significant changes and updates are indicated through red text for additions and strike throughs for deletions. Minor changes—such as typos, formatting, and grammar corrections or updates—are not marked.

Version	Date	Effective Date (FY & Data Set)	Change #	Description
<u>5.0</u>	<u>6/13/17</u>	<u>FY17</u>	<u>42095</u>	<u>Added instructions for reporting Location IRN for preschool courses.</u>
4.0	6/17/16	FY16L	37330	Added Delivery Method CP.
4.0	6/17/16	FY16L	35175	College Credit Plus reporting instructions added.
4.0	6/17/16	FY16		Added Coming Changes section.
3.0	9/28/15	FY15L		Updated language to reflect shift from reporting periods to FY15 reporting.
3.0	9/28/15	FY15L	1063	Added VM Curriculum Code.
2.0	6/12/15	FY14K	937	Deleted references to 999370-General Education for preschool; replaced such references with 999270-Preschool General Education.
2.0	6/12/15	FY14K	1010	Removed references to unit funding.

COMING CHANGES

The coming changes sections of the EMIS Manual provide a means to share with the field currently known information about upcoming changes. The final details of these changes have not all been determined at this time, however, those currently known are included here. Once all relevant details of the change(s) are known, the main text of the EMIS Manual section will be updated and the change(s) will be removed from this list.

At this time, there are no additional FY17 EMIS changes known to impact the Course Master (CN) Record.

Change #	Change Description

TABLE OF CONTENTS

REVISION HISTORY	II
COMING CHANGES	II
TABLE OF CONTENTS.....	III
4.2 COURSE MASTER (CN) RECORD.....	3
<i>Required Collection Requests</i>	3
<i>General Guidelines</i>	3
<i>Reporting Course Master (CN) Record – Kindergarten</i>	5
<i>Reporting Course Master (CN) Records – Grades 1-12</i>	5
<i>Reporting Course Master (CN) Records - Home Instruction</i>	6
<i>Students with Disabilities – Basic Living Skills</i>	7
<i>Reporting Course Master (CN) Records – Educational Options</i>	7
<i>Reporting Course Master (CN) Records – Technology Courses</i>	7
<i>Reporting Course Master (CN) Records - Educational Service Personnel (ESP)</i>	8
<i>Course Master Data Elements</i>	8
☼ Course Level Element.....	8
☼ Course End Date Element.....	9
☼ Course Start Date Element.....	10
☼ Credit Flexibility Element	10
☼ CTE College Credit Element	10
☼ Curriculum Element.....	11
☼ Delivery Method Element.....	14
☼ Educational Option Element.....	15
☼ High School Credit Element.....	15
☼ Language Used in Teaching Course Element.....	15
☼ Length of Scheduled Instruction Element.....	15
☼ Local Classroom Code Element	16
☼ Location IRN Element.....	16
☼ Semester Code Element.....	17
☼ Student Population Element.....	18
☼ Subject Area for Credit Element.....	18
☼ Subject Code Element.....	19
<i>Defining a Unique Record</i>	20
4.2 COURSE MASTER (CN) RECORD FILE LAYOUT	21

4.2 COURSE MASTER (CN) RECORD

Required Collection Requests

The Course Master (CN) Record is to be reported for the Initial and Final Staff/Course Collections.

General Guidelines

A separate Course Master (CN) Record is required to be reported for each course being taught. Even if two or more subjects (i.e., reading and math) are taught by the same teacher to the same group of students, a separate Course Master (CN) Record is required to be reported for each subject taught (i.e., one record is submitted for reading and one for math).

The individual reported as the teacher of record for a course must be reported with at least one Staff Employment (CK) Record with position code 230 (Teacher), 108 (Principal Assignment), or 109 (Superintendent Assignment) with the appropriate teaching assignment area. For courses taught via Delivery Method CC, OL, or ET that are also Educational Options (YS), or a Delivery Method of IM, a position code of 202 (Counselor Assignment) may be reported as the teacher of record.

Preschool courses continue to be reported as self-contained courses. Therefore, only report one Course Master (CN) Record for each self-contained preschool class.

With the exception of postsecondary courses, it is necessary to associate a teacher or staff member with each course. Therefore a Staff Course (CU) Record is required for each course being taught.

During the Initial and Final Staff/Student (L) Collections, submit Student Course (GN), Staff Course (CU), and Course Master (CN) Records for all courses, including:

- Year-long courses (i.e., courses offered for the entire school year), and
- Any other courses offered during the school year, such as courses offered during the second semester only or courses that span five or six week periods.

Note that summer school courses are not reported to EMIS.

Team Teaching. In a team teaching situation (more than one teacher teaching a course) create a single Course Master (CN) Record for the course in question. Create a Staff Course (CU) Record for *each* teacher.

Supplemental Instruction Provided by a Remedial Specialist or a Tutor. The Position Code Element is reported with a 204 or 208 in this situation. If the tutor is providing supplemental instruction (teacher is not considered the “teacher of record” and does not assign the grade for the course), then no Course Master (CN) Record is required to be reported for the supplemental instruction.

Educational Service Centers. ESCs, with the exception of preschool course data, are not required to report a Course Master (CN) Record for courses taught to students by staff employed by ESCs. It is the responsibility of the resident/educating district contracting with the ESC for a staff member to teach a course to report a Course Master (CN) Record for the contracted staff member.

Contracted Staff. When a resident/educating district is contracting with an ESC or another EMIS-reporting entity for a staff member to teach a course, the resident/educating district is responsible for reporting a Staff Course (CU) and a Course Master (CN) Record for each contracted staff member teaching a course.

Exception to ESC Reporting Course Master. In most cases, the ESC or other EMIS-reporting entity does not report a Course Master (CN) Record for the course being taught for the resident/educating district. However, if an ESC is providing preschool special education instruction or is allocated state funds for an Early Childhood Education program (formerly state funded Public Preschool), then the ESC (or other EMIS-reporting entity) is required to report a Staff Course (CU) and a Course Master (CN) Record for the preschool special education teacher and/or regular preschool teacher. The ESC is also required to report Student Course (GN) Records for the students enrolled in preschool special education. This is to ensure that preschool special education funding flows accurately.

Reporting Course Master (CN) Records – Preschool Courses

Preschool courses are to be reported as self-contained courses. Do not report a separate Course Master (CN) Record for each subject (i.e., reading, math, writing, etc.) the students are taking. The following self-contained course code options are valid for reporting on the Course Master (CN) Record. See Section 4.7 Subject Codes for a complete description of the courses.

180050	Early Education (Ages 0-2)
180108	Preschool: preschool program in a self-contained classroom, this includes course related to ECE, Federal Head Start, and other local programs.
180280	Title I Preschool: A preschool program funded with Title I funds.
196095	Early Education of the Handicapped (for children below 6)

Preschool Special Education Courses. A center-based preschool special education class is to be reported with a 196095 in the Subject Code Element and a D8 or DP in the Student Population Element. All students scheduled into the class are to be scheduled with the local classroom code that matches the value reported on the Staff Course (CU) Record for the special education teacher. The following students may also be scheduled into a class with a subject code of 196095.

- A regular or typically-developing peer in the same class as preschoolers with disabilities. These children are taught by the preschool special education teacher and are scheduled with the same local classroom code of the preschool special education teacher found on that staff member’s Staff Course (CU) Record.

Do not report course records for a preschool special education teacher who only provides itinerant services (and is not also teaching a center-based class) to students.

For itinerant teachers, only a Staff Demographic (CI) and a Staff Employment (CK) Record are required to be reported.

Exceptions to Reporting Staff Course and Course Master for Itinerant Teachers. If a teacher provides preschool itinerant services and also teaches a center-based special education preschool class (also known as a ‘combination teacher’), then it is necessary to report a Staff Course (CU) and Course

Master (CN) Record for the center-based class which he/she is teaching. However, only those students who are receiving center-based services are to be scheduled into the class. A student who is receiving only itinerant services (and not receiving preschool special education center-based services) is not to be scheduled into the center-based class.

ESCs that provide preschool special education instruction are required to report a Staff Course (CU) and Course Master (CN) Record.

Regular Preschool Courses. A teacher who is teaching a regular preschool class (non-special ed class) is reported with a position code of 230 and an assignment area of 999270 Preschool General Education. He/she is to have one Staff Course (CU) Record attached to each preschool Course Master class he/she is teaching. The Subject Code Element is to be reported with the appropriate “180xxx” code, and the Student Population Element is reported as “PR”. See Section 4.7 for descriptions of the 180xxx preschool subject codes.

It is possible that a preschool teacher may be teaching two separate preschool courses such as a special education course in the AM and an Early Childhood Education course in the PM. In this case, two Staff Course (CU) and two Course Master (CN) Records, one with “196095” and one with “180108”, are to be reported in the Subject Code Element. Two Staff Employment (CK) Records are to be reported, each with position code 230. One record will have assignment area 999270 Preschool General Education and the other will have assignment area 999412 Preschool Special Education.

Reporting the Location IRN. A Location IRN is required to be completed for all preschool courses reported. Report the IRN where the course is being taught. For example, if the Early Childhood Education Course is taught at a Head Start or Community Action Organization, report the IRN of the Head Start or Community Action Organization. For a complete list of IRNs, please check the Ohio Educational Directory System (OEDS) on ODE’s website.

Reporting Course Master (CN) Records – Kindergarten

A separate Course Master (CN) Record is required to be submitted for each course/subject taught to kindergarten students. This includes reporting a separate record for each subject/course taught to the same group of students. Each Course Master (CN) Record reported for a kindergarten course is to be reported with the appropriate Curriculum, Delivery Method, Educational Option, and Student Population Element options.

Reporting Course Master (CN) Records – Grades 1-12

A separate Course Master (CN) Record is required to be submitted for each course. This includes reporting a separate record for each course which is taught to the same group of students.

Example 1.

Teaching several courses to the same group of students

If a teacher is teaching seven courses to the same group of students, then seven Course Master (CN) Records, each with a unique local classroom code, are to be reported, each with a matching Staff Course (CU) Record for that teacher, one record for each course.

Regular Instruction. Regular education courses for students in grades 1-12 are reported with the Student Population Element option as “RG”. These are courses that are primarily designed to provide regular instruction to a group of students. Postsecondary courses are reported as “PS” or “PI” in the Curriculum Element.

Students with Disabilities. Courses primarily designed for students with disability conditions require a separate Course Master (CN) Record to be reported for each course. The appropriate option is to be reported in the Subject Code Element (see Section 4.7 for a complete list of options). Report the “SE” or “SP” option in the Student Population Element only for courses that were primarily designed for students with disabilities or if the majority of the students are students with disabilities.

A Course Master (CN) Record is not required to be reported when a student with a disability condition is either pulled out of the regular classroom to receive special education services or is receiving supplemental instruction within the regular classroom (i.e., tutoring, speech and language therapy, etc.). This includes services provided by staff reported with the “212 – Supplemental Service Teaching Assignment (special education)” option in the Position Code Element. Only position code 230 with assignment area 999414 can be used to report a “teacher of record” for students with a disability condition.

Gifted Students. Gifted courses taught to gifted students in grades K-12 are required to be reported separately. A Course Master (CN) Record is required for each subject in which the student receives instruction. If a student receives seven subjects, then a unique local classroom code is required to be reported on each Course Master (CN) Record for each of the seven courses.

Report a “Gx” option for the Student Population Element only for courses that were primarily designed for gifted students and the instructor is credentialed in gifted education. However, if the course is a regular education course or is taught by a teacher who is not credentialed in gifted education, then report the “RG” option in the Student Population Element and if appropriate report the applicable 205xxx program(s) for the served gifted students.

If the Gifted Intervention Specialist is the “teacher of record” for the gifted course, report one Course Master (CN) Record for each course. Report one of the “Gx” gifted options in the Student Population Element. However, no Course Master (CN) Record is required for a Gifted Intervention Specialist who provides supplemental gifted programs and services to students. In the case of supplemental instruction, report the applicable 206xxx program code(s) with the Employee ID of the Gifted Intervention Specialist for the served gifted students.

A Course Master (CN) Record is required to be reported with the appropriate subject code and “GA” gifted option in the Student Population Element for education in the arts delivered by a trained arts instructor. These include gifted students who are receiving instruction or participating in activities that are directed by a teacher or visiting instructor trained in the arts areas of dance, visual arts, drama/theater, or music.

Reporting Course Master (CN) Records - Home Instruction

Students Without Disabilities. A student without disabilities receiving home instruction from a tutor is reported as though he/she is scheduled into his/her courses at school. He/she should be reported in his/her regular classes, or the normal course he/she would be taking if he/she was physically in school and

a Delivery Method Element option of “HI” would not be reported. A separate Course Master (CN) Record is not reported.

Students With Disabilities. A student with a disability receiving home instruction is to be reported with a Delivery Method Element option of “HI”, a Student Population Element option of “SE” or “SP,” and the appropriate subject code in the Subject Code Element of the Course Master (CN) Record connected to the Staff Course (CU) Record for the special education teacher. In general, this refers to students who are individually served at their place of residence by a special education teacher. A “teacher of record” is to be reported with a position code of 230 with assignment area 999414.

Students with Disabilities – Basic Living Skills

There are subject codes that identify courses for severely handicapped students who require instruction in basic living skills. For these students, report the Student Population Element option as “SE” or “SP” and the appropriate “196xxx” subject code for the Subject Code Element of the Course Master.

Reporting Course Master (CN) Records – Educational Options

Educational options include courses that are taught for credit toward graduation through the use of an educational option delivery method (i.e., correspondence courses/on-line learning, interactive distance learning, educational travel, independent study, etc.).

If the course will be offered for credit toward graduation and delivered through an educational option delivery method, report a Course Master (CN) Record with the appropriate options in the Subject Code, Curriculum, Delivery Method, and Student Population Elements. The Educational Option Element would always be reported as “YS”. A credentialed staff member at the district identified as the “teacher of record” is to be identified for these courses. This individual is responsible for reviewing the instructional plan, providing or supervising instruction, and evaluating student performance. The district must report a Staff Course (CU) and associated Course Master (CN) Record with a credentialed staff member at the district identified as the “teacher of record”. The teacher located at the remote site should *not* be reported to EMIS.

An instructional plan that is based on individual student needs must be developed and should include the following:

- instructional objectives that align with the local district’s curriculum requirements
- an outline that specifies instructional activities, materials, and learning environments
- a description of the criteria and methods for assessing student performance

Credit for approved educational options shall be assigned according to student performance relative to stated objectives of the educational option and in accordance with local board policy and established procedures.

Reporting Course Master (CN) Records – Technology Courses

The Ohio technology academic content standards address a broad range of technology experiences with application in computer and multimedia literacy, information literacy, and technological literacy in order to provide a fully articulated program of technology study that enables students to achieve the No Child Left Behind 8th Grade Technology Literacy Goal.

Computer and Multimedia Literacy (29xxxx subject codes) includes the ability to appropriately use hardware, software applications, multimedia tools, and other electronic technology. It harnesses the use of educational technology tools for productivity, communication, research, and problem-solving. Instruction is most effective when integrated with curricular components of other academic content areas.

Information Literacy (20xxxx subject codes) is the acquisition, interpretation, and dissemination of information. Information literacy focuses on effective methods for locating, evaluating, using, and generating information. Technology-based information literacy skills encompass the use of library resources, the Internet, and other electronic information sources for research and knowledge building. Instruction is most effective when integrated with curricular components of other academic content areas.

Technological Literacy (10xxxx subject codes) addresses the abilities needed to participate in a technological world. It is the intersection of mathematics, science, and technology. It specifies unique knowledge, devices, and capabilities used to solve problems. It identifies career connections between technology and the world of work. Technological literacy includes technology education and pre-engineering concepts.

Reporting Course Master (CN) Records - Educational Service Personnel (ESP)

Report a Course Master (CN) Record with the appropriate 02XXXX, 08XXXX, or 12XXXX option in the Subject Code Element for art, music, and PE courses taught in grades 9-12. The Position Code Element on the Staff Employment Record is to be reported with the 230 option for these ESP personnel teaching in grades 9-12. Student Course (GN) Records for students enrolled in these classes in grades 9-12 are required to be reported.

A Course Master is required to be reported with the appropriate art, music, or PE subject code for courses taught in grades K-8. ODE does not require that districts enroll K-8 students in art, music, or PE courses unless their specific software packages require students to be enrolled. If a teacher is hired to meet the ESP ratio requirement and meets the criteria listed above, then report the teacher with position code 230 in the Position Code Element and the appropriate assignment area code, indicating the subject he/she teaches:

- 999050 Art Education - K-8
- 999570 Music Education - K-8
- 999418 Physical Education - K-8

For additional information about ESP staff members see the Educational Service Personnel section of the Staff Employment (CK) Record.

Course Master Data Elements

The following portion of this section discusses each of the data elements within the Course Master (CN) Record. The elements are organized alphabetically.

 ***Course Level Element***

Record Field Number	CN080
Definition	The level of the course.

Valid Options

- * Not applicable
- 1 I
- 2 II
- 3 III
- 4 IV
- 5 V
- 6 Advanced course
- 7 Intervention

Reporting Instructions. Generally, districts are going to report the “*” option for most courses.

Options “1” through “7” provide distinctions between courses that have identical course codes as defined by the Department and/or are usually taken in a series and are prerequisites for one another. Course levels will most likely be used only for the foreign language courses; however, districts may choose to report course levels for local purposes.

Course levels are no longer required for all CTE courses; however, districts may choose to report course levels for CTE courses at a local level.

Course level designations are not to be used to distinguish between groups of students in the same grade level taking the same subjects.

 **Course End Date Element**

Record Field Number	CN290
Definition	Last scheduled day of a course.

Valid Options

- CCYYMMDD Year, Month, Day (value must be within current fiscal year: July 1 - June 30)

Reporting Instructions. Reported dates must be valid dates (i.e., reporting 20150132 would cause a Course Master (CN) Record to fatal) and must be within the current fiscal year (20140701 to 20150630 for FY15).

For course master dates, the ending date of the school calendar period may be used for courses that span all the weeks of the calendar period even if the last actual day of the specific course is before the final day of the calendar period. For example, a course that meets on Tuesdays during a semester that ends on a Friday may use the Friday date in the Course End Date Element even though the last class session was three days prior. If, however, the Tuesday-only course had ended a week earlier (10 days before the end of the semester), the actual end date would be used, since the course did not span all weeks of the semester.

For courses spanning beyond this school year, report the last day of school for the course end date (CN290). For example, a course that spans from 9/17/10 to 10/19/11 should be reported with a course master in FY11 with course end date of the last day of school. The FY12 Course Master (CN) Record would be reported having a course end date of 10/19/11.

 **Course Start Date Element**

Record Field Number	CN280
Definition	First scheduled day of a course.

Valid Options

CCYYMMDD Year, Month, Day (value must be within current fiscal year: July 1 - June 30)

Reporting Instructions. Reported dates must be valid dates (i.e., reporting 20150132 would cause a Course Master (CN) Record to fatal) and must be within the current fiscal year (20140701 to 20150630 for FY15).

For course master dates, the starting date of the school calendar period may be used for courses that span all the weeks of the calendar period even if the first day of the specific course is after the first day of the calendar period. For example, a course that meets on Tuesdays during a semester that starts on a Monday may use the Monday date in the Course Start Date Element even though the first class session was the next day. If, however, the Tuesday-only course had started a week later (8 days after the start of the semester), the actual start date would be used, since the course did not span all weeks of the semester.

For courses that started in a prior school year, use the first day of school of the current school year as the course start date (CN280). For example, a course that spans from 9/17/10 to 10/19/11 should be reported with a course master in FY11 with a start date of 9/17/10. The FY12 Course Master (CN) Record would be reported having a start date of the first day school.

 **Credit Flexibility Element**

Record Field Number	CN350
Definition	Identifies whether the course is customized and developed in collaboration with school officials within the scope of the district board-approved credit flexibility policy that provides opportunities for students to earn credits in non-traditional ways.

Valid Options

N No, the course is not a Credit Flexibility Course (default)
 R Yes, the course is a Credit Flexibility Course used for credit recovery work
 Y Yes, the course is a Credit Flexibility Course not used for credit recovery work

Reporting Instructions. Credit recovery refers to making up credits that a student was not successful in earning in a prior attempt(s). For more detailed information on Credit Flexibility, search for “Credit Flexibility” on www.education.ohio.gov.

 **CTE College Credit Element**

Record Field Number	CN300
Definition	Indicates if a career-technical course provides an opportunity for students to earn college credit.

Valid Options

N No, the course is not a CTE College Credit Course (default)
 Y Yes, the course is a CTE College Credit Course

Reporting Instructions. This element is only reported with a non-default value for Career Technical courses that meet the definition of this element and some type of formal agreement exists between the district and the college that indicates the course is eligible for college credit (e.g., dual/concurrent enrollment, articulated credit, Career-Technical Credit Transfer (CT2)). The value in this element will be used in the calculation of one of the performance measures for CTE programs related to courses that earn both high school and college credit.

 **Curriculum Element**

Record Field Number	CN310
Definition	The curriculum source/model/program for a specific course.

Valid Options

- AP Advanced Placement**
Used to designate a class that follows the current Advanced Placement syllabus.
- IA International Baccalaureate AB INITO**
- IH International Baccalaureate Higher Level**
- IS International Baccalaureate Standard Level**
- OC Expert Contracted from Outside Company/Organization for Credit Flex**
Course is taught by a content area expert who is employed by an outside company or organization that is providing the instructor under contract or memorandum of understanding to a school district as part of a Personalized Learning Experience under a Student Credit Flexibility Plan.
- OT Curriculum Not Specifically Covered By Another Option**
- PI Postsecondary Instructor**
Course is taught by a college or university faculty member who is not directly employed by the school district for the teaching of the course and the course is not being funded through the College Credit Plus program.
- PS College Credit Plus (CCP)**
- VA Career Technical Education Applied Academic**
Used to designate a class as a high school academic class that is integral to the career field workforce development program and which only enrolls students who are enrolled in a career field workforce development program (VC, VN, VP or VT).

With a few exceptions, this curriculum value can be reported with most high school mathematics (11xxxx), science (13xxxx), English/language arts (05xxxx) and social studies (15xxxx) courses.

Below is a list of high school courses which should not have this curriculum value reported as they do not qualify for funding. These courses are remedial/intervention in nature. These courses are to prepare students to retake test(s) or to take high school level courses.

- 050014 – Intervention English
- 050119 – Intervention Reading

- 111950 – Intervention Mathematics
- 110190 – Transition to High School Mathematics
- 132900 – Intervention Science
- 150400 – Intervention Social Studies

This curriculum value is NOT TO BE USED for Career Based Intervention (CBI) academic courses.

For purposes of weighted career-technical funding, the length of scheduled instruction of these classes may not exceed 54% of a career field workforce development program.

- VB Career Technical Education Applied Academic Advanced Placement**
Used to designate a Career Technical Education Applied Academic class that follows the current Advanced Placement syllabus.
- VC Career Technical Education Cooperative Program Anchor**
Establishes a class as an anchor class. Anchor classes define the class that will be used to determine program enrollment either as an independent class or for a set of connected classes. Use this code with cooperative programs only. Cooperative programs are those requiring all students to be involved in PAID work-site based instruction. A teacher may teach more than one anchor class IF individual classes are taught with separate and generally unique student enrollment. All VC classes MUST be connected with at least one V3 class in the Career-Technical Education Correlated Class Record.
- VM Career Technical Education Middle Grade Course**
Establishes a class as a middle grade Career-Technical Education class. Middle grade CTE courses are 30-120 hour introductory level courses linked to business, industry, and labor that ensure a seamless pathway from middle school to college and careers. CTE middle grade courses may be offered for any pathway with an approved CTE-26 on file. VM courses do not count towards a student's CTE concentrator status and students in VM courses are not subject to CTE technical testing. See the CTE Program Matrix for a complete list of Subject Codes that may be used in conjunction with the VM Curriculum Code.
- VN Career Technical Education Non-Cooperative Based Anchor**
Establishes a class as an anchor class. Anchor classes define the class that will be used to determine program enrollment either as an independent class or for a set of connected classes. Use this code with all non-cooperative based programs (i.e., all students are not involved in paid work-site based instruction). A teacher may teach more than one anchor class if individual classes are taught with separate and generally unique student enrollment.
- VO Career Technical Education Not Specifically Covered by Another CTE Option**
Instruction designed specifically to serve CTE students. A career-technical program that cannot be described by one of the other Vx curriculum values. This curriculum does not qualify for career-technical weighted funding.

- VP Career Technical Education Tech Prep Cooperative Program Anchor**
Establishes a class as an anchor class. Anchor classes define the class that will be used to determine program enrollment either as an independent class or for a set of connected classes. Use this code with cooperative tech prep programs only. Cooperative programs are those requiring all students to be involved in PAID work-site based instruction. A teacher may teach more than one anchor class if individual classes are taught with separate and generally unique student enrollment. All VP classes **MUST** be connected with at least one V3 class in the Career-Technical Education Correlated Class Record.
- VT Career Technical Education Tech Prep Non-Cooperative Based Anchor**
Establishes a class as Tech Prep. This curriculum value defines the anchor class that will be used to determine Tech Prep program enrollment either as an independent class or for a set of connected classes. Tech Prep is a high school and college career path linked to business, industry and labor that ensures a specified seamless pathway from high school to college to careers meeting Ohio’s technological employment needs.
- Only those students in a State approved Tech Prep Program (reported as a VT curriculum value will be counted toward Tech Prep Enrollment and be included in Tech Prep Accountability.
- V3 Career Technical Education Related/Correlated**
Designates a class as a career-technical education course. Use with all career-technical classes not identified as an anchor class (see VC, VN, VP or VT). Must be connected with an anchor class (VC, VN, VP or VT) in the Career-Technical Education Correlated Class Records. This curriculum type is used for career field workforce development courses when part of a career field workforce development program and for academic courses when a part of a Career Based Intervention (CBI) program. The curriculum value is also used to designate GRADS (090194, 090193, or 090192) instructional support time.
- V9 Career Technical Education Contract Program**
Used to designate a career-technical program that is contracted to a source outside the school district’s realm. Limited availability - must be approved.

International Baccalaureate Curriculum Values. These curriculum values are for use with subject codes based on the International Baccalaureate curriculum published by the International Baccalaureate Organization (www.ibo.org). As such, they should only be reported by schools approved by IBO.

See Section 4.7 Subject Codes for a full list of International Baccalaureate Subject Codes (32xxxx). The following Curriculum Element options may only be used with Subject Codes in the 32xxxx series.

- IS International Baccalaureate Standard Level
- IH International Baccalaureate Higher Level
- IA International Baccalaureate AB INITO (Used only with IB Second Language Codes)

☀ Delivery Method Element

Record Field Number	CN320
Definition	Identifies the means by which instruction is provided/communicated to the student(s) in the course.

Valid Options

- CC Correspondence Course**
Instruction between a pupil and an instructor by mail.
- CI Computer as Instructor**
Instruction provided by a computer with no instruction of any kind provided by a teacher, either in person or from a remote location. Any teacher monitoring a student in this course would not be involved in adapting or modifying lessons and/or clarifying subject content. A teacher monitoring a student receiving instruction via this delivery method may assign the grade for the course provided the assignments and/or evaluations are scored by the computer program.
- CP Career Tech College Credit Plus Course**
Instruction delivered at district with instructor provided by the college/university or with district’s own instructor.
- ET Educational Travel**
An educational activity involving travel in accordance with local board policy under the direction of a person approved by the board and parent.
- FF Face To Face Classroom Instruction**
Instruction where the teacher and students are face to face in the same physical location.
- HI Home Instruction**
Instruction at a student’s residence delivered by a school staff member.
- ID Interactive Distance Learning**
Instruction where the course is provided via interactive video with a teacher at a remote site.
- IS Independent Study**
An educational activity involving advanced or in-depth work by an individual pupil under the direction of a certified member of the school staff.
- IM Internship/Mentorship**
Obtaining credit via use of a formalized agreement working under the direction of a third party mentor/artisan with oversight provided by a credentialed educator.
- OL Online**
Instruction between a pupil and an instructor by electronic media other than interactive video.
- TO Test Out**
Earning credit by examination(s) under a Credit Flexibility plan.
- OT Other Delivery Method Not Specifically Covered By Another Option**

Reporting Instructions. When reporting TO-Test Out, the Credit Flexibility element must be reported with an option other than ‘N’.

☀ Educational Option Element

Record Field Number	CN330
Definition	Identifies the Educational Option status for a course per Ohio Administrative Code 3301-35-06 (G).

Valid Options

- NO Not an Educational Option Course
- YS Course is an Educational Option Course

☀ High School Credit Element

Record Field Number	CN200
Definition	The amount of high school credit allowed for the course.

Valid Options

0.00 – 9.99

Reporting Instructions. Report for courses offered for high school credit, whether at the middle or high school level.

This is a three-digit field allowing for two decimal places. Report the amount of credit to be allowed for the given course, for example, 1.00 or 0.50.

☀ Language Used in Teaching Course Element

Record Field Number	CN220
Definition	The language(s) used by the teacher when presenting to students.

Valid Options

- E English
- N Native language only
- B English & native language

Reporting Instructions. “Native language” refers to the native language of the student(s), not the teacher.

☀ Length of Scheduled Instruction Element

Record Field Number	CN100
Definition	Hours per year that a teacher spends in instruction for the course/subject.

Valid Options

0000 – 1260

Reporting Instructions. Calculate the number of hours per school year that the teacher instructs on the subject/course reported on this record.

A full year course (Semester Code Element of “3”) may not exceed 1,260 hours. A course offered on a semester basis (Semester Code Element of “1” or “2”) may not exceed 630 hours.

Report the amount of time an elementary music, art, and/or PE teacher spends in a building.

The time scheduled in labs for non-career-technical courses such as chemistry should be included.

The minimum length for a non-Credit Flexibility course is 9 hours; only a Credit Flexibility course can be less than 9 hours.

 **Local Classroom Code Element**

Record Field Number	CN060
Definition	The code used by the local school district that uniquely identifies a specific classroom (i.e., period and section) within a district.

Valid Options

Alphanumeric code

Reporting Instructions. A classroom is defined per period and building for K-12 courses. The local classroom code is completely defined by the resident/educating district. A student scheduled into a class/course is to be reported with the same local classroom code on his/her Student Course (GN) Record as the local classroom code reported on his/her teacher’s Staff Course (CU) Record and the Course Master (CN) Record for that course.

If a coding system does not exist at a building or district, the resident/educating district is responsible for creating a code that uniquely identifies each classroom. A resident/educating district may create the local classroom code using any method. However, this code is only a unique identifier of specific classes within a district. When this information reaches ODE, it only differentiates one body (classroom) of students from another. ODE will not extract period, section, building, course, or teacher from this element. Such information is obtained from other elements reported on the Staff Course (CU) and Course Master (CN) Records.

The local classroom code must refer to the same class in the Initial and Final Staff/Course (L) Collections.

If a classroom is eliminated during the year, then no other classroom can use this unique identifier for the Final Staff/Course (L) Collection.

New local classroom codes may be reported during the Final Staff/Course (L) Collection to identify classes added after the Initial Staff/Course (L) Collection.

Local classroom codes can be changed for succeeding school years.

 **Location IRN Element**

Record Field Number	CN110
Definition	The IRN of building where the course is held.

Valid Options

Six-digit IRN
999999

Reporting Instructions. In general, the IRN of the physical location where the course is being held is to be reported. The following examples illustrate cases that may deviate from the general case.

College Credit Plus Courses. For a College Credit Plus (CCP) course, report the IRN of the post-secondary institution that is giving credit for the course.

For information on Post-Secondary Institution IRNs, search for the institution in OEDS-R on the ODE website.

Joint Vocational School District Satellite Courses. For JVSD satellite course, the location IRN is used for funding purposes; therefore, when a JVSD reports a satellite course, the JVSD will always use the location IRN corresponding to the location where the course is being held.

Preschool Courses. For all preschool courses report the IRN of the physical location of the course, even if the physical location is in another district building, ESC, or private entity.

Rental or “Borrowed” Space. In the case where an EMIS-reporting entity rents or “borrows” space from another organization (such as another district, ESC, or private entity) to house a course taught by its own staff, the EMIS-reporting entity would use the IRN for one of its own buildings (or its district IRN) as the location IRN on the Course Master.

For example, if a high school holds a course in a neighboring office complex, then the course master for this course would use the high school building’s IRN as the Location IRN. Likewise, if district A rents or borrows space in a building in district B for a course for A’s students, then district A would report the course as taking place in one of their own buildings (this could include the district’s IRN as a location IRN).

Student Attending Courses at non-EMIS Entity. If a district sends a student to attend a course in a space that cannot be considered as the district’s space and the staff teaching the course is provided by a non-EMIS reporting entity, the district should report 999999 in the Location IRN Element. This is the only time that 999999 can be reported in the Location IRN Element.

 **Semester Code Element**

Record Field Number	CN090
Definition	The length of time, in weeks or semesters, that the course is taught.

Valid Options

- 1 1st semester only
- 2 2nd semester only
- 3 All year
- 4 12 weeks
- 5 9 weeks
- 6 6 weeks
- 8 Other

Reporting Instructions. For Credit Flexibility courses, report accordingly per the Credit Flexibility Plan for the student, otherwise use ‘8’.

☀ Student Population Element

Record Field Number	CN340
Definition	Identifies the attributes of the group of students for which the course is intended.

Valid Options

- DP Preschool Special Education Hearing/Visual**
Center-based course for preschool students with disabilities, structured to specifically instruct students with hearing and/or visual impairments.
- D8 Preschool Special Education**
Center-based course for preschool students with disabilities.
- GA Gifted Education In Arts Delivered By Trained Arts Instructor K-12**
Course specifically for students identified as gifted and related to the gifted identification arts areas of dance, visual arts, drama/theater, and/or music.
- GE Gifted Education K-12**
Course specifically for students identified as gifted and with a Gifted Intervention Specialist as the teacher of record.
- PR Preschool General Education**
Center-based course for preschool students without disabilities.
- RG Regular/General Students K-12**
No specific student attributes reflected in the other options for this element apply to the group of students intended to take this course.
- SE Special Education K-12**
Course specifically for students with disabilities.
- SP Special Education K-12 Hearing/Visual**
Course specifically for students with disabilities, structured to specifically instruct students with hearing and/or visual impairments.

☀ Subject Area for Credit Element

Record Field Number	CN210
Definition	The subject for courses offered in which high school credit toward graduation is being applied, whether at middle school or high school level.

Valid Options

- *** Not applicable – course does not qualify for high school credit toward graduation.
- BUS Business
- CTA Career-Technical
- ENG English
- FAR Fine Arts (including dance, drama, music and visual arts)
- FLR Foreign Language
- HEC Family and Consumer Sciences (non-career-technical)
- HTH Health
- JTC JROTC - Junior Reserve Officer Training Corps

- MTA Mathematics - Algebra II or Equivalent units
- MTO Mathematics units Other than Algebra II or Equivalent
- PHE Physical Education
- SOG Social Studies- American Government units
- SOH Social Studies- American History units
- SOO Social Studies units Other than American History & Government
- SCA Science - Advanced Science units
- SCL Science - Life Science units
- SCO Science units Other than Physical, Life, or Advanced Science
- SCP Science - Physical Science units
- TEC Technology Education/Computer Science
- ELE Elective – Option reported for courses that are not aligned with the academic content standards and for which credit toward meeting legislated graduation requirements is awarded. These courses may be included in district programs and can be used toward elective graduation requirements based on local district determination.

Reporting Instructions. Report the most specific option that would apply. For example, if a student takes a business course as an elective report the ‘BUS’ option instead of the ‘ELE’ option since the ‘BUS’ option is more specific.

 **Subject Code Element**

Record Field Number	CN050
Definition	The subject of the course being reported.

Valid Options

Valid six-character code

Reporting Instructions. A complete list of subject code options and descriptions is found in Section 4.7 Subject Codes.

There is no requirement that the subject codes used in student scheduling software be the same as the subject codes provided by Section 4.7. However, a crosswalk should be available by the software vendors to map the district-defined codes to the codes in Section 4.7 before data submission to the designated ITCs.

If a course being offered at the district does not exactly match one of the options found in Section 4.7, select the code that represents the subject definition most closely related to the course offered at the district. Not every subject title will fit precisely into the list found in Section 4.7; therefore the best match should be used.

Academic subject codes that may be reported for career-technical instruction include mathematics, English/language arts, science and social studies. Courses must be integral to the workforce development career-technical program (excluding foundation courses), limited to courses enrolling workforce development students only, and in compliance with the state academic standards for the grade level.

In general, if a special education student is placed by the school district in an employment situation for high school credit, then this employment is required to be supervised by the work/study coordinator. The subject code on the Course Master (CN) Record and the assignment area on the Staff Employment (CK) Record must reflect this. If the staff member providing employment supervision as part of the course of study for the student with a disability condition is the special education classroom teacher, then report the “300010 – Career Exploration” option in the Subject Code Element and option “SE” or “SP” for the Student Population Element.

Defining a Unique Record

Each EMIS record has specific fields that must be unique on each row of data reported to ODE. For the Course Master (CN) Record, the following field must be unique.

Required Fields	Number
Local Classroom Code	CN060

4.2 COURSE MASTER (CN) RECORD FILE LAYOUT

Number	Position	Name	PIC/Size
	1-8	Filler	PIC 9(8)
CN010	9-10	Sort Type	PIC X(2)
		Always "CN"	
	11	Filler	PIC X
CN020	12-15	Fiscal Year, e.g., 2010 (CCYY)	PIC X(4)
CN030	16	Data Set	PIC X
		L – Staff/Course	
CN040	17-22	District IRN	PIC X(6)
CN050	23-28	Subject Code	PIC X(6)
CN060	29-48	Local Classroom Code	PIC X(20)
	49-57	Filler	PIC X(9)
CN080	58	Course Level	PIC X
CN090	59	Semester Code	PIC X
CN100	60-63	Length of Scheduled Instruction	PIC 9(4)
CN110	64-69	Location IRN Number	PIC X(6)
	70-72	Filler	PIC X(3)
	73-78	Filler	PIC X(6)
	79-93	Filler	PIC X(15)
CN200	94-96	High School Credit	PIC 9V99
CN210	97-99	Subject Area for Credit	PIC X(3)
CN220	100	Language Used in Teaching Course	PIC X
	102	Filler	PIC X(2)
	103	Filler	PIC X
	104-109	Filler	PIC X(6)
CN280	110-117	Course Start Date CCYYMMDD	PIC 9(8)
CN290	118-125	Course End Date CCYYMMDD	PIC 9(8)
CN300	126	CTE College Credit	PIC X(1)
CN310	127-128	Curriculum	PIC X(2)
CN320	129-130	Delivery Method	PIC X(2)
CN330	131-132	Educational Option	PIC X(2)
CN340	133-134	Student Population	PIC X(2)
CN350	135	Credit Flexibility Code	PIC X

ODE EMIS MANUAL

Section 4.3: Staff Course (CU) Record



Version 5.0
July 26, 2017

REVISION HISTORY

The revision history sections of the EMIS Manual provide a means for readers to easily navigate to the places where updates have occurred. Significant changes and updates are indicated through red text for additions and strikethroughs for deletions. Minor changes—such as typos, formatting, and grammar corrections or updates—are not marked.

Version	Date	Effective Date (FY & Data Set)	Change #	Description
5.0	7/26/17	FY17	NA	No FY17 changes.
4.0	8/22/16	FY16L	36252	Updated HQT Code option 1 to include new licensing exams.
4.0	8/22/16	FY16		Added Upcoming Changes section.
3.0	9/16/15	FY15		Updated language to reflect shift from reporting periods to FY15 reporting.
2.0	9/16/15	FY14K	1010	Removed references to unit funding.

COMING CHANGES

The coming changes sections of the EMIS Manual provide a means to share with the field currently known information about upcoming changes. The final details of these changes have not all been determined at this time, however, those currently known are included here. Once all relevant details of the change(s) are known, the main text of the EMIS Manual section will be updated and the change(s) will be removed from this list.

At this time, there are no additional ~~FY17~~ EMIS changes known to impact the Staff Course (CU) Record.

TABLE OF CONTENTS

REVISION HISTORY	II
COMING CHANGES	II
TABLE OF CONTENTS.....	III
4.3 STAFF COURSE (CU) RECORD.....	3
<i>Required Collection Requests</i>	3
<i>General Guidelines</i>	3
<i>Staff Course Data Elements</i>	3
☼ Employee ID Element.....	3
☼ Highly Qualified Teacher Element	5
☼ Highly Qualified Teacher IRN Element	6
☼ Local Classroom Code Element	7
☼ Staff Course End Date Element	7
☼ Staff Course Start Date Element.....	7
☼ Staff Provider IRN Element.....	8
☼ Staff Role Code	8
<i>Defining a Unique Record</i>	9
4.3 STAFF COURSE (CU) RECORD FILE LAYOUT	10

4.3 STAFF COURSE (CU) RECORD

Required Collection Requests

The Staff Course (CU) Record is to be reported for the Initial and Final Staff/Course Collection Requests.

General Guidelines

At least one Staff Course (CU) Record is required to be reported for each teacher who is responsible for a course between the course start and end date. A staff member can have two or more Staff Course (CU) Records for the same course if the staff member is the teacher responsible for the course during two or more non-consecutive date ranges.

Every Course Master (CN) Record must have at least one Staff Course (CU) Record reported with a matching Local Classroom Code.

“Responsible for a course” specifically excludes a substitute teacher unless the substitute is in charge of the course for an extended period of time, including activities typically completed by a lead teacher for a course (e.g., designing daily lesson plans, evaluating students, etc.), or unless the substitute is the only staff member for the course.

Contracted Staff. When a resident/educating district is contracting with an ESC or another EMIS-reporting entity for a staff member to teach a course, the resident/educating district is responsible for reporting a Staff Course (CU) Record for each contracted staff member teaching a course. When submitting a Staff Course (CU) Record for a contracted staff member, the resident/educating district is required to report the IRN of the contracting entity in the Staff Provider IRN Element. In addition, the ID of the staff member teaching the course is to be reported in the Employee ID Element.

Exception to ESC Reporting Staff Course (CU) Record. In most cases, the ESC or other EMIS-reporting entity does not report a Staff Course (CU) Record for the staff member teaching a course for the resident/educating district. Although ESCs are, for the most part, no longer reporting course information, there is an exception. If an ESC is providing preschool special education instruction or is allocated state funds for an Early Childhood Education program (formerly state funded Public Preschool), then the ESC (or other EMIS-reporting entity) is required to report a Staff Course (CU) Record for the preschool special education teacher and/or regular preschool teacher. The ESC is also required to report a Student Course (GN) Record for the students enrolled in preschool special education. This is to ensure that preschool special education funding flows accurately.

Staff Course Data Elements

The following portion of this section discusses each of the data elements within the Staff Course (CU) Record. The elements are organized alphabetically.

☼ Employee ID Element

Record Field Number	CU050
Definition	Unique code assigned to the staff member.

Valid Options

A valid nine-character code.

Reporting Instructions. The individual reported as the teacher of record for a course must be reported with at least one Staff Employment (CK) Record with position code 230 (Teacher), 108 (Principal Assignment), or 109 (Superintendent Assignment) with the appropriate teaching assignment area. For courses that are provided via Delivery Method Element options “CC”, “OL”, and “ET” that are also Educational Options (“YS”) or a Delivery Method of “IM” (regardless of the Educational Option value), a position code of 202 (Counselor Assignment) may be reported as the teacher of record.

Contracted Teachers. If the resident/educating district is contracting with an ESC or another EMIS-reporting entity for a teacher to teach a course, then the educating/resident district is required to report the State Staff ID of the teacher (employed by an ESC/EMIS-reporting entity) teaching the course.

Credit Flexibility: Test Out Courses. Courses that are provided with Delivery Method Element option “TO” may have all 9s reported. If districts report anything other than all 9s, then a complete Staff Demographic (CI) Record and Staff Employment (CK) Record must be reported for the instructor. If all 9s are reported, then the CI and CK Records are not required.

Postsecondary Teachers. Resident districts may report all 9s in this element when reporting data about classes provided by the College Credit Plus program or taught by postsecondary instructors (Curriculum values of “PS” or “PI”). If districts report anything other than all 9s, then a complete Staff Demographic (CI) Record and Staff Employment (CK) Record must be reported for the instructor. If all 9s are reported, then the CI and CK Records are not required.

Expert Contracted from Outside Company/Organization for Credit Flex. Districts may report all 9s in this element when reporting data about classes provided by an expert contracted from a company or organization for a credit flex opportunity (Curriculum value of “OC”). If districts report anything other than all 9s, then a complete Staff Demographic (CI) Record and Staff Employment (CK) Record must be reported for the instructor. If all 9s are reported, then the CI and CK Records are not required.

With the exception of reporting the situations above, this element should never be reported as all 9s.

All Other Teachers. When reporting the Employee ID Element, report the local number assigned to the employee by the district. The same locally assigned number must be used for the Employee ID for the Staff Demographic (CI) Record.

An ESC that is providing preschool special education instruction or is awarded an Early Childhood Education Grant (formerly Public Preschool Grant) is responsible for reporting a record with the ID of the preschool teacher reported in the Employee ID Element.

The value in the Employee ID Element must be consistently reported as it is used to connect related staff (Section 3.4 Staff Employment (CK), Section 3.3 Staff Demographic (CI), Section 3.5 Contractor Staff Employment (CJ)) and student (Section 2.9 Student Program (GQ)) records. The only restriction on the value is the use of all 9s as discussed above; therefore, districts can use the staff

member’s credential ID, a Z-ID, or a local value determined by the district as long as the same value is used for each staff member across these record types.

☀ Highly Qualified Teacher Element

Record Field Number	CU100
Definition	Describes how the person teaching the course meets the federal definition of a highly qualified teacher (HQT).

Valid Options

- I Not a core course OR type of course is not evaluated for HQT.
- N Teacher does not meet the definition of Highly Qualified Teacher for this course
- 1 NTE/Praxis II/OAE – State Licensing Exam
- 2 Academic major or 30 hours in content area
- 3 Master’s Degree
- 5 Holds or has ever held an 8-year Professional Certificate
- 6 Permanent Certificate
- 7 National Board Certification
- 8 Expanded HQT Rubric
- 9 90 Completed and Approved Clock Hours of Professional Development approved by a Local Professional Development Committee (LPDC)

Reporting Instructions. This element is required to be reported for all teachers who teach core academic subjects. To report this information, you should utilize the Center for the Teaching Profession Highly Qualified Teacher Worksheet. This worksheet is available on ODE’s website. Districts are to report the first reason from this worksheet that indicates how the teacher meets the HQT definition for the particular course being reported.

Reporting of options 3 through 9 are restricted to certain situations. Details of when these options are valid for a specific teacher, grade, and subject area can be found in the HQT Toolkit from the Center for the Teaching Profession.

Core academic subjects (as specified by the No Child Left Behind Act of 2001, Reauthorization of Elementary and Secondary Education Act (ESEA), Public Law 107-110) include the following: English, reading, language arts, mathematics, science, civics and government, economics, arts (including music, visual arts, dance, and drama), history, geography, and foreign language.

A list of subject codes considered “core courses” is available in Section 4.7 Subject Codes of the EMIS Manual located on the EMIS website. Noncore courses are not evaluated for HQT.

Report option I whenever one or more of the following is true:

- Curriculum Element is OC, PS, or PI, or
- Delivery Method is CC, ET, or OL and Educational Option is YS, or
- Delivery Method is ID, IM, TO, or CI, or
- Student Population is D8, DP, or PR

☀ Highly Qualified Teacher IRN Element

Record Field Number	CU110
Definition	IRN used to group courses for the calculation of the percent of core courses taught by highly qualified staff and the percent of core courses taught by properly certificated staff.

Valid Options

Six digit IRN
999999

Reporting Instructions. This element will be used for the determination of where a course will count in HQT calculations.

All *****s should only be reported if the subject being taught is not a subject area for HQT (see Section 4.7 Subject Codes), or the Curriculum, Delivery Method, or Student Population Element option being reported for the subject is not evaluated for HQT.

Courses not evaluated for HQT have an “I” reported in the Highly Qualified Teacher element.

Rental or “Borrowed” Space. In the case where an EMIS-reporting entity rents or “borrows” space from another organization (such as another district, ESC, or private entity) to house a course taught by its own staff, the EMIS-reporting entity would report the IRN for one of its own buildings (or its district IRN) as the Highly Qualified Teacher (HQT) IRN.

For example, if a high school holds a course in a neighboring office complex, then they would use the high school building’s IRN as the HQT IRN. Likewise, if district A rents or borrows space in a building in district B for a course for A’s students, then district A would report the course as taking place in one of their own buildings (this could include reporting the district’s IRN as the HQT IRN for an ESC, community school, JVSD, STEM district, OSB, OSD, or DYS).

Note that the district IRN should never be used by a local, exempted village, or city school district. These entities should always report one of their own buildings as the HQT IRN for courses where they are responsible for the HQT status of the teacher (see exception for contracted staff below.)

Contracted Staff. The value of the HQT IRN for courses taught by the contracted staff member is dependent on the location of the course and the districts of students in that course.

If the contracted staff member is teaching the course in a building of the district reporting the course master, and if all the students in the course are from the reporting district, then the building IRN where the course takes place is used in the HQT IRN field. In this case, the HQT IRN Teacher Element and the Location IRN Element would be the same.

In all other cases, the district IRN of the entity providing the contracted staff member is used in the HQT IRN field. These cases may result in the HQT Teacher IRN Element and Location IRN Element being different. This would include courses taught at the entity providing the contracted staff member and instruction provided by a contracted staff member to a classroom of students from more than one district.

If, in the case of contracted staff, the entity providing the staff does not have an IRN, you may use 999999 in the HQT IRN field.

☀ Local Classroom Code Element

Record Field Number	CU060
Definition	The code used by the local school district that uniquely identifies a specific classroom (i.e., period and section) within a district.

Valid Options

Alphanumeric code

Reporting Instructions. The local classroom code is completely defined by the resident/educating district. Report the same local classroom code as reported on the Course Master Record for this course.

☀ Staff Course End Date Element

Record Field Number	CU080
Definition	Last scheduled day a staff member is associated with a course where dates are required.

Valid Options

00000000

Reporting dates not required (default)

CCYYMMDD

Year, Month, Day (value must be within current fiscal year: July 1 - June 30)

Reporting Instructions. Only required for staff where the staff member’s association with the course does not span the entire period of the course reported on the Course Master record.

If available in a district’s data system, dates may be reported for all staff, but any reported dates must be valid dates (i.e., reporting 20150132 would cause a Staff Course (CU) Record to fatal) and must be within the current fiscal year (20140701 to 20150630 for FY15) and within the range of dates reported on the Course Master (CN) Record for the course.

The ending date of the school calendar period may be used for associated staff that span all the weeks of the calendar period even if the last actual day of the specific course is before the final day of the calendar period. For example, a course that meets on Tuesdays during a semester that ends on a Friday may use the Friday date in the Staff Course End Date Element even though the last class session was three days prior. If, however, the staff member stopped working with the Tuesday-only course a week earlier (10 days before the end of the semester), the actual end date would be used, since the assignment did not span all weeks of the semester.

☀ Staff Course Start Date Element

Record Field Number	CU070
Definition	First scheduled day a staff member is associated with a course where dates are required.

Valid Options

00000000 Reporting dates not required (default)
 CCYYMMDD Year, Month, Day (value must be within current fiscal year: July 1 - June 30)

Reporting Instructions. Only required for staff where the staff member’s association with the course does not span the entire period of the course reported on the Course Master record.

If available in a district’s data system, dates may be reported for all staff, but any reported dates must be valid dates (i.e., reporting 20150132 would cause a Staff Course (CU) Record to fatal) and must be within the current fiscal year (20140701 to 20150630 for FY15) and within the range of dates reported on the Course Master (CN) Record for the course.

The starting date of the school calendar period may be used for courses that span all the weeks of the calendar period even if the first day of the specific course is after the first day of the calendar period. For example, a course that meets on Tuesdays during a semester that starts on a Monday may use the Monday date in the Staff Course Start Date Element even though the first class session was the next day. If, however, the staff member started working with the Tuesday-only course a week later (8 days after the start of the semester), the actual start date would be used, since the assignment did not span all weeks of the semester.

 **Staff Provider IRN Element**

Record Field Number	CU120
Definition	The district IRN of the entity in contract with the reporting school district.

Valid Options

Six-digit IRN
 ***** Not Applicable

Reporting Instructions. When the resident/educating district is contracting with an EMIS-reporting entity, e.g., ESC, for a staff member to teach this course, the IRN of the EMIS-reporting entity must be reported in this element. If the resident/educating district is not contracting with another EMIS-reporting entity, then this element should be filled with “*****”.

 **Staff Role Code**

Record Field Number	CU090
Definition	The role of a staff member within the context of this course and date range.

Valid Options

CT Co-Teacher
 LT Lead Teacher

Reporting Instructions. Report the code that describes the role of the staff member with this specific course during the date range reported on this record (or for the entire date range of the course if the staff member is associated with this course for its entire length).

A traditional classroom arrangement has a single staff member who is responsible for instruction and evaluation of students. This individual would be thought of as the Lead Teacher for the course. In this situation, we are not collecting information on other staff involved with the course, including intervention specialists, tutors, aides, etc. The vast majority of courses reported to EMIS will have a single Staff Course record reported with a Staff Role Code of “LT”.

A value of “CT” (Co-Teacher) should be reported when there are 2 or more staff who have equal responsibility for teaching a group of students content for a specific subject code in the same class section/room. Prior to FY12, this would have been reported in EMIS under the instructions for team teaching (dividing the students into more than one class section and assigning the students randomly to only one teacher). The collection of “CT” is not intended to increase the number of staff reported to EMIS compared to prior year reporting.

If a Staff Course Record is reported for a specific timeframe with the “LT” option, then only one Staff Course Record may be reported for that timeframe. If “CT” is reported, then there must be at least two Staff Course Records reported for that timeframe.

Defining a Unique Record

Each EMIS record has specific fields that must be unique on each row of data reported to ODE. For the Staff Course (CU) Record, each combination of values in the following fields must be unique.

Required Fields	Number
Employee ID	CU050
Local Classroom Code	CU060
Staff Course Start Date	CU070

4.3 STAFF COURSE (CU) RECORD FILE LAYOUT

Number	Position	Name	PIC/Size
	1-8	Filler	PIC 9(8)
CU010	9-10	Sort Type	PIC X(2)
		Always "CU"	
	11	Filler	PIC X
CU020	12-15	Fiscal Year, e.g., 2015 (CCYY)	PIC X(4)
CU030	16	Data Set	PIC X
		L – Staff/Course	
CU040	17-22	District IRN	PIC X(6)
CU050	23-31	Employee ID	PIC X(9)
CU060	32-51	Local Classroom Code	PIC X(20)
CU070	52-59	Staff Course Start Date CCYYMMDD	PIC 9(8)
CU080	60-67	Staff Course End Date CCYYMMDD	PIC 9(8)
CU090	68-69	Staff Role Code	PIC X(2)
CU100	70	Highly Qualified Teacher	PIC X
CU110	71-76	Highly Qualified Teacher IRN	PIC X(6)
CU120	77-82	Staff Provider IRN	PIC X(6)

ODE EMIS MANUAL

Section 4.4: Student Course (GN) Record



Version 5.0
August 30, 2017

REVISION HISTORY

The revision history sections of the EMIS Manual provide a means for readers to easily navigate to the places where updates have occurred. Significant changes and updates are indicated through red text for additions and strikethroughs for deletions. Minor changes—such as typos, formatting, and grammar corrections or updates—are not marked.

Version	Date	Effective Date (FY & Data Set)	Change #	Description
5.0	8/30/16	FY17	NA	No FY17 changes.
4.0	8/22/16	FY16		Added Coming Changes section.
3.0	9/29/15	FY15L		Updated language to reflect shift from reporting periods to FY15 reporting.
2.0	6/26/15	FY14K	1010	Removed references to unit funding.

COMING CHANGES

The coming changes sections of the EMIS Manual provide a means to share with the field currently known information about upcoming changes. The final details of these changes have not all been determined at this time, however, those currently known are included here. Once all relevant details of the change(s) are known, the main text of the EMIS Manual section will be updated and the change(s) will be removed from this list.

At this time, there are no additional FY17 EMIS changes known to impact the Student Course (GN) Record.

TABLE OF CONTENTS

REVISION HISTORY	II
COMING CHANGES	II
TABLE OF CONTENTS.....	III
4.4 STUDENT COURSE (GN) RECORD.....	3
<i>Required Collection Requests</i>	3
<i>General Guidelines</i>	3
<i>Reporting Preschool Courses</i>	4
<i>Reporting Course Records for Students Without Disabilities, K-12</i>	5
<i>Reporting Student Course (GN) Records for Students With Disabilities, K-12</i>	5
<i>Career-Technical Students – Satellite Courses</i>	6
<i>Gifted Students</i>	6
<i>Educational Options and Delivery Methods</i>	6
<i>Educational Service Centers</i>	7
<i>Student Course Data Elements</i>	7
☼ Course Enrollment End Date Element	7
☼ Course Enrollment Start Date Element	8
☼ District IRN Element	8
☼ High School Credit Earned Element.....	8
☼ Local Classroom Code Element	9
☼ Partial/Override Credit Element	9
<i>Defining a Unique Record</i>	10
4.4 STUDENT COURSE (GN) RECORD FILE LAYOUT	11

4.4 STUDENT COURSE (GN) RECORD

Required Collection Requests

The Student Course (GN) Records are to be reported for the Initial and Final Staff/Course (L) Collections. The table below provides the collection by element.

Record Field Number	Data Element	Initial L	Final L
GN170	Course Enrollment End Date Element	√	√
GN160	Course Enrollment Start Date Element	√	√
GN040	District IRN Element	√	√
GN150	High School Credit Earned Element		√
GN080	Local Classroom Code Element	√	√
GN152	Partial/Override Credit Element		√

General Guidelines

It is mandatory to report all courses separately for students in grades K-12. Therefore, a separate Student Course (GN) Record will have to be reported for every course in which the student is participating, even if two or more courses are being taught by the same teacher.

The only exceptions are preschool courses. These are still to be reported as self-contained courses.

In situations where school districts are contracting with Educational Service Centers and/or other EMIS-reporting entities, the school district is responsible for reporting Student Course (GN) Records, with the exception of preschool courses. The school district will report the Student Course (GN) Records, the Staff Course (CU) Records of the staff teaching the students at the ESC, and the Course Master (CN) Records.

In general, all students who have at least one Student Standing (FS) Record reported with a Student Percent of Time (FS120) that is greater than zero should have courses reported or have the preschool itinerant program code (220100) reported. In addition, students who have any Student Standing (FS) Record reported with a Sent to Percent of Time (FS220 or FS250) greater than zero for the following Sent Reasons (FS200 or FS230) should have courses reported for the student:

- PS – Post Secondary Enrollment Option Program Participant,
- PI – Proprietary Institution Program Placement, and
- NP – Non-public school placement at district expense.

During the Initial Staff/Course (L) Collection, report the Student Course (GN) Records, the Staff Course (CU) Records, and the Course Master (CN) Records for *all* courses in accordance with the instructions below, including:

- Year-long courses (i.e., courses offered for the entire school year), and
- Any other courses offered during the school year, such as courses offered during the second semester only or courses that span five or six-week periods.

Courses taken during the summer (after the last day of the school year and prior to the start of the following school year) are not reported to the Ohio Department of Education.

See Section 4.7 Subject Codes, for a complete list of subject codes and definitions. See Section 4.2 Course Master Record and Section 4.3 Staff Course Record for more information on reporting those records.

Reporting Preschool Courses

As indicated above, preschool courses are to be reported as self-contained courses. Do not report separate course records for each course/subject in which the preschool student is participating, such as reading, math, etc. The following self-contained subject codes are applicable for preschool students/teachers:

180050	Early Education (Ages 0-2)
180108	Preschool: preschool program in a self-contained classroom, this includes course related to ECE, Federal Head Start, and other local programs.
180280	Title I Preschool: A preschool program funded with Title I funds.
196095	Early Education of the Handicapped (for children below 6)

Reporting Special Education Preschool Courses. Students who are receiving center-based preschool special education services are to be scheduled with a Local Classroom Code of a special education teacher with a subject code of 196095 and a Student Population of D8 or DP. The following students may also be scheduled into a class with the subject code of 196095.

- Regular or “Typically Developing Peers” in the same class as preschoolers with disabilities, being taught by a preschool special education teacher, should be scheduled with the same Local Classroom Code of the preschool special education teacher found on that teacher’s Staff Course Record. The subject code should be 196095.

Students receiving preschool special education itinerant services are reported with a program code (220100) for itinerant services. If the student is receiving preschool itinerant services and also center-based services, then both a Student Course (GN) Record (showing the local classroom code of the special education teacher) and a Student Program (GQ) Record (with the itinerant services program code and the itinerant teacher’s state ID) are to be reported for the student.

Reporting Regular Preschool Courses. Each non-disabled student reported with a “PS” in the Grade Level Element is required to have at least one Student Course (GN) Record reported with an appropriate local classroom code. All regular preschool courses are to be reported with a Student Population of PR. It is possible that a non-disabled preschool student is enrolled in a center-based special education course (196095 subject code) as a typically-developing peer (as noted above). If this typically-developing peer is not “dually enrolled” into another preschool class (such as a locally funded preschool class), then this is the only subject code that is required for him/her. If he/she is dually enrolled into another class, such as a locally funded preschool class, then he/she is reported with two Student Course (GN) Records: one with the local classroom code of the 196095 subject code and one with the local classroom code of the 180108 subject code.

A student enrolled in the Early Childhood Education grant program is required to be scheduled into the 180108 course. Only those students who are scheduled into this preschool course (and who meet the income eligibility requirements and admission requirements) will count towards the grantee's preschool child count. The number of students scheduled into this course is used to determine the state-funded Early Childhood Education Grant head count as of December 1. This head count is the baseline for the Early Childhood Education Grant allocation for the following school year. Please note that the Early Childhood Education head count is different from the Federal Child Count for students with disabilities.

Dually Enrolled Students. Any student who is dually enrolled into two preschool programs (e.g., subject codes 196095 and 180108) is required to be scheduled into both preschool courses and should have two Student Course (GN) Records reported for him/her.

Reporting Course Records for Students Without Disabilities, K-12

A separate Student Course (GN) Record must be submitted for each course/subject in which the student is taught. This includes courses that are taught by the same teacher and courses that are taught by different teachers.

Example 1.

If Mrs. Smith, a kindergarten teacher, is teaching math, reading, science, and social studies to the same group of students, in the same building, at roughly the same time, then a separate Student Course (GN) Record, with a unique Local Classroom Code for each subject, would be reported for math, reading, science, and social studies. In this case, four Student Course (GN) Records would be reported for each student in Mrs. Smith's kindergarten class.

In addition, the Staff Course (CU) Record for Mrs. Smith would have the respective Local Classroom Codes, and the Course Master (CN) Record would have the appropriate subject codes as indicated in Section 4.7 Subject Codes, and the appropriate Student Population.

Students who are non-disabled and are receiving temporary home instruction are considered to be enrolled and in attendance for the school district. Therefore, a Student Course (GN) Record is to be reported for each subject in which the student is enrolled, with the same Local Classroom Code reported on both the Course Master (CN) Record and the Staff Course (CU) Record, as if the student was actually in the class.

A Student Course (GN) Record is not required for students who receive supplemental instruction from a Remedial Specialist (position code 204) or a Tutor (position code 208).

Reporting Student Course (GN) Records for Students With Disabilities, K-12

A separate Student Course (GN) Record is required to be reported for each course/subject for which a student is taught. This includes courses that are taught by the same teacher and those that are taught by different teachers.

Course records for students with disabilities are to be reported for each course/subject in which a student is enrolled. The actual subject codes of these courses are found in Section 4.7 Subject Codes and are to be coded on the Course Master (CN) Record.

If modifications are made to the curriculum, and/or the program, for a particular student in conjunction with a special education teacher in accordance with an IEP, then the Student Population Element on the Course Master (CN) Record into which the student is scheduled must indicate Special Education (SE or SP).

If no program or curriculum modifications are made for a student, then the Student Population Element on the Course Master (CN) Record into which the student is scheduled should reflect the regular course (RG).

A Student Course (GN) Record is not required to be reported for students with disabilities who are pulled out of the regular classroom in order to receive supplemental special education services such as tutoring, speech and language, etc. This includes students who are being taught by staff with a position code of “212 – Supplemental Services Teaching Assignment – Special Education”.

School-age students with disabilities receiving home instruction are to have one Student Course (GN) Record per course, reported with the same local classroom code as that reported on the Course Master (CN) Record and the Staff Course (CU) Record. Each such course is reported with a Delivery Method of HI and the appropriate Subject Code.

Career-Technical Students – Satellite Courses

A Student Course (GN) Record is required to be reported by the district that employs the instructor for career-technical students enrolled in satellite courses (including GRADS courses). In addition to the course records, the district that employs the instructor must also report Student Demographic (GI), Student Standing (FS), Student Attributes – Effective Date (FD), and Student Attributes – No Date (FN) Records.

Gifted Students

One Student Course (GN) Record should be reported for each course/subject taught to a student. The Student Course (GN) Records for students who are gifted are to be reported for each course with the same Local Classroom Code as that reported on the related Staff Course (CU) and Course Master (CN) Records. The actual Subject Codes of these courses are found in Section 4.7 Subject Codes and are to be coded on the Course Master (CN) Record. The appropriate gifted Student Population (Gx) is also to be reported on the Course Master (CN) Record. This includes submitting a Student Course (GN) Record for students who are gifted and receiving instruction in the arts.

No Student Course (GN) Record is reported for students receiving supplemental gifted instruction provided by a gifted intervention specialist. However, students receiving such services should have the appropriate gifted supplemental code reported for the Program Code Element on the Student Program (GQ) Record.

Educational Options and Delivery Methods

A Student Course (GN) Record is submitted for each student who is enrolled in a course that is offered for graduation credit regardless of the Delivery Method. Examples of Delivery Methods are

- Correspondence Courses (CC)
- On-Line (OL)

- Interactive Distance Learning (ID)
- Educational Travel (ET)
- Independent Study (IS)

See Section 4.2 Course Master (CN) Record for a complete list of Delivery Methods, along with descriptions and additional reporting instructions.

Students can be enrolled in courses for credit that are educational options or have Delivery Methods other than the traditional face-to-face classroom situation. For such courses, Student Course (GN) Records should still be reported, along with Staff Course (CU) Records that report the staff member monitoring the class and Course Master (CN) Records.

Educational Service Centers

With the exception of preschool courses, the Educational Service Centers (ESCs) do not report course information. It is the sending district’s responsibility to report Student Course (GN), Staff Course (CU), and Course Master (CN) Records for students and staff who are educated by employees of the ESC.

An exception to this is when ESCs have preschools. In these cases, the ESCs do report Student Course (GN), Staff Course (CU), and Course Master (CN) Records for the preschool students they are educating.

Student Course Data Elements

The following portion of this section discusses each of the data elements within the Student Course (GN) Record. The elements are organized alphabetically. The Student Course (GN), Staff Course (CU), and Course Master (CN) Records are tied together through the Fiscal Year, District IRN, and Local Classroom Code.

☀ Course Enrollment End Date Element

Record Field Number	GN170
Definition	Last day of a student’s enrollment in a course where course dates are required.

Valid Options

- | | |
|----------|------------------------------------------------------------------------------------------------------------------------------|
| 00000000 | Student enrolled in course through the Course End Date (CN290) or reporting student’s enrollment date not required (default) |
| CCYYMMDD | Year, Month, Day (value must be within current fiscal year: July 1 - June 30) |

Reporting Instructions. Only required for student course enrollments where the end date of a student’s enrollment is different than the end date (CN290) of the course (e.g., the student dropped the course before it ended).

If “00000000” is reported in this element, the value for the Course End Date (CN290) will be used for this element for this student.

Enrollment dates may be reported for all students in a course, but any reported dates must be valid dates (i.e., reporting 20090132 would cause a Student Course record to fatal) and must be within the boundaries of the start and end dates on the related Course Master (CN) Record.

☀ Course Enrollment Start Date Element

Record Field Number	GN160
Definition	First day of a student’s enrollment in a course where course dates are required.

Valid Options

- 00000000 Student enrolled in course from the Course Start Date (CN280) or reporting student’s enrollment date not required (default)
- CCYYMMDD Year, Month, Day (value must be within current fiscal year: July 1 - June 30)

Reporting Instructions. Only required for student course enrollments where the start date of a student’s enrollment is different than the start date (CN280) of the course (e.g., the student started the course late).

If “00000000” is reported in this element, the value for the Course Start Date (CN280) will be used for this element for this student.

Enrollment dates may be reported for all students in a course, but any reported dates must be valid dates (i.e., reporting 20090132 would cause a Student Course Record to fatal) and must be within the boundaries of the start and end dates on the related Course Master (CN) Record.

☀ District IRN Element

Record Field Number	GN040
Definition	The state assigned six-digit information retrieval number (IRN) of the district.

Valid Options

- Six-digit IRN
- Valid school district IRN

Reporting Instructions. The IRN of the school district that is reporting the student’s course(s) is reported in this element.

☀ High School Credit Earned Element

Record Field Number	GN150
Definition	Indicates if a student earned high school credit for the course.

Valid Options

- Y The student received credit for the course as reported on the Course Master (CN)
- N The student did not receive credit for the course
- P The student received the credit as reported in the Partial/Override Credit Element

Reporting Instructions. For courses that do not have high school credit associated with the course, the district would report a “Y” in this element and would report zeros in the High School Credit Element on the Course Master (CN) Record.

If a student receives the same high school credit that was reported for the course, report a “Y” in this element. If a student receives high school credit for a course, but the amount of credit awarded is different than what was reported on the Course Master (CN) Record, report a “P” in this element and report the amount of credit awarded to the student in the Partial/Override Credit Element.

If high school credit is offered for a course but a student does not receive credit for the course, report an “N” in this element. This would include situations where the student does not complete the course or does not pass the course.

 **Local Classroom Code Element**

Record Field Number	GN080
Definition	The code used by the local school district that uniquely identifies a specific classroom (i.e., period and section) within a district.

Valid Option

Alphanumeric code Local district classroom code

Reporting Instructions. A classroom is defined per teacher, period, subject, and building. The Local Classroom Code is completely defined by the school district. It must match between the Student Course (GN), Staff Course (CU), and Course Master (CN) Records.

If a coding system does not exist at a building or district, the school district will need to create a unique number that uniquely identifies each classroom.

If a classroom is eliminated during the year, then no other classroom can use this unique identifier for the remainder of the school year.

New Local Classroom Codes may be reported during the Final Staff/Course (L) Collection to identify classes added after Initial Staff/Course (L) Collection.

Local Classroom Codes can be changed for succeeding school years.

 **Partial/Override Credit Element**

Record Field Number	GN152
Definition	Indicates the amount of high school credit that the student received for the course.

Valid Options

0.00 – 9.99

Reporting Instructions. This element is linked to the High School Credit Earned Element and a credit amount should only be reported in this element when the option of “P” is reported in the High School Credit Earned Element. When the option of “P” is reported in the High School Credit Earned Element, ODE will use the amount of credit that is reported in this element instead of the credit reported

on the Course Master (CN) Record for this course. This element is used to report the amount of credit a student is awarded when the credit is different than what is reported on the Course Master (CN) Record.

If a software vendor or district chooses to, they may report all high school credit earned through this element; in this case the option of “P” must be used for all students that earn high school credit.

Note. The credit assigned to the course must still be reported on the Course Master (CN) Record for all courses that may be taken for high school credit.

Defining a Unique Record

Each EMIS record has specific fields that must be unique on each row of data reported to ODE. For the Student Course (GN) Record, each combination of values in the following fields must be unique.

Required Fields	Number
EMIS Student ID	GN050
Local Classroom Code	GN080
Course Enrollment Start Date	GN160

4.4 STUDENT COURSE (GN) RECORD FILE LAYOUT

Number	Position	Name	PIC/Size
	1-8	Filler	PIC 9(8)
GN010	9-10	Sort Type	PIC X(2)
		Always GN	
	11	Filler	PIC X
GN020	12-15	Fiscal Year, e.g., 2015 (CCYY)	PIC X(4)
GN030	16	Data Set	PIC X
		L – Staff/Course	
GN040	17-22	District IRN	PIC X(6)
GN050	23-31	EMIS Student ID Number	PIC X(9)
	32-160	Subject Information (OCCURS 3 TIMES)	
GN080		Local Classroom Code	PIC X(20)
		Filler	PIC X
GN150		High School Credit Earned	PIC X
		Filler	PIC X(2)
GN152		Partial /Override Credit	PIC 9V99
GN160		Course Enrollment Start Date CCYYMMDD	PIC 9(8)
GN170		Course Enrollment End Date CCYYMMDD	PIC 9(8)

ODE EMIS MANUAL

Section 4.5: Career-Technical Education Correlated Class (CV) Record



Version 5.0
August 30, 2017

REVISION HISTORY

The revision history sections of the EMIS Manual provide a means for readers to easily navigate to the places where updates have occurred. Significant changes and updates are indicated through red text for additions and strikethroughs for deletions. Minor changes—such as typos, formatting, and grammar corrections or updates—are not marked.

Version	Date	Effective Date (FY & Data Set)	Change #	Description
5.0	8/30/17	FY17	NA	No FY17 changes.
4.0	8/22/16	FY16		Added Upcoming Changes section.
3.0	10/6/15	FY15L		Updated language to reflect shift from reporting periods to FY15 reporting.
2.0	10/16/13	FY14K	997	Updated per course additions.

COMING CHANGES

The coming changes sections of the EMIS Manual provide a means to share with the field currently known information about upcoming changes. The final details of these changes have not all been determined at this time, however, those currently known are included here. Once all relevant details of the change(s) are known, the main text of the EMIS Manual section will be updated and the change(s) will be removed from this list.

At this time, there are no additional ~~FY17~~ EMIS changes known to impact the Career-Technical Education Correlated Class (CV) Record.

TABLE OF CONTENTS

REVISION HISTORY	II
COMING CHANGES	II
TABLE OF CONTENTS.....	III
4.5 CAREER-TECHNICAL EDUCATION CORRELATED CLASS (CV) RECORD.....	3
<i>Required Collection Requests</i>	3
<i>General Guidelines</i>	3
☼ Anchor/Lab/Co-op Local Classroom Code Element	6
☼ First Correlated Academic or Technical Related Local Classroom Code Element	6
☼ Second Correlated Academic or Technical Related Element	6
<i>Defining a Unique Record.....</i>	7
4.5 CAREER-TECHNICAL EDUCATION CORRELATED CLASS (CV) RECORD FILE LAYOUT	8

4.5 CAREER-TECHNICAL EDUCATION CORRELATED CLASS (CV) RECORD

Required Collection Requests

The Career-Technical Education Correlated Class (CV) Record is to be reported for the Initial and Final Staff/Course (L) Collection Requests.

General Guidelines

To form a career-technical program, the Career-Technical Education Correlated Class (CV) Record is used to indicate the relationship between a career-technical anchor (Curriculum Element options VN, VC, VP, or VT) and its

- Associated technical related class (Curriculum Element option V3) for career field workforce development programs,
- Associated technical related class and/or academic class(es) (Curriculum Element option V3) for Career Based Intervention, and
- Instructional support time (Curriculum Element option V3) for GRADS.

One or more Correlated Class (CV) Records may be used for a career-technical anchor class. This file is comprised of local classroom codes.

All co-op classes (Curriculum Element option VC or VP) *must* be correlated with a technical related class (Curriculum Element option V3).

Rules for Determining Anchor/Lab/Co-op, First and Second Academic, or Technical Related Correlated Classes for the Career-Technical Education Correlated Class. The Career-Technical Correlated Class (CV) Record is used to form a career-technical program by associating the career-technical anchor class with its associated class(es).

Rules for the Anchor/Lab/Co-op Class of a career-technical Block.

- The Career-Technical Correlated Class (CV) Record must have an Anchor/Lab/Co-op local classroom code with a valid career-technical Subject Code and career-technical Curriculum Element option (VX).
- The valid Curriculum Element options for the Anchor/Lab/Co-op local classroom code are VN, VC, VP, and VT.
- The valid Subject Codes for the Anchor/Lab/Co-op local classroom code are found in EMIS Manual Section 4.7 Subject Codes under the following headings.

All Subject Codes in the following Career Fields could be used as Anchor/Lab/Co-op Subject Codes (Curriculum Element options VP or VT) for the Correlated Class (CV) Record:

- Career Field 01: Agricultural and Environmental Systems
- Career Field 08: Government and Public Administration Subject Codes

The following Subject Code could be used as an Anchor/Lab/Co-op Subject Code (Curriculum Element option VN) for the correlated class record:

- Vocational Job Training Coordinating (990371)

The following Subject Code could be used as an Anchor/Lab/Co-op Subject Code (Curriculum Element options VN or VC) for the correlated class record:

- Career Based Intervention (CBI) (252525)

The following table includes the Career Fields or Subject Code section where some Subject Codes are valid but others are not for Anchor/Lab/Co-op subject codes (Curriculum Element options VN, VC, VP, or VT).

Anchor/Lab/Co-op Subject Codes (VN, VC, VP, & VT Curriculum options ONLY)	Does not include subject codes
Career Field 02: Arts & Communications Codes	340010 – Principles of Arts and Communications
Career Field 03: Business & Administrative Services Codes	140050 – Introduction to Business and Administrative Services 140075 – Interdisciplinary Career Field Business Concepts
Career Field 04: Construction Technologies Codes	170005 – Construction Technologies
Career Field 05: Education and Training Codes	350001 – Introduction to Education and Training
Career Field 06: Engineering and Science Technology Codes	170007 – Engineering Systems 175001 – Engineering Design 175015 – Pre-Engineering Technologies
Career Field 07: Finance Codes	140025 – Finance Career Field Course
Career Field 09: Health Science Subject Codes	070005 – Health Science
Career Field 10: Hospitality and Tourism Codes	330015 – Introduction to Hospitality and Tourism
Career Field 11: Human Service Codes	172600 – Human Services
Career Field 12: Information Technology Codes	140200 – Information Technology I
Career Field 13: Law & Public Safety Codes	170342 – Foundations of Firefighting and Emergency Medical Services 170911 – The American Criminal Justice System 172812 – Public Safety - Core
Career Field 14: Manufacturing Technologies Codes	170006 – Manufacturing Technologies
Career Field 15: Marketing Codes	040805 – Introduction to Marketing
Career Field 16: Transportation Systems Codes	170350 – Transportation Systems
Family and Consumer Sciences Codes(Includes GRADS – 090194, 090193, 090192)	090700 – Consumer and Financial Literacy 091025 – Child Development 091050 – Financial Management I 091051 – Financial Management II 091400 – Career Search 091401 – Career Search II (Includes Mentorship) 091410 – Transitions and Careers 090050 – Healthy Food – Middle School 091077 – Healthy and Safe Food 091200 – Healthy Living

Anchor/Lab/Co-op Subject Codes (VN, VC, VP, & VT Curriculum options ONLY)	Does not include subject codes
	091300 – Managing Transitions

Workforce Development Programs – Rules for the Technical Related Correlated Classes of a Career Field Workforce Development Block.

- The Technical Related Correlated Local Classroom Code Elements must be career-technical Curriculum Element option V3.
- The related correlated local classroom code subject code must be a valid career-technical subject code for the V3 Curriculum Element option. The CTE Secondary Workforce Development Program Matrix (available on the ODE Career-Technical and Adult Education website) lists workforce development subject codes that are valid as V3 Curriculum Element option.
- All students enrolled in a correlated technical related class (V3 Curriculum Element option) must also be enrolled in an approved and funded career field workforce development anchor class (VP or VT).

Career Based Intervention (CBI) (252525 subject code) – Rules for the First and Second Academic or CBI Related Correlated Classes of a Career-Technical CBI Block.

- The related correlated local classroom code subject code may be a related CBI class (252525 subject code), a valid CBI academic subject code or a valid mathematics, science, English/language arts or social studies subject code. The related correlated class must be the V3 Curriculum Element option.
- CBI teachers can instruct ONLY academic subjects in which they are age- and subject-appropriate certificated/licensed (e.g., an elementary certificate (K-8) permits the CBI teacher to teach any academic to 7th-8th grade CBI students only).
- Only CBI technical related or academic V3 courses taught by one CBI teacher can be correlated. CBI technical related or academic V3 courses taught by different CBI teachers cannot be correlated.
- All students enrolled in correlated technical related and academic V3 courses must also be enrolled in that teacher’s approved and funded CBI anchor class (VN or VC).

Graduation, Reality and Dual-role Skills (GRADS) (subject codes 090194, 090193, and 090192) – Rules for the Instructional Support Time Correlated Class of a Career-Technical GRADS Program Block.

- The correlated local classroom codes subject code must be career-technical Curriculum Element option V3.
- The correlated local classroom codes subject code must be 090194, 090193, or 090192.
- A GRADS teacher must have one (1) Instructional Support Time (Curriculum Element option V3) correlated with one (1) GRADS class taught by that GRADS teacher.
- Students must *not* be enrolled in the Instructional Support Time.

Career-Technical Education Correlated Class Record Data Elements. The following portion of this section discusses each of the data elements within the Career-Technical Education Correlated Class (CV) Record data. The elements are organized alphabetically.

☀ Anchor/Lab/Co-op Local Classroom Code Element

Record Field Number	CV060
Definition	The Anchor/Lab/Co-op local classroom code found on the Course Master Record.

Valid Options

Alphanumeric code

Reporting Instructions. Report the local classroom code of the career-technical anchor course (VN, VC, VP, or VT) in the first column on the State Software EMIS screen EMSVEP (labeled “Anchor/Lab/Coop LCC”).

☀ First Correlated Academic or Technical Related Local Classroom Code Element

Record Field Number	CV070
Definition	The Technical Related local classroom code (or academic local classroom code for Career-Based Intervention; or Instructional Support Time local classroom code for GRADS) from the Course Master Record of the first correlated class.

Valid Options

Alphanumeric code Local district classroom code

Reporting Instructions. Report the local classroom code of the related course (Curriculum Element option V3) in second column on the State Software EMIS screen EMSVEP (labeled “First Corr. Academic or Tech. Related LCC”).

☀ Second Correlated Academic or Technical Related Element

Record Field Number	CV080
Definition	The Technical Related local classroom code (or academic local classroom code for Career Based Intervention; or Instructional Support Time local classroom code for GRADS) from the Course Master Record of the second correlated class.

Valid Options

Alphanumeric code Local district classroom code

Reporting Instructions. Report local classroom code of related course (Curriculum Element option V3) in the third column on the State Software EMIS screen EMSVEP (labeled “Second Corr. Academic or Tech. Related LCC”).

Defining a Unique Record

Each EMIS record has specific fields that must be unique on each row of data reported to ODE. For the Career-Technical Education Correlated Class (CV) Record, each combination of values in the following fields must be unique.

Required Fields	Number
Local Classroom Code	CV060
First Correlated Classroom	CV070
Second Correlated Classroom	CV080

4.5 CAREER-TECHNICAL EDUCATION CORRELATED CLASS (CV) RECORD FILE LAYOUT

Number	Position	Name	PIC/Size
	1-8	Filler	PIC 9(8)
CV010	9-10	Sort Type	PIC X(2)
		Always "CV"	
	11	Filler	PIC X
CV020	12-15	Fiscal Year, e.g., 2015 (CCYY)	PIC X(4)
CV030	16	Data Set	PIC X
		L – Staff/Course	
CV040	17-22	District IRN	PIC X(6)
	23-28	Filler	PIC X(6)
CV060	29-48	Anchor/Lab/Co-op Local Classroom Code	PIC X(20)
CV070	49-68	First Correlated Academic or Technical Related Local Classroom Code	PIC X(20)
CV080	69-88	Second Correlated Academic or Technical Related Local Classroom Code	PIC X(20)

ODE EMIS MANUAL

Section 4.6: Mapped Local Classroom Code (CM) Record



Version 4.0
August 30, 2017

REVISION HISTORY

The revision history sections of the EMIS Manual provide a means for readers to easily navigate to the places where updates have occurred. Significant changes and updates are indicated through red text for additions and strikethroughs for deletions. Minor changes—such as typos, formatting, and grammar corrections or updates—are not marked.

Version	Date	Effective Date (FY & Data Set)	Change #	Description
<u>4.0</u>	<u>8/30/17</u>	<u>FY17</u>	<u>NA</u>	<u>No FY17 changes.</u>
3.0	2/28/16	FY16		Added Coming Changes section.
2.0	9/28/15	FY15L		Updated language to reflect shift from reporting periods to FY15 reporting.

COMING CHANGES

The coming changes sections of the EMIS Manual provide a means to share with the field currently known information about upcoming changes. The final details of these changes have not all been determined at this time, however, those currently known are included here. Once all relevant details of the change(s) are known, the main text of the EMIS Manual section will be updated and the change(s) will be removed from this list.

At this time, there are no additional FY17 EMIS changes known to impact the Mapped Local Classroom Code (CM) Record.

TABLE OF CONTENTS

REVISION HISTORYII

COMING CHANGESII

TABLE OF CONTENTS.....III

4.6 MAPPED LOCAL CLASSROOM CODE (CM) RECORD.....3

Required Collection Requests3

General Guidelines3

 ☼ Mapped From Local Classroom Code4

 ☼ Mapped To Local Classroom Code4

Defining a Unique Record.....5

4.6 MAPPED LOCAL CLASSROOM CODE (CM) RECORD FILE LAYOUT6

4.6 MAPPED LOCAL CLASSROOM CODE (CM) RECORD

Required Collection Requests

The Mapped Local Classroom Code (CM) Record is to be reported for the Initial and Final Staff/Course Collections.

General Guidelines

The Mapped Local Classroom Code (CM) Record allows a district to map (combine) the students from a specific class into another class. Mapping means combining (merging) students from two or more classes in EMIS to look like a single class. The students who are reported in the Mapped From Local Classroom Code (CM050) will be mapped (moved) to the Mapped To Local Classroom Code (CM060) and for EMIS reporting will no longer exist in the Mapped From Local Classroom Code. The process should only be used for Career Technical courses.

This process should only be used in instances where there is physically one teacher and one set of students in a classroom, but due to scheduling constraints subsets of the students are scheduled into different classes. This mapping process should not be used to combine students from different classes when the students are not physically in the same classroom.

In order to map classes together, both classes must have the same values in the following elements:

- Subject Code (CN050)
- Curriculum (CN310)
- Delivery Method (CN320)
- Educational Option (CN330)
- Student Population (CN340)

Both courses also must have the same teacher(s) reported on the Staff Course (CU) Record.

Only classes with a Semester Code of '1', '2', or '3' (CN090) will be eligible to be included in the mapping process.

Types of Mapping. There are two types of mapping that can be accomplished using the mapping process.

1. Mapping two classes from the same semester
2. Mapping first and second semester classes together

The mapping process will automatically determine which type of mapping is being performed based upon the semester code of both classes.

Mapping Two Classes From the Same Semester. This type of mapping is used to combine two classes from the same semester that should be reported as one class. For example, juniors and seniors were scheduled separately for a class that is truly one class (taught by the same teacher during the same period); the classes should be reported as a single class.

If a student is enrolled in both classes then the student is only included once in the combined class.

Mapping First and Second Semester Classes Together. This form of mapping may be used when a school district schedules a year-long class in two parts (a first and a second semester class). For Vocational Education some of these classes are required to be reported as a single all year class.

A first and a second semester class may be mapped together for reporting to ODE. When this occurs the mapping process will automatically combine the classes and convert the class into an “All Year” class. The length of scheduled instruction from both classes will be added together and used for the “All Year” class. Students who are enrolled in both the first and second semester classes will only be included once in the combined class.

Combinations. It is possible to do combinations of the above mappings with a set of classes. For instance, it may be necessary to combine two first semester classes into one class, also combine two second semester classes into one class, and then map the combined classes into a single all year class. In this type of situation the district should map all first semester classes into one class and all second semester classes into one class, then map the one first semester class into the one second semester class. A class can only appear once as a “From” class. However, a class can appear multiple times in the “To” field, and a class that has been mapped into can also be mapped to another class.

Mapped Local Classroom Code Record Data Elements. The following portion of this section discusses each of the data elements within the Mapped Local Classroom Code (CM) Record. The elements are organized alphabetically.

 **Mapped From Local Classroom Code**

Record Field Number	CM050
Definition	The Local Classroom Code of the class that the students should be mapped (moved) from.

Valid Options

Alphanumeric code

Reporting Instructions. Report the Local Classroom Code (CN060) of the class that the students should be mapped (moved) from. Each student that is reported in the “From” local classroom code will be removed from this class and moved into the “To” local classroom code.

 **Mapped To Local Classroom Code**

Record Field Number	CM060
Definition	The Local Classroom Code of the class that the students should be mapped (moved) into.

Valid Options

Alphanumeric code

Reporting Instructions. Report the Local Classroom Code (CN060) of the class that the students should be mapped (moved) into. Each student that is reported in the “From” local classroom code will be

mapped into this class. If a student is reported in both the “From” class and the “To” class, that student will only be in the “To” class once.

If a Local Classroom Code has been entered into the “From” element in this record or any other record it cannot be entered in this element because a course cannot be mapped to itself. Multiple classes can be mapped into one class; therefore, the same local classroom code can be reported multiple times in this element.

Defining a Unique Record

Each EMIS record has specific fields that must be unique on each row of data reported to ODE. For the Mapped Local Classroom (CM) Code Record, each combination of values in the following fields must be unique.

Required Fields	Number
Mapped From Local Classroom Code	CM050
Mapped To Local Classroom Code	CM060

4.6 MAPPED LOCAL CLASSROOM CODE (CM) RECORD FILE LAYOUT

Number	Position	Name	PIC/Size
	1-8	Filler	PIC 9(8)
CM010	9-10	Sort Type	PIC X(2)
		Always "CM"	
	11	Filler	PIC X
CM020	12-15	Fiscal Year, e.g., 2010 (CCYY)	PIC X(4)
CM030	16	Data Set	PIC X
		L – Staff/Course	
CM040	17-22	District IRN	PIC X(6)
CM050	23-42	Mapped From Local Classroom Code	PIC X(20)
CM060	43-62	Mapped To Local Classroom Code	PIC X(20)

ODE EMIS MANUAL

Section 4.7: Subject Codes



Version 6.1
June 9, 2017

REVISION HISTORY

The revision history sections of the EMIS Manual provide a means for readers to easily navigate to the places where updates have occurred. Significant changes and updates are indicated through red text for additions and strikethroughs for deletions. Minor changes—such as typos, formatting, and grammar corrections or updates—are not marked.

Version	Date	Effective Date (FY & Data Set)	Change #	Description
<u>6.1</u>	<u>6/9/17</u>	<u>FY17L</u>	<u>50161</u>	<u>Suggested subject area for credit of math added to two computer science courses.</u>
<u>6.0</u>	<u>12/28/16</u>	<u>FY17L, Initial</u>	<u>43540</u>	<u>Marked the following Career Technical subject codes to be deleted before the start of FY19: 350001, 350011, 350201.</u>
<u>6.0</u>	<u>12/28/16</u>	<u>FY17L, Initial</u>	<u>43540</u>	<u>Marked the following Career Technical subject codes to be deleted before the start of FY18: 090050, 090192, 090193, 090194, 090700, 091025, 091050, 091051, 091077, 091200, 091300, 091400, 091401, 091410, 175005, 330005, 330010, 330015, 340005, 340010, 340015, 340020.</u>
<u>6.0</u>	<u>12/28/16</u>	<u>FY17L, Initial</u>	<u>43540</u>	<u>Added the following Career Technical subject codes, which were deleted in a previous year: 170350, 170801.</u>
<u>6.0</u>	<u>12/28/16</u>	<u>FY17L, Initial</u>	<u>43540</u>	<u>Added the following Career Technical subject codes: 178040, 178030, 178031, 175017, 350002, 350035, 350030, 350235, 350020, 350015, 350400, 350230, 350210, 350205, 350010, 350215, 350220, 350225, 176010.</u>
<u>6.0</u>	<u>12/28/16</u>	<u>FY17L, Initial</u>	<u>43540</u>	<u>Deleted the following Career Technical subject codes: 140050, 140075, 140300, 140310, 140320, 140800, 140025, 010110, 011025, 140100, 140110, 040805, 040810, 040815, 041900, 042010, 042015, 042020, 042025, 042030, 042035, 042040, 042045, 044100, 044110, 330020, 142210.</u>
<u>6.0</u>	<u>12/28/16</u>	<u>FY17L, Initial</u>	<u>43540</u>	<u>Salon Operations and Communications appeared with the wrong subject code in the previous version of this EMIS Manual section. That has been corrected and the subject code is now correctly listed as 174155.</u>
<u>6.0</u>	<u>12/28/16</u>	<u>FY17L, Initial</u>	<u>43324</u>	<u>Added subject codes 060139 Hindi and 320525 IB Second Language – Hindi.</u>
<u>6.0</u>	<u>12/28/16</u>	<u>FY17L, Initial</u>	<u>39033</u>	<u>Added subject code 290250 Computer Science Principles.</u>
<u>6.0</u>	<u>12/28/16</u>	<u>FY17L, Initial</u>	<u>33752</u>	<u>New subject codes for Senior Only Industry Credential Courses (code set 38xxxx).</u>
<u>6.0</u>	<u>12/28/16</u>	<u>FY17L, Initial</u>	<u>34165</u>	<u>Changed “cognitive disability” to “intellectual disability”.</u>

Version	Date	Effective Date (FY & Data Set)	Change #	Description
6.0	12/28/16	FY17L, Initial	39673	Added the following subject code: 322900 IB Global Politics.
6.0	12/28/16	FY17L, Initial	39517	Added Capstone Courses, which includes two new subject codes: 370010 Research and 370015 Seminar.
6.0	12/28/16	FY17		Added Coming Changes section.
5.0	9/11/15	FY16L, Initial	30349	Added the following subject codes: 010125, 010130, 010945, 010640, 142050, 330130, 330000, 330100, 330125, 330105, 330110, 330120, 330025, 330021, 330040, 330030, 330035, 176009, 990364, 990365, 090191, 091201, 091205, 091210, 091215, 091220, 091225, 093010, 093015, 091403, 091053, 091052, 091402, 091500, 091505, 091501, 093005.
5.0	9/11/15	FY16L, Initial	30349	Deleted the following subject codes: 170005, 170100, 171001, 171002, 171003, 171004, 171005, 171007, 171011, 171017, 171100, 171805, 171806, 173601, 171821, 171822, 171402, 171504, 171815, 171816, 171817, 171818, 171819, 175000, 170007, 171600, 171810, 171820, 171825, 070005, 070101, 070103, 070203, 070204, 070302, 070303, 070305, 070307, 070410, 070603, 070904, 070906, 070912, 070913, 071100, 070994, 074820, 074830, 074840, 074850, 074890, 140200, 140210, 140220, 140230, 140240, 172801, 172802, 172808, 172810, 172811, 172812, 172815, 170370, 170006, 171012, 171300, 171503, 172302, 172306, 170350, 170301, 170302, 170303, 170400, 170401, 170403, 170801, 171200, 173100.
5.0	9/11/15	FY16L, Initial	30349	Modified the name or definition for a few career technical subject codes.
4.1	10/22/14	FY15L, Initial	1111	Marked the following subject codes as to be deleted before the start of FY17: 140050, 140075, 140300, 140310, 140320, 140800, 140025, 140100, 140110, 040805, 040810, 040815, 041900, 042010, 042015, 042020, 042025, 042030, 042035, 042040, 042045, 044110, and 044100.
4.1	10/22/14	FY15L, Initial	1009	Corrected the name of course 110500.
4.1	10/22/14	FY15L, Initial	1111	Changed the names of the following subject codes: 177014, 177015, 177016, 177017, and 177018.

Version	Date	Effective Date (FY & Data Set)	Change #	Description
4.1	10/22/14	FY15L, Initial	1111	Added a number of courses in each of the following career fields: Arts and Communications, Engineering and Science Technologies, Health Science, Human Services, Law and Public Safety, and Business and Administrative Services.
4.1	10/22/14	FY15L, Initial	1111	Added a career development code (990363).
4.1	10/22/14	FY15L, Initial	1111	Career Fields 03, 07, and 15 were combined into one table for Business Administration courses.
4.1	10/22/14	FY15L, Initial	1009	Subject code 110050 was deleted.
4.1	10/22/14	FY15L, Initial	947	Subject codes 132212, 132214, 132216, 132240, and 139905 were deleted.
4.0	9/17/14	FY15L, Initial	1105	Added 050103 Reading 3-4 and 050153 Integrated English Language Arts 3-4.
3.3	4/14/14	FY14N	1009	A number of math subject code descriptions have been updated to align with new standards. Subject code 110050 was marked to be deleted in FY15. The following subject codes were added: 110060, 110065, 111960, 111970, 111980, and 111350.
3.3	4/14/14	FY14N	947	A number of science subject code descriptions have been updated to align with new standards. The following subject codes were marked as to be deleted in FY15: 132212, 132214, 132216, 132240, and 139905. The following subject codes were added: 134250, 139960, and 139970.
3.2	1/10/1	FY14K	1039	Marked the following subject codes as to be deleted before the start of FY16: 170005, 170100, 171001, 171002, 171003, 171004, 171005, 171007, 171011, 171017, 171100, 171805, 171806, 173601, 171821, 171822, 171402, 171504, 171815, 171816, 171817, 171818, 171819, 175000, 170007, 171600, 171810, 171820, 171825, 070005, 070101, 070103, 070203, 070204, 070302, 070303, 070305, 070307, 070410, 070603, 070904, 070906, 070912, 070913, 071100, 070994, 074820, 074830, 074840, 074850, 074890, 140200, 140210, 140220, 140230, 140240, 172801, 172802, 172808, 172810, 172811, 172812, 172815, 170370, 170006, 171012, 171300, 171503, 172302, 172306, 170350, 170301, 170302, 170303, 170400, 170401, 170403, 170801, 171200, and 173100.
3.1	10/31/13	FY14K	997	The following new courses were added twice in v3.0: 178000, 178029, 175001, 072000, 072005, 072010, 145120, 145115, 170911, 176000, and 177000. The duplicate entries have been deleted.

Version	Date	Effective Date (FY & Data Set)	Change #	Description
3.0	10/16/13	FY14K	839	Deleted the following subject codes: 120000, 230000, and 220000.
3.0	10/16/13	FY14K	997	Added a number of courses in each of the following career fields: Information Technology, Health Science, Law & Public Safety, Engineering & Science Technologies, Manufacturing Technologies, Construction Technologies, and Transportation Systems.
2.0	9-20-12	FY13 October (K)	907	Deleted the following subject codes: 010301, 010201, 010901, 012000, 011001, 010601, 010701, 010001, 010150.
2.0	9-20-12	FY13 October (K)	907	Added the following subject codes: 012015, 012020, 012025, 010718, 010716, 010717.
2.0	9-20-12	FY13 October (K)	907	Changed the name of course code 990361.
2.0	11-27-12	FY13 October (K)	FY12 875	Deleted the following subject codes: 151207, 150210, 151131, 152410, 150110.

COMING CHANGES

The coming changes sections of the EMIS Manual provide a means to share with the field currently known information about upcoming changes. The final details of these changes have not all been determined at this time, however, those currently known are included here. Once all relevant details of the change(s) are known, the main text of the EMIS Manual section will be updated and the change(s) will be removed from this list.

At this time, there are no known FY17 EMIS changes that will further impact this manual section.

TABLE OF CONTENTS

<i>Revision History</i>	<i>ii</i>
<i>Coming Changes</i>	<i>v</i>
Table of Contents	vi
4.7 Subject Codes	3
<i>Academic Content Areas Section</i>	<i>3</i>
Fine Arts Section.....	3
Table 1. Dance Codes (0803xx)	3
Table 2. Drama/Theatre Arts Codes (050xxx)	3
Table 3. Music Codes (12xxxx)	4
Table 4. Visual Art Codes (02xxxx).....	5
Business Education Section	7
Table 5. Business Education (Non-Career Technical) Codes (03xxxx)	7
English Language Arts Section	9
Table 6. English Language Arts Codes (05xxxx).....	9
Family & Consumer Sciences Section	13
Table 7. Family & Consumer Sciences (Non-Career Technical) Codes (23xxxx).....	13
Foreign Language Section.....	13
Table 8. Foreign Language Codes (06xxxx)	13
Health and Physical Education Section.....	16
Table 9. Health Education Codes (26xxxx).....	16
Table 10. Physical Education Codes (08xxxx).....	17
Mathematics Section	17
Table 11. Elementary and Middle School Level Mathematics Codes (11xxxx)	17
Table 12. High School Level Mathematics Codes (11xxxx).....	18
Table 13. Additional High School Level Mathematics Codes (11xxxx).....	20
Science Section	22
Table 14. Science Codes (13xxxx)	22
Social Studies Section.....	27
Table 15. Social Studies Codes (15xxxx).....	27
Technology Section.....	29
Table 16. Computer Science Codes (29xxxx)	29
Table 17. Information Literacy Codes (20xxxx).....	31
Table 18. Technology Education Codes (10xxxx)	32
<i>Career-Technical Education Section</i>	<i>36</i>
Workforce Development Section	36
Table 19. Career Field 01: Agricultural & Environmental Systems Codes (01xxxx)	36
Table 20. Career Field 02: Arts & Communications Codes (04xxxx, 34xxxx).....	48
Table 21. Business Administration Courses	55
Career Field 03: Business & Administrative Services Codes (14xxxx)	55
Career Field 07: Finance Codes (14xxxx)	57
Career Field 15: Marketing Codes (04xxxx)	58
Table 22. Career Field 04: Construction Technologies Codes (17xxxx).....	69
Table 23. Career Field 05: Education & Training Codes (35xxxx).....	76
Table 24. Career Field 06: Engineering & Science Technologies Codes (17xxxx)	80
Table 25. Career Field 08: Government and Public Administration Codes (360230).....	82
Table 26. Career Field 09: Health Science Codes (07xxxx).....	82
Table 27. Career Field 10: Hospitality & Tourism Codes (33xxxx)	91
Table 28. Career Field 11: Human Services Codes (17xxxx, 99xxxx)	94
Table 29. Career Field 12: Information Technology Codes (14xxxx).....	97
Table 30. Career Field 13: Law & Public Safety Codes (17xxxx)	101

Table 31. Career Field 14: Manufacturing Technologies Codes (17xxxx)	103
Table 32. Career Field 16: Transportation Systems Codes (17xxxx)	106
Career Based Intervention Section	111
Table 33. Career Based Intervention (CBI) Codes (25xxxx)	111
Career Development Section	112
Table 34. Career Development Codes (99xxxx)	112
Family and Consumer Sciences (Career Technical) Section	113
Table 35. Family and Consumer Sciences Codes (09xxxx)	113
<i>International Baccalaureate Courses Section</i>	<i>120</i>
Table 36. International Baccalaureate Courses for Diploma Program (32xxxx)	120
Table 37. International Baccalaureate Courses for Middle Years Program (32xxxx)	122
Table 38. International Baccalaureate Courses for Primary Years Program (32xxxx)	123
<i>Self-Contained Courses Section</i>	<i>125</i>
Table 39. General Education Codes (18xxxx)	125
Table 40. Exceptional Children (for Students with Disability Conditions) Codes (19xxxx)	125
<i>Other Courses Section</i>	<i>127</i>
Table 41. Other Course Codes (30xxxx)	127
Table 42. Humanities Codes (31xxxx)	127
Table 43. Driver Education Code (210100)	128
Table 44. ROTC Military Science Code (220000)	128
Table 45. Capstone Codes (37xxxx)	128
Table 46. Senior Only Industry Credential Codes (38xxxx)	129

4.7 SUBJECT CODES

ACADEMIC CONTENT AREAS SECTION

Fine Arts Section

Table 1. Dance Codes (0803xx)

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
080312	Introduction to Dance A study of the skills and processes necessary to understand and experience dance as an art form and as a means of meaningful communication. Emphasis is placed on kinesthetic intelligence and the fundamentals of dance and choreography. Study also emphasizes the role of dance throughout history and in different cultures.	FAR	Arts
080315	Comprehensive Dance A comprehensive study of the knowledge and processes of creating, performing, responding to, and representing ideas through the art form of dance. Multiculturalism, art history, art criticism and aesthetics are incorporated into course content and dance experiences for individual and group learning.	FAR	Arts

Table 2. Drama/Theatre Arts Codes (050xxx)

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
050337	Drama/Theatre in grades K-8 The study of dramatic elements and theatrical techniques, particularly in an improvisational, non-exhibitional, process-centered manner, designed to develop imagination, communication, and expressive skills.	N/A	Arts
050600	Theatre Arts Subject matter and experiences are concerned with a wide range of studies and activities including playwriting, dramatic literature, scene design, technical theatre, acting, directing, and the supporting of arts and crafts of the theatre and of selected aspects of video, radio, television and film.	FAR	Arts

Table 3. Music Codes (12xxxx)

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
122000	Music (K-8) Organized study of the elements and styles of music and the historical, cultural and societal context of music designed for all pupils in grades K-8.	N/A	Arts
120001	General Music Organized subject matter and musical experiences consisting of an extensive and varied study of music designed for all pupils in grades K-12.	FAR	Arts
120300	Music Theory The study of the principles of music, including rudiments, harmony, counterpoint, form and analysis, orchestration and skills such as sight singing, ear training, conducting and composing.	FAR	Arts
120400	Vocal/Choral Music Learning experiences designed for the study of vocal / choral repertoire and the development of vocal / choral skills through solo and ensemble performance.	FAR	Arts
120500	Instrumental Music Learning experiences designed for the study of instrumental repertoire and the development of instrumental skills through solo and ensemble performance.	FAR	Arts
120800	Music Appreciation Organized subject matter and learning experiences designed to further pupils' knowledge, comprehension, and appreciation of various types and styles of music.	FAR	Arts
129999	Other Music Course A music course that is given for high school credit toward graduation that is different in scope from any of the other SUBJECT CODES described above and which addresses important content (knowledge and skills) in the study of music.	FAR	Arts

Table 4. Visual Art Codes (02xxxx)

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
020012	Visual Art (K-12) A study of the knowledge, skills and processes for observing, creating, responding and communicating in ways that are unique to visual art. Art production and the construction of meaning in visual artworks are complimentary learning activities. Course content may include meaningful connections between visual art and other disciplines to enable students to understand art in a broader context.	FAR	Arts
020100	Art Appreciation The study of works of visual art from various historical, cultural and social contexts. Instruction addresses multiple strategies for inquiry to enable students to develop and present their own views and responses to specific artworks and to discuss the viewpoints of others.	FAR	Arts
020101	Art History This course examines the reciprocal impact between visual art and historical, cultural, social and political contexts. Key artworks are studied chronologically and thematically with emphasis on subject matter, ideas, and the formal, technical and expressive aspects of the works.	FAR	Arts
020210	Design This course emphasizes study of the elements and principles of art and design. Students explore, organize, and use the elements and principles to create two- and three-dimensional original work in various forms and media.	FAR	Arts
020240	Crafts Students acquire utilitarian skills including weaving, jewelry-making, fabric crafting, basketry, metalsmithing, leather-shaping, and wood-forming. Objects by professional craftspersons are studied for their formal, expressive, and technical qualities.	FAR	Arts
020242	Ceramics Original objects (primary pottery and sculpture) are created with clay using hand building, casting, wheel forming, and glazing techniques. Objects created by professional ceramists are examined for their expressive, formal, and technical qualities.	FAR	Arts
020250	Drawing and Painting Pencil, pen and ink, chalk, charcoal, acrylics, oils, and watercolors are explored to create original personal images. Drawings and paintings by culturally and historically representative artists are examined for their formal, expressive, and technical qualities.	FAR	Arts
020270	Photography and Film Making Still and motion picture camera procedures are investigated along with darkroom developing and printing techniques. The expressive, formal, and technical qualities of professional work are studied.	FAR	Arts

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
020280	<p>Printmaking Linoleum block printing, woodblock printing, silk-screen printing, and etching are studied as processes for expressing ideas. Professional printmakers' products are also examined.</p>	FAR	Arts
020290	<p>Sculpture Various media such as clay, metal, wood, stone, and wire and various processes such as carving, casting, soldering, and modeling are investigated as means for creating three-dimensional artistic forms. Professional sculptors' works are studied.</p>	FAR	Arts
029902	<p>Advanced Visual Art An advanced course of organized subject matter and experiences in art. Works from different cultures and time periods as well as those created by the students are studied.</p>	FAR	Arts
020320	<p>Graphic Arts/Unified Arts Computer design is explored to develop understanding of techniques, processes and possibilities of electronic media to understand, create and appreciate visual art.</p>	FAR	Arts
029100	<p>Studio Art – Drawing A course in drawing for students who are highly motivated and have previous training in art.</p>	FAR	Arts
029110	<p>Studio Art – 2D Design A course in two-dimensional art design for students who are highly motivated and have previous training in art.</p>	FAR	Arts
029120	<p>Studio Art – 3D Design A course in three-dimensional art design for students who are highly motivated and have previous training in art.</p>	FAR	Arts
029999	<p>Other Visual Art Course A course that is given for high school credit toward graduation, but that is different in scope from any of the other SUBJECT CODES described above and which addresses important content (knowledge and skills) in the study of visual art.</p>	FAR	Arts

Business Education Section

Table 5. Business Education (Non-Career Technical) Codes (03xxxx)

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
030100	<p>Accounting Instruction focuses on the management of a company’s financial resources including the accounting cycle, financial statements, and interpretation and use of financial data. Content should be based on National Business Education Association (NBEA) content standards. Only grade 9-12 courses based on standards from the 9-12 grade band of NBEA Standards are eligible for high school credit.</p>	BUS	—
030500	<p>Business Mathematics Students develop the skills necessary to solve mathematical problems, analyze and interpret data, and apply sound decision-making skills in business. Content should be based on National Business Education Association (NBEA) content standards. Only grade 9-12 courses based on standards from the 9-12 grade band of NBEA Standards are eligible for high school credit.</p>	BUS, MTH	Mathematics
030600	<p>Business Communications Students master the oral and written communication skills essential to interacting effectively with people in the workplace and society. Content should be based on National Business Education Association (NBEA) content standards. Only grade 9-12 courses based on standards from the 9-12 grade band of NBEA Standards are eligible for high school credit.</p>	BUS, ENG	English
030900	<p>Business Law Addresses statutes and regulations affecting businesses, families and individuals in their related roles. Content should be based on National Business Education Association (NBEA) content standards. Only grade 9-12 courses based on standards from the 9-12 grade band of NBEA Standards are eligible for high school credit.</p>	BUS	—
031500	<p>Personal Finance Students develop and utilize rational decision-making processes to form personal financial decisions in their roles as citizens, workers, and consumers. Content should be based on National Business Education Association (NBEA) content standards. Only grade 9-12 courses based on standards from the 9-12 grade band of NBEA Standards are eligible for high school credit.</p>	BUS	—
031700	<p>Computer Programming and Software Development Students design, develop, test and implement computer programs using structural/procedural, objective oriented, data description, scripting/control, and/or mark-up languages. Content should be based on National Business Education Association (NBEA) content standards. Only grade 9-12 courses based on standards from the 9-12 grade band of NBEA Standards are eligible for high school credit.</p>	BUS, TEC	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
031800	Business Economics Develops student's abilities to make wise economic decisions related to their personal financial affairs, the successful operation of organizations, and the economic activities of the country. Content should be based on National Business Education Association (NBEA) content standards. Only grade 9-12 courses based on standards from the 9-12 grade band of NBEA Standards are eligible for high school credit.	BUS, SOC	Economics
032300	Introduction to Business/General Business The study of domestic and international business operations including start-up, financing, management, and standard practices. Content should be based on National Business Education Association (NBEA) content standards. Only grade 9-12 courses based on standards from the 9-12 grade band of NBEA Standards are eligible for high school credit.	BUS	—
032800	Office Procedures Instruction in office practices and procedures, office technology, office environment, records management, human relations, and telephone techniques. Content should be based on National Business Education Association (NBEA) content standards. Only grade 9-12 courses based on standards from the 9-12 grade band of NBEA Standards are eligible for high school credit.	BUS	—
033450	Business (Other) Abbreviated written and/or electronic communications.	BUS	—
036000	Computer Application Students identify, evaluate, select, install, use, upgrade, and customize application software. Computer applications include word processing, database, spreadsheet, presentation, and calendaring/scheduling software. Content should be based on National Business Education Association (NBEA) content standards. Only grade 9-12 courses based on standards from the 9-12 grade band of NBEA Standards are eligible for high school credit.	BUS, TEC	—

English Language Arts Section

Table 6. English Language Arts Codes (05xxxx)

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
050102	Reading K-3 This course should address the content in the K-3 portion of Ohio's academic content standards for reading. Reading instruction should include the reading of a variety of text (e.g., informational and literary), application of comprehension strategies and the building and extending of vocabulary.	N/A	Reading
050103	Reading 3-4 This course should address the content in the 3-4 portion of Ohio's academic content standards for reading. Reading instruction should include the reading of a variety of text (e.g., informational and literary), application of comprehension strategies and the building and extending of vocabulary. This course should contain a majority of 4 th graders, but will also include 3 rd graders who have been retained due to Third Grade Reading Guarantee.	N/A	Reading
050104	Reading 4-6 This course should address the content in the 4-6 portion of Ohio's academic content standards for reading. Reading instruction should include the reading of a variety of text (e.g., informational and literary), applications of the comprehension strategies and the building and extending of vocabulary.	N/A	Reading
050106	Reading 7-8 This course should address the content in the 7-8 portion of Ohio's academic content standards for reading. Reading instruction should include the reading of a variety of text (e.g., informational and literary), applications of the comprehension strategies and the building and extending of vocabulary.	N/A	Reading
050152	Integrated English Language Arts K-3 Instruction should be based on the benchmarks and indicators for grades K-3. Students should read grade appropriate text and use a variety of comprehension strategies for different purposes, utilize the writing process, write for different purposes and different audiences, research self-selected or assigned task and use effective communication techniques.	N/A	Language Arts
050153	Integrated English Language Arts 3-4 Instruction should be based on the benchmarks and indicators for grades 3-4. Students should read grade appropriate text and use a variety of comprehension strategies for different purposes, utilize the writing process, write for different purposes and different audiences, research self-selected or assigned task and use effective communication techniques. This course should contain a majority of 4 th graders, but will also include 3 rd graders who have been retained due to Third Grade Reading Guarantee.	N/A	Language Arts

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
050154	Integrated English Language Arts 4-6 Instruction should be based on the benchmarks and indicators for grades 4-6. Students should read grade appropriate text and use a variety of comprehension strategies for different purposes, utilize the writing process, write for different purposes and different audiences, research self-selected or assigned task and use effective communication techniques.	N/A	Language Arts
050156	Integrated English Language Arts 7-8 Instruction should be based on the benchmarks and indicators for grades 7-8. Students should read grade appropriate text and use a variety of comprehension strategies for different purposes, utilize the writing process, write for different purposes and different audiences, research self-selected or assigned task and use effective communication techniques.	N/A	Language Arts
050160	Integrated English Language Arts I Integrated Language Arts Instruction addresses the content and skills of Ohio’s Academic Content Standards for English Language Arts. Instruction should be based on the benchmarks for grades 8-10 and grade level indicators for grade <i>nine</i> . Students will read a variety of texts for different purposes, utilize the writing process, write for different purposes and different audiences, research self-selected or assigned topics use an appropriate form to communicate their findings and continue to use effective communication techniques.	ENG	Language Arts
050170	Integrated English Language Arts II Integrated Language Arts Instruction addresses the content and skills of Ohio’s Academic Content Standards for English Language Arts. Instruction should be based on the benchmarks for grades 8-10 and grade level indicators for grade <i>ten</i> . Students will read a variety of texts for different purposes, utilize the writing process, write for different purposes and different audiences, research self-selected or assigned topics use an appropriate form to communicate their findings and continue to use effective communication techniques.	ENG	Language Arts
050180	Integrated English Language Arts III Integrated Language Arts Instruction addresses the content and skills of Ohio’s Academic Content Standards for English Language Arts. Instruction should be based on the benchmarks for grades 11-12 and grade level indicators for grade <i>eleven</i> . Students will read a variety of texts for different purposes, utilize the writing process, write for different purposes and different audiences, research self-selected or assigned topics, use an appropriate form to communicate their findings and continue to use effective communication techniques.	ENG	Language Arts

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
050190	<p>Integrated English Language Arts IV Integrated Language Arts Instruction addresses the content and skills of Ohio’s Academic Content Standards for English Language Arts. Instruction should be based on the benchmarks for grades 11-12 and grade level indicators for grade <i>twelve</i>. Students will read a variety of texts for different purposes, utilize the writing process, write for different purposes and different audiences, research self-selected or assigned topics use an appropriate form to communicate their findings and continue to use effective communication techniques.</p>	ENG	Language Arts
050014	<p>Intervention English This course is designed for remedial study with emphasis on the English language arts Academic Content Standards and the Ohio Graduation Test.</p>	ENG	English
050119	<p>Intervention Reading This course is designed to provide special assistance in the development of reading skills and strategies for students who cannot construct meaning from what they read. Instruction addresses content from the reading benchmarks of the English language arts Academic Content Standards.</p>	ENG	Reading
051905	<p>English as a Second Language (ESL) Designed for individuals whose primary language is not English. The study of the English language and culture leading to the ability to function in everyday situations as well as in academic settings, with a special emphasis on Ohio’s English Language Arts Academic Content Standards.</p>	ENG	English
050220	<p>Grammar and Usage This course emphasizes the editing phase of the writing process, providing students a variety of strategies for refining and editing their own writing. Instruction will be centered around the writing benchmarks of the English language arts Academic Content Standards.</p>	ENG	English
050300	<p>Literature This course is designed to provide instruction in the study of print materials, which have noteworthy content and excellence of style. Students apply the reading process to the various genres of literature. Instruction addresses content from the reading benchmarks of the English language arts Academic Content Standards.</p>	ENG	English
050400	<p>Composition This course will provide instruction in writing. Students will develop their writing with a focus on expository and persuasive techniques. Journals will be kept and portfolios will be maintained throughout the class. Instruction will be centered around the writing benchmarks of the English language arts Academic Content Standards.</p>	ENG	English

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
050403	Journalism This course includes the study and practice of writing, editing and publishing newspapers and periodicals. Instruction centers on the writing and research standards in the English Language Arts Academic Content Standards.	ENG	English
050500	Speech This course covers subject matter and experiences in speech. A wide spectrum of studies and activities from the scientific (voice science) through the humanistic (rhetoric) will be taught. Behavioral sciences (group dynamics) as well as the artistic (oral interpretation of literature) will also be taught.	ENG	English
050545	Applied Communications This course gives students practice in communication skills of reading, writing, listening and speaking in their chosen vocations. Students learn to deliver presentations that effectively convey information and persuade or entertain audiences. Instruction centers on the Communication: Oral and Visual Standard in the English Language Arts Academic Content Standards.	ENG	English
059920	English Language & Composition This course is centered around the reading and writing benchmarks of the English language arts Academic Content Standards. It is designed to develop the writing and language skills students need for success in their secondary school program, in their daily lives, and in a global society. Students will compose oral, written, and media text consisting of organized subject matter and experiences emphasized in English.	ENG	English
059930	English Literature & Composition This course is centered around the reading and writing benchmarks of the English language arts Academic Content Standards. It is designed to develop the reading and writing skills students need for success in their secondary school program, in their daily lives, and in a global society. Students will analyze and interpret a variety of genres of literature as well as informational and graphic texts.	ENG	English
059999	Other English/Language Arts Course A topical course that can cover the different aspects of English Language arts. Instruction will be centered around the benchmarks of the English language arts Content Standards.	ENG	English

Family & Consumer Sciences Section

The courses below earn Home Economics Credit.

Table 7. Family & Consumer Sciences (Non-Career Technical) Codes (23xxxx)

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
230001	Family & Consumer Sciences Content from a combination of the various areas of family and consumer sciences.	HEC	—
230100	Clothing and Textiles Nature, acquisition, and the use of clothing and textiles.	HEC	—
230140	Foods and Nutrition Food and its role in personal and family living.	HEC	—
230200	Child Development and Parenting The developing child and the care and guidance of children.	HEC	—
230300	Consumer Education Consumer education as it relates to the management of homes and families.	HEC	—
230500	Family Living Nurturing human development through the life span.	HEC	—
230600	Housing and Home Furnishings Choosing, equipping and furnishing living environments.	HEC	—

Foreign Language Section

Table 8. Foreign Language Codes (06xxxx)

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
060101	Arabic The study of the language and culture of the Arabic world leading to the ability to communicate in a range of situations and glean meaning from a variety of texts.	FLR	Foreign Language
060102	Chinese The study of the language and culture of the Chinese-speaking world leading to the ability to communicate in a range of situations and glean meaning from a variety of texts.	FLR	Foreign Language
060103	Greek The study of the language, literature, and culture of the Ancient Greeks and their influence on modern civilization.	FLR	Foreign Language
060104	Hebrew The study of the language and culture of the Hebrew-speaking world leading to the ability to communicate in a range of situations and glean meaning from a variety of texts.	FLR	Foreign Language

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
060107	Latin The study of the language, literature, and culture of Ancient Rome and its influence on modern civilization.	FLR	Foreign Language
<u>060139</u>	<u>Hindi</u> <u>The study of the language and culture of the Hindi-speaking world leading to the ability to communicate in a range of situations and glean meaning from a variety of texts.</u>	<u>FLR</u>	<u>Foreign Language</u>
060218	Russian The study of the language and culture of the Russian-speaking world leading to the ability to communicate in a range of situations and glean meaning from a variety of texts.	FLR	Foreign Language
060221	Swahili The study of the language and culture of the Swahili-speaking world leading to the ability to communicate in a range of situations and glean meaning from a variety of texts.	FLR	Foreign Language
060227	Czech The study of the language and culture of the Czech-speaking world leading to the ability to communicate in a range of situations and glean meaning from a variety of texts.	FLR	Foreign Language
060230	French The study of the language and culture of the French-speaking world leading to the ability to communicate in a range of situations and glean meaning from a variety of texts.	FLR	Foreign Language
060235	German The study of the language and culture of the German-speaking world leading to the ability to communicate in a range of situations and glean meaning from a variety of texts.	FLR	Foreign Language
060245	Italian The study of the language and culture of the Italian-speaking world leading to the ability to communicate in a range of situations and glean meaning from a variety of texts.	FLR	Foreign Language
060250	Japanese The study of the language and culture of the Japanese-speaking world leading to the ability to communicate in a range of situations and glean meaning from a variety of texts.	FLR	Foreign Language
060255	Polish The study of the language and culture of the Polish-speaking world leading to the ability to communicate in a range of situations and glean meaning from a variety of texts.	FLR	Foreign Language
060265	Spanish The study of the language and culture of the Spanish-speaking world leading to the ability to communicate in a range of situations and glean meaning from a variety of texts.	FLR	Foreign Language
060900	Foreign Language (Exploratory) A language survey course during which students are exposed to several languages.	FLR	Foreign Language

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
060207	TESOL–English as a Second Language (ESL) The study of the language and culture of the English-speaking world leading to the ability to function in academic and everyday situations. Designed for individuals whose primary language is not English. This course focuses on English as a foreign language.	FLR	Foreign Language
061050	American Sign Language (ASL) The study of a visual-gestural language used by deaf people in the United States and part of Canada. ASL has its own culture, grammar, and vocabulary; is produced by using the hands, face, and body; and is not derived from any spoken language.	FLR	Foreign Language
069922	Latin: Vergil Students read, translate, analyze, and interpret the works of Vergil.	FLR	Foreign Language
069915	French Literature A formal study of a representative body of literary texts in French for students who have advanced language skills.	FLR	Foreign Language
069935	Spanish Literature A formal study of a representative body of literary texts in Spanish for students who have advanced language skills	FLR	Foreign Language
069925	Latin Literature Students read, translate, analyze, and interpret Latin works.	FLR	Foreign Language
069951	Early Language Learning Arabic The study of a language and culture other than English in elementary school-Arabic.	N/A	Foreign Language
069952	Early Language Learning Chinese The study of a language and culture other than English in elementary school-Chinese.	N/A	Foreign Language
069953	Early Language Learning Japanese The study of a language and culture other than English in elementary school-Japanese.	N/A	Foreign Language
069954	Early Language Learning Italian The study of a language and culture other than English in elementary school-Italian.	N/A	Foreign Language
069955	Early Language Learning German The study of a language and culture other than English in elementary school-German.	N/A	Foreign Language
069956	Early Language Learning Hebrew The study of a language and culture other than English in elementary school-Hebrew.	N/A	Foreign Language
069957	Early Language Learning French The study of a language and culture other than English in elementary school-French.	N/A	Foreign Language
069958	Early Language Learning Spanish The study of a language and culture other than English in elementary school-Spanish.	N/A	Foreign Language

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
069959	Early Language Learning Swahili The study of a language and culture other than English in elementary school-Swahili.	N/A	Foreign Language
069960	Early Language Learning Russian The study of a language and culture other than English in elementary school-Russian.	N/A	Foreign Language
069961	Early Language Learning Latin The study of a language and culture other than English in elementary school-Latin.	N/A	Foreign Language
069962	Early Language Learning Greek The study of a language and culture other than English in elementary school-Greek.	N/A	Foreign Language
069963	Early Language Learning American Sign Language The study of a language and culture other than English in elementary school-American Sign Language.	N/A	Foreign Language

Health and Physical Education Section

Table 9. Health Education Codes (26xxxx)

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
260101	Health Education Educational activities that promote understanding, attitudes, and practices consistent with individual, family, and community health needs.	HTH	—
260150	Substance Abuse Prevention Subject matter and learning experiences which address drug, alcohol, and tobacco abuse situations including prevention, intervention, discipline, and community resources available to the pupil and to the family.	HTH	—
260200	Safety/First Aid/CPR Subject matter and learning experiences concerned with developing students' awareness and understanding of hazards of everyday living, and the knowledge, habits, attitudes, and skills which will enable them to function at an optimum level in the prevention and care of injury situations.	HTH	—
260410	Sports Medicine Educational activities concerned with the effects of sports and exercise on health and fitness and with the prevention and treatment of athletic injuries.	HTH	—
269999	Other Health A course that is given for High School credits to be applied toward the diploma, but that is different in scope from any of the other SUBJECT CODES described above.	HTH	—

Table 10. Physical Education Codes (08xxxx)

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
080300	Physical Education A comprehensive subject area which incorporates fundamental motor skills, body control and balance, physical fitness, leisure sports and games skills, cognitive skills, as well as stress management skills.	PHE	—
080405	Lifetime Sports Activities taught throughout the school life with emphasis on learning experiences that can be turned into healthful lifetime skills.	PHE	—
080505	Adapted Physical Education Adapted Physical Education is specially designed instruction in physical education. According to federal law, physical education means the development of (a) physical and motor fitness; (b) fundamental motor skills and patterns; and (c) skills in aquatics, dance, and individual and group games and sports.	PHE	—
080900	Outdoor Physical Education A variety of outdoor leisure and sports activities, such as, fishing, archery, nature study, boating, backpacking, and similar pursuits that enhance students physical health and their understanding of the natural world.	PHE	—
080999	Other Physical Education Course Other Physical Education course for which high school credit can be earned that is different in scope and content from any of the other courses described above.	PHE	—

Mathematics Section

Table 11. Elementary and Middle School Level Mathematics Codes (11xxxx)

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
The following four courses do not earn high school mathematics credit.			
110003	Mathematics K-3 Instruction provided by a teacher to multiple groups of students rather than in a self-contained classroom setting. Includes content in the K-3 portions of Ohio's New Learning Standards for Mathematics.	N/A	Mathematics
110150	Mathematics 4-6 Includes content in the 4-6 portions of Ohio's New Learning Standards for Mathematics.	N/A	Mathematics
110175	Mathematics 7-8 Includes content in the 7-8 portions of Ohio's New Learning Standards for Mathematics.	N/A	Mathematics

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
110060	<p>Advanced Mathematics 7 This is the first year of a two-year optional program designed to compress 7th, 8th, and 9th grades into two years. The content of this first year will address all of the 7th grade content and a portion of the 8th grade content. Description of the content appropriate for this course is identified in Appendix A of the Common Core State Standards for Mathematics.</p>	MTHN/A	Mathematics
The following course would receive high school mathematics credit if taught by a 7-12 or 4-9 licensed mathematics teacher.			
110065	<p>Advanced Mathematics 8 This is the second year of a two-year optional program designed to compress 7th, 8th, and 9th grades into two years. The content of this second year will address the remaining content from the 8th grade content and the first year of high school (Mathematics I or Algebra I) as described in the Pathways for high school mathematics. Description of the content for this course is identified in Appendix A of the Common Core State Standards for Mathematics.</p>	MTH	Mathematics

Table 12. High School Level Mathematics Codes (11xxxx)

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
<p>Topic-Focused Mathematics Course Sequence: A four-year program or sequence of courses that addresses the content in the high school portion of the New Learning Standards for Mathematics through topic-focused, discrete courses. Described as the Traditional Pathway identified in Appendix A of the Common Core State Standards for Mathematics. These courses would require the Traditional End-of-Course exams.</p>			
110301	<p>Algebra I The first course in a four-year sequence that addresses the high school portion of the New Learning Standards for Mathematics. Description of the content appropriate for this course is identified in the Traditional Pathway of Appendix A and/or the Model Content Framework.</p>	MTH	Mathematics
111200	<p>Geometry The second course in a four-year sequence that addresses the high school portion of the New Learning Standards for Mathematics. Description of the content appropriate for this course is identified in the Traditional Pathway of Appendix A and/or the Model Content Framework.</p>	MTH	Mathematics
110302	<p>Algebra II The third course in a four-year sequence that addresses the high school portion of the New Learning Standards for Mathematics. Description of the content appropriate for this course is identified in the Traditional Pathway of Appendix A and/or the Model Content Framework.</p>	MTH	Mathematics

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
110099	<p>Advanced Mathematics (Pre-Calculus) The fourth course in a four-year sequence which addresses advanced content in Number and Quantity, Algebra, Functions, Geometry, and Statistics and Probability, and/or the conceptual underpinnings of calculus.</p>	MTH	Mathematics
<p>Integrated Mathematics Course Sequence: A four-year program or sequence of courses that address the content in the grades high school portion of the New Learning Standards for Mathematics using an integrated approach. This course sequence is described in Appendix A of the Common Core State Standards for Mathematics as the Integrated Pathway. These courses would require the Integrated End-of-Course exams.</p>			
110010	<p>Mathematics I The first course in a four-year sequence that addresses the high school portion of the New Learning Standards for Mathematics. Description of the content appropriate for this course is identified in the Integrated Pathway of Appendix A and/or the Model Content Framework.</p>	MTH	Mathematics
110020	<p>Mathematics II The second course in a four-year sequence that addresses the high school portion of the New Learning Standards for Mathematics. Description of the content appropriate for this course is identified in the Integrated Pathway of Appendix A and/or the Model Content Framework.</p>	MTH	Mathematics
110030	<p>Mathematics III The third course in a four-year sequence that addresses the high school portion of the Common Core State Standards for Mathematics. Description of the content appropriate for this course is identified in the Integrated Pathway of Appendix A and/or the Model Content Framework.</p>	MTH	Mathematics
110040	<p>Mathematics IV (Pre-calculus) The fourth course in a high school sequence that addresses advanced content in Number and Quantity, Algebra, Functions, Geometry, and Statistics and Probability, and/or the conceptual underpinnings of calculus.</p>	MTH	Mathematics
<p>Applied Mathematics Course Sequence: The following three courses address the content in the high school portion of the New Learning Standards for Mathematics through concrete models and real-world situations and with less emphasis on symbol-manipulation and formal mathematical structure. This sequence of courses would require the respective Traditional or Integrated series of End-of-Course exams and would meet the requirement of Algebra II or its equivalent. If a course is used as a first year of a two year course, then the End-of-Course exam would follow the completion of the two years. A fourth course in high school mathematics is required to meet the Ohio Graduation Requirements.</p>			
110480	<p>Applied Algebra or Applied Mathematics I The first course in a high school sequence addressing content through concrete models and real-world situations and with less emphasis on symbol-manipulation and formal mathematical structure. This course would<u>may</u> require the respective Algebra I or Mathematics I End-of-Course exam.</p>	MTH	Mathematics

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
110490	Applied Geometry or Applied Mathematics II The second course in a high school sequence addressing content through concrete models and real-world situations and with less emphasis on symbol-manipulation and formal mathematical structure. This course would <u>may</u> require the respective Geometry or Mathematics II End-of-Course exam.	MTH	Mathematics
110500	Applied Algebra II or Applied Mathematics III The third course in a high school sequence addressing content through concrete models and real-world situations and with less emphasis on symbol-manipulation and formal mathematical structure. This course would require the respective Algebra II or Mathematics III End-of-Course exam.	MTH	Mathematics

Table 13. Additional High School Level Mathematics Codes (11xxxx)

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
111950	Intervention Mathematics (high school credit optional in grades 9-12, not for high school credit below grade 9) Course designed specifically as intervention for students who have taken and not yet reached the proficient standard on the Ohio Graduation Test for mathematics. Prepares students to retake the test, includes little or no new significant content, and is remedial in nature.	MTH	Mathematics
111960	Mathematics Response to Intervention Support 1 This course is designed to provide support and to coincide with an Algebra I or Mathematics I course. This class is not remedial and is to provide immediate support and intervention for students.	MTH	Mathematics
111970	Mathematics Response to Intervention Support 2 This course is designed to provide support and to coincide with a Geometry or Mathematics II course. This class is not remedial and is to provide immediate support and intervention for students.	MTH	Mathematics
111980	Mathematics Response to Intervention Support 3 This course is designed to provide support and to coincide with an Algebra II or Mathematics III course. This class is not remedial and is to provide immediate support and intervention for students.	MTH	Mathematics
110190	Transition to High School Mathematics (Elective high school credit optional in grades 9-12, not for high school credit below grade 9. This course does not meet the mathematics credit requirements of the Ohio Graduation Requirements.) Course designed specifically as intervention for students who enter grade 9 not ready for high school level mathematics courses. Use this code for courses that contain little of the high school level content found in the New Learning Standards for Mathematics.	MTH N/A	Mathematics

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
111350	<p>Modeling and Quantitative Reasoning This course prepares students to investigate contemporary issues mathematically and to apply the mathematics learned in earlier courses to answer questions that are relevant to their civic and personal lives. The applications should provide an opportunity for deeper understanding and extension of the material from earlier courses. This course should also show the connections between different mathematics topics and between the mathematics and the areas in which applied.</p>	MTH	Mathematics
111300	<p>Discrete Mathematics The study of mathematical properties of sets and systems that have a countable number of elements including applications of systematic counting techniques and algorithmic thinking to represent, analyze, and solve problems.</p>	MTH	Mathematics
111600	<p>Trigonometry In-depth study of trigonometric and circular functions including modeling, graphing, and connecting to polar coordinates, complex numbers, and series.</p>	MTH	Mathematics
111850	<p>Transition to College Mathematics A course designed for students in grades 11-12 making a transition to a college preparatory program. The content is from the high school portion of the New Learning Standards for Mathematics, both new and previously addressed topics with increasing emphasis on symbol manipulation and mathematical structure.</p>	MTH	Mathematics
111500	<p>Probability and Statistics In-depth study of probability, data analysis, and statistics including applying the concept of random variables to generate and interpret probability distributions, transforming data to aid in interpretation and prediction, and testing hypotheses using appropriate statistics.</p>	MTH	Mathematics
119550	<p>Statistics The purpose of this course is to introduce students to the major concepts and tools for collecting, analyzing, and drawing conclusions from data. Students are exposed to four broad conceptual themes: Exploring Data, Sampling and Experimentation, Anticipating Patterns, and Statistical Inference.</p>	MTH	Mathematics
110600	<p>Calculus A formal study of topics from calculus that is not associated with the Advanced Placement Program. Includes the study of limit, series, and differentiation and integration.</p>	MTH	Mathematics

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
119930	Calculus AB Calculus AB is designed to be taught over a full high school academic year. It is possible to spend some time on elementary functions and still teach the Calculus AB curriculum within a year. However, most of the year must be devoted to the topics in differential and integral calculus. The courses described here represent college-level mathematics for which most colleges grant advanced placement and/or credit.	MTH	Mathematics
119960	Calculus BC Calculus BC is a full-year course in the calculus of functions of a single variable. It includes all topics taught in Calculus AB plus additional topics, but both courses are intended to be challenging and demanding; they require a similar depth of understanding of common topics. The courses described here represent college-level mathematics for which most colleges grant advanced placement and/or credit.	MTH	Mathematics
119999	Other Mathematics Course High school level elective course that addresses advanced mathematical topics. Course Other mathematics course for which high school credit can be earned that is different in scope from any of the other SUBJECT CODES described above. (A course that addresses concepts and skills below the 9-12 portion of New Learning Standards for Mathematics should be coded as 110190 Transition to High School Mathematics.)	MTH	Mathematics

Science Section

Table 14. Science Codes (13xxxx)

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
132110	Science (K-3) Early elementary science course for grades K-3. Course includes content found in Ohio’s New Learning Standards and Model Curriculum for Science, Grades K-3. Earth and Space Sciences, Life Sciences, and Physical Sciences are integrated with scientific practices, inquiry, and applications.	N/A	Science
132120	Science (4-6) Elementary or early middle school science course for grades 4-6. Course includes content found in Ohio’s New Learning Standards and Model Curriculum for Science, Grades 4-6. Earth and Space Sciences, Life Sciences, and Physical Sciences are integrated with scientific practices, inquiry, and applications.	N/A	Science

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
132130	Science (7-8) Middle school science course for grades 7-8. Course includes content found in Ohio's New Learning Standards and Model Curriculum for Science, Grades 7-8. Earth and Space Sciences, Life Sciences, and Physical Sciences are integrated with scientific practices, inquiry, and applications.	N/A	Science
132900	Intervention Science High school science course for students who have previously completed Physical Science and Biology and have taken but not yet passed the Ohio Graduation Test. The variety of standards-based instruction and assessment strategies used in this course is appropriate to assist student preparation for the Ohio Graduation Test. This course may not satisfy Ohio's graduation requirements.	SCI	Science
132220	Physical Science High school level course that satisfies Ohio's science graduation requirements as required by section 3313.603 of the Ohio Revised Code, which requires inquiry-based laboratory experiences that engage students in asking valid scientific questions and gathering and analyzing information. Content from this course contributes to the Ohio Graduation Test. Course includes content found in Ohio's New Learning Standards and Model Curriculum for Science, High School Physical Science.	SCI	Science
132230	Biology High school level course that satisfies Ohio's science graduation requirements as required by section 3313.603 of the Ohio Revised Code which requires inquiry-based laboratory experiences that engage students in asking valid scientific questions and gathering and analyzing information. Content from this course contributes to the Ohio Graduation Test. Course includes content found in Ohio's New Learning Standards and Model Curriculum for Science, High School Biology.	SCI	Science
132350	Environmental Science Advanced high school level course that satisfies Ohio's science graduation requirements as required by section 3313.603 of the Ohio Revised Code, which requires inquiry-based laboratory experiences that engage students in asking valid scientific questions and gathering and analyzing information. Course includes content found in Ohio's New Learning Standards and Model Curriculum for Science, High School Environmental Science.	SCI	Science

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
134250	<p>Physical Geology Advanced high school level course that satisfies Ohio's science graduation requirements as required by section 3313.603 of the Ohio Revised Code, which requires inquiry-based laboratory experiences that engage students in asking valid scientific questions and gathering and analyzing information. Course includes content found in Ohio's New Learning Standards and Model Curriculum for Science, High School Physical Geology</p>	SCI	Science
130301	<p>Chemistry Advanced high school level course that satisfies Ohio Core science graduation requirements as required by section 3313.603 of the Ohio Revised Code, which requires inquiry-based laboratory experiences that engage students in asking valid scientific questions and gathering and analyzing information. Course includes content found in the Revised Academic Content Standards and Model Curriculum for Science, High School Chemistry.</p>	SCI	Science
130302	<p>Physics Advanced high school level course that satisfies Ohio's science graduation requirements as required by section 3313.603 of the Ohio Revised Code, which requires inquiry-based laboratory experiences that engage students in asking valid scientific questions and gathering and analyzing information. Course includes content found in Ohio's New Learning Standards and Model Curriculum for Science, High School Physics.</p>	SCI	Science
132330	<p>Advanced Biology An advanced high school level course that satisfies Ohio's science graduation requirements as required by section 3313.603 of the Ohio Revised Code, which requires inquiry-based laboratory experiences that engage students in asking valid scientific questions and gathering and analyzing information. Course develops specialized content to extend connections, depth, and detail of biology that emphasizes content beyond what is outlined in Ohio's New Learning Standards and Model Curriculum for Science, High School Biology. Content may include concepts in anatomy, physiology, ecology, behavior, evolution, genetics, cell biology, microbiology, diversity, growth, or human biology.</p>	SCI	Science

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
132326	<p>Advanced Chemistry Advanced high school level course that satisfies Ohio's science graduation requirements as required by section 3313.603 of the Ohio Revised Code, which requires inquiry-based laboratory experiences that engage students in asking valid scientific questions and gathering and analyzing information. Course develops specialized content to extend connections, depth, and detail of chemistry that emphasizes content beyond what is outlined in Ohio's New Learning Standards and Model Curriculum for Science, High School Chemistry. Content may include concepts in inorganic, organic, analytical, physical, or and biological chemistry.</p>	SCI	Science
132340	<p>Advanced Earth and Space Sciences Advanced high school level course that satisfies Ohio's science graduation requirements as required by section 3313.603 of the Ohio Revised Code, which requires inquiry-based laboratory experiences that engage students in asking valid scientific questions and gathering and analyzing information. Course develops specialized content beyond what is outlined in Ohio's New Learning Standards for Science to extend connections, depth, and detail of the major concepts and principles of earth and space sciences. Content may include concepts in astronomy, oceanography, meteorology, geology, or natural resources.</p>	SCI	Science
132325	<p>Advanced Physics Advanced high school level course that satisfies Ohio's science graduation requirements as required by section 3313.603 of the Ohio Revised Code which requires inquiry-based laboratory experiences that engage students in asking valid scientific questions and gathering and analyzing information. Course develops specialized content beyond what is outlined in Ohio's New Learning Standards for Science, High School Physics to extend connections, depth, and detail of physics. Content may include concepts in mechanics, electricity, magnetism, thermodynamics, waves, optics, atomic and nuclear physics, radioactivity, relativity, or quantum mechanics.</p>	SCI	Science
139960	<p>Physics 1: Algebra-Based Advanced high school level course that satisfies Ohio's science graduation requirements as required by section 3313.603 of the Ohio Revised Code, which requires inquiry-based laboratory experiences that engage students in asking valid scientific questions and gathering and analyzing information. Course includes topics found in the Advanced Placement Physics 1: Algebra-Based Course Description.</p>	SCI	Science

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
139970	Physics 2: Algebra-Based Advanced high school level course that satisfies Ohio's science graduation requirements as required by section 3313.603 of the Ohio Revised Code, which requires inquiry-based laboratory experiences that engage students in asking valid scientific questions and gathering and analyzing information. Course includes topics found in the Advanced Placement Physics 2: Algebra-Based Course Description.	SCI	Science
139940	Physics C: Electricity & Magnetism Advanced high school level course that satisfies Ohio's science graduation requirements as required by section 3313.603 of the Ohio Revised Code, which requires inquiry-based laboratory experiences that engage students in asking valid scientific questions and gathering and analyzing information. Course includes topics found in the Advanced Placement Physics C: Electricity & Magnetism Course Description.	SCI	Science
139950	Physics C: Mechanics Advanced high school level course that satisfies Ohio's science graduation requirements as required by section 3313.603 of the Ohio Revised Code, which requires inquiry-based laboratory experiences that engage students in asking valid scientific questions and gathering and analyzing information. Course includes topics found in the Advanced Placement Physics C: Mechanics Course Description.	SCI	Science
139997	Other Science Any introductory level high school science course that includes content typically taught at the 9 th or 10 th grade level and is not listed in previous course descriptions. These courses would typically be science elective courses that are offered to grade 9 or 10 students, but may not satisfy Ohio's graduation requirements.	SCI	Science
139998	Other Advanced Science Any advanced level science course that satisfies Ohio's science graduation requirements as required by section 3313.603 of the Ohio Revised Code, which requires inquiry-based laboratory experiences that engage students in asking valid scientific questions and gathering and analyzing information. Course content must be at the 11 th or 12 th grade level or above, must not repeat content in K – 8, High School Physical Science, or Biology, and must be designed to prepare students for college or career level coursework or training.	SCI	Science

Social Studies Section

Table 15. Social Studies Codes (15xxxx)

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
151209	Social Studies (K-3) Social studies instruction offered primarily for students in grades K-3.	N/A	—
151210	Social Studies (4-6) Social studies instruction offered primarily for students in grades 4-6.	N/A	—
151201	Social Studies (7-8) Integrated study using various social studies disciplines. (for grades 7-8)	N/A	—
150610	Economics (7-8) The study of how society uses its resources to satisfy the desires of its citizens for goods and services. (for grades 7-8)	N/A	Economics
150701	Geography (7-8) The study of spatial aspects of human existence. (for grades 7-8)	N/A	Geography
150305	Government (7-8) The study of institutions and processes through which decisions are made for a society. (for grades 7-8)	N/A	Civics and Government
150807	History (American) (7-8) The study of America's past. (for grades 7-8)	N/A	History
152310	History (Integrated) (7-8) The integrated study of American history and world history. (for grades 7-8)	N/A	History
150888	History (World) (7-8) The study of the world's past. (for grades 7-8)	N/A	History
150100	Anthropology The study of the physical, social and cultural development of humans.	SOC	—
150600	Economics The study of how society uses its resources to satisfy the desires of its citizens for goods and services.	SOC	Economics
150700	Geography The study of spatial aspects of human existence.	SOC	Geography
150300	Government (American) The study of institutions and processes through which decisions are made for the United States.	SOC	Civics and Government
150308	Government/Economics (American) The study of institutions and processes through which decisions are made for the United States and the study of how the United States uses its resources to satisfy the desires of its citizens for goods and services.	SOC	Civics and Government
150810	History (American) The study of America's past.	SOC	History

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
152300	History (Integrated) The integrated study of American history and world history.	SOC	History
152400	History (Regional) The study of a region's past.	SOC	History
150890	History (World) The study of the world's past.	SOC	History
152100	Integrated Social Studies Integrated study using various social studies disciplines.	SOC	—
150400	Intervention Social Studies Remedial study in preparation for the Ohio Graduation Tests with little or no significant new content.	SOC	—
151121	Psychology The study of the human mind and its influence on behavior.	SOC	—
151205	Social Psychology The study of individual human behavior in groups.	SOC	—
151300	Sociology The study of social relationships, institutions, and group behavior in societies.	SOC	—
152810	European History The study of Europe's past.	SOC	History
159960	Government & Politics (Comparative) The comparative study of the institutions and processes through which decisions are made for societies.	SOC	Civics and Government
159950	Government & Politics (United States) The study of institutions and processes through which decisions are made for the United States.	SOC	Civics and Government
159930	Macroeconomics The study of the functioning of entire economies.	SOC	Economics
159940	Microeconomics The study of the behavior of individual households, firms and markets.	SOC	Economics
152150	Issues in Social Studies The study of issues related to the social studies utilizing applications of relevant disciplines.	SOC	—
159999	Other Social Studies The study of specialized social studies topics (including community service courses per ORC 3313.605).	SOC	—

Technology Section

Table 16. Computer Science Codes (29xxxx)

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
<p>The following courses do not earn high school technology credit. This instruction may also be provided by a teacher to multiple groups of students rather than in a self-contained classroom setting. The K-8 content across Ohio's Technology standards defines achievement in meeting the No Child Left Behind 8th Grade Technology Literacy Requirement. Instruction is most effective when integrated with curricular components of other academic content areas.</p>			
290035	<p>Computer/Multimedia Literacy K-3 Includes content in the K-3 portion of Ohio's academic content standards for technology that focuses on the use of educational technology for learning.</p>	N/A	—
290040	<p>Computer/Multimedia Literacy 4-6 Includes content in the 4-6 portion of Ohio's academic content standards for technology that focuses on the use of educational technology for learning.</p>	N/A	—
290045	<p>Computer/Multimedia Literacy 7-8 Includes content in the 7-8 portion of Ohio's academic content standards for technology including keyboarding, word processing, productivity, communication and information tools.</p>	N/A	—
<p>Computer Science codes include computer/multimedia literacy, software, Internet, systems/networking and programming. All courses should be based on advanced topics aligned with the 9-12 section of the Ohio Technology academic content standards. Credit cannot be given for concepts below 9th – 12th grade.</p>			
290050	<p>Computer/Multimedia Literacy Course focuses on advanced concepts in 9-12 portion of Ohio's technology academic content standards. Instruction is most effective when integrated or linked to other content areas.</p>	TEC	—
290100	<p>Technology-Productivity Tools Course focuses on advanced concepts in 9-12 portion of Ohio's technology academic content standards that increase personal productivity and manage information. Instruction is most effective when integrated or linked to other academic areas.</p>	TEC	—
290110	<p>Technology-Communication Tools Course focuses on advanced concepts in the 9-12 portion of Ohio's technology academic content standards including identifying purpose, audience and communication strategy. Instruction is most effective when integrated or linked to other academic content areas.</p>	TEC	—
290120	<p>Technology-Problem-Solving Tools Course focuses on advanced concepts in the 9-12 portion of Ohio's technology academic content standards including inquiry/problem-solving skills and technology tools. Instruction is most effective when integrated or linked to other academic content areas.</p>	TEC	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
290130	Internet Searching Course focuses on advanced concepts in the 9-12 portion of Ohio's technology academic content standards including Internet search strategies, search engine ranking methods and Web site evaluation.	TEC	—
290075	Technology: Electronic Resources Course focuses on advanced concepts in the 9-12 portion of Ohio's technology academic content standards including information literacy concepts and use of technology tools to conduct research. Topics include use of Internet and other electronic information resources.	TEC	—
290140	Technology and Ethics Course focuses on advanced concepts in the 9-12 portion of Ohio's technology academic content standards and library guidelines including copyright, intellectual property, biotech and other current ethical concerns.	TEC	—
290150	Computer Graphics Course includes design techniques used to generate computer graphics. Topics may include use of tools to draw, import, edit, create, animate images, photos, original artwork, etc.	TEC	—
290200	Computer Science Course includes study and use of programming languages, i.e., BASIC, COBOL, DOS, Visual BASIC, C++, HTML, XML, MSDN, etc. Topics also include operating systems, servers, networks, etc.	TEC	—
290250	<u>Computer Science Principles</u> <u>This course is designed to develop an understanding of the usage and impact of computer science as an innovative computational tool for solving problems in many fields. Effective communication and collaboration skills are developed as students individually and in group explorations solve simulations of real-world problems. The course focuses on the importance of solving problems and the impacts of those solutions to their community, society, and the world.</u>	<u>TEC, MTH</u>	<u>—</u>
290310	Computer Science A The study of programming methodology with an emphasis on problem solving and algorithm development. Also includes study of data structures and abstraction, but not to the extent as covered in Computer Science AB.	TEC, MTH	—
290320	Computer Science AB Includes all topics of Computer Science A, as well as a more formal and more in-depth study of algorithms, data structures and data abstraction.	TEC, MTH	—
290160	Web Site Development Course includes Web site design, posting/removing Web sites to/from Web server and Web programming HTML, XML, etc. Course should cover Universal Design and other accessibility methods.	TEC	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
290165	Advanced Web Site Development Course should include advanced Web programming and applications, Universal Design and other accessibility methods.	TEC	—
290170	Networking Course includes operating systems, printers/print servers, network configuration and servers, etc.	TEC	—
290180	Computer Repair Course includes troubleshooting, repair, system/network reconfiguration, help desk practices, etc.	TEC	—
299999	Other Computer Technology A course that is given for High School credit to be applied toward the diploma, but that is different in scope from any of the other SUBJECT CODES described above.	TEC	—

Table 17. Information Literacy Codes (20xxxx)

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
The following courses do not earn high school technology credit. This instruction may also be provided by a teacher to multiple groups of students rather than in a self-contained classroom setting. The K-8 content across Ohio’s Technology standards defines achievement in meeting the No Child Left Behind 8th Grade Technology Literacy Requirement. Instruction is most effective when integrated with curricular components of other academic content areas.			
200910	Information Literacy K-3 Instruction that includes content in the K-3 portion of Ohio’s technology academic content standards and library guidelines.	N/A	—
200915	Information Literacy 4-6 Instruction that includes content in the 4-6 portion of Ohio’s technology academic content standards and library guidelines.	N/A	—
200920	Information Literacy 7-8 Instruction that includes content in the 7-8 portion of Ohio’s technology standards and library guidelines including Internet searching, evaluation of Web sites and other electronic resources.	N/A	—
Information literacy codes focus on acquisition, interpretation, and dissemination of information. All courses should be based on advanced topics aligned with the 9-12 section of the Ohio Technology academic content standards and Library Guidelines. Credit cannot be given for concepts below 9th – 12th grade.			
200700	Library Science Course focuses on how information is organized, accessed, and evaluated, including use of information management systems in school, public, academic, and government libraries.	TEC	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
200905	<p>Information Literacy Instruction focuses on recognizing the need for information and developing the skills to locate, evaluate and utilize the information. Learning experiences include information retrieval and critical thinking skills that enable students to acquire, interpret, evaluate, create, and communicate information. Information sources include print, nonprint, electronic, Internet-based resources accessed via the school library, school district, Internet, statewide/national networks, and other providers.</p>	TEC	—

Table 18. Technology Education Codes (10xxxx)

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
<p>The following courses do not earn high school technology credit. This instruction may also be provided by a teacher to multiple groups of students rather than in a self-contained classroom setting. The K-8 content across Ohio’s Technology standards defines achievement in meeting the No Child Left Behind 8th Grade Technology Literacy Requirement. Instruction is most effective when integrated with curricular components of other academic content areas.</p>			
102285	<p>Technological Literacy K-3 Instruction that includes content in the K-3 portion of Ohio’s academic content standards for technology.</p>	N/A	—
102290	<p>Technological Literacy 4-6 Instruction that includes content in the 4-6 portion of Ohio’s academic content standards for technology.</p>	N/A	—
102295	<p>Technological Literacy 7-8 Instruction that includes content in the 7-8 portion of Ohio’s academic content standards for technology.</p>	N/A	—
<p>Technology Education: A comprehensive study of the knowledge and processes necessary in designing, making, developing, producing, using, managing, and assessing of technological systems and products. Dimensions of technology include assessing impacts and consequences of technology, nature and history of technology, and connections. Technological systems and products are those systems and products that change the world around us to satisfy our needs and wants. In particular Technology Education focuses on the systems and products of the energy/power/transportation, manufacturing, construction, communication, and bio-related/chemical fields. These activities may take place in thematic units at the elementary level, general technology courses at the middle and high school levels, specific high school systems courses, Tech Prep and Pathways courses at the high school level, and modules and problem-based learning integrated with mathematics, science, language arts, social studies and arts teams at all levels.</p>			
102300	<p>Technology Education Comprehensive action-based courses concerned with the evolution, utilization, and significance of technology and its impact on industry, including its organization, personnel, systems, techniques, resources, products, and socio cultural aspects.</p>	TEC	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
107450	<p>Foundations of Technology Prepares students to understand and apply technological concepts and processes that are the cornerstone for the high school technology program. Group and individual activities engage students in creating ideas, developing innovations and engineering practical solutions. Technology content, resources and laboratory/classroom activities apply student applications of science, mathematics and other school subjects in authentic situations. This course will focus on the three dimensions of technological literacy: knowledge, ways of thinking and acting, and capabilities, with the goal of students developing the characteristics of technologically literate citizens.</p>	TEC	—
101700	<p>Research and Development The study of industrial-technical problems, including provisions for individual or group investigations of problems and opportunities to evaluate their solutions by designing, constructing, and testing products.</p>	TEC	—
101720	<p>Design Course includes design topics from the 9-12 portion of Ohio’s technology academic content standards; including identifying and producing a product or system using a design process and evaluating the final solution, and communicating findings; recognizing the role of teamwork in engineering design and of prototyping in the design process; and understanding and applying research, development, and experimentation to problem-solving.</p>	TEC	—
101730	<p>Issues and Problems in Technology The study of themes concerning technology, society, and the environment.</p>	TEC	—
<p>Construction Technology Systems: A comprehensive study of the knowledge and processes in designing, making, developing, producing, using, managing, and assessing of technological systems and products to build structures on site. In particular courses that are part of the construction technology systems focus on project planning, architectural design and drafting, site preparation, building the structure, and maintaining the structure.</p>			
100100	<p>Construction The study of the technology and the socioeconomic contributions of those industries concerned with residential, civic industrial, civil, and transportation structures.</p>	TEC	—
100800	<p>Home Mechanics The study of the tools, materials, and processes involved in the up-keep and repair of the home, its equipment and devices.</p>	TEC	—
<p>Manufacturing Technology Systems: A comprehensive study of the knowledge and processes in designing, making, developing, producing, using, managing, and assessing of technological systems and products in manufacturing facilities. In particular courses that are part of manufacturing technology systems focus on mechanical design and drafting, materials, and processes (including woods, metals, plastics), production, robotics, and automation systems, and specific trades/crafts.</p>			

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
101300	<p>Manufacturing The study of the technology and the socioeconomic contributions of industries concerned with the creation of durable consumer products.</p>	TEC	—
101350	<p>Robotics Application of processes and knowledge in the design, development, and use of systems to manage and control devices. Products of student work in robotics may be descriptive and/or functional models of technology applications across all systems areas.</p>	TEC	—
101800	<p>Service Industries The study of the technology of industries concerned with the maintenance and repair of consumer and/or industrial products.</p>	TEC	—
101900	<p>Woods Processes Information and skills concerned with woods, including various manufactured wood products, focusing on the technology employed in the manufacture and construction of products using woods and related factors such as occupations, economics, and consumer information.</p>	TEC	—
101410	<p>Metals Processes Information and skills concerned with metals including the products manufactured from metals and the technology employed in the production, processing, and use of metals, as well as related factors such as occupations, economics, and consumer information.</p>	TEC	—
101500	<p>Plastics Information and skills concerned with the production, processing, and use of plastics, composites and related factors such as occupations, economics, and consumer information.</p>	TEC	—
100200	<p>Industrial Crafts Information and skills concerned with handcrafts and the craft industry, including its tools, materials, processes, products, and occupations.</p>	TEC	—
<p>Communication Technology Systems: A comprehensive study of the knowledge and process in designing, making, developing, producing, using, managing, and assessing of technological systems to products for transferring graphic and electronic messages. Computer modeling and information technology applications are critical to all technology systems areas. In particular courses that are part of communication technology systems focus on existing and emerging information technologies for encoding, transmitting, receiving, storing, retrieving, and decoding of graphic and electronic messages.</p>			
100300	<p>Drafting Information and skills concerned with conveying ideas or illustrations graphically through drawings, charts, sketches, maps, and graphs, and the related factors such as the role of drafting in history and industry.</p>	TEC	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
100401	Electricity/Electronics Information and skills concerned with electrical energy including theory, applications, and control as it relates to electrically powered equipment, to various kinds of communications equipment, and to related factors such as occupations, economics, and consumer information.	TEC	—
100700	Graphic Arts The study of information and skills concerned with graphic reproduction, as well as related factors such as occupations, economics, and consumer information.	TEC	—
102000	Communications Provides an introduction to technical communication systems and processes. Students use a variety of technologies and media to create, implement, and evaluate a network to solve a communication problem.	TEC	—
102500	Industrial Computer Applications Experiences with computer applications across the technological systems areas. Selected activities covering computer hardware, software, and interface device applications to develop understanding of industrial uses of computers.	TEC	—
Energy/Power/Transportation Technology Systems: A comprehensive study of the knowledge and process in designing, making, developing, producing, using, managing, and assessing of technological systems to produce products for the transmission of energy and power, and the transportation of goods and people. In particular technology courses focus on energy and power sources or devices, the transformation of energy and power from one form to another, the transmission of energy and power from one form to another, and the sale use of power. In addition transportation focuses on the systems and products used to transport goods and people.			
101610	Power Mechanics Information and skills concerned with the various forms of power, including its generation, transmission, and utilization.	TEC	—
102100	Energy/Power/Transmission Beginning-level course designed to provide a conceptualized study of basic machines. Students obtain a basic understanding and develop skills needed to identify, build, maintain, test, and develop machines.	TEC	—
Bio-Related and Chemical Technology Systems: A comprehensive study of the knowledge and process in designing, making, developing, producing, using, managing, and assessing of technological systems to produce products with bio-related and chemical applications. In particular technology courses focus on practical application of biological organism and chemical processes to make or modify products, the production process techniques related to agriculture, chemical, and medical technology products, and the human interface with technology in managing the artificial and natural environment.			
103050	Bio-Related and Chemical Technology Systems Comprehensive study of the knowledge and process in designing, making, developing, producing, using, managing, and assessing of technological systems to produce products with bio-related and chemical applications.	TEC	—

CAREER-TECHNICAL EDUCATION SECTION

Workforce Development Section

Table 19. Career Field 01: ~~Environmental &~~ Agricultural & Environmental Systems Codes (01xxxx)

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
010105	<p>Agriculture, Food and Natural Resources</p> <p>This first course in the career field is an introduction to Agricultural and Environmental Systems. Students will be introduced to the scope of the Agricultural and Environmental Systems career field. They will examine principles of food science, natural resource management, animal science & management, plant & horticultural science, power technology and bioscience. Students will examine the FFA organization and Supervised Agricultural Experience programs. Throughout the course, students will develop communication, leadership and business skills essential to the agriculture industry. This is the first course in the Agricultural and Environmental Systems career field. It introduces students to the pathways that are offered in the Agricultural and Environmental Systems career field. As such, learners will obtain fundamental knowledge and skills in food science, natural resource management, animal science and management, plant and horticultural science, power technology and biotechnology. Students will be introduced to the FFA organization and begin development of their leadership ability.</p>	CTA	—
010110	<p>Communications and Leadership</p> <p>Students will analyze attributes and capabilities of those in leadership positions and develop their communication and leadership skills in authentic situations. The course prepares students to apply journalistic, communication and broadcasting principles to the development, production, and transmittal of agricultural and environmental systems information.</p>	CTA	—
010115	<p>Business Management for Agricultural and Environmental Systems</p> <p>LearnersStudents will examine elements of business, identify organizational structures and identify and apply management skills. Learners willwhile developing business plans, financial reports and strategic goals for new ventures or existing businesses. Learners will use marketing concepts to evaluate the marketing environment and develop a marketing plan with marketing channels, product approaches, promotion and pricing strategies. Learners will practice customer sales techniques andThroughout the course, students will apply concepts of ethics and professionalism while understanding implications of relatedbusiness regulations will be identified.</p>	CTA	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
010120	<p>Mechanical Principles Structural Engineering Students will engage in the mechanical principles utilized in animal and plant production systems. They will learn electrical theory, design, wiring, hydraulic and pneumatic theory, along with metallurgy in relation to hot and cold metals. Students will apply knowledge of sheet metal fabrication applicable to the agricultural industry along with identify, diagnose, and maintain small air-cooled engines. Throughout the course, students will learn critical components of site and personal safety as well as communication and leadership skills. Students will apply principles of engineering and design along with an understanding of the properties and uses of construction materials to buildings and structures used in agriculture, horticulture and natural resources. The course will focus on the study and utilization of wood and lumber, metals, concrete and masonry, pipes and plumbing, and electrical systems. Students will design, plan, build and calculate costs benefits analysis for construction projects while abiding by all building code and safety regulations.</p>	CTA	—
010155	<p>Plant and Horticultural Science This first course in the pathway focuses on the broad knowledge and skills required to research, develop, produce and market agricultural, horticultural, and native plants and plant products. Students will apply principles and practices of plant physiology and anatomy, plant protection and health, reproductive biology in plants, influences in bioengineering, plant nutrition and disorders. Environmental aspects of irrigation, chemical application, soils, and pest management will be studied and applied. Projects and activities will enable students to develop communication, leadership, and business management skills.</p>	CTA	—
010190	<p>Agricultural and Environmental Systems Capstone Students apply Agricultural and Environmental Systems program knowledge and skills in a more comprehensive and authentic way. Capstones are project/problem-based learning opportunities that occur both in and away from school. Under supervision of the school and through partnerships, students combine classroom learning with work experience to benefit themselves and others. These can take the form of mentorship employment, cooperative education, and internships.</p>	CTA	—
010210	<p>Agricultural and Industrial Power The Agricultural and Industrial Power course will introduce students to the breadth of the Agricultural and Industrial Power Technology pathway. Students will learn the principles of agricultural and industrial power technology equipment systems including electronic, electrical, engines, fuel, hydraulics, and power trains. Additionally, students will learn to operate and maintain agricultural and industrial equipment.</p>	CTA	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
010215	<p>Electronic and Electrical Systems In the Electronic and Electrical Systems course, students will diagnose problems, test and repair electronic and electrical components. Students will learn physical principles of electricity and apply such to the proper maintenance, diagnosis and repair of electrical circuits. Students will learn the physical and mathematical principles of electronics, controllers and sensors and will learn the operation of onboard computers and programmable controllers.</p>	CTA	—
010220	<p>Engines and Fuel Systems In the Engines and Fuel Systems course, students will learn basic engine information and operations; different kinds of corollary systems; how to use test equipment and service tools; plus techniques for diagnosis and testing. Students will learn the different kinds of fuel systems, fuels and their characteristics, designations, and additives. Students will diagnose fuel system problems including the identification of parts failure and will be able to make necessary repairs.</p>	CTA	—
010225	<p>Hydraulics and Pneumatics In the Hydraulics and Pneumatics course, students will learn physical principles of hydraulics. They will diagnose problems, test system components, learn how to properly maintain hydraulic circuits and diagnose and test problem areas in hydraulics systems of agricultural and industrial power equipment.</p>	CTA	—
010230	<p>Power Trains In the Power Trains course, students will learn the physical principles of power trains, the different components that transfer and control power, and how power trains are designed to function. Students will also learn how to adjust and maintain a power train system as well as how to diagnose and test problem areas.</p>	CTA	—
010235	<p>Outdoor Power Technology The Outdoor Power Technology course trains students in technical knowledge and skills necessary to maintain, troubleshoot and repair small power equipment used in agriculture, horticulture and natural resource management. Students will learn the theory of power and progress through aspects of 2- and 4-stroke engines, electrical systems, fuel systems, and drive train systems that make up modern small engine powered equipment.</p>	CTA	—
010240	<p>Power Sports In the Power Sports course, students will learn the theories of operating systems and the maintenance practices for power sport vehicles used off road or on the water. Students will learn principles of power sports vehicles including diagnosis, service, and repair. This courses covers core information on power sport internal combustion engines, primary drive operation, transmission power flow, fuel system operation, and electrical and suspension systems.</p>	CTA	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
010610	<p>Greenhouse and Nursery Management The course will apply principles of science, engineering, and business to support the sustainable propagation and production of plants in a commercial nursery or greenhouse facility. Management of soil/media, water and nutrient distribution, lighting, ventilation and temperature, and pests will be learned and applied. Students will demonstrate knowledge of propagation methods, plant health, nutrition, and growth stimulation. Students will develop successful business, communication, marketing, and sales strategies for use in the greenhouse and nursery industries.</p>	CTA	—
010615	<p>Landscape Systems Management Students will learn methods for establishing and managing landscapes to promote growth and balance. The classification and care of woody and herbaceous landscape plants will be covered in-depth. Students will learn to optimize growing conditions, balance nutrients, and manage pests and disease. Horticultural skills including proper planting, fertilizing, and pruning techniques will be practiced while safely operating well maintained specialized equipment. The implications of landscape installation on the environment will be analyzed and eco-friendly practices applied. Students will employ communication, business, and management strategies appropriate for the industry.</p>	CTA	—
010620	<p>Agronomic Systems Students will apply This course focuses on the knowledge and skills required to research, develop, produce and market major agricultural and horticultural crops. Cultural and sustainable production practices will be examined. Students will while students apply scientific knowledge of plant development, nutrition and growth regulation. The knowledge and skills needed to manage water, soils, and pests related to agronomic crops will be learned <u>assessed</u>. Students will employ <u>technological advances</u>, communication, business, and management strategies appropriate for the industry.</p>	CTA	—
010625	<p>Floral Design and Marketing Students will use principles and elements of design to create various types and styles of floral arrangements with natural and artificial plants and plant products. <u>Topics will include identification of ornamental plants and cut flowers, use of design materials, and storage and handling applications.</u> Identification of ornamental plants and cut flowers, use of design materials, and storage and handling applications will be examined. Students will develop successful business, communication, marketing, and sales strategies for use in the floral industry.</p>	CTA	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
010630	<p>Landscape Design and Build Students will learn skills in creating blueprints, estimates and landscaping designs. Topics include basic principles of design, engineering, drawing and drafting techniques including the use of technology such as computer-aided design. Students will incorporate principles of hardscapes and examine the use of artificial lighting, water systems, and creative features in their designs. Throughout the course, business management practices, employability skills, and safety procedures will also be emphasized. Students will develop skills in landscape planning, design, estimation and installation. Principles and elements of design and engineering will be emphasized. Students will design full featured landscapes using computer-aided technology, construct hardscapes and install artificial lighting and water systems. Environmental effects of a landscape will be evaluated and eco friendly techniques applied. Students will employ communication, business, and management strategies appropriate for the industry.</p>	CTA	—
010635	<p>Turf Science and Management The course Students will apply principles of science, engineering, and business to support the establishment and maintenance of residential, athletic and recreational turf. Instruction in Students will learn techniques for the establishment, care, production, and marketing of turf grass along with safe operation and maintenance of specialized equipment. will be provided. Throughout the course, Environmental awareness and conservation practices will be applied. Students will employ emphasized along with communication, business, and management strategies appropriate for the industry.</p>	CTA	—
010710	<p>Natural Resources Learners Students will apply science principles and management practices to the protection of renewable and non-renewable natural resources. Students will learn fundamentals of land use as well as watershed, wildlife, fishery and forest management. Furthermore, Students will be introduced to learn management practices related to managing air and water quality along with requirements for managing solid and liquid waste. Throughout the course, students will apply Communications, business principles and leadership skills. development are essential to the program.</p>	CTA	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
010715	<p>Energy Systems Management Students will apply basic principles of energy accounting, thermodynamics and heat transfer, energy conversion and efficiency to heating, power generation and transportation. Students will apply the principles and practices needed for managing both renewable and non-renewable energy sources including, solar thermal, hydrogen generation, photovoltaic, hydroelectric, biomass use, geothermal heat transfer, and fossil fuel. Future energy systems and energy use scenarios are investigated, with a focus on promoting the use of renewable energy resources and technologies.</p>	CTA	—
010716	<p>Bio Energy Students are introduced to the scientific and technical processes of biofuel/bioenergy production. Learners will evaluate the energy conversion process and methods for optimizing the fermentation process. Students will identify the systems and components employed by fermentation systems and communicate safe handling techniques of equipment, biomass, effluent and biogas. A focus will be given to environmental impacts, life-cycle analysis, and economic analysis of bioenergy production.</p>	CTA	—
010717	<p>Solar and Wind Energy Students will specify system options by conducting Energy Site Assessments by using and interpreting resource maps, performance data, zoning requirements and interferences, installation timelines and price. Students will read plans, lay out components and assemble electrical systems. Students will perform system checkouts and interpret results from mechanical and electrical diagnostic reports and compile and maintain system records. Students will apply safety regulations and requirements and identify and mitigate public safety issues during system installations.</p>	CTA	—
010718	<p>Oil and Gas Operations Students will develop the skills applicable to careers in petroleum, natural gas and coal industries. They will learn practices related to exploration, leasing, surveying, drilling, geophysical logging and completion process. Students will be familiar with wellhead and surface production equipment and interpret production histories and graphs. Students will learn sampling, analysis, monitoring and control techniques for effective environmental management in the extractive industries and the principals of metering, sales and marketing.</p>	CTA	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
010720	<p>Environmental Science for Agriculture and Natural Resources Learners will study relationships between organisms and their environment. Principles of biogeochemical cycles, air-water-land relationships, non-point pollution, and wetlands will be applied. Learners will examine economic fundamentals of resource development, agriculture sustainability, energy needs and pollution control. Learners will analyze and interpret data gathered from ecosystems, population studies, forest management practices, pesticide use, land use and waste management. Learners will develop responses to environmental problems and develop management strategies for responsible conservation and resource development.</p>	CTA	—
010725	<p>Environmental Systems Management Learners will analyze and interpret biological, chemical and physical properties of soil, water and air. They will determine the source and type of environmental contamination, evaluate pollution control measures and be prepared to respond accordingly. Learners will be able to monitor treatment processes for potable water, waste water and solid waste. Learners will develop and implement environmental plans using principles governing ecosystems in relation to resource development and industrial processes.</p>	CTA	—
010730	<p>Forestry and Woodland Ecosystems Learners will apply principles of botany, dendrology and silviculture to the management of forests and forest ecosystems. Learners will apply principles of timber cruising with surveying and mapping techniques to take forest measurements. Learners will develop the knowledge and skills necessary for forest reforestation, timber stand improvement, timber harvesting and forest product utilization. Learners will operate and maintain forestry equipment, apply fire management practices, and understand related regulations, laws, and policy issues.</p>	CTA	—
010735	<p>Park and Recreational Management Students will design facilities, develop educational programs and manage resources for use in public recreation. Students will maintain and operate equipment for maintaining wildlife habitat and supporting a variety of public recreational activities. Students will develop marketing and programming skills for park development, apply management practices to park operations and learn the systems required to maintain public safety.</p>	CTA	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
010740	<p>Urban Forestry The learner will promote the care and management of trees for residential and commercial purposes. Learners will apply principles of soil management, dendrology and pest management to the care and management of trees. Learners will analyze budgets; and develop short and long-range management plans that balance environmental and economic goals and that support sustainable land use patterns. Principles of rigging, advanced rope techniques, and chainsaw applications for tree pruning and removal will be learned.</p>	CTA	—
010745	<p>Wildlife and Fisheries Learners will apply the principles and practices of resource conservation and management to fish and wildlife populations. Students learn to properly handle wild animals, principles of wildlife nutrition, inventory practices, water quality parameters and testing, and natural and artificial propagation. Learners will apply principles of facility design and layout for managing fish populations. Learners will research and evaluate the impacts of various land practices, legislation, and human activities on habitats and populations.</p>	CTA	—
010910	<p>Animal Science and Technology Learners will develop business leadership, problem-solving and communication skills in relation to the science and technology of animals. Students will learn responsible animal management principles and routine husbandry practices in relation to animal welfare and behavior. Learners will identify and describe the anatomy and physiology of monogastric and ruminant organisms as it applies to nutrition, reproduction, and animal health. Learners will investigate animal genetics and how it impacts principles of animal improvement, selection and marketing.</p>	CTA	—
010915	<p>Animal Nutrition, Health and Reproduction Learners will apply principles of nutritional management for various classes of animals. Learners will analyze nutritional content/quality of feeds; formulate rations; develop feeding recommendations; identify deficiency symptoms and implement corrective methods as needed. Care/management plans are developed that reflect the classification of animals and follows best practices and legal compliance. Learners will monitor/evaluate the quality of animal habitats and estimate carrying capacity as it relates to the impact of the environment and animal health.</p>	CTA	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
010920	<p>Livestock Science Selection, Nutrition, and Management Learners will apply principles of nutrition, health and reproduction to the management of animals, poultry and fish in production agriculture. Learners will demonstrate understanding of anatomy and physiology and apply genetic principles for improvement. Learners will apply knowledge of animal behavior, welfare, and husbandry principles. Learners will evaluate body/carcass composition and apply marketing principles to the sale and distribution of livestock products. Learners will employ communication, business, and management strategies appropriate for the industry.</p>	CTA	—
010925	<p>Small Animal Science Companion Animal Selection, Nutrition, and Management Learners apply principles of nutrition, health and reproduction to the management of animals intended for companionship or research. Through interpretation, problem-solving and diagnostic methods, the learners develop and implement management programs that reflect responsible animal behavior, welfare and husbandry practices. Learners implement principles and practices of nutritional management, responsible breeding and disease management. Safe handling, grooming and training skills are developed and applied. Learners identify business management procedures and understand the importance of business regulations.</p>	CTA	—
010930	<p>Veterinary Science Learners will develop knowledge of veterinary pharmacology, radiology and imaging techniques, principles of surgery, safe laboratory skills, and the concepts of ethics and professionalism in the work place. Learners will develop skills in inquiry and statistical methods. Learners will describe causes, symptoms, and treatment of common diseases with special emphasis on developing preventative health management plans and breeding programs. Learners will utilize principles of technology to manage information systems, and research issues affecting the industry.</p>	CTA	—
010935	<p>Equine Science and Selection, Nutrition, and Management Learners are introduced to responsible equine management principals and routine husbandry practices in relation to equine behavior methodology and legal compliance. Learners will apply knowledge of health and nutrition when designing preventative health care plans, breeding plans, and feed management programs. Safe handling, grooming, training, equipment selection/maintenance/use and emergency care techniques are developed and applied. Learners will evaluate responsible stewardship practices and develop production management strategies that emphasize the industries goals through good reproductive decision-making.</p>	CTA	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
010940	<p>Zoo and Aquarium In this course, learners will identify and apply responsible animal science principals and routine husbandry practices to captive animal populations. Learners will apply knowledge of animal behavior, welfare, and husbandry principals to enhance exhibit design, animal enrichment and training plans, and educational and visitor engagement programs. Emphasis will be given to data collection and research techniques. Principles of responsible population control, disease risk and management, and problem-solving/action planning techniques will be examined.</p>	CTA	—
011010	<p>Science and Technology of Food This first course in the pathway examines the research, marketing, processing and packaging techniques applied to the development of food products. Learners will examine principles of food preservation techniques and determine correlations to food sensory, shelf life and food stability. Learners will examine and develop food safety, sanitation, and quality assurance protocol. Government regulations and food legislation will be examined and the implications to food science and technology will be identified.</p>	CTA	—
011015	<p>Food Marketing and Research Learners will focus on the stages of research process from research planning to gathering, analysis, and interpretation of data as it relates to food marketing management. Learners will apply knowledge of food additives, nutrition, mixes and solutions to enhance existing food products and to create new processed foods. Learners will identify and describe the impact that technological advances have on food production and availability. Cultural trends and preferences affecting product development will be examined.</p>	CTA	—
011020	<p>Meat Science and Technology Learners will apply food chemistry and microbiology to processing, preservation, packaging, storage and marketing of meat products. Learners will design and implement a quality assurance program that meets legal compliance. Learners will evaluate carcass composition, assign quality grades, and examine valued-added products. Learners will demonstrate knowledge of safety regulations and operate and maintain equipment and facilities. Learners will practice customer service and sales techniques while understanding the scope and importance of business regulations.</p>	CTA	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
011025	<p>Microbial Food Science and Safety Learners are introduced to the chemistry, bioengineering and microbiology involved in producing food products. Processes contributing to the appearance, taste, texture, and smell of food products will be explored. Learners will examine functional foods, value-added foods, organic foods and food additives. Contamination points from biological hazards and food allergens will be identified and preventive measures developed. Food laws, regulations and regulatory and commercial grading standards will be examined.</p>	CTA	—
011030	<p>Applications of Food Science and Safety Technology Learners will use principles and practices of food processing and packaging to develop solutions for problems in food production, handling and storage. Learners will examine heat preservation, cold processing, food irradiation, fermentation, milling, and hydrogenation processing techniques. Learners will examine the process of food product development and techniques used to measure food sensory aspects, shelf life and food stability. Learners will examine government regulation impact on labeling, new packaging technologies, harvesting, transportation, and the environment.</p>	CTA	—
012010	<p>Animal and Plant Biotechnology Learners will apply principles of chemistry, microbiology and genetics to plant and animal research and product development. They will describe the importance of biotechnology in society and analyze the issues that have affected agricultural biotechnology. Students will apply genetic principals to determine genotypes and phenotypes. Students will describe the parts and functions of animal and plant cells and their importance in biochemistry.</p>	CTA	—
012015	<p>Laboratory Techniques and Safety Principles and Practices of Bioscience Learners will demonstrate proper techniques and procedures that apply in a laboratory environment. They will examine the theory of application and will operate various analytical instruments. Students will apply current Good Laboratory Practice and Good Manufacturing Practices. Learners will demonstrate proper safety procedures used in the laboratory and abide by the compliance standards of regulatory agencies.</p>	CTA	—
012020	<p>Applications of Genetics of Plants and Animals Learners will explore the mechanisms of heredity and genetics through food, plant, and animal science. Students will examine DNA and chromosome structure, transcription and gene regulation; replication and cell division; patterns of inheritance; and genetic recombination mutations and their repair. Learners will apply molecular technologies to food, plant and animal research.</p>	CTA	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
012025	<p>Bioinformatics/Bioresearch Learners will be introduced to the basics of bioinformatics where they will employ mathematical, statistical and computational methods to process large amounts of biologically-derived information. The main techniques that will be examined related to sequence analysis are gene identification, genome sequencing, sequence comparison, and database searching. Students will apply biological principles to understand the application of bioinformatics algorithms and software.</p>	CTA	—
010125	<p>Animal and Plant Science Students will apply knowledge of animal and plant science to the agriculture industry. They will be introduced to the value of production animals relative to the agricultural marketplace. Students will engage in animal classification and selection, body systems, along with animal welfare and behavior in relation to the production of animals. Students will learn principles of plant anatomy and physiology, and the role of nutrition, deficiencies and growing environment on plant production. Throughout the course, business principles and professional skills will be examined.</p>	CTA	—
010130	<p>Global Economics and Food Markets Students will examine economic principles related to agriculture, food, and natural resources along with the operation and use of commodity futures and option markets. Students will learn economic principles with emphasis on their application to the solution of agricultural industry problems. They will examine future exchanges and commodity futures contracts, hedging strategies, as well as put and call options. Throughout the course, students will become familiar with the causes and consequences of economic growth, globalization and development.</p>	CTA	—
010945	<p>Animal Anatomy and Physiology Students will examine the structure and function of the major organ systems as well as the function and principle of blood flow in animals. Students will study internal and external anatomical parts, their functions, and will investigate the relationship among these parts and systems within the body of animal. Throughout the course, students will apply the internal functions of anatomical structures to the business and industry principles of the animal industry.</p>	CTA	—
010640	<p>Landscape Hardscapes Students will learn skills in constructing and installing hardscape features in a landscape. Topics include basic principles of building and implementing designs drawn and drafted from computer-aided designs and blueprints. Students will install artificial lighting, water systems, deck and creative concrete features on job sites. Throughout the course, business management practices, employability skills, and safety procedures will also be emphasized.</p>	CTA	—

Table 20. Career Field 02: Arts & Communications Codes (04xxxx, 34xxxx)

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
340001	<p>Arts and Communication Primer The worlds of art designers, performers, and media artists intersect historically, culturally and aesthetically. In this introductory course for the Arts and Communication Career Field, students learn the basics of performance, design, audio, and video. They review brochures, photographs, news stories, videos, and other products common to the visual, media and performing arts industries.</p>	CTA	—
340005	<p>Visual Design and Imaging Programs that focus on the creation, design, and execution of layouts and illustrations on various mediums including electronic media and the theory and processes of image transfer, including offset, flexography, lithography, photoengraving and other techniques. Communications, business principles and leadership skill development related to the industry are essential to the program. Specialization areas include commercial art and graphic occupations.</p> <p><u>FY17 will be the last year for this subject code; it will be deleted prior to FY18.</u></p>	CTA, TEC	—
340006	<p>Business of Arts and Communications A growing number of professionals make a living in industries related to arts and communications. From event management to tracking expenses, students learn the business side of visual, media, and performing arts. Topics include marketing, branding, producing, promoting, booking, budgeting and merchandising, etc. Students learn and apply intellectual property rights, licensing, copyright, royalties, liabilities, and contractual agreements. They learn how both profit and non-profit organizations businesses operate.</p>	CTA	—
340009	<p>Arts and Communication Capstone Students apply Arts and Communication program knowledge and skills in a more comprehensive and authentic way. Capstones are project/problem-based learning opportunities that occur both in and away from school. Under supervision of the school and through partnerships, students combine classroom learning with work experience to benefit themselves and others. These can take the form of mentorship employment, cooperative education, and internships.</p>	CTA	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
340010	<p>Principles of Arts and Communications A course focused on the fundamental principles and practices of image capture, audio and writing in Media Arts; creating and outputting illustrations for Visual Design and Imaging; and creating, interpreting and performing works for the Performing Arts all of which convey a message and stimulate thought. Business principles and leadership skill development related to the industry are essential to the program.</p> <p><u>FY17 will be the last year for this subject code; it will be deleted prior to FY18.</u></p>	CTA	—
340015	<p>Media Arts Programs that focus on the use of still and motion photography in journalism. Communications, business principles and leadership skill development related to the industry are essential to the program. Specialization areas include journalism, photography and digital media.</p> <p><u>FY17 will be the last year for this subject code; it will be deleted prior to FY18.</u></p>	CTA	—
340020	<p>Performing Arts Programs that focus on the creation, interpretation and performance of works that use auditory, kinesthetic, and visual phenomena to express ideas and emotions in various forms. Communications, business principles and leadership skill development related to the industry are essential to the program. Specialization areas include music, dance and theater.</p> <p><u>FY17 will be the last year for this subject code; it will be deleted prior to FY18.</u></p>	CTA	—
340110	<p>Media Arts Primer In this first course of the Media Arts pathway students will learn the basics of how to convey messages through journalism, commercial advertising, and marketing. They review the accuracy and impact of words and visuals used in news, advertisements, and commercials. They learn essential terminology and basic tools for delivering messages. They understand the content length, deadlines, and responsibilities of various delivery channels.</p>	CTA	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
340115	<p>Media Arts Writing Copy for news stories, technical journals, advertisements and social media has similarities and differences. This course focuses on creating and adapting content for multiple purposes with print, radio, TV and the Web. Students conduct and synthesize research and interviews to write persuasive and unbiased copy. They evaluate and edit text for purpose, style, space limitations, and accuracy. They accentuate messaging with design elements. Strategies to determine audience impact are engaged.</p>	CTA	—
340120	<p>Digital Image Editing This course focuses on manipulating images for final output through print and Web-based production. Students obtain a brief perspective on analog image editing and delve into the world of editing digital photos, illustrations and other artwork. They learn to adjust resolution and exposure, modify color, compress data, and format and manage files. Students will use problem-solving strategies and work collaboratively to complete the creative process with artists, printers and Web developers.</p>	CTA	—
340125	<p>Motion Graphics From script to storyboard and special effects, students develop products focused on a central theme and purpose. Using commercial and open-source digital animation software, they create an illusion of motion that extends beyond traditional frame-by-frame footage. They learn skills and techniques involving music, animation, text, voice, photos and videos. Products are adjusted for access through computers, mobile devices, game consoles, projectors, radio, and TV.</p>	CTA	—
340130	<p>Audio Broadcast Sound is essential to broadcast journalism and advertising. Students compare and contrast how sound alone and sound combined with visuals can entertain, inform, and initiate action. They generate content, record, edit, mix, and produce voice and music for airwaves, podcasts, and/or the internet. They adapt for analog and digital audio while adhering to Federal Communications Commission rules and regulations related to bandwidth and advertising.</p>	CTA	—
340135	<p>Musical Engineering Students put music theory and basic music skill into practice as they engineer sound for live and recorded production. They create, capture, edit, mix, and synchronize music into audio and video tracks of various formats. Topics include acoustics, reflection, absorption of sound and reverberation. Students create products based on research of audience sensitivity and need and do so in compliance with laws related to intellectual property and competition.</p>	CTA	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
340140	Video Broadcast This course focuses on video broadcast for the journalism industry. Skills attained include interviewing, image capture, color manipulation, audio and video blend, lighting and editing. Students critique news broadcasts and research content. They plan and shoot video for live and recorded use in a specific time slot while adhering to laws related to defamation, libel, copyright, and privacy.	CTA	—
340145	Video Production This course focuses on video production for commercial use. Students plan and coordinate work with clients to produce projects on a tight timeline. They learn how to read and interpret a script, select and maintain equipment and combine graphics, text and special effects. Skills attained include pre-production documentation and planning; in-production audio and video recording; and post-production editing and distribution.	CTA	—
340150	Photographic Composition Aesthetics and techniques are essential to producing a good photograph. This course focuses on capturing and manipulating images in digital photography with some skill development in darkroom film processing, printing, and enlarging. Topics include camera functions, mechanics of image capture, image manipulation, and print production. Students shoot photographs in various studio and indoor and outdoor settings.	CTA	—
340155	Photography Production Students advance their digital photographic knowledge and skill using camera raw files with a focus on commercial use and knowledge of production software. Emphasis is on creative expression and client communications to increase marketability of product. Topics include white balance, saturation, contrast and color correcting. Students apply copyright and fair use guidelines.	CTA	—
340160	Multi-Media Web Production The focus of this course is on merging different types of media on the Internet. Students combine text, still photography, audio, videography, and graphic arts to create interactive Web pages. They demonstrate creative, digital storytelling accessible from multiple platforms. Students learn project management and marketing. They learn how to create Web content that is accessible by individuals with visual disabilities.	CTA	—
340165	Digital Cinema Inspiration, technique, and trends are the focus of this single-camera, cinema-style course. Students engage in creative storytelling through concept development, scriptwriting, and storyboarding. They learn to achieve the look of film through lighting and camera technique as well as double-system audio capture. Legal and ethical aspects such as copyright and fair use guidelines are learned.	CTA	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
340210	<p>Performing Arts Primer In this first course for the Performing Arts pathway, students examine how music, dance and theatre disciplines connect to create a production. They compare and contrast different genre, social contexts, and cultural aspects of dance, music and theatre from early Greek to present day. They learn the role of stagecraft, including new and emerging technology.</p>	CTA	—
340215	<p>Dance Performing arts directors and choreographers look for dancer technical strength, preciseness, and ability to engage audiences. In this course, students develop physical stamina and fitness, musicality, expression and sequence retention while learning terminology for dance movement and for the industry. Through solo, ensemble, and improvisational movement, they interpret and communicate stories and feelings. Self-discipline, including emotional and nutritional health, is reinforced.</p>	CTA	—
340220	<p>Choreography The choreographer designs steps and routines. In this course, students critique choreographed works from multiple dance genres. Using this knowledge and research as well as understanding specific characteristics and movements of dance, they compose sequences into their own designs. They alter choreography in solo and/or ensemble work. They work with dancers to maximize aesthetic appeal for the audience while helping them manage physical and psychological demands of a performance.</p>	CTA	—
340225	<p>Acting and Script Analysis This course combines understanding of the relationship between actor and script. Students research major theatre genres and influences, breaking down a script to discover objectives, obstacles, tactics, and character development. They create a script with scenes, plot points, and characters. They learn acting techniques, including imagery, personal associations, and inner monologue. They perform a role within an original or established piece of work.</p>	CTA	—
340230	<p>Acting Performance Meeting expectations of the casting director and audience is critical to any successful performer. This course focuses on maximizing an actor's physical and emotional expression, vocal intonation, memorization, and imagination to convey stories and feelings. Whether spoken or sung, stylistic identity is reinforced. Other topics include material selection, developing a score of action for a role, sustaining a character and self and peer critique.</p>	CTA	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
340235	<p>Musical Concept From warm up skills to complex rhythmic and technical passages, students combine theory and technique to sing or play at least one musical instrument. They recognize different harmonic, rhythmic and melodic structures based on culture, era and style. They write, read and understand musical symbols. Other topics include scales and mode studies, dictation, transcriptions and. Students provide and receive performance critiques.</p>	CTA	—
340240	<p>Music Ensemble and Composition In this course, students compose music and perform in groups. They sight read music, blend and balance ensemble instrumental and/or vocal performance and respond to cues with an understanding of stage presence and choreography. They score an original musical piece using notation and sequencing software. Talent and self-confidence is strengthened through practice, social interaction, self/peer critique, and performance.</p>	CTA	—
340245	<p>Musical Theatre The troupe member with abilities in music, dance, and acting has “triple threat” value in musical theatre. In this course, students assume the roles of singer, instrumentalist, actor and dancer as well as director, stage manager, set designer and/or costume technician. Students learn to take, and give orders to accomplish tasks. They analyze historical and current-day exemplary models of musical theatre for story line, musical arrangement, and audience appeal.</p>	CTA	—
340250	<p>Stagecraft Creating the set, balancing the lights, projecting video and engineering the sound all help to accentuate the script and characters in a show. Students learn the skills of stagecraft through research, critique, and hands-on experience. They use technology, background design, makeup, and costuming to enhance overall production with a focus on the script and director vision.</p>	CTA	—
340255	<p>Stage Design and Construction This course focuses on design and construction of what the audience sees around actors. Students analyze scripts and budgets to determine appropriate sets. They create renderings and drawings by hand and through computer drafting programs to present the designer’s vision. They develop models, mock-ups, and final construction of scenery. In addition to construction techniques, they acquire workplace skills such as leadership, collaboration, and safety.</p>	CTA	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
340260	<p>Costuming and Makeup This course focuses on character design specific to makeup and costumes. Students research, render, and produce masks, hats, dresses, and other attire. They apply actor makeup and choose wigs or hairstyles aligned with a production script and/or purpose. Factors influencing character design are story line, director concept, relationships among characters, character movement, color, and stage lighting.</p>	CTA	—
340310	<p>Visual Design Primer Visual design takes the form of charts, drawings, boxes and more. In this first course for the Visual Design and Imaging pathway, students gain a perspective of symbols, typography and product output. They acquire basic knowledge of today’s role of graphics in communication industries. Focusing on the consumer, students analyze products and create their own designs for critique. They learn how safety, deadlines, teamwork, and ethics relate to the work.</p>	CTA	—
340315	<p>Visual Creation A keen eye for detail, art elements, design principles, and styles of art are essential to the world of visual communications. Students learn proper composition with such principles as color theory, typography, and drawing. They create designs targeted for the Internet and for two- or three-dimensional products while adhering to copyright laws and deadlines.</p>	CTA	—
340320	<p>Digital Print Design Starting with understanding target audiences, demographics, product shelf life and sustainability students create designs for two- or three-dimensional products. Using workflow processes, they lay out newsletters, posters, business cards and other products. They create logo and package designs for corporate branding, marketing, and advertising. Critical thinking is engaged in multiple-level critiques.</p>	CTA	—
340325	<p>Digital Media Art This course focuses on digital technology for products accessed through computers, mobile devices, game consoles, projectors, radio, and TV. Students apply techniques to digitize drawing, painting, and typography. They analyze the effects of single-color and multi-color output. They identify advantages and disadvantages of digital communications from philosophical, ethical, creative, and commercial output perspectives. Products are critiqued for design, production quality and customer impact.</p>	CTA	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
340330	Visual Distribution Students analyze customer preferences to determine product creation, production, and delivery. From a four-color vehicle wrap to a spot varnish that adds spark to an annual report cover, students learn techniques to enhance product uniqueness in the graphic arts industry. They compare the differences of customer impact between using traditional mass distribution to individual consumer targeting. Among strategies engaged are Variable Data Imaging (VDI), Quick Response (QR) codes and e-mail blasts.	CTA	—
340340	Advertising and Communication Creators and producers of graphic images must understand how to integrate and adapt creations for multiple marketing purposes. Students research and analyze the power of visuals in advertising campaigns and public relations events. Using the principles of advertising and visual communications, they develop strategies and products for specific purposes and audiences. They use logos, images, and type integrated strategically to create both printed and electronic products on a theme.	CTA	—

Table 21. Business Administration Courses. This includes courses from three career fields: 03–Business & Administrative Services (14xxxx); 07–Marketing (04xxxx); and 15–Finance (14xxxx).

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
Career Field 03: Business & Administrative Services Codes (14xxxx)			
140050	Introduction to Business and Administrative Services This career field course is based upon the Business and Administrative Services Career Field Technical Content Standards and includes content that crosses all pathways of the career field. It is the basics course that leads to specialization in one of the career pathways of Administrative and Professional Support, Legal Management and Support, Medical Management and Support, and Management. FY16 will be the last year for this subject code; it will be deleted as of FY17.	CTA, BUS, TEC	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
140075	<p>Interdisciplinary Career Field Business Concepts This course addresses business content specific to the various career fields and is addressed in a contextual manner. Content is based on business competencies, including business process and computer applications, within the career field technical content standards for the career field that serves as the anchor class. The course must be correlated to an anchor course in any career field except business and administrative services, finance, marketing, or information technology.</p> <p>FY16 will be the last year for this subject code; it will be deleted as of FY17.</p>	CTA, BUS	—
140300	<p>Administrative and Professional Support Based on a sequence of courses, students will be prepared for careers which support business operations through a variety of administrative duties including information and communication management, data processing and collection, and project tracking. Due to changes in technology, the skills required in administrative support careers have increased and correspond with that of a mid-level manager. Sample occupations within this pathway include: administrative assistant, customer service representative, executive assistant, office manager, and project coordinator.</p> <p>FY16 will be the last year for this subject code; it will be deleted as of FY17.</p>	CTA, BUS, TEC	—
140310	<p>Legal Management and Support Based on a sequence of courses, students will be prepared for careers which facilitate legal operations through a variety of management and administrative duties. Employees in this field are found in law firms, courts, court reporting firms, legal departments of corporate businesses, and government regulatory agencies. Sample occupations within this pathway include: legal office manager, legal assistant, legal secretary, paralegal, court administrator, compliance analyst, regulatory analyst.</p> <p>FY16 will be the last year for this subject code; it will be deleted as of FY17.</p>	CTA, BUS, TEC	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
140320	<p>Medical Management and Support Based on a sequence of courses, students will be prepared for careers which facilitate medical business operations, through a variety of management and administrative duties. Employees in this field are found in medical offices, hospitals, and insurance companies. Sample occupations within this pathway include: admissions specialists, benefits coordinators, medical billing specialists, medical records and health information technician, medical office manager, claims processor, and medical coding specialist.</p> <p>FY16 will be the last year for this subject code; it will be deleted as of FY17.</p>	CTA, BUS, TEC	—
140800	<p>Business Management Based on a sequence of courses, students will be able to plan, organize, direct, and evaluate all or part of a business organization (including their own) through the allocation and use of financial, human and material resources. Activities in which they are engaged include project management, business analysis, quality control, scheduling, procurement and warehousing, and activities related to staffing. Sample occupations within this pathway include: business analyst, chief operations officer, district manager, master scheduler, project manager, purchasing manager, small business manager/owner, supervisor, human resources generalist/manager, labor relations, manager, recruiter, training manager.</p> <p>FY16 will be the last year for this subject code; it will be deleted as of FY17.</p>	CTA, BUS, TEC	—
142210	<p>Legal Environment of Business Students will examine all aspects of business law including the judicial system, differences between types of laws and origins of laws, administrative and employment laws and laws impacting individuals as well as businesses. Students will also research real estate and debtor and creditor laws and regulations. Students will learn to support attorneys by conducting legal research, and preparing fully compliant legal documents. Compliance and contract law will be emphasized.</p>	CTA, BUS	—
Career Field 07: Finance Codes (14xxxx)			
140025	<p>Finance Career Field Course This career field specialization course is based upon the Finance CFTCS and includes content that crosses all pathways of the career field. It is the basics course that leads to specialization in one of the career pathways of Accounting or Financial Services.</p> <p>FY16 will be the last year for this subject code; it will be deleted as of FY17.</p>	CTA, BUS	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
140100	<p>Accounting (Career Technical) Prepares students for careers that record, classify, summarize, analyze and communicate a business's financial information and business transactions. Accounting includes such activities as bookkeeping, systems design, and analysis and interpretation of accounting information. Sample occupations include: certified public accounting (CPA), auditor, financial accountant, accounting clerk, treasurer, bookkeeper, forensic accountant, and international accountant.</p> <p>FY16 will be the last year for this subject code; it will be deleted as of FY17.</p>	CTA, BUS	—
140110	<p>Financial Services Prepares students for careers in banking, securities and investments, and insurance. Activities include accepting deposits, lending funds and extending credit, banking services, investments, mortgages and loans, investments, real estate, and insurance. Sample occupations include: loan officer, branch manager, investment banker, financial planner, bank teller, personal financial advisor, real estate broker, and credit analyst.</p> <p>FY16 will be the last year for this subject code; it will be deleted as of FY17.</p>	CTA, BUS	—
Career Field 15: Marketing Codes (04xxxx)			
040805	<p>Introduction to Marketing Broad preparation for careers that help identify and understand target audience needs and wants, generate demand, or get a good, service or idea to that audience. This can be the first course for all marketing, business administration or hospitality and tourism pathways.</p> <p>FY16 will be the last year for this subject code; it will be deleted as of FY17.</p>	CTA, BUS	—
040810	<p>Marketing Management Educational programs in marketing management prepare learners for careers requiring broad, cross-functional knowledge of marketing and management. These functions include supply chain management, marketing information management, pricing, product/service management, marketing communications, and selling.</p> <p>FY16 will be the last year for this subject code; it will be deleted as of FY17.</p>	CTA, BUS	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
040815	<p>Marketing Communications Preparation for careers that inform, remind, and/or persuade a target audience including advertising, public relations, and multimedia marketing communications.</p> <p>FY16 will be the last year for this subject code; it will be deleted as of FY17.</p>	CTA, BUS	—
041900	<p>Supply Chain Management Preparation for the strategic operation and management of marketing systems with emphasis on logistics components, including purchasing and warehousing.</p> <p>FY16 will be the last year for this subject code; it will be deleted as of FY17.</p>	CTA, BUS	—
042010	<p>Leadership Introductory, project based course that develops student understanding and skills in such areas as communications, emotional intelligence, self management, operations and professional development. This is a recommended first course for the High School of Business pathway.</p> <p>FY16 will be the last year for this subject code; it will be deleted as of FY17.</p>	CTA, BUS	—
042015	<p>Wealth Management Project based course that develops student understanding and skills in such areas as economic decision making, time value of money, financial management and types of investment. This is a recommended second course for the High School of Business pathway.</p> <p>FY16 will be the last year for this subject code; it will be deleted as of FY17.</p>	CTA, BUS	—
042020	<p>Principles of Business Project based course that develops student understanding and skills in such areas as business law, economics, financial analysis, human resources management, marketing, operations, information management, and strategic management. This is the recommended third course for the High School of Business pathway.</p> <p>FY16 will be the last year for this subject code; it will be deleted as of FY17.</p>	CTA, BUS	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
042025	<p>Principles of Economics Introductory, project-based course that develops student understanding and skills in such areas as consumer spending, government politics, economic conditions, legal issues, and global competition. This is the recommended fourth course for the High School of Business pathway.</p> <p>FY16 will be the last year for this subject code; it will be deleted as of FY17.</p>	CTA, BUS	—
042030	<p>Principles of Marketing Introductory, project-based course that develops student understanding and skills in the functional areas of marketing including channel management, marketing information management, marketing planning, pricing, product/service management, promotion and selling. This is a recommended fifth course for the High School of Business pathway.</p> <p>FY16 will be the last year for this subject code; it will be deleted as of FY17.</p>	CTA, BUS	—
042035	<p>Principles of Finance Project-based course that develops student understanding and skills in such areas as accounting and finance including financial statements, financial ratios, operating and overhead costs, internal controls, budgets and corporate financial data analysis. This is the recommended sixth course for the High School of Business pathway.</p> <p>FY16 will be the last year for this subject code; it will be deleted as of FY17.</p>	CTA, BUS	—
042040	<p>Principles of Management Project-based course that develops student understanding and skills in all areas of management including project management, human resources management, knowledge management, quality management, risk management and legal and ethical issues in management. This is the recommended seventh course for the High School of Business pathway.</p> <p>FY16 will be the last year for this subject code; it will be deleted as of FY17.</p>	CTA, BUS	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
042045	<p>Business Strategies Capstone course that requires extensive student decision-making to finalize marketing, financial and management plans and incorporate them into a business plan. This is the recommended final course for the High School of Business pathway.</p> <p>FY16 will be the last year for this subject code; it will be deleted as of FY17.</p>	CTA, BUS	—
044110	<p>Entrepreneurship Preparation for starting new ventures that create, power and change business activity meaning new markets, new products, new production methods and new businesses.</p> <p>FY16 will be the last year for this subject code; it will be deleted as of FY17.</p>	CTA, BUS	—
044100	<p>Introduction to Entrepreneurship Preparation for the early business stages of starting new ventures that create, power and change business activity meaning new markets, new products, new production methods and new businesses.</p> <p>FY16 will be the last year for this subject code; it will be deleted as of FY17.</p>	CTA, BUS	—
<p>The following courses can be a part of any of the three business administration career fields: 03–Business & Administrative Services (14xxxx); 07–Marketing (04xxxx); and 15–Finance (14xxxx).</p>			
141000	<p>Business Foundations This is the first course for the Business and Administrative Services, Finance, and Marketing career fields. It introduces students to specializations within the three career fields. Students will obtain knowledge and skills in fundamental business activities. They will acquire knowledge of business processes, economics, and business relationships. Students will use technology to synthesize and share business information. Employability skills, leadership, communications, and personal financial literacy will be addressed.</p>	CTA, BUS	—
141005	<p>Business Applications and Economics Students will develop fundamental knowledge and skills in business administration. They will examine business activities, business processes, and forms of business ownership. Students will acquire an understanding of economic principles such as supply and demand, division of labor, and competition. They will identify current trends, issues, and conditions impacting business and determine the impact of the global environment on business operations. Innovation, technology, leadership, and communications will also be addressed.</p>	CTA, BUS	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
141010	<p>Business Administration Marketing Students will obtain fundamental knowledge of marketing activities, including sales channels, marketing-information management, marketing research, market planning, marketing communications, pricing, product and service management, branding, and selling. They will conduct marketing research, identify target markets, conduct market and competitive analyses, forecast sales, set marketing goals, establish a marketing budget, and develop a marketing plan. Legal and ethical issues in marketing will be addressed. Employability skills, technology, leadership, and communications will be incorporated in classroom activities.</p>	CTA, BUS	—
141015	<p>Business Administration Finance Students will develop knowledge and skills in financial analysis, financial reporting, and corporate investments. They will predict corporate performance and select profitable investments using financial statements, ratio analysis, and other financial analysis techniques. They will calculate cash needs using the time value of money and track, record, and summarize a business’s financial transactions. Compliance, internal controls, business governance, and personal financial management will be addressed. Technology, employability skills, leadership, and communications will be emphasized.</p>	CTA, BUS	—
141020	<p>Business Administration Strategic Management Students will plan, actualize, and run a small business. They will define their business’s mission; develop the business’s vision, goals, and objectives; and create a business plan. Students will also develop a budget and recruit, interview, select, hire, and manage employees. They will examine legal and ethical issues associated with management as well as management functions, levels, and types. Project management technology, tools, and processes will also be emphasized.</p>	CTA, BUS	—
141025	<p>Management Principles Students will apply management and motivation theories to plan, organize, and direct staff toward goal achievement. They will learn to manage a workforce, lead change, and build relationships with employees and customers. Students will use technology to analyze the internal and external business environment, determine trends impacting business, and examine risks threatening organizational success. Ethical challenges, project management, and strategic planning will also be addressed.</p>	CTA, BUS	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
141030	<p>Strategic Entrepreneurship Students will use innovation skills to generate ideas for new products and services, evaluate the feasibility of ideas, and develop a strategy for commercialization. They will use technology to select target markets, profile target customers, define the venture’s mission, and create business plans. Students will take initial steps to establish a business; Students will calculate and forecast costs, break-even, and sales. Establishing brand, setting prices, promoting products, and managing customer relationships will be emphasized.</p>	CTA, BUS	—
141035	<p>International Business Students will evaluate global business strategies and market-entry methods for conducting business internationally. They will use technology to determine the impact of government, economics, geography, history, ethics, and digital communication tools on global trade. Management of sourcing and procurement, quality, distribution and supply chain in a global environment will be emphasized. Students will identify financing options for international operations. They will also analyze the competitiveness of U.S. companies in the international marketplace.</p>	CTA, BUS	—
142000	<p>Fundamentals of Business and Administrative Services This is the first course specific to the Business and Administrative Services career field. It introduces students to the specializations offered in Business and Administrative Services. Students will obtain fundamental knowledge and skills in general management, human resources management, operations management, business informatics and office management. They will acquire knowledge of business operations, business relationships, resource management, process management, and financial principles. Students will use technological tools and applications to develop business insights.</p>	CTA, BUS	—
142005	<p>Office Management Students will apply techniques used to manage people and information in a business environment. Students will learn to build relationships with clients, employees, peers, and stakeholders and to assist new employees. They will manage business records, gather and disseminate information, and preserve critical artifacts. They will also examine contracts, internal controls, and compliance requirements. Business office tools and applications will be emphasized.</p>	CTA, BUS	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
142010	<p>Legal Environment of Business Students will examine all aspects of business law including the judicial system, differences between types of laws and origins of laws, administrative and employment laws and laws impacting individuals as well as businesses. Students will also research real estate and debtor and creditor laws and regulations. Students will learn to support attorneys by conducting legal research and preparing fully-compliant legal documents. Compliance and contract law will be emphasized.</p>	CTA, BUS	—
142015	<p>Medical Office Management Students will carry out procedures used to manage people and information in medical offices. Students will code medical procedures in accordance with applicable guidelines as well as use technology to convert patient information to electronic medical records. They will also manage the insurance billing and collection process, utilize a patient scheduling and registration system, and develop a compliance program. Medical office safety and security will be emphasized.</p>	CTA, BUS	—
142020	<p>Operations Management Students will learn to plan, organize, and monitor day-to-day business activities. They will use technology to plan production activities, forecast inventory needs, and negotiate vendor contracts. Students will also calculate break-even, set cost-volume-profit goals, and develop policies and procedures to promote workplace safety and security. They will design sustainability plans and use lean and six sigma principles to plan for quality improvement. Corporate social responsibility, ethics, risk management, and compliance will be emphasized.</p>	CTA, BUS	—
142025	<p>Supply Chain Management Students will determine how to facilitate the flow of goods from the point of origin to the point of consumption. Students will utilize technology to track supply chains and measure their effectiveness and efficiency. They also will identify opportunities to improve service levels, quality, and costs through supply chains and select strategies for improving customer and supplier relationships. International business, business process analysis, project management, internal controls, and compliance will be emphasized.</p>	CTA, BUS	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
142030	<p>Logistics Management Students will develop plans and networks to move materials, information, products, and services through organizations. Students will analyze transportation cost structures and reverse logistics' costs. They will utilize technology to evaluate warehouse size and space layouts. Students will also design receiving and fulfillment processes and develop preventive maintenance schedules. Requirements for the treatment, storage, and disposal of hazardous materials will be emphasized. Project management techniques and international business will be examined.</p>	CTA, BUS	—
142035	<p>Human Resource Management Students will develop human resources strategies to obtain, retain, and effectively use talent throughout the organization. Students will utilize technology to create job applications, job descriptions, and job profiles to support the talent acquisition process. They will learn to recruit applicants, administer employment assessments, conduct background investigations, and make and communicate hiring decisions. Students will also develop employee handbooks and establish performance improvement processes. Rewards and recognition practices, relationship management and compliance will be addressed.</p>	CTA, BUS	—
142040	<p>Business Informatics Students will capture and use organizational knowledge and data to solve business problems and meet specific business needs. Students will select tools and techniques to facilitate knowledge sharing. They will also maintain and update knowledge management systems. They will examine business issues using business process analysis and complete data research and analysis using structured approaches and tools. Relationship management and project management skills will also be emphasized.</p>	CTA, BUS	—
142045	<p>Business and Administrative Services Capstone The capstone course provides opportunities for students to apply knowledge, attitudes and skills that were learned in a Business and Administrative Services program in a more comprehensive and authentic way. Capstones often include project-/problem-based learning opportunities that occur both in and away from school. Under supervision of the school and through community partnerships, students may combine classroom learning with work experience. This course can be delivered through a variety of delivery methods including cooperative education or internship.</p>	CTA, BUS	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
142050	<p>Medical Terminology for Business This course focuses on the development and use of a working medical vocabulary. Topics include medical terminology development, business relationships, compliance, and business practices. Students will use medical terminology for transcription, coding, and related medical management processes. Students will also focus on operation of a medical office and office-related skills.</p>	CTA	—
143000	<p>Finance Foundations This is the first course specific to Finance. It introduces students to the specializations offered in the career field. Students will obtain fundamental knowledge and skills in accounting, banking services, corporate finance, insurance, and securities and investments. They will acquire knowledge of financial analysis and application, business law and ethics, economics, international business and business relationships. Knowledge management and information technology will be emphasized. Employability skills, leadership, and communications will be incorporated in classroom activities.</p>	CTA, BUS	—
143005	<p>Financial Accounting Students will track, record, summarize, and report a business's financial transactions. They will develop financial documents, project future income and expenses, and evaluate the accuracy of a business's financial information. Students will also apply tools, strategies, and systems to evaluate a company's financial performance and monitor the use of financial resources. Technology, employability skills, leadership, and communications will be incorporated in classroom activities.</p>	CTA, BUS	—
143010	<p>Corporate Finance Students will manage policy and strategy for corporate budgeting, investment, and financial planning. They will calculate profitability, predict business success and the likelihood of failure, and compare business performance within and across industries. Students will also develop and track the achievement of financial goals. They will determine how to balance risk with return and select strategies for recovering from risky situations and disasters. Technology, employability skills, leadership, and communications will be incorporated in classroom activities.</p>	CTA, BUS	—
143015	<p>Managerial Accounting Students will use financial information to make strategic business decisions. They will monitor business profitability, measure the cost-effectiveness of expenditures, prepare budget and forecast reports, and set achievable business financial goals. Students will also use critical information on financial documents to determine risks to short-term and long-term business success. Technology, employability skills, leadership, and communications will be incorporated in classroom activities.</p>	CTA, BUS	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
143020	<p>Fundamentals of Financial Services Students will develop knowledge and skills needed in the banking, insurance, and investment industries. They will analyze banking products and services, determine ways in which insurance reduces risk, and calculate insurable losses. Students will also learn to sell financial products and build positive relationships with clients and colleagues. They will use financial ratios to evaluate company performance and select profitable investments for clients. Technology, employability skills, leadership, and communications will be incorporated in classroom activities.</p>	CTA, BUS	—
143025	<p>Financial Services Operations Students will plan, organize, and carry out day-to-day activities unique to the banking, insurance, and investment industries. They will learn to underwrite loan and insurance applications, handle problem accounts, and investigate and process insurance claims. Students will also evaluate risks faced by financial institutions and develop processes to promote ethically and legally compliant behavior throughout a banking, insurance, or investment company. Technology, employability skills, leadership, and communications will be incorporated in classroom activities.</p>	CTA, BUS	—
143030	<p>Finance Capstone The capstone course provides opportunities for students to apply knowledge, attitudes and skills that were learned in a Finance program in a more comprehensive and authentic way. Capstones often include project-/problem-based learning opportunities that occur both in and away from school. Under supervision of the school and through community partnerships, students may combine classroom learning with work experience. This course can be delivered through a variety of delivery methods including cooperative education or internship.</p>	CTA, BUS	—
144000	<p>Marketing Principles This is the first course in the Marketing career field. It introduces students to the specializations offered in Marketing. Students will obtain fundamental knowledge and skills in marketing communications, marketing management, marketing research, merchandising, and professional selling. They will acquire knowledge of marketing strategies, market identification techniques, employability skills, business ethics and law, economic principles and international business. Technology, leadership, and communications will be incorporated in classroom activities.</p>	CTA, BUS	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
144005	<p>Marketing Applications Students will develop and implement marketing strategies and techniques across marketing functions: channel management, marketing research, market planning, pricing, product-/service management, and branding. They will use marketing operations procedures and activities to ensure marketing’s efficiency and effectiveness. Students will generate, screen, and develop new product ideas. They will predict economic trends and conditions and determine how cultural intelligence can impact organizations. Technology, employability skills, leadership, and communications will be incorporated in classroom activities.</p>	CTA, BUS	—
144010	<p>Integrated Marketing Communications Students will create, execute, and evaluate promotional strategies and content for advertising, sales promotion, and publicity/public relations. They will apply project management techniques to guide and control promotional campaign development and execution. Students will incorporate motivation theories, branding techniques and design principles in communications with targeted audiences. They will plan and implement procedures to use marketing communications that mitigate image or brand-damaging issues. Technology, employability skills, leadership, and communications will be incorporated in classroom activities.</p>	CTA, BUS	—
144015	<p>Digital Marketing and Management Students will apply tools, strategies, and processes to communicate digitally with targeted customers. They will create, implement, and critique online advertising, email marketing, websites, social media, mobile marketing, search-engine optimization, video or images and podcasts/webcasts. Students will apply project management techniques to guide and control digital communications efforts. They will also create and repurpose content for use in digital environments. Technology, employability skills, leadership, and communications will be incorporated in classroom activities.</p>	CTA, BUS	—
144020	<p>Marketing Research Students will conduct qualitative and quantitative marketing research using primary and secondary data. They will gather, synthesize, evaluate, and disseminate marketing information for use in business decision-making or to address a specific marketing problem or issue. Students will apply project management techniques to guide and control marketing-research activities. They will use statistical techniques to evaluate marketing data. Technology, employability skills, leadership, and communications will be incorporated in classroom activities.</p>	CTA, BUS	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
144025	<p>Merchandising and Buying Students will determine what to buy, when to buy, how much to buy, and from whom to buy products for resale. They will develop a product mix and apply display and visual merchandising techniques. Students will also implement sales support activities, process sales, track products, and plan merchandise flow. Students will establish and grow positive customer relationships. Technology, employability skills, leadership, and communications will be incorporated in classroom activities.</p>	CTA, BUS	—
144030	<p>Professional and Technical Sales In this course, students will demonstrate sales processes and techniques used in a business-to-business environment. They will develop, grow, and maintain positive business relationships. Students will monitor trends and the business environment to determine the impact on their sales, customers, and competitors. They will negotiate and adjust prices and sales terms. Students will manage sales activities and territories. Technology, employability skills, leadership, and communications will be incorporated in classroom activities.</p>	CTA, BUS	—
144035	<p>Marketing Capstone The capstone course provides opportunities for students to apply knowledge, attitudes and skills that were learned in a Marketing program in a more comprehensive and authentic way. Capstones often include project-/problem-based learning opportunities that occur both in and away from school. Under supervision of the school and through community partnerships, students may combine classroom learning with work experience. This course can be delivered through a variety of delivery methods including cooperative education or internship.</p>	CTA, BUS	—

Table 22. Career Field 04: Construction Technologies Codes (17xxxx)

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
178000	<p>Construction <u>Technology–Core and Sustainable Construction</u> Students will learn principles in basic safety (10-hr OSHA), construction math, hand and power tool use and operation, blueprint reading, material handling, communication and employability skills. An emphasis will be placed on safe and green construction practices.</p>	CTA	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
178029	<p>Construction Capstone Students apply Construction Technologies program knowledge and skills in a more comprehensive and authentic way. Capstones are project/problem based learning opportunities that occur both in and away from school. Under supervision of the school and through partnerships, students combine classroom learning with work experience to benefit themselves and others. These can take the form of mentorship employment, cooperative education, or internships.</p>	CTA	—
178001	<p>Carpentry and Masonry Technical Skills This first course in the pathway will introduce to students the materials, methods, and equipment used in carpentry and masonry. Students will organize a project work sequence by interpreting plans and diagrams within a construction drawing set. They will lay out and install basic wall, floor and roof applications. Students will perform introductory concrete applications including formwork, reinforcement, mixing, and finishing. Current advancements in technology, safety, applicable code requirements and correct practices are learned.</p>	CTA	—
178003	<p>Structural Systems Students will learn procedures and techniques required for layout and framing of walls and ceilings, including roughing-in door and window openings, constructing corners and partitions; bracing walls and ceilings; and applying sheathing. Students will learn methods of roof, cold formed steel, and wood stair framing. Students will learn site and personal safety, material properties, design procedures, and code requirements for structural systems.</p>	CTA	—
178004	<p>Structural Coverings and Finishes This course will address applications of interior and exterior finish work. Students will identify material properties and select for appropriate application. Students will install thermal and moisture protection including roofing, siding, fascia and soffits, gutters, and louvers. Students will install drywall; trim-joinery and molding and apply wall, floor and ceiling coverings and finishes. Throughout the course, the safe handling of materials, personal safety, prevention of accidents and the mitigation of hazards are emphasized.</p>	CTA	—
178005	<p>Masonry-Brick and Block The focus of this course will be on the technical aspects of masonry with emphasis on developing introductory skills in laying block and brick. They will learn the physical attributes of masonry materials and the tools required in masonry construction. Students will learn the principles necessary to construct structures with a variety of brick and block materials. Throughout the course, the safe handling of materials and personal safety are emphasized.</p>	CTA	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
178006	<p>Concrete and Residential Masonry In this course, students will learn to read and interpret construction plans and drawings for masonry applications. They will learn to select materials based on physical attributes and job requirements. Students will set grades and construct forms, for concrete foundations, footings, and retaining walls. They will mix, reinforce, pour and finish concrete in various residential and commercial applications.</p>	CTA	—
178002	<p>Mechanical, Electrical and Plumbing Systems Students learn physical principles and fundamental skills across mechanical systems in construction. Students will select materials, assemble, and test basic electrical circuits. Students will select materials and assemble simple copper and plastic plumbing applications for both supply and drains. They will perform simple maintenance of electric motors, electric fixtures and plumbing fixtures. Students will be able to select and install basic ductwork components and learn the operation and maintenance of heating and cooling equipment.</p>	CTA	—
178007	<p>Construction Electrical Systems This introductory electrical course will emphasize electrical theory, materials, equipment. Students will explore the National Electrical Code and learn worksite safety. They will interpret schematics; construct basic circuits, use test equipment and electrical hand and power tools.</p>	CTA	—
178008	<p>Residential Electrical Systems This course will emphasize electrical theory, materials, equipment and general methods used in residential construction. Students will navigate the National Electrical Code, learn worksite safety and understand licensing and permitting requirements. They will interpret plans and job specifications and calculate loads and service requirements. Students will install, test and repair receptacle outlet, lighting and small appliance circuits. They will understand circuit protection concepts and install a subpanel. Specialty circuit installation will be addressed.</p>	CTA	—
178009	<p>Commercial and Industrial Construction Electrical Systems Students will plan and install electrical systems in commercial settings. Students learn worksite safety and understand permitting requirements. Students interpret plans and job specifications and calculate loads and service requirements. Students install, test and repair receptacle outlet, lighting and equipment circuits. They will understand circuit protection concepts and be able to install entrance panels. Specialty commercial circuit installation will be addressed. Students apply operating principles to the installation and troubleshooting of motors and controls.</p>	CTA	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
178010	<p>Pipefitting and Plumbing Systems This course will emphasize the physical principles, general methods, materials and equipment used in the plumbing and pipefitting. Students will learn worksite safety and understand licensing and permitting requirements. They will interpret plans and job specifications and calculate service requirements. Students will rough in water supply and drainage lines following plumbing codes and municipal building standards. Additionally, students will install and maintain plumbing fixtures.</p>	CTA	—
178011	<p>Residential and Commercial Plumbing Systems This course focuses on the advanced residential and commercial plumbing systems. Students will plan, install, and maintain water supply, wastewater and fuel supply components following codes and municipal building standards.</p>	CTA	—
178012	<p>Heating and Cooling Systems Students will apply principles of heating and cooling to the installation, troubleshooting and maintenance of residential and commercial Heating, Ventilation, and Air conditioning/Refrigeration (HVAC/R) Systems.</p>	CTA	—
178013	<p>HVAC Refrigeration Students will install, troubleshoot and service residential and commercial refrigeration systems. Students will learn laws of thermodynamics, pressure and temperature relationships, the refrigeration cycle, and refrigerant management. Students will address hydronic systems, chilled water systems, package units, and cooling towers.</p>	CTA	—
178014	<p>Sheet Metal The fundamentals of the sheet metal trade are the emphasis of this course. Students will learn components of a ductwork system and use architect and engineer’s scales to read and interpret construction drawings for material calculations and selection. Students will layout sheet-metal patterns using parallel line, radial line, and triangular development procedures. Students will, also fabricate edges, joints, seams, and notches; seal and insulate; and install ductwork systems and accessories.</p>	CTA	—
178015	<p>Telecommunications/Low Voltage Systems Students will apply knowledge of regulatory codes and operating principles to the installation and service of low voltage communications and alarm systems. Students will read and interpret electronic circuit diagrams, specifications, engineering drawings, and service manuals. Students will use measuring and testing instruments to locate circuit and component faults, and to calibrate and test systems. Additionally, students will identify components, layout, install and verify operation of security and access control systems.</p>	CTA	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
178016	<p>Alternative Power Generation Systems Students will learn the technology and applications of solar and wind energy with an emphasis on installation and service processes. Content includes identifying the functions of photovoltaic, standby power and electric storage systems. Students will perform battery maintenance and implement principles and guidelines of energy analysis needed to carry out effective energy audits in accordance with standards and codes.</p>	CTA	—
178017	<p>Powerline/Hi-Voltage Power Transmission This course focuses on the principles of hi-voltage power transmission. Students use code to build, maintain and repair both above-ground and belowground electrical transmission systems. Students will apply specific rigging techniques and equipment to field situations. Emphasis is placed on safety around high voltage equipment.</p>	CTA	—
178018	<p>Construction Safety and Crew Leadership This course covers OSHA standards (30-hr OSHA) and requirements as they apply to the construction industry and crew/project management. Topics include safety and health hazards, safe practices, construction safety management, and crew management. Emphasis is on hazard identification, avoidance, control and prevention.</p>	CTA	—
178019	<p>Plan Reading Students learn blueprint reading as it relates to the architecture and construction. Students will use scaling, orthographic projections, dimensioning practices, symbols, notations, and abbreviations to perform area calculations and to interpret floor plan, section, and elevations. Using construction plans, students will identify problems or shortcomings related to the layout and installation of materials for the project.</p>	CTA	—
178020	<p>Architecture Design – Structural and Mechanical/Electrical/Plumbing Students will use architecture design principles to organize and arrange structures to create a perspective of a building. Students will use orthographic/pictorial projection, freehand technical sketching and computer-aided drafting (CAD) skills to generate floor and wall plans, elevations, sections, details and schedules. Students will develop sets of structural framing and mechanical working drawings that include plumbing, HVAC and electrical power and lighting plans.</p>	CTA	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
178021	<p>Architecture Design – Site and Foundation Plans Students use advanced architectural design concepts to construct design models including perspective drawings for final presentations. Students use orthographic/pictorial projection, freehand technical sketching and computer-aided drafting (CAD) tools to create site foundation and section plans that include topographical details and schedules. Additionally, students perform zoning analysis, develop preliminary plot plans, and construct grading and utilities plans that include legal descriptions and cut and fill volumes.</p>	CTA	—
178022	<p>Construction Management This course provides an integrated look at balancing the planning, estimating, and directing of construction operations. Students learn the process of creating and monitoring a construction project including standard agreements, bidding, estimates and project schedules. Students will learn to manage change orders, accident prevention and loss control, closeouts, and claims with an emphasis in production and quality control. Additionally, students will apply leadership, communications, and problem solving skills to construction management.</p>	CTA	—
178023	<p>Remodeling/Renovation Students will apply structural and mechanical skills to remodeling and renovations. Also, students will learn the process of securing the required building permits, the management of subcontractors, and the coordination of formal building inspections. Students will troubleshoot design or logistics issues and provide possible solutions. Throughout the course, the safe handling of materials, personal safety, prevention of accidents and the mitigation of hazards are emphasized.</p>	CTA	—
178024	<p>Facility and Building Maintenance Students are introduced to the maintenance and management processes used in public buildings and industrial facilities. Students will troubleshoot building and systems issues and provide solutions following applicable procedures and standards. Students will operate and maintain machinery and equipment used in grounds and facilities maintenance tasks. Throughout the course, the safe handling of materials, personal safety, prevention of accidents and the mitigation of hazards are emphasized.</p>	CTA	—
178025	<p>Custodial Services Students select and use the tools and equipment required for maintaining the safety and sanitation of building environments. Students select and apply methods, chemicals and equipment used to clean and maintain resilient, natural, synthetic and special surfaces. Students perform routine and renovation cleaning activities in both common and special service areas with an emphasis in client satisfaction. Additionally, students follow standard safety practices and procedures.</p>	CTA	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
178026	<p>Heavy Equipment Operations Students perform heavy equipment operating techniques and perform operator level maintenance. Students will learn to survey using lasers, transits and machine control systems. Additionally, students learn the techniques and processes for clearing, grubbing, stripping, excavating, backfilling, stockpiling, and cutting and spreading of fill material. Throughout the course, safety is emphasized.</p>	CTA	—
178027	<p>Construction Site Preparation Students use surveying, topographic, satellite positioning, and geometric instruments to locate and prepare a site for construction. Students establish lot and building lines as well as grade levels, and use site plans and elevation drawings to determine excavation needs. Students locate and mark underground and overhead services, identify soil conditions that may require shoring and position batter boards. Additionally, students identify the parameters for site selection, zoning regulations, and the process for filing building permits.</p>	CTA	—
178028	<p>Interior Design Students learn principles and elements of design as they relate specifically to interior spaces. Students develop functional and aesthetic design concepts with an emphasis in providing design solutions. Students select materials for appropriateness, quality, performance, and cost for interior applications. Students use presentation techniques, technical drawings and other visual materials to enhance and present interior designs.</p>	CTA	—
178040	<p><u>Fundamentals of Architecture and Construction</u> <u>In this first course in the career field students will be introduced to the basic principles of architecture and construction. During this course students will read and create construction drawings and use hand tools to create basic construction projects and models. Throughout the course, students will use hands-on skills and procedures in a laboratory setting. Additionally, students will investigate career opportunities in construction and architecture related fields.</u></p>	CTA	=
178030	<p><u>Principles of Woods Construction</u> <u>Students will engage in the introductory skills utilized in working with various wood construction materials. They will learn to use basic measuring tools, hand tools and machines, common to the wood industry, to construct basic projects. Additionally, students will examine various wood construction materials and their properties. Throughout the course, students will learn components of site and personal safety.</u></p>	CTA	=

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
178031	<p><u>Principles of Metals Construction</u> <u>Student will engage in the introductory skills utilized in working with metal construction materials. They will use basic measuring tools, hand tools and machines, common to the metal building and HVAC industry, to construct basic projects. Additionally, students will examine various metal construction materials and their properties. Throughout the course, students will learn components of site and personal safety.</u></p>	CTA	=

Table 23. Career Field 05: Education & Training Codes (35xxxx)

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
350001	<p>Introduction to Education and Training Provides options for students to explore Education and Training career field to allow students to pursue the career pathways.</p> <p><u>FY18 will be the last year for this subject code; it will be deleted prior to FY19.</u></p>	CTA	—
350011	<p>Teaching Professions Major career courses to prepare students for entry level, technical and professional career option within the teaching professions.</p> <p><u>FY18 will be the last year for this subject code; it will be deleted prior to FY19.</u></p>	CTA	—
350201	<p>Early Childhood Education Preparation for employment in childcare services, child development, and early childhood education within the childcare and guidance industries.</p> <p><u>FY18 will be the last year for this subject code; it will be deleted prior to FY19.</u></p>	CTA	—
350002	<p><u>Foundations of Education and Training</u> <u>In this first course to the career field, students will compare the merit of educational and training models to the evolving knowledge base of research and theory that is used to guides practice. They will describe how historical perspectives, economics, politics, and governance that impact the current learning environment. Additionally, students will identify the principles that guide instructional paradigm shifts from the instructor-led to learner-directed instruction, accountability reform, and uses of technology in curriculum design and delivery.</u></p>	CTA	=

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
350035	<p><u>Child and Adolescent Development</u> <u>Students will apply the theoretical foundations of human growth and development that will enhance work with learners. Through observation, the student will determine the learner’s stages of social, emotional, and physical development. They will apply linguistic principles and practices in the development of language skills, determine stage of literacy development and implement strategies that support the learner’s formal and informal educational readiness.</u></p>	CTA	=
350030	<p><u>Classroom Management</u> <u>Students will apply developmentally appropriate techniques to advance learners’ social and emotional growth. They will create classroom environments to maximize the learning potential of each learner. Students will develop intervention strategies, utilize conflict resolution principles and involve the stakeholders in the development of individualized behavioral plans. Emphasis will be given to establishing SMART goals for student’s self-evaluation to create a student-centered-learning environment.</u></p>	CTA	=
350235	<p><u>Curriculum and Instruction for Early Childhood Education</u> <u>Students will apply developmentally and intellectually appropriate pedagogies that promotes physical, cognitive and emotional growth. They will determine curricular goals, create lesson plans, and employ observation and assessment strategies. Application of foundational principles of reading, writing, speaking, and listening skills to enhance the learner’s application of literacy will be emphasized.</u></p>	CTA	=
350020	<p><u>Curriculum and Instruction for Teaching Professions</u> <u>Students will apply developmentally and intellectually appropriate pedagogies that promotes physical, cognitive and emotional growth. They will determine curricular goals, create lesson plans, and employ observation and assessment strategies. Students will learn to maintain professional identity while applying technology concepts, protocol and practices that impacts the learner’s digital footprint will be emphasized. In addition, students will develop online instruction using learning management system platforms.</u></p>	CTA	=

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
350015	<p><u>Educational Assessment</u> <u>Student will utilize assessment data, to develop and improve curriculum and instruction that helps the learner obtain educational readiness and mastery. They will compare assessments for their purpose, value and use and align intervention strategies to assist learners with testing. In addition, students will develop assessments that align performance objectives and delivery model tools using knowledge domains. Emphasis will be given to using assessment as an effective medium for communications between the instructor and the learner.</u></p>	CTA	=
350400	<p><u>Education and Training Capstone</u> <u>Students apply Education and Training program knowledge and skills in a more comprehensive and authentic way. Capstones are project/problem-based learning opportunities that occur both in and away from school. Under supervision of the school and through partnerships, students combine classroom learning with work experience to benefit themselves and others. These can take the form of mentorship employment, cooperative education, apprenticeships and internships.</u></p>	CTA	=
350230	<p><u>Health, Safety and Nutrition</u> <u>Students will apply principles and practices for creating a productive learning environment that promotes positive interactions for students, staff, and stakeholders. They will identify signs and symptoms of common health issues and diseases and establish policies to promote healthy well-being. Students will identify signs, symptoms and impact of physical and mental abuse and connect to the organizations and agencies committed to providing services and treatment.</u></p>	CTA	=
350210	<p><u>Infant and Toddler Education</u> <u>Students will use principles and philosophies to create a framework that supports an effective and responsive learning environment that is age-appropriate to promote the growth and development of infants and toddlers. Regulations and guidelines impacting preschools and daycares will be emphasized. Students will learn to apply effective communication channels that build relationships between the educational environment, families, and communities.</u></p>	CTA	=

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
350205	<p><u>Early Childhood Education Principles</u> <u>In this first course to the pathway, students will research the historical perspectives and theories of early childhood education used in the forming of their own personal educational philosophy. Students will assess legal, ethical and organizational issues. Additionally, students will assess developmental appropriate practices and identify challenging issues associated with the teaching of young children with diverse needs. Career planning, professional guidelines and ethical practices will also be emphasized.</u></p>	CTA	=
350010	<p><u>Education Principles</u> <u>In this first course to the pathway, students will research the historical perspectives and theories of education used in the forming of their own personal educational philosophy. Students will assess legal, ethical and organizational issues. Additionally, students will assess developmental appropriate practices and identify challenging issues associated with the teaching children with diverse needs. Career planning, professional guidelines and ethical practices will also be emphasized.</u></p>	CTA	=
350215	<p><u>Early Childhood Education Language and Literacy</u> <u>Students will implement instructional strategies to develop young children’s reading, writing, listening and speaking skills. They will assess learners’ reading ability, establish reading goals and analyze writing samples for comprehension and understanding. The importance of early exposure to reading and writing will be emphasized.</u></p>	CTA	=
350220	<p><u>Early Childhood Education Observation and Assessment</u> <u>Students will use formal or informal observations and diagnostics testing to recognize the learner’s goal attainment and align strategies and interventions to meet educational readiness. They will use screening techniques to determine social and emotional growth that will promote reading, writing, speaking and listening skills to assess the learner’s transition. The role of assessment data in developing suitable teaching responses and strategies will be examined.</u></p>	CTA	=
350225	<p><u>Communities, Schools and Stakeholders</u> <u>Students will establish activities that promote positive interactions, stakeholder collaboration, and learning opportunities that promotes active engagement. Students will learn techniques that promote the establishment of stakeholder collaboration when identifying community resources that supports learner’s informal education, creates a culturally compatible learning environment and supports global perspectives when enhancing opportunities for enrichment. Working with socially, culturally, linguistically diverse families will be emphasized.</u></p>	CTA	=

Table 24. Career Field 06: Engineering & Science Technologies Codes (17xxxx)

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
175001	<p>Engineering Design The focus of Engineering Design is the application of the engineering design process. Topics include work-processes, optimization methods, design optimization, and risk management tools. Students will use 2D and 3D modeling software to help them design solutions to solve proposed problems, document their work, and communicate solutions. Additionally, students will interpret industry prints, and create working drawings from functional models. Emphasis is given to experimental problem solving in real systems.</p>	CTA	—
175002	<p>Engineering Principles This course will introduce students to fundamental engineering concepts and scientific principles associated with engineering design applications. Topics include mechanisms, energy, statics, materials, and kinematics. Additionally students will learn material properties and electrical, control and fluid power systems. Students will learn to apply problem solving, research and design skills to create solutions to engineering challenges.</p>	CTA	—
175003	<p>Manufacturing Operations Students will learn the production processes applied across manufacturing operations. Students will be able to demonstrate a broad array of technical skills with an emphasis given to quality practices, measurement, maintenance and safety.</p>	CTA	—
175004	<p>Robotics Students will apply the knowledge and skills necessary to program and operate Robots, using the teach pendant as the main interface point. The Students will learn robotic operations and system configurations. Students will code, compile, and debug programs using the robotic programming language.</p>	CTA	—
175005	<p>Aerospace Engineering This course will introduce students to the evolution of flight, navigation and control, flight fundamentals, aerospace materials, propulsion, space travel, and orbital mechanics. Students will learn and apply principles of aerospace design and construction to aircraft, rockets and spacecraft.</p> <p><u>FY17 will be the last year for this subject code; it will be deleted prior to FY18.</u></p>	CTA	—
175006	<p>Computer Integrated Manufacturing In this course students will be introduced to all aspects of computer integrated manufacturing. They will learn about robotics and automation, manufacturing processes, computer modeling, manufacturing equipment, and flexible manufacturing systems.</p>	CTA	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
175007	<p>Digital Electronics Students are introduced to the process of combinational and sequential logic design. The system uses a precise sequence of discrete voltages, representing numbers, non-numeric symbols or commands for input, processing, transmission, storage, or display. Engineering standards and methods for technical documentation will also be learned.</p>	CTA	—
175008	<p>Mechanisms and Drives Students will learn the principles and practices of machine operation and machine applications. They will learn will learn how machine components such as gears, belts, sprockets, bearings, clutches, couplings, springs, etc. contribute to the application for which the machine is designed. They will also examine the basic drives of such mechanisms as electric motors and hydraulic & pneumatic actuators.</p>	CTA	—
175009	<p>Engineering Capstone The capstone course provides opportunities for students to apply knowledge, attitudes and skills that were learned in Engineering program in a more comprehensive and authentic way. Capstones often include project/problem based learning opportunities that occur both in and away from school. Under supervision of the school and through community partnerships, students may combine classroom learning with work experience. This course can be delivered through a variety of delivery methods including cooperative education or internship.</p>	CTA	—
175011	<p>DC and AC Electronic Circuits Students will learn the fundamental principles of electricity with emphasis on DC (direct current) circuits and an introduction to AC (alternating current) circuits. They will use concepts of Ohm’s Law, the Power Formula, and Kirchoff’s Laws with series, parallel, and series-parallel circuit applications. The relationship between electricity and magnetism and motor theory will also be introduced. The student will use and maintain digital multimeters and oscilloscopes.</p>	CTA	—
175012	<p>Analog Based Electronic Devices Students are introduced to semiconductor diode applications, other two-terminal devices, thyristors, transistors and field effect transistors. Course includes design and analysis of transistor and FET DC bias circuitry. Operational characteristics and applications of FET and diode switching circuitry are studied. Students will examine rectifier circuits, amplifier circuits and zener voltage regulation. Emphasis is on component testing and troubleshooting.</p>	CTA	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
175015	Pre-Engineering <u>Technologies</u> (Middle Level) Students in the pre-engineering programs acquire knowledge and skills in problem solving, teamwork and innovation. Students explore STEM careers as they participate in a project-based learning process, designed to challenge and engage the natural curiosity and imagination of middle school students. Teams design and test their ideas using modeling, automation, robotics, mechanical and computer control systems, while exploring energy and the environment.	CTA	—
<u>175017</u>	<u>Engineering Logic</u> <u>Students will apply the processes of digital circuit theory, combinational and sequential logic as it relates to circuit design and operation. Students will identify numbering systems, arithmetic and Boolean operations and apply simplification methods. Emphasis will be given to the analysis of wiring schematics and diagrams for accuracy and function. In addition, students will use electronic components to construct and troubleshoot digital circuits.</u>	<u>CTA</u>	<u>—</u>

Table 25. Career Field 08: Government and Public Administration Codes (360230)

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
360230	Government and Public Administration Students will focus on those careers that are inherent to government, as well as other career fields that are utilized in a government and public administration context.	CTA	—

Table 26. Career Field 09: Health Science Codes (07xxxx)

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
072001	Health Science and Technology This first course in the career field provides students an overview of the opportunities available in the healthcare industry. Students will learn fundamental skills in effective and safe patient care that can be applied across a person’s lifespan. They will also be introduced to exercise science and sports medicine, the field of biomedical research and the importance of managing health information.	CTA	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
072000	<p>Exercise and Athletic Training In this, first course students will apply procedures and techniques used in athletic training and in the care and rehabilitation of athletic injuries and therapeutic exercise. Topics include injury prevention, conditioning, and wound care techniques of the musculoskeletal system. Students will learn techniques in the analysis of mechanical factors related to human movement. In addition, current trends, technology, legal considerations, and the role of exercise science in relationship to other health fields will be emphasized.</p>	CTA	—
072005	<p>Bio-Statistics in Exercise Science and Sports Medicine Students will use fundamental qualitative analysis to study the human body's responses to exercise. Topics include respiratory response to exercise, metabolism and energy production, body composition, healing rate of tissues, and cardiovascular conditioning. Students will use therapeutic exercise and the application of modalities to restore or facilitate normal function or development. Developing and implementing exercise test protocols, and emergency procedures will be emphasized.</p>	CTA	—
072010	<p>Exercise Physiology and Biochemistry Students will learn to critically evaluate acute and chronic conditions associated to the human body's responses to exercise. Students will pre-screen individuals to identify the benefits and risks associated with physical activity. Students will coordinate exercise tests in order to measure body compositions, cardiorespiratory fitness, muscular strength/endurance, and flexibility. Emphasis is placed on developing conditioning programs that address pre-assessment needs, enhance mobility and build muscle strength.</p>	CTA	—
072015	<p>Nutrition and Wellness Students will increase their knowledge of comprehensive health and wellness. Students will be able to identify the components of fitness and communicate the relationship between physical fitness, physical performance, injury prevention, and nutritional intake. Students will evaluate an individual's state of nutrition based upon the impact of personal choices and social, scientific, psychological and environmental influences. Further, students will calculate an individual's kilocalorie burn rate and recommend an ideal diet and physical fitness plan.</p>	CTA	—
072020	<p>Fitness Evaluation and Assessment Students will complete comprehensive fitness evaluations and develop individualized training programs. Students will administer lab and field tests of cardiovascular endurance, body composition, joint flexibility and muscular strength, power, and endurance. Emphasis is placed on assessing body composition, neuromuscular flexibility, agility, balance, coordination, and proprioception. Additionally, students will identify components of physical fitness and communicate how physical activity impact health and wellness.</p>	CTA	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
072025	<p>Athletic Injuries and Prevention Students will identify signs and symptoms of injury and apply emergency procedures and techniques used in the immediate care of athletic-related trauma. Students will learn clinical and field evaluative processes, injury prevention techniques, conditioning techniques, treatment, taping, bracing, and rehabilitation of musculoskeletal injuries and conditions. Students will design and implement conditioning programs, including nutritional considerations and ergogenic aids. Emphasis is placed on the synthesis of information gathered through injury history, observation, and manual muscle testing.</p>	CTA	—
072030	<p>Sports Exercise Psychology Students apply practical and theoretical information as it relates to psychology of sport. Students analyze the reciprocal relations among physical activity, exercise behavior, and biochemical and physiological adaptation. Topics include theories of behavior change, exercise psychology interventions, and the relationship between exercise and mental health. Further, students will identify psychosocial determinants and effects associated with adopting and maintaining an exercise program and develop strategies for promoting optimal performance in athletes.</p>	CTA	—
072035	<p>Principles of Allied Health In this, first course students will apply knowledge and clinical skills necessary to assess, plan, provide, and evaluate care to patients in varied healthcare settings. Students will apply first aid principles and techniques needed for response to choking, cardiopulmonary resuscitation, and other life-threatening emergencies. Emphasis will be placed on regulatory compliance, patient safety, pathophysiology, and medical interventions. Additionally, this course introduces psychomotor skills needed to assist individuals in meeting basic human needs.</p>	CTA	—
072040	<p>Human Anatomy and Physiology In this course, students will demonstrate knowledge of body systems with emphasis on the interrelationships between structure and physical function. Students will analyze and evaluate how the body systems respond to physical activity, disease, and aging. Students will use data acquisition software to monitor abnormal physiology and body functions (e.g., muscle movement, reflex, respiratory, and voluntary actions). Further, students will analyze descriptive results of abnormal physiology and evaluate clinical consequences.</p>	CTA	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
072045	<p>Human Pathophysiology In this course, students will identify the causes, processes, and changes in body organs and tissues that occur with human illness. Topics include identification of clinical characteristics and effects of diseases, mechanisms causing alterations in cellular activity, maintenance of cellular tissue oxygenation, fluid and electrolyte balance, neuroendocrine control of the body, and diagnostic methodology. Students will interpret and use clinical data and patient health history to assemble a comprehensive health assessment.</p>	CTA	—
072050	<p>Patient Centered Care Students will apply psychomotor nursing skills needed to assist individuals in meeting basic human needs. Students will implement interventions following a nursing assistant plan of care. Students will collect patient’s vital signs including temperature, pulse rate, respiration rate, and blood pressure. Students will perform phlebotomy procedures with emphasis on infection prevention, universal precautions, proper patient identification, specimen acquisition, handling, and processing. Additionally, students will observe patients’ physical, mental, and emotional conditions and document any change.</p>	CTA	—
072055	<p>Patient Centered Care and Diagnostics In this course, students establish and implement treatment plans while providing primary nursing care. Topics include pharmacology, phlebotomy, mental health nursing and acute care nursing. Students use diagnostic techniques to develop patient health assessments. Emphasis is placed on the synthesis of information gathered through health history, observation, and the detection of deviations and variations from normal physical characteristics. In addition, students learn the legal and ethical principles needed to function within the scope of practice.</p>	CTA	—
072060	<p>Lifespan Development and Medical Intervention Students gain necessary skills and knowledge to meet the needs of individuals from infancy through the human life cycle in a safe, legal, and ethical manner using the nursing process. Topics include physical, psychological, and cultural variations associated with maturing and aging. Emphasis will be placed on regulatory compliance, patient assessment, patient safety, and medical interventions. Additionally, students use psychomotor nursing skills to assist in day-to-day patient care activities.</p>	CTA	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
072065	<p>Mental Health Students learn contemporary mental health theories related to psychiatric disorders and mental diseases. Students will differentiate between stress, anxiety, and crisis, and identify methods to maintain mental health, including problem-solving techniques, treatment and intervention strategies. Students will assess, plan, implement and evaluate the mental health needs of the client. Additionally, students will use therapeutic communication techniques and be able to discuss documentation guidelines and the plan of care with the patient.</p>	CTA	—
072070	<p>Surgical Support Student demonstrates knowledge and skill necessary to carry out delegated tasks associated with the safe and efficient operating room support functions and related procedures. Topics include surgical technology theory, patient care concepts, and sterilization techniques. Student will assist with the passing of instruments and the positioning of patients. Additionally, students will prepare patients for transport to and from surgery, maintain equipment and supplies, and prepare the operating room for surgery.</p>	CTA	—
072075	<p>Dental Technology Students will demonstrate knowledge and skills associated with the practice of dentistry. Topics include principles of dental procedures and comprehensive dental care; infection control in dentistry; and dental specialties including radiology and laboratory procedures. Students will perform chair-side assisting techniques including instrument sterilization, fluoride applications, dietary analysis, and assisting physician. Emphasis is given to terminology, instruments and equipment, and patient communication. Additionally, students maintain accounts and inventory, records and appointments.</p>	CTA	—
072076	<p>Dental Radiography Students will perform procedures to expose, process, and interpret dental radiographs. Students will apply knowledge of radiation physics, infection prevention and quality control standards that are appropriate to the clinical setting. Students will apply effective communication skills for interacting with diverse patient populations and proper procedure documentation according to business and industry standards.</p>	CTA	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
072080	<p>Oral Diagnosis and Treatment Planning Students gain knowledge of head and neck anatomy with a focus on the oral cavity and teeth. They will study bone structure, cosmetic dentistry, and tooth identification and numbering systems. Students gain knowledge of chemical and physical properties of dental materials, their indications for use, and proper manipulation of the materials. Students perform radiographs, impressions, pouring, trimming, and wax bites methods and techniques. Additionally, students educate the patient on dental procedures and comprehensive dental care.</p>	CTA	—
072085	<p>Pharmacology Students will apply the principles of pharmacology in order to read, interpret and dispense prescriptions. They will learn how medications are classified and administered. Students will study the impact of drugs on different systems of the body, interaction of drugs, side effects and effectiveness in relation to dosages.</p>	CTA	—
072090	<p>Respiratory Technology Students will be able to collaborate with the respiratory therapist to administer care to patients with heart and lung disorders requiring humidity, medial gas and aerosol therapies. Students will perform diagnostic tests, clean and maintain equipment. Students observe patient responses and progress. Students apply concepts of infection control, basic therapeutic and diagnostic modalities.</p>	CTA	—
072095	<p>Opticianry and Vision Care In this course, students apply optometric examination techniques and applications. Topics include visual acuity, stereopsis, color vision, and Amlser grid. Additionally, students perform patient assessments; demonstrate medical interviewing techniques, collect health history content and prepare medical record documentations. Students will assist patients in frame selection and fittings and educate patient in comprehensive vision care.</p>	CTA	—
072100	<p>Clinical Laboratory Techniques Students will apply practical application of a wide range of clinical duties. Topics covered will include hematology, urinalysis, hemostatic processes, body chemistry, microbiology, and blood typing. Students will perform laboratory exercises illustrating principles of the cell and human physiology. Emphasis is given to safe handling, collection procedures, and preparation of specimens. Additionally, students will correlate and document clinical findings and maintain quality management in a clinical laboratory.</p>	CTA	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
072105	<p>Health Science Capstone The capstone course provides opportunities for students to apply knowledge, attitudes and skills that were learned in Health Sciences program in a more comprehensive and authentic way. Capstones often include project/problem based learning opportunities that occur both in and away from school. Under supervision of the school and through community partnerships, students may combine classroom learning with work experience. This course can be delivered through a variety of delivery methods including cooperative education or internship.</p>	CTA	—
072110	<p>Principles and Practices of Biomedical Technologies In this first course, students will use concepts, procedures, and equipment common to a professional medical laboratory. Students conduct problem-based studies, apply scientific methodology and use descriptive statistics to communicate and support predictions and conclusions. Students will follow procedures and protocols for handling, transporting, storing, and preparing specimens. Further, students will sample, monitor, and record environmental conditions of the facilities. Emphasis is given to demonstrating professional and ethical behavior associated with the medical field.</p>	CTA	—
072115	<p>Biomedical Engineering Students learn the use of cell culture techniques for bioscience research and commercial applications. Topics include cultivation of cell lines, bench-top fermenter management, detection of contamination, and an introduction to bioassays. Students will use microbiological techniques to manipulate, evaluate, and study cell growth. Focus will be on media formulation, preparation, autoclaving, and clean up procedures for the vessel and accessories. Further, students will implement quality control methods, maintain records and ensure compliance with regulatory requirements.</p>	CTA	—
072120	<p>Biochemistry of Health This course introduces biochemical methods, analysis, and techniques used in the bioscience research and development industry. Students will learn the chemistry of organic macromolecules, intermediary metabolism and the relationships to the human body. Topics also include structures, properties, functions, reactivity, and synthesis of simple organic molecules. Students will monitor, record, and maintain integrity of equipment and instrumentations; environmental conditions of the facility; and inventory.</p>	CTA	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
072125	<p>Biotechnology for Health and Disease This course explores techniques for extracting, separating, and assaying carbohydrates, lipids, and proteins from biological samples. Topics include mechanisms for regulating metabolism and gene expression. Students will describe the morphology and process of reproduction of microorganisms important in clinical disease and biotechnology applications. Students will perform assays as a diagnostic tool to detect the presence of a pathogen. Further, students will perform separation techniques including chemical separations, centrifugation, distillation, and filtration and interpret results.</p>	CTA	—
072130	<p>Genetics of Disease Students gain knowledge and skill in genetic principles and molecular methods of analysis. Topics include enzymology, protein purification, and gene expression and organization. Students perform bio-molecular applications using knowledge of nucleic acid structure and function, DNA replication, transcription, translation, chromosome structure and remodeling and regulation of gene expression in prokaryotes and eukaryotes. Additionally, students will use electrophoresis to separate nucleic acids and proteins to determine molecular weight.</p>	CTA	—
072135	<p>Health Information Technology Students will design, develop, and assess information systems and processes used in the management and maintenance of health record systems. Topics include information technology, health care systems, health data collection and project management. Students will design and maintain medical databases, computer networks, and internet or multimedia applications. Emphasis is placed on data management, quality and security. Additionally, students evaluate the impact of information technology on the clinical process, clinical outcome, organizations, and resources.</p>	CTA	—
072140	<p>Health Information Management This course introduces Health Information Management (HIM) and its role in healthcare delivery systems. Topics include standards, regulations and initiatives; payment and reimbursement systems, healthcare providers and disciplines; and electronic health records (EHRs). Emphasis will be placed on procedures for completion, maintenance, and preservation of health information. Students will gain knowledge and skills in Current Procedural Terminology (CPT) coding system used to assign valid procedure and service codes, including general content, and coding guidelines.</p>	CTA	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
072145	<p>Billing and Coding Students develop, evaluate, and implement billing and record systems for health information data using various classification systems to code and categorize patient information. Topics include health record content and structure, diagnostic coding, legal and compliance requirements. Students will record transactions, process payments, and manage patient accounts. Further, students gain knowledge using coded data to produce and submit claims to insurance companies; reviewing and appealing unpaid and denied claims; and for handling collections on unpaid accounts.</p>	CTA	—
072150	<p>Medical Terminology This course focuses on the applications of the rules for constructing and defining medical terms with an emphasis on building a working medical vocabulary. Topics include using the appropriate abbreviations and symbols for anatomical, physiological and pathological classifications and the associated medical specialties and procedures. Students will decipher medical terms by identifying and using word elements with an emphasis on derivation, meaning, and pronunciation. Further, students will interpret and translate medical records and documents.</p>	CTA	—
072155	<p>Medical and Dental Office Technology Students will apply fundamental principles of communication, leadership, technology and management as it applies to the medical office setting. Students will demonstrate documentation and record keeping procedures set forth by national accrediting organizations.</p>	CTA	—
072160	<p>Data and Use This foundational course focuses on the use of data and databases within the health field. Students learn what are data, how it is used and sources of data in the medical and health informatics field. They learn how to make sense of data and how data can be applied to our lives. Students will have the opportunity to interact with professionals in the health informatics field.</p>	CTA	—
072165	<p>Transforming Data into Information Students learn how to use data to address both patient and industry needs in the health-care field. Students use software to collect and analyze data, develop a health-care registry, create a mobile app mockup and develop forms and systems to solve health-care problems. They will learn how technology can be used to create better information to inform decision making, create information from data, improve public and individual health and to protect patient privacy.</p>	CTA	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
072170	<p>Transforming Information into Knowledge This advanced course allows students to make improvements in the health-care field by designing solutions using the information, knowledge and technology tools available to health informatics professionals. Students are engaged in the following activities: building a system of sharing information among health-care facilities; using social media tools to reduce diseases in foreign countries; exploring voice recognition software; using a motion-based video gaming console for rehabilitation; and exploring clinical decision rules for improving patient care.</p>	CTA	—
072175	<p>Problems and Solutions In this advanced course, students study and design solutions to problems facing health-care systems. Students learn how can the health-care system work more efficiently and economically, how health-care issues in rural locations can be addressed and how various community organizations work together to improve the health of the community? Students will have the opportunity to interact with professionals in the health informatics fields.</p>	CTA	—

Table 27. Career Field 10: Hospitality & Tourism Codes (33xxxx)

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
330005	<p>Culinary and Food Service Operations Educational programs in Culinary and Food Service Operations prepare learners for careers in the art and science of food preparation and presentation.</p> <p><u>FY17 will be the last year for this subject code; it will be deleted prior to FY18.</u></p>	CTA	—
330010	<p>Lodging and Travel Services Preparation for careers in the management, marketing and operations of lodging facilities.</p> <p><u>FY17 will be the last year for this subject code; it will be deleted prior to FY18.</u></p>	CTA, BUS	—
330015	<p>Introduction to Hospitality and Tourism Preparation for careers requiring broad, cross-functional knowledge of marketing, management and operations of restaurants, and other food services, lodging, destination marketing organizations, attractions, meetings and events, transportation and travel-related services.</p> <p><u>FY17 will be the last year for this subject code; it will be deleted prior to FY18.</u></p>	CTA, BUS	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
330020	<p>Travel and Tourism Educational programs in travel and tourism prepare learners for careers in management, marketing and operation of destination marketing organizations, attractions, meetings and events, transportation, and travel related services.</p>	CTA, BUS	—
330130	<p>Hospitality and Tourism Capstone The capstone course provides opportunities for students to apply knowledge, attitudes and skills that were learned in the program in a more comprehensive and authentic way. Capstones often include project/problem based learning opportunities that occur both in and away from school. Under supervision of the school and through community partnerships, students may combine classroom learning with work experience. This course can be delivered through a variety of delivery methods including cooperative education or apprenticeship.</p>	CTA	—
330000	<p>Hospitality Fundamentals This first course in the career field will introduce students to culinary arts, foodservice operations, lodging, travel and tourism. Students will obtain knowledge of customer service principles and examine the impact of cultural, historical, social and technological developments on key segments of the industry. They will also apply safety and sanitation techniques to prevent and control injuries, illnesses and diseases in the workplace. Business law, employability skills, leadership and communications will be addressed.</p>	CTA	—
330100	<p>Fundamentals of Food Production Students will prepare food products and beverages according to standardized recipes. They will apply plating and presentation principles to deliver attractive menu items, establish food specifications and prep lists, and develop ingredient and portion control guides. Safety and sanitation, standard knife skills, and culinary math will be emphasized. Employability skills, leadership and communications will also be incorporated.</p>	CTA	—
330125	<p>Baking and Pastry Arts Students will apply food-science principles to prepare and bake breads, desserts and pastries. They will also use specialized decorating and presentation techniques to decorate cakes, cookies, pastries, and other baked goods. Students will select quality ingredients, determine food costs, and research and develop marketable new recipes and food concepts. Personal safety, food safety, and equipment safety will be emphasized.</p>	CTA	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
330105	<p>Contemporary Cuisine Students will prepare regional and international food products and beverages according to standardized recipes. They will research and develop marketable new recipes, plan and design menus, and calculate food requirements and costs. Selection, use, maintenance and storage of commercial equipment, machines, tools and tableware will be emphasized. Food science, inventory management, food presentation, and safety and sanitation will also be addressed.</p>	CTA	—
330110	<p>Dining Room Service and Operations Students will apply strategies and techniques to identify and meet dining guest needs. They will provide table and beverage service; maintain eating areas, meeting spaces and serving stations; manage online reservations and orders; and monitor table turns, wait lines and table assignments. Nutritional analysis, types of table service, safety and sanitation, cultural intelligence, employability skills and communications will also be addressed.</p>	CTA	—
330120	<p>Restaurant Management Students will apply management principles to plan, organize and direct restaurant staff toward goal achievement. They will hire, train, and supervise employees; establish processes to facilitate restaurant operations; and plan and design menus. Students will also forecast and schedule food production, establish food specifications, select vendors, calculate costs, and purchase food and non-food products. Other topics include food science, nutritional analysis, business law and ethics, economics and marketing.</p>	CTA	—
330025	<p>Catering and Banquet Service Operations Students will design and manage catering and banquet operations. They will recommend types of food functions and food-and-beverage services to clients, create menus for special occasions and events, and determine financial requirements. Students will hire, train, and supervise staff; manage event logistics, operations and service providers; and oversee dining room operations. Customer service; food, equipment and site safety; and high-volume food production will also be addressed.</p>	CTA	—
330021	<p>Event and Food Planning Students will design and organize meetings and events. They will analyze risks, identify needs and develop strategies for achieving event goals. Students will also set up event facilities, manage event activities and evaluate event success. Other topics addressed in the course include menu development, customer service, people management, simple food production, sales and marketing.</p>	CTA	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
330040	Travel and Adventure Planning Students will apply knowledge of travel destinations, tourist attractions and events of interest to plan and coordinate travel and tourism activities for customers. They will analyze cultural, historical and environmental factors impacting travel and tourism; examine challenges, opportunities and trends associated with the industry; and develop strategies for promoting travel and tourism. Social media marketing, brand positioning, marketing research and employability skills will also be addressed.	CTA	—
330030	Front Office Management and Operations Students will develop knowledge and skills needed in the lodging industry. Students will perform front-office procedures such as reserving rooms, checking guests in and out, and orienting guests to the lodging property. They will also maintain guest rooms and public areas, develop a housekeeping plan, and establish a schedule for facilities maintenance. In addition, site safety and sanitation, customer service, people management, employability skills, leadership and communications will be emphasized.	CTA	—
330035	Hospitality Management Students will plan, organize, and monitor day-to-day lodging operations. They will use technology to maintain guest room status and accounts, manage lodging property finances, conduct marketing research, and communicate with current and prospective guests. Property sales, property management, people management and strategic planning will also be addressed.	CTA	—

Table 28. Career Field 11: Human Services Codes (17xxxx, 99xxxx)

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
172600	Human Services Utilizing business and industry technical standards, math, science, ELA, social studies and technology with a business process framework, introduces concepts in Human Services leading to pathways in Family & Community Services or Personal Care Services.	CTA	—
172605	Family and Community Services Utilizing business and industry technical standards, math, science, ELA, social studies and technology with a business process framework, introduces concepts in the Family and Community Services Pathway such as unemployment, substance abuse, aging and physical, emotional and cognitive-intellectual disabilities, domestic violence, physical/emotional abuse, poverty and community resources.	CTA	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
172602	<p>Cosmetology Utilizing business and industry technical standards, math, science, ELA, social studies and technology with a business process framework, instruction includes variety of beauty treatments including care and beautification of the hair, complexion, hands and feet.</p>	CTA	—
172601	<p>Barbering Utilizing business and industry technical standards, math, science, ELA, social studies and technology with a business process framework, instruction and clinical experiences includes haircutting and styling, shaving and massaging with emphasis on hygiene, skin and scalp diseases, and sterilization of instruments and utensils.</p>	CTA	—
174115	<p>Microbiology and Infection Control Students will learn basic bacteriology, infection control, and salon safety practices. Students will be able to recognize infectious disorders and contagious diseases learn the dispensary requirements, product storage, and requirements of the laws and rules, which regulate the cosmetology industry in Ohio.</p>	CTA	—
174120	<p>Trichology Students will learn the anatomy of the head and scalp, structure of the hair and various techniques and procedures for analyzing hair, scalp disorders and diseases. Students will be able to determine hair porosity, elasticity, density, texture and growth patterns as well as conduct chemical tests for treated hair and ability to recommend corrective scalp treatment.</p>	CTA	—
174125	<p>Fundamentals of Hair Cutting and Styling Students will learn basic shampooing, conditioning and haircutting including trimming, wet styling and thermal styling techniques when working with natural and synthetic hair. Students will also learn infection control and safety along with the science of ergonomics.</p>	CTA	—
174130	<p>Advanced of Hair Cutting and Styling Students will learn advanced cutting and formal styling using specialized equipment and techniques. This course offers enhanced training in current trends and razor techniques.</p>	CTA	—
174135	<p>Fundamentals of Chemical Services Students will apply basic skills, knowledge, and safety practices when giving permanent/chemical waves, curl re-forming, chemical relaxers and hair color techniques to include tinting, highlighting, bleaching, and foiling.</p>	CTA	—
174140	<p>Advanced Chemical Services Students will learn advanced chemical services using specialized products and techniques. Students will do advanced coloring, dimensional coloring, corrective techniques, texturizing, and advanced chemical wave wrapping techniques.</p>	CTA	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
174145	<p>Hand & Foot Treatment Fundamentals and Enhancements Students will learn the knowledge and skills to perform both manicures and pedicures. They will learn how to maintain personal hygiene and infection control. Students will give plain/oil manicures, pedicures, and hand/arm & foot/leg massages. Enhanced hand and foot treatments using specialized products and techniques will be performed.</p>	CTA	—
174150	<p>Skin Care Fundamentals and Enhancements Students will apply the principles of anatomy, skin analysis, infection control and safety to safe hair removal, skincare treatments, and facial massage. Students will use electrical and manipulative facial treatments including masks, packs, and make-up techniques. Students will also learn advanced skin care treatments, targeted massage, and enhancement applications using specialized products and techniques.</p>	CTA	—
175155 <u>174155</u>	<p>Salon Operations and Communications Students will learn the fundamentals of managing a cosmetology salon. Students will learn about employment and customer liability, insurance, leases, record keeping, communication, and sales.</p>	CTA	—
174010	<p>Human Services Capstone The capstone course provides opportunities for students to apply knowledge, attitudes and skills that were learned in Human Resources program in a more comprehensive and authentic way. Capstones often include project/problem based learning opportunities that occur both in and away from school. Under supervision of the school and through community partnerships, students may combine classroom learning with work experience. This course can be delivered through a variety of delivery methods including cooperative education or internship.</p>	CTA	—
990371	<p>Vocational Job Training Coordinating A specialized community based job training program for students with disabilities who are unable to successfully participate in regular career-technical education programs even when adjusted programs and supplemental aides or specialized supportive personnel are available. The program utilizes a job training coordinator to match specific jobs in the community to the individual student's skills. Job coach services must be made available to assist the students to gain the skills necessary for the job. Students must be at least sixteen years old and this program must be identified on the student's individualized educational program (IEP).</p>	CTA	—

Table 29. Career Field 12: Information Technology Codes (14xxxx)

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
145120	<p>3-D Techniques Students will use current industry standard commercial and open source programming software to create 3-D visual elements in a web or standalone environment. Students will learn aspects of computer visual production, thought, and application; to map out, design, and test three dimensional elements.</p>	CTA	—
145115	<p>Animation Students will use animation and storyboarding techniques to plan the production of an animation project. Students will design from script and storyboard actions in the pre-production planning process. Students will use commercial and open source digital animation software to create finished animations, cartoons, and other short movies. They will accomplish this using animated text, character movements, voice, background sound, sound effects, camera movements, and multiple scenes.</p>	CTA	—
145015	<p>Information Technology Capstone The capstone course provides opportunities for students to apply knowledge, attitudes and skills that were learned in Information Technology program in a more comprehensive and authentic way. Capstones often include project/problem based learning opportunities that occur both in and away from school. Under supervision of the school and through community partnerships, students may combine classroom learning with work experience. This course can be delivered through a variety of delivery methods including cooperative education or internship.</p>	CTA	—
145020	<p>Computer and Mobile Applications Students will learn to create applications for mobile devices using a variety of commercial and open source software. They will install these applications, modify them, and develop customer service skills to handle user issues. Knowledge and skills related to customer service in professional offices, small businesses, departments, work groups, and corporate information services will be addressed.</p>	CTA	—
145025	<p>Computer Hardware Students will learn to install, repair, and troubleshoot computer hardware systems. They will perform preventative maintenance practices and learn techniques for maintaining computer hardware security. Communication skills and professionalism in troubleshooting situations will be emphasized.</p>	CTA	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
145030	<p>Computer Software Students will apply knowledge and skills of commercial and open source operating systems in portable, stand alone, and networked devices. Students will install a variety of operating systems manually and using remote assistance. They will learn to configure, modify, and troubleshoot operating systems. Desktop virtualization, system security, and operating system history will be addressed.</p>	CTA	—
145100	<p>Creating and Editing Digital Graphics Students will learn to design, develop, and produce interactive media projects, web sites, and social media contexts. Students will demonstrate methods of creating professional quality media using commercial and open source software.</p>	CTA	—
145080	<p>Database Administration Students will learn about user rights and responsibilities, concurrency security, reliability, backup and recovery to perform tasks involved in the administration and management of a database system. Students will design, extract and transform data ensuring data quality. Knowledge and skills relating to reporting systems, data warehouses, and data mining will be developed.</p>	CTA	—
145085	<p>Database Applications Development Students will use developer strategies to manipulate data, present database systems theory, and develop database applications. Students will learn to import and export data, manipulate table properties, make advanced queries, and run basic SQL forms and reports. Students will develop macros for automating database tasks and building menu-driven applications. Knowledge and skills of data modeling, diagraming, query writing, and design theory will be developed</p>	CTA	—
145095	<p>Design Techniques Students will learn techniques for transforming photographic images, through use of digital cameras, computers, and mobile devices. To accomplish this, they will learn software photo editing techniques including layering, color correction, masking, and special effects using current commercial and open source programs and applications.</p>	CTA	—
145090	<p>Game Design This course will prepare students to design and program games using commercial and open source programs and applications. Students will learn industry standard programming language constructs to write programs that integrate classes, class methods, and class instances. Students will learn input method handling, animation, collision detection, game physics and basic artificial intelligence.</p>	CTA	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
145005	<p>Information Technology This first course in the IT career field is designed to provide students with a working knowledge of computer concepts and essential skills necessary for work and communication in today’s society. Students will learn safety, security, and ethical issues in computing and social networking. Students will also learn about input/output systems, computer hardware and operating systems, and office applications.</p>	CTA	—
145125	<p>Interactive Application Development Students will learn skills to support and create interactive and engaging components for web and standalone interactive applications. Using commercial and open source programs and applications, students will master web interactivity with advanced techniques.</p>	CTA	—
145105	<p>Multimedia and Image Management Techniques Students will apply principles of image creation, management procedures, and multimedia techniques as they create, revise, optimize, and export graphics for video, print, and web publishing. The course will address issues related to web based publishing, social media, and security. Students will utilize current commercial and open source languages, programs, and applications.</p>	CTA	—
145035	<p>Networking Students will install, configure, and troubleshoot network hardware and peripherals. Students will learn networking by exploring the OSI model, network topologies, and cabling. Students will design simple networks, know how to select physical devices, and be able to configure the equipment. Knowledge and skills relating to the operation and usage of network protocols will be developed.</p>	CTA	—
145045	<p>Network Management Students will perform network administrator duties by installing and configuring network hardware, software, and peripherals. Abiding by IEEE standards and the Open Source Interconnection (OSI) model, students will create advanced networks, assign user rights, and develop knowledge and skills of network hierarchy. Students will demonstrate mastery of topologies, remote connectivity, wireless networking, TCP/IP, network security, and network troubleshooting.</p>	CTA	—
145040	<p>Network Operating Systems Students will perform desktop client administrator duties by providing support for users in various work environments including professional offices, small businesses, work groups, departments, and/or corporate information services (IS). Students will learn to install, configure, and update commercial and open source network operating systems.</p>	CTA	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
145050	<p>Network Security This course will address securing networks and operating systems. Students will learn to secure network communications, computer hardware, and network software. Topics include: network security theory, cryptography, security architecture, firewalls, VPNs, IP Security, and methods of protection.</p>	CTA	—
145065	<p>Object Oriented Programming Students will learn to represent programming concepts as "objects" that have data fields and associated procedures known as methods. Students will implement classes such as support static, instance method, inheritance, polymorphism, exception handling, and object serialization. A variety of commercial and open source programs and applications will be used.</p>	CTA	—
145060	<p>Programming In this course students will learn the basics of building simple interactive applications. Students will learn the basic units of logic: sequence, selection, and loop. Students will apply algorithmic solutions to problem-domain scenarios. Students will gain experience in using commercial and open source languages, programs, and applications.</p>	CTA	—
145055	<p>Routing and Switching Student will learn the functions, characteristics, and operations of routers and switches. Students will learn about wireless network standards and components and the role that routers play in enabling communications across multiple networks. Students will troubleshoot the routing process. Students will examine the use of Virtual Local Area Networks (VLANs) to create logically separate networks.</p>	CTA	—
145075	<p>Systems Analysis and Design Students will learn the theory and practice of software testing and develop an understanding of the analysis and design phases of software development. Students will effectively use appropriate programming languages and software patterns to improve software development. A variety of commercial and open source programs, applications, and tools will be used.</p>	CTA	—
145110	<p>Video and Sound Students will create professional video and audio productions for distribution in traditional and new media channels. Students will plan, produce, edit, and launch media products. Students will develop scripts and storyboards, compose shots and operate cameras, capture sounds using microphone hardware, apply special effect techniques, and edit to achieve the final product. Students will be able to use animation and graphic design for video.</p>	CTA	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
145070	Visual Programming Students will create event-driven programs using object oriented programming techniques for use in web based and standalone applications. Students will map out, design, and test computer applications, web applications, and mobile applications. Both commercial and open source programs and applications will be used.	CTA	—
145010	Web Design Students will learn the dynamics of the Web environment while pursuing an in-depth study of both Hypertext Markup Language (HTML) and Cascading Style Sheets (CSS). Web based protocols such as FTP, TCP/IP, and HTTP will be addressed. Students will create a website with tag text elements, special characters, lines, graphics, hypertext links, and graphical tables.	CTA	—

Table 30. Career Field 13: Law & Public Safety Codes (17xxxx)

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
170346	Law and Public Safety Capstone The course provides opportunities for students to apply knowledge, attitudes and skills that were learned in Law and Public Safety in a more comprehensive and authentic way. Capstones often include project/problem based learning opportunities that occur both in and away from school. Under supervision of the school and through community partnerships, students may combine classroom learning with work experience. This course can be delivered through a variety of delivery methods including cooperative education or internship.	CTA	—
170911	The American Criminal Justice System This first course in the Criminal Justice pathway traces the history, organization, and functions of local, state, and federal law enforcement. Students will study criminal behavior and apply constitutional and criminal law to crime and punishment. Students will learn law enforcement terminology, classifications and elements of crime, and how various court systems are used to judge and punish offenders.	CTA	—
170912	Security and Protective Services Private Security is an ever expanding industry that requires trained professionals that can detect, deter, and investigate crime. The course focuses on private security measures used to protect lives, property, and proprietary information. Students completing the Ohio Peace Officer Training Academy Private Security curriculum provided by an approved instructor will be eligible to sit for the OPOTA certification exam as a private security guard.	CTA	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
170913	<p>Police Work and Practice in Public Safety In this course, students will learn the skills necessary to prevent, detect and react to crime. Students will learn self-defense and subject control techniques, methods to conduct patrols, surveillance, and traffic procedures. Students will understand the ethical and legal responsibilities of police officers on patrol. Additionally, students will learn the operations of police and emergency telecommunication systems.</p>	CTA	—
170914	<p>Investigations and Forensics in Criminal Investigations Forensic Science uses a structured and scientific approach to the investigation of crimes including assault, abuse and neglect, domestic violence, accidental death and homicide. Students will learn the psychology of criminal behavior and apply it to investigative procedures. Students will collect and analyze evidence through case studies and simulated crime scenes such as fingerprint analysis, ballistics, and blood spatter analysis.</p>	CTA	—
170915	<p>The Correctional System and Services The correctional officer plays a critical role in the criminal justice system. In this course students will learn institutional rehabilitation and community corrections strategies that prepare them for work in a correctional setting. The student will learn the role and responsibilities of a correctional officer including processing inmates, maintaining security in a correctional setting, and understanding inmate mental health needs.</p>	CTA	—
170916	<p>Homeland Security: Protecting America's Critical Infrastructure In this course students will learn techniques to secure and protect America's people and infrastructure from natural and man-made disasters. Students will analyze a range of national security issues. Students will learn to develop and manage local emergency plans. Students will also learn to manage critical incidents through training in the National Incident Management System and the Incident Command System.</p>	CTA	—
170342	<p>Foundations of Firefighting and Emergency Medical Services In this first course in the pathway, Fire Fighting and Emergency Medical Services introduces students to the foundational concepts of firefighting safety and emergency medical services. Students will learn and practice skills outlined in the Ohio Department of Public Safety Fire Protection and Ohio Emergency Medical Services rules and regulations in preparation for Firefighter I&II curriculum and EMT licensure.</p>	CTA	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
170343	Firefighter I The Firefighter I course prepares students for a career in the fire service. Students learn the history of firefighting, fire science and techniques to fight fires and conduct rescues. Students will train with tools, appliances and fire equipment in the classroom and in live fire exercises. Students that successfully complete this course at a chartered institution will be eligible to take the Ohio Firefighter I certification test.	CTA	—
170344	Firefighter II The Firefighter II course builds on the knowledge and skills learned in Firefighter I. In this course students will apply knowledge and skills to advanced training in fire suppression, rescue and hazardous materials operations. Students who have completed Firefighter I and successfully complete this course at a chartered institution will be eligible to take the Ohio Firefighter II certification test.	CTA	—
170345	Emergency Medical Technician Emergency Medical Technicians are first responders who provide basic care to individuals needing medical attention. Students will learn to assess an emergency situation and provide pre-hospital care to stabilize a patient. They will learn the procedures and protocols for patient transport and the transition to advanced medical care. Students who successfully complete this course at chartered institution will be eligible to take the National Registry Exam for Ohio EMT certification.	CTA	—

Table 31. Career Field 14: Manufacturing Technologies Codes (17xxxx)

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
176000	Gas Metal Arc Welding Students will safely use the Gas Metal Arc Welding process (GMAW) to join various types of metal. They will cut metals using oxy-fuel processes and perform multiple types of welds in all positions up to overhead. They will select the appropriate type of electrode and shielding gas and adjust welding equipment based on the physical characteristics and properties of the metal. Students will apply their understanding of quality control factors to evaluate weld quality.	CTA	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
176001	<p>Shielded Metal Arc Welding Students will be able to safely use the Shielded Metal Arc Welding process (SMAW) to join various types of metal. They will perform multiple types of welds in all positions up to overhead. They will select the appropriate type of electrode and adjust welding equipment based on the physical characteristics and properties of the metal. Students will apply their understanding of quality control factors to evaluate the quality of welds.</p>	CTA	—
176002	<p>Flux Core Arc Welding Students will be able to safely use the Flux Core Arc Welding process (SMAW) to join various types of metal. They will perform multiple types of welds in all positions up to overhead. They will select the appropriate type of cored electrode and adjust welding equipment based on the physical characteristics and properties of the metal. Students will apply their understanding of quality control factors to evaluate the quality of welds.</p>	CTA	—
176003	<p>Gas Tungsten Arc Welding Students will safely use the Gas Tungsten Arc Welding process (GMAW) to join various types of metal. They will perform multiple types of welds in all positions up to overhead. They will select the appropriate type of electrode, filler metal and shielding gas and be able to adjust welding equipment based on the physical characteristics and properties of the metal. Students will apply their understanding of quality control factors to evaluate weld quality.</p>	CTA	—
176004	<p>Machine Tools This course introduces students to all aspects of machining applications in manufacturing. They will be able to perform routine calculations, interpret basic drawings, begin the process of performing accurate measurements and be able to plan simple machining processes. Students will learn the fundamental principles and practices of cutting, drilling and grinding using modern machine tools, hand tools and precision measuring instruments.</p>	CTA	—
176005	<p>Machining with Industrial Lathes This course directs the student in the safe use of different types of manual industrial lathes. Students will use these machine tools to shape, pattern, bore, thread and polish metal and other materials. Students will apply their knowledge of product characteristics, perform necessary calculations, use precision measuring instruments and make all adjustments needed to fabricate products to print dimensions. Students will be able to identify operational problems and provide routine care and maintenance to the lathe.</p>	CTA	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
176006	<p>Machining with Industrial Milling Machines In this course students are directed in the safe use of manual milling machines. Students apply their knowledge of product characteristics, perform necessary calculations, use precision measuring instruments and layout equipment to mill products to print dimensions. Students will use these machine tools to shape, cut, drill and bore and metal and other materials. Students will be able to identify operational problems and provide routine care and maintenance to the manual mill.</p>	CTA	—
176007	<p>Computer Numerical Control Technology with Industrial Mills and Lathes In this course students will use computer numerical control (CNC) programming to mill products comprised of various materials. Students will prepare numerical control programs in positioning systems using standard industrial G and M codes. They will program computerized numerical control mills and lathes.</p>	CTA	—
176008	<p>Manufacturing Capstone The capstone course provides opportunities for students to apply knowledge, attitudes and skills that were learned in Manufacturing program in a more comprehensive and authentic way. Capstones often include project/problem based learning opportunities that occur both in and away from school. Under supervision of the school and through community partnerships, students may combine classroom learning with work experience. This course can be delivered through a variety of delivery methods including cooperative education or internship.</p>	CTA	—
176009	<p>Welding Technologies Students will use fundamental welding principles involving shielded metal arc, oxyacetylene, gas tungsten, and gas metal arc welding in the flat, horizontal, and vertical positions. An emphasis is given to electrode selection, equipment setup, operating procedures, welding inspection, and testing. Students will learn joint designs and layout and will be introduced to welding codes and standards. Additional topics include employability skills and an emphasis will be given to personal safety.</p>	CTA	—
176010	<p><u>Principles of Manufacturing</u> <u>Students will apply knowledge and skills required in the application of standard manufacturing practices including planning, design, and visualization. Students will learn and apply skills related to interpreting drawings, creating documentation and performing measurements. Additionally, students will use principles and techniques of Computer Numerical Control (CNC), employ scheduling, and project evaluation.</u></p>	<u>CTA</u>	<u>—</u>

Table 32. Career Field 16: Transportation Systems Codes (17xxxx)

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
170350	<p><u>Transportation Systems</u> <u>Combined with specialization competencies utilizing business and industry technical standards and math, science, ELA, technology, and business process framework, develops technical literacy in transportation systems, leading to pathways in ground and air transportation and post-secondary articulation.</u></p>	CTA	=
170801	<p><u>Maritime Operations</u> <u>Utilizing rigorous academics and Maritime industry standards introduce concepts of deck, engineering and other careers in the maritime industry.</u></p>	CTA	=
177000	<p>Ground Transportation Maintenance In this first course, students will apply skills needed to inspect and perform general service on vehicles. Students will research applicable service information and technical service bulletins, and perform maintenance on vehicles. Students will inspect and service engine, drive train, suspension, steering, electrical and braking systems. Students will perform ignition maintenance including spark plug/glow plug and ignition wire and coil pack replacement. Additionally, students change fluids, filters and inspect vehicles for leaks and fluid condition.</p>	CTA	—
177001	<p>Ground Transportation Engine and Power Train Students will inspect, adjust and repair internal combustion engines and drivetrain. Topics include physical and mechanical principles of engines, transmissions and transaxles, differentials and cooling systems. Students will learn precision measurement, inspection, and reconditioning techniques. Students will also identify customer's needs, determine labor rates, and create estimates.</p>	CTA	—
177002	<p>Ground Transportation Electrical/Electronics Student will diagnose and repair vehicle electrical systems, including chassis electrical, charging, starting and lighting systems. Students will learn the fundamentals of direct current (DC) electronics including series, parallel, and series-parallel circuits. Students will use electronic diagnostic tools, read schematics, and utilize printed and electronic repair manuals to troubleshoot electrical circuits, test components and replace defective modules.</p>	CTA	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
177003	<p>Automotive Braking, Suspension, and Steering Systems (Undercarriage Systems)</p> <p>Students will perform inspections, troubleshoot malfunctions and service automotive undercarriage systems. Students will identify poor performing hydraulic brake systems and replace malfunctioning components. Students will install coil and leaf springs, shock absorbers and struts, and replace wheel bearings. Students will inspect and replace automotive steering components and perform wheel alignments. Additionally, students will disable and enable supplemental restraint systems (SRS) and replace antilock brake systems components.</p>	CTA	—
177004	<p>Ground Transportation HVAC</p> <p>Students will learn principles of heating, ventilation and air conditioning systems (HVAC) for use in motor vehicles. They will also inspect, diagnose, repair and maintain vehicle air conditioning and heating systems. Students will use service equipment to evacuate, store and charge the air conditioning system. An emphasis will be given to the safe handling of refrigerants following EPA regulations.</p>	CTA	—
177005	<p>Truck Braking, Suspension, and Steering Systems (Undercarriage Systems)</p> <p>Students perform inspections, troubleshoot malfunctions, and service truck undercarriage systems. Students identify poor performing air brake systems and replace malfunctioning components. Students will install leaf springs, shock absorbers and air suspension components. Students inspect and replace truck steering components and replace wheel bearings. Additionally, students will perform wheel alignment and tire inspections, diagnostics, and repair. Identifying workplace risk factors associated with repetitive motion and lifting, operating, and moving of heavy objects are emphasized.</p>	CTA	—
177006	<p>Automotive Engine Performance</p> <p>Students will research vehicle service histories using model specific service bulletins. Students will test and diagnose for engine performance in fuel, air induction and exhaust systems using advanced testing procedures. Topics include computerized engine controls including retrieving and recording diagnostic trouble codes using On Board Diagnostics (OBD). Additionally, students will diagnose drivability and emissions problems resulting from malfunctions of interrelated systems.</p>	CTA	—
177007	<p>Truck Diesel Engines</p> <p>Students will inspect, diagnose, and repair diesel truck engines. Students will learn the principles of valve train assemblies, lubrication, intake, exhaust and fuel systems. Additionally, skill development in engine testing, inspection and repair of electronic fuel management systems are emphasized. Students will break down and assemble heavy truck engines and supporting systems.</p>	CTA	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
177008	<p>Sports/Recreational Power Systems Students learn principles and skills to maintain and repair sports/recreational vehicles. Students will inspect, diagnose, and repair engine, drive train, and suspension systems. Students remove, disassemble, and repair components in engine cylinder head and block assemblies. Students inspect, adjust and repair drivetrain systems including shaft and chain drive components. Additionally, students will inspect, adjust and replace suspension components including shocks, seals and springs. Students will maintain and adjust systems specific to specialized vehicles.</p>	CTA	—
177009	<p>Collision Electrical & Mechanical Systems Students will perform inspections and repair electrical and mechanical damage due to collision. Topics include electrical and wiring harness, suspension, braking and cooling system repairs. Students will service supplemental restraint systems (SRS) and ensure the integrity of the systems.</p>	CTA	—
177010	<p>Collision Structural Inspection & Repair Students will perform automotive collision repair of full and unibody frames and attach non-structural components. Students will apply the skills and knowledge needed to measure and diagnose structural damage, create a parts list, and determine labor costs. Students will remove and replace damaged structural components. Emphasis will be given to joining and cutting aluminum, steel and other metals. Students will maintain tools and facilities while complying with personal and environmental safety practices.</p>	CTA	—
177011	<p>Collision Nonstructural Inspection & Repair Students will learn the skills and knowledge of automotive body panel repairs, replacements, and adjustments. Students will analyze, document and repair nonstructural collision damage. Students will remove corrosion protection, undercoating, sealer, and other protective coatings as necessary to perform repairs. Emphasis will be given to joining and cutting aluminum, steel and other metals. Students will maintain tools and facilities while complying with personal and environmental safety practices.</p>	CTA	—
177012	<p>Collision Painting & Refinishing Students will restore and refinish vehicle exterior body and paint finish. Students will inspect and identify substrate, type of finish, surface condition, and film thickness; develop and execute a plan for refinishing using a total product system. Students will inspect, clean, and determine condition of spray guns and related equipment. Additionally, students will observe safety precautions when using hazardous materials.</p>	CTA	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
177013	<p>Aviation In this first course, students apply knowledge of aviation theory and navigation to flight performance and planning. Students will apply principles of simple machines and fluid mechanics to aircraft operations. Identification of aircraft engines and airframe related systems will be emphasized. Weather theories and concepts are used to interpret weather-briefing documents. Additionally, students will distinguish among airport environments, and understand rules, regulations and orders relevant to the airport industry.</p>	CTA	—
177014	<p>Aviation Maintenance General Students will apply knowledge of aircraft ground handling safety procedures to aviation maintenance. Students will start, ground operate, service, and secure aircraft. Students will perform aircraft maintenance including detecting, identifying, removal, and treating of various types of corrosion found on ferrous and non-ferrous metals. In addition, students will identify methods of cleaning aircraft and aircraft components. The course content also focuses on developing communication, leadership, human relations and employability skills; and safe, efficient work practices.</p>	CTA	—
177015	<p>Aviation Structure and Design Students will inspect, repair, and refinish aircraft airframes and external components. Students will rig rotary and fixed-wing aircraft, evaluate and repair sheet metal and nonmetallic structures. Students will form, layout, bend and join metal airframe components using welding processes, rivets and fasteners. Students will inspect, repair and assemble wooden, metal, aluminum, fiberglass and composite components. Students will inspect and repair external finishes including surface preparation and refinishing.</p>	CTA	—
177016	<p>Aviation Airframe Systems and Components Students will learn the principles avionics and practical application of AC/DC electrical circuits with an emphasis on airborne installations. Students will learn power calculations, and the relationship of voltage, current, and resistance. Students will inspect, repair, and install instrument, communication and navigation systems. Additionally, students will evaluate and service airframe electrical systems including position, warning, hazard control, ignition systems.</p>	CTA	—
177017	<p>Aviation Powerplant Theory and Maintenance Students will learn the principles of theory, operation, and maintenance of powerplant electrical systems including ignition, starting, and fire protection. Students will inspect, repair, and install aircraft powerplants including reciprocating, radial, and turbine engines. Students examine and service systems that support each engine type including fuel, lubrication and cooling. Additionally, will perform powerplant conformity and airworthiness inspections, troubleshoot malfunctions and service aircraft to assure continued operation and reliability.</p>	CTA	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
177018	<p>Aviation Powerplant Systems and Components Students will inspect, repair and replace fuel systems for fixed and rotary wing aircraft. Topics will include troubleshooting and servicing fuel management transfer, pressure fueling, fluid quantity, fuel indicator and temperature warning systems. Additionally, students will evaluate and service unducted fan, fuel dump, and induction and exhaust systems including heat exchangers and superchargers. Students will perform planned preventative maintenance on tools and equipment, and maintain a clean and safe work environment.</p>	CTA	—
177019	<p>Aviation Meteorology Learners apply principles of meteorology forecasting to aviation. Students will take, record, encode, and disseminate surface weather observations using forecasting equipment. Topics include concepts of aviation meteorology in the study of temperature, pressure, moisture, stability, clouds, air masses, fronts, thunderstorms, icing, and fog. Additionally, students will interpret and use of weather information for pre-flight and in-flight support to aviation.</p>	CTA	—
177020	<p>Aviation Airport Management Learners will distinguish between controlled and nontowered fields and apply management principles to airport environments. Students will interpret and use weather, Automatic Terminal Information Systems (ATIS), and Traffic Collision Avoidance Systems (TCAS) to control aircraft operations. Students will sequence aircraft approaches and departures with approach control radar. Students will interpret and use airport lighting, navigation principles and avionic communication systems including Very High Frequency (VHF), Ultra-High Frequency (UHF), radio and phraseology.</p>	CTA	—
177021	<p>Aviation Pilot Training Students will learn the essentials of piloting an aircraft. Students will learn principles of aircraft operations, air traffic control, meteorology, and navigation. Students learn aircraft performance functions including spins, recovery, stalls, landings and takeoffs. Additionally, students learn to use aircraft instruments and flight controls. Students will apply skills to tie-off, transfer and defuel aircraft. An emphasis is given to Federal Aviation Administration regulations, and mitigation of personal and aviation hazards.</p>	CTA	—
177022	<p>Aviation Air Traffic Control Students will learn and simulate fundamentals of air traffic control. Subjects taught include principles of aircraft tracking using radar and transponders, controlling aircraft departures, takeoffs, ground operation and in air flight control. Students will learn and simulate techniques of sequencing aircraft approaches and departures using approach control radar. Students will study concepts of meteorology, the flight environment, identification of emergency codes, fundamental aspects of flight and air navigation.</p>	CTA	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
177023	<p>Transportation Capstone The capstone course provides opportunities for students to apply knowledge, attitudes and skills that were learned in Transportation program in a more comprehensive and authentic way. Capstones often include project/problem based learning opportunities that occur both in and away from school. Under supervision of the school and through community partnerships, students may combine classroom learning with work experience. This course can be delivered through a variety of delivery methods including cooperative education or internship.</p>	CTA	—

Career Based Intervention Section

Table 33. Career Based Intervention (CBI) Codes (25xxxx)

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
250510	<p>CBI Language Arts Content based on academic content standards; for CBI students facing academic barriers. (These courses are always reported in EMIS with Curriculum Element “V3”.)</p>	ENG	Language Arts
250519	<p>CBI Reading Content based on academic content standards; for CBI students facing academic barriers. (These courses are always reported in EMIS with Curriculum Element “V3”.)</p>	ENG	Reading
251110	<p>CBI Mathematics Content based on academic content standards; for CBI students facing academic barriers. (These courses are always reported in EMIS with Curriculum Element “V3”.)</p>	MTH	Mathematics
251310	<p>CBI Science Content based on academic content standards; for CBI students facing academic barriers. (These courses are always reported in EMIS with Curriculum Element “V3”.)</p>	SCI	Science
251510	<p>CBI Social Studies Content based on academic content standards; for CBI students facing academic barriers. (These courses are always reported in EMIS with Curriculum Element “V3”.)</p>	SOC	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
252525	<p>Career Based Intervention CBI programs are designed for students ages 12 through 21 in grades 7 through 12 who are identified as disadvantaged (either academically or economically or both) and who have barriers to achieving academic and career success. The goals of the program are to help students improve academic competence, graduate from high school, develop employability skills, implement a career plan and participate in a career pathway in preparation for postsecondary education and/or careers.</p>	CTA	—

Career Development Section

Table 34. Career Development Codes (99xxxx)

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
990361	<p>Entrepreneurship Skills (Career Technical) Exploring owning your own business.</p>	CTA	—
990362	<p>Employability Skills (Career Technical) Work related skills for entering, competing and advancing in a changing work world.</p>	CTA	—
990363	<p>Essential Skills for Business The central theme of this course is the development of students’ skills that support business employment and entrepreneurial endeavors. Emphasis is placed on using personal, interpersonal and organizational skills that contribute to the success of a business. Students identify their leadership styles, collaborate with people, develop professional networks, use communication skills, and reflect on their own personal growth. They apply principles needed to contribute to business operations in general and management of projects in particular.</p>	CTA	—
990364	<p>Career Connections In this course, students investigate how classroom learning translates into marketable skills. Through hands-on learning and local business involvement, students will engage in career-related experiences to acquire basic skills in various career fields. This provides students with tangible experiences to begin career decision making. Teachers have the flexibility to select career fields related to Ohio’s in-demand jobs represented in the community.</p>	CTA	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
990365	<p>Pre-Apprenticeship Students in this course have the opportunity to apply knowledge, attitudes and skills in a structured work environment. Students are enrolled in a career-technical education structured pre-apprenticeship program, apprenticeship, or formalized work-based learning program, with a documented training plan that will potentially lead to further employment or training with the industry partner following graduation. Students are required to have completed at least three courses in the pathway related to the work assignment.</p>	CTA	—

Family and Consumer Sciences (Career Technical) Section

Table 35. Family and Consumer Sciences Codes (09xxxx)

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
090191	<p>Graduation, Reality and Dual-Role Skills (GRADS) This course will allow pregnant and parenting students to remain in school while developing parenting skills. Topics will include career readiness, financial management, relationship techniques, human growth and development and parenting styles and responsibilities. This is a dropout prevention program.</p>	CTA	—
090192	<p>GRADS – Minimum Intervention/Follow-up Graduation, Reality and Dual-role Skills (GRADS) is an instructional and intervention program for pregnant and parenting students, male and female. An in-school instructional program for pregnant and parenting students, grades 7-12. The mission is to promote personal growth, educational competence, and economic self-sufficiency as socially responsible members of society. The objectives are for the student to remain in school, have healthy pregnancies and healthy babies, learn practical parenting and child-development skills, gain orientation to work, set goals toward balancing work and family, and delay subsequent pregnancies.</p> <p><u>FY17 will be the last year for this subject code; it will be deleted prior to FY18.</u></p>	CTA	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
090193	<p>GRADS – Alternative Structure Graduation, Reality and Dual-role Skills (GRADS) is an instructional and intervention program for pregnant and parenting students, male and female. An in-school instructional program for pregnant and parenting students, grades 7-12. The mission is to promote personal growth, educational competence, and economic self-sufficiency as socially responsible members of society. The objectives are for the student to remain in school, have healthy pregnancies and healthy babies, learn practical parenting and child-development skills, gain orientation to work, set goals toward balancing work and family, and delay subsequent pregnancies.</p> <p><u>FY17 will be the last year for this subject code; it will be deleted prior to FY18.</u></p>	CTA	—
090194	<p>GRADS – Class Structure Graduation, Reality and Dual-role Skills (GRADS) is an instructional and intervention program for pregnant and parenting students, male and female. An in-school instructional program for pregnant and parenting students, grades 7-12. The mission is to promote personal growth, educational competence, and economic self-sufficiency as socially responsible members of society. The objectives are for the student to remain in school, have healthy pregnancies and healthy babies, learn practical parenting and child-development skills, gain orientation to work, set goals toward balancing work and family, and delay subsequent pregnancies.</p> <p><u>FY17 will be the last year for this subject code; it will be deleted prior to FY18.</u></p>	CTA	—
090700	<p>Consumer and Financial Literacy Students will learn how to manage money, set goals, understand needs and wants, develop spending plans that fit different careers, and make financial decisions based on the impact of advertising and practice good consumer responsibilities.</p> <p><u>FY17 will be the last year for this subject code; it will be deleted prior to FY18.</u></p>	—	—
091025	<p>Child Development In this course, students will study the principles of child growth, development, and behavior. An emphasis will be placed on the cognitive development of a child and sensory and motor skills. Additional topics will include childhood diseases, immunizations, theories of development, learning styles and evaluating childcare services.</p> <p><u>FY17 will be the last year for this subject code; it will be deleted prior to FY18.</u></p>	CTA	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
091050	<p>Financial Management I Course provides students with an understanding of the concepts and principles involved in managing one’s personal finances. Topics may include savings and investing, credit, insurance, taxes and social security, spending patterns and budget planning, contracts, and consumer protection. These courses may also provide an overview of the American economy.</p> <p><u>FY17 will be the last year for this subject code; it will be deleted prior to FY18.</u></p>	CTA	—
091051	<p>Financial Management II Course helps students evaluate resources, financial institutions and services that meet individual, family and business goals, protect financial health including credit and debit, prevent loss of assets, and advocate public policy issues that impact financial well-being.</p> <p><u>FY17 will be the last year for this subject code; it will be deleted prior to FY18.</u></p>	CTA	—
091400	<p>Career Search I Update IACP plans, practice job skills, and interpret career and workplace issues. Demonstrate how academic achievement influences personal and career growth, conflict resolution techniques and apply social skills that lead to effective school, career and family relationships that lead to a healthy, caring and responsible citizen.</p> <p><u>FY17 will be the last year for this subject code; it will be deleted prior to FY18.</u></p>	CTA	—
091401	<p>Career Search II (Includes with Mentoringship) Areas of study would include assessing career plans, managing job searches, and examining career and workplace issues, develop essential interpersonal skills, communication skills and workplace related skills. The course has a mentorship experience attached.</p> <p><u>FY17 will be the last year for this subject code; it will be deleted prior to FY18.</u></p>	CTA	—
091410	<p>Transitions and Careers In this course, students will analyze interests, aptitudes and skills to prepare for careers and transition through life. An emphasis will be placed on work ethics, team building, communication and leadership skills. Additional topics will include technology etiquette and career planning.</p> <p><u>FY17 will be the last year for this subject code; it will be deleted prior to FY18.</u></p>	—	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
090050	<p>Healthy Food – Middle School Provide students with the knowledge to evaluate good food choices and develop a plan for maintaining healthy weight. Demonstrate proper food handling, food preparation and apply safe kitchen practices.</p> <p><u>FY17 will be the last year for this subject code; it will be deleted prior to FY18.</u></p>	—	—
091077	<p>Healthy and Safe Food Develop practical problem solving that influences cultural and social factors that affect the body weight and healthy lifestyles. Demonstrate safe food-handling practices related to food-borne pathogens and kitchen environments.</p> <p><u>FY17 will be the last year for this subject code; it will be deleted prior to FY18.</u></p>	CTA	—
091200	<p>Healthy Living Develop practical problem solving that influences cultural and social factors that affects the body weight and healthy lifestyles. Demonstrate safe food-handling practices related to food-borne pathogens and kitchen environments. Use time management strategies, decision-making skills, peer pressure and multi-cultural awareness that relate to educational, work and family goals that sustain productive, meaningful lifestyles.</p> <p><u>FY17 will be the last year for this subject code; it will be deleted prior to FY18.</u></p>	CTA	—
091300	<p>Managing Transitions Assess values and resources that support lifestyle goals, effective time management plans, stress management, multicultural awareness that sustains a productive, meaningful lifestyle. Choose resources that meet individual, family and business financial goals, credit and debt issues, techniques to prevent financial loss of assets conflict resolution and public policy that impact financial well-being.</p> <p><u>FY17 will be the last year for this subject code; it will be deleted prior to FY18.</u></p>	CTA	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
091201	<p>Introduction to Family and Consumer Sciences This first course, will provide students with an overview of the four major content areas of Family and Consumer Sciences. Students will be introduced to child development, family relationship concepts and how they relate to family dynamics. Additionally, students will identify financial literacy and consumer economic principles. Students will understand the concepts of design through textiles for personal and home use. Throughout the course, students will develop communication, leadership and career investigation skills.</p>	CTA	—
091205	<p>Principles of Food In this course, students will gain knowledge in food selection criteria and apply preparation methods to promote a healthy lifestyle. Students will apply cooking methods, ingredient selection and nutritional information in the context of selected food dishes. Throughout the course, basic food safety and sanitation techniques will be emphasized.</p>	CTA	—
091210	<p>Global Foods In this course, students will compare cuisines, ingredients and preferred cooking methods of various cultures. The influence of traditions and regional and cultural perspectives on food choices and culinary practices will be emphasized. Students will examine the issues and conditions that affect the availability and quality of food in the global market, and apply advanced cooking techniques, including the use of specialty and advanced equipment in the preparation of food dishes.</p>	CTA	—
091215	<p>Food Science In this course, students will apply basic culinary practices and understand how flavor, texture and appearance are affected during food preparation. Students will evaluate chemical reactions as they occur in cooking methods and assess how to control high-risk food safety situation. Food safety and sanitation techniques will align to industry-recognized certifications.</p>	CTA	—
091220	<p>Culinary Fundamentals In this course, students will apply fundamental culinary techniques, such as knife handling skills and the recognition, selection and proper use of tools and equipment. An emphasis will be placed on mise en place, the management of time, ingredients and equipment. Students will apply standard recipe conversions using proper scaling and measurement techniques.</p>	CTA	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
091225	<p>Principles of Nutrition and Wellness In this course, students will use principles of nutrition to ensure a healthy body throughout the lifecycle. An emphasis will be placed on planning and preparing meals with an understanding of nutrients and their benefits, portion control and dietary needs. Additional information will include steroid and supplemental use, body weight and management and the implementation of physical activity to maintain a healthy lifestyle.</p>	CTA	—
093010	<p>Personal Wellness In this course, students will analyze personal physical, emotional, social and intellectual growth for a healthy lifestyle. An emphasis will be placed on lifespan wellness by managing stress through relaxation, physical activity and sleep. Additional topics will include human growth development, mental health management, personal hygiene and preparing for emergency medical situations. This course may serve as the Health credit.</p>	CTA	—
093015	<p>Human Growth and Development In this course, students will analyze human growth and development throughout the lifespan. An emphasis will be placed on physical, cognitive, social and emotional growth and development. Additional topics will include human characteristics and traits, genetic defects, parenting styles and responsibilities and cultural differences within a family unit and community.</p>	CTA	—
091403	<p>Leadership and Community Engagement In this course, students will learn how to become an active community member and citizen. An emphasis will be placed on in-service learning, leadership training and teambuilding opportunities. Additional topics will include public policy issues, community and global engagement.</p>	CTA	—
091053	<p>Consumer Economics In this course, students will study public policy and consumer behavior related to consumer economics. Throughout the course, students will examine laws and regulations that affect the consumer. Additional topics will include consumer expenditures, consumer fraud, global economy, large purchases, and contracts.</p>	CTA	—
091052	<p>Personal Financial Management In this course, students will develop personal financial plans for individual personal well-being. Throughout the course, students will develop financial literacy skills to provide a basis for responsible citizenship and career success. Additional topics will include analyzing services from financial institutions, consumer protection, investing and risk management.</p>	CTA	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
091402	<p>Career and College Readiness In this course, students will develop effective learning strategies and skills to provide a strong foundation for successful lifelong learning. Throughout the course, students will research careers and occupations, review postsecondary admissions qualifications, develop interviewing skills and participate in internships. Additional topics will include principles and techniques of professionalism, networking, conflict-resolution, negotiation, leadership and entrepreneurship.</p>	CTA	—
091500	<p>Interior Design, Furnishings and Management In this Family and Consumer Sciences career field, students will examine design principles used in residential interiors. An emphasis will be placed on incorporating anthropometrics, ergonomics and psychological responses. Additional topics will include the selection and organization of furnishings, floors and wall coverings in living spaces, kitchens and baths.</p>	CTA	—
091505	<p>Textile Design, Construction and Maintenance In this course, students will study the visual appearance of fabric and fashion design. Students will identify, analyze and apply production processes and techniques to textiles. Additional topics will include the maintenance and alterations of textiles products, including home interior accessories and garments.</p>	CTA	—
091501	<p>Textiles and Interior Design In this course students will explore a broad range of topics relating to the various aspects and career opportunities available in the field of textiles and design. The emphasis will be given to textiles project development and developing strategies to maintain the home. Additional topics will include project collaboration, design techniques and environmental sustainability.</p>	CTA	—
093005	<p>Personal Wellness and Development In this course students will develop a personalized approach to healthy living. An emphasis will be placed on developing personal health for an adolescent that can be used as they transitions through life. Additional topics will focus on problem-solving, work ethics, nutritional and food selections, family dynamics and personal health.</p>	CTA	—

INTERNATIONAL BACCALAUREATE COURSES SECTION

Table 36. International Baccalaureate Courses for Diploma Program (32xxxx)

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
320050	IB Mathematics Based upon the most current International Baccalaureate Program curriculum.	MTH	Mathematics
320150	IB Mathematical Studies Based upon the most current International Baccalaureate Program curriculum.	MTH	Mathematics
320200	IB First Language Based upon the most current International Baccalaureate Program curriculum.	ENG	English
320250	IB Second Language – Arabic Based upon the most current International Baccalaureate Program curriculum.	FLR	Foreign Language
320300	IB Second Language – Chinese Based upon the most current International Baccalaureate Program curriculum.	FLR	Foreign Language
320350	IB Second Language – Czech Based upon the most current International Baccalaureate Program curriculum.	FLR	Foreign Language
320400	IB Second Language – French Based upon the most current International Baccalaureate Program curriculum.	FLR	Foreign Language
320450	IB Second Language – German Based upon the most current International Baccalaureate Program curriculum.	FLR	Foreign Language
320500	IB Second Language – Hebrew Based upon the most current International Baccalaureate Program curriculum.	FLR	Foreign Language
<u>320525</u>	<u>IB Second Language – Hindi</u> <u>Based upon the most current International Baccalaureate Program curriculum.</u>	<u>FLR</u>	<u>Foreign Language</u>
320550	IB Second Language – Italian Based upon the most current International Baccalaureate Program curriculum.	FLR	Foreign Language
320600	IB Second Language – Japanese Based upon the most current International Baccalaureate Program curriculum.	FLR	Foreign Language
320650	IB Second Language – Polish Based upon the most current International Baccalaureate Program curriculum.	FLR	Foreign Language
320700	IB Second Language – Russian Based upon the most current International Baccalaureate Program curriculum.	FLR	Foreign Language

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
320750	IB Second Language – Swahili Based upon the most current International Baccalaureate Program curriculum.	FLR	Foreign Language
320800	IB Second Language – Spanish Based upon the most current International Baccalaureate Program curriculum.	FLR	Foreign Language
320850	IB Classical Languages (Latin or Classical Greek) Based upon the most current International Baccalaureate Program curriculum.	FLR	Foreign Language
320900	IB Business and Management Based upon the most current International Baccalaureate Program curriculum.	BUS	—
320950	IB Economics Based upon the most current International Baccalaureate Program curriculum.	SOC	Economics
321000	IB Geography Based upon the most current International Baccalaureate Program curriculum.	SOC	Geography
321050	IB History Based upon the most current International Baccalaureate Program curriculum.	SOC	History
321100	IB Islamic History Based upon the most current International Baccalaureate Program curriculum.	SOC	History
321150	IB Information Technology in a Global Society (ITGS) Based upon the most current International Baccalaureate Program curriculum.	TEC	—
321200	IB Philosophy Based upon the most current International Baccalaureate Program curriculum.	N/A	—
321250	IB Psychology Based upon the most current International Baccalaureate Program curriculum.	SOC	—
321300	IB Social and Cultural Anthropology Based upon the most current International Baccalaureate Program curriculum.	SOC	—
321350	IB Biology Based upon the most current International Baccalaureate Program curriculum.	SCI	Science
321400	IB Chemistry Based upon the most current International Baccalaureate Program curriculum.	SCI	Science
321450	IB Physics Based upon the most current International Baccalaureate Program curriculum.	SCI	Science

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
321500	IB Design Technology Based upon the most current International Baccalaureate Program curriculum.	TEC	—
321550	IB Environmental Systems Based upon the most current International Baccalaureate Program curriculum.	SCI	Science
321600	IB Computer Science Based upon the most current International Baccalaureate Program curriculum.	TEC	—
321650	IB Visual Arts Based upon the most current International Baccalaureate Program curriculum.	FAR	Arts
321700	IB Music Based upon the most current International Baccalaureate Program curriculum.	FAR	Arts
321750	IB Theatre Arts Based upon the most current International Baccalaureate Program curriculum.	FAR	Arts
321775	IB Theory of Knowledge Based upon the most current International Baccalaureate Program curriculum.	SOC	—
322900	<u>IB Global Politics</u> <u>The global politics course explores fundamental political concepts such as power, liberty and equality, in a range of contexts and at a variety of levels. It allows students to develop an understanding of the local, national, international and global dimensions of political activity, as well as allowing them the opportunity to explore political issues affecting their own lives.</u>	<u>SOC</u>	<u>—</u>

Table 37. International Baccalaureate Courses for Middle Years Program (32xxxx)

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
321800	IB Mathematics (Middle Years - Grades 7-8) Based upon the most current International Baccalaureate Program curriculum.	N/A	Mathematics
321850	IB Mathematics (Middle Years - Grades 4-6) Based upon the most current International Baccalaureate Program curriculum.	N/A	Mathematics
321900	IB Language Arts A (Middle Years - Grades 7-8) Based upon the most current International Baccalaureate Program curriculum.	N/A	English
321950	IB Language Arts A (Middle Years - Grades 4-6) Based upon the most current International Baccalaureate Program curriculum.	N/A	English

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
322000	IB Language Arts B (Middle Years - Grades 7-8) Based upon the most current International Baccalaureate Program curriculum.	N/A	English
322050	IB Language Arts B (Middle Years - Grades 4-6) Based upon the most current International Baccalaureate Program curriculum.	N/A	English
322100	IB Humanities (Middle Years - Grades 7-8) Based upon the most current International Baccalaureate Program curriculum.	N/A	—
322150	IB Humanities (Middle Years - Grades 4-6) Based upon the most current International Baccalaureate Program curriculum.	N/A	—
322200	IB Technology (Middle Years - Grades 7-8) Based upon the most current International Baccalaureate Program curriculum.	N/A	—
322250	IB Technology (Middle Years - Grades 4-6) Based upon the most current International Baccalaureate Program curriculum.	N/A	—
322300	IB Arts (Middle Years - Grades 7-8) Based upon the most current International Baccalaureate Program curriculum.	N/A	Arts
322350	IB Arts (Middle Years - Grades 4-6) Based upon the most current International Baccalaureate Program curriculum.	N/A	Arts
322400	IB Sciences (Middle Years - Grades 7-8) Based upon the most current International Baccalaureate Program curriculum.	N/A	Science
322450	IB Sciences (Middle Years - Grades 4-6) Based upon the most current International Baccalaureate Program curriculum.	N/A	Science
322500	IB Physical Education (Middle Years - Grades 7-8) Based upon the most current International Baccalaureate Program curriculum.	N/A	—
322550	IB Physical Education (Middle Years - Grades 4-6) Based upon the most current International Baccalaureate Program curriculum.	N/A	—

Table 38. International Baccalaureate Courses for Primary Years Program (32xxxx)

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
322600	IB Mathematics (Primary Years - Grades 1-3) Based upon the most current International Baccalaureate Program curriculum.	N/A	Mathematics

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
322650	IB Language (Primary Years - Grades 1-3) Based upon the most current International Baccalaureate Program curriculum.	N/A	English
322700	IB Social Studies (Primary Years - Grades 1-3) Based upon the most current International Baccalaureate Program curriculum.	N/A	—
322750	IB Arts (Primary Years - Grades 1-3) Based upon the most current International Baccalaureate Program curriculum.	N/A	Arts
322800	IB Science & Technology (Primary Years - Grades 1-3) Based upon the most current International Baccalaureate Program curriculum.	N/A	Science
322850	IB Personal, Social & Physical Education (Primary Years - Grades 1-3) Based upon the most current International Baccalaureate Program curriculum.	N/A	—

SELF-CONTAINED COURSES SECTION

Table 39. General Education Codes (18xxxx)

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
180108	Preschool Preschool program in a self-contained classroom, this includes course related to ECE, Federal Head Start, and other local programs.	NA	—
180280	Title I Preschool A preschool program funded with Title I funds.	N/A	—
180050	Early Education (0-2) Courses taught to students ages 0-2.	N/A	—

Table 40. Exceptional Children (for Students with Disability Conditions) Codes (19xxxx)

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
196095	Early Education of the Handicapped Special Education programs and related services for children below six years of age.	N/A	—
199000	Transition to Post School Readiness Specialized curriculum designed for students with disabilities 14 years of age and older that provides training for the development of skills that supports the students transition to post school environments, including employment, postsecondary education, independent living, or community participation.	N/A	—
Content of the following courses is based on IEP goals linked to standards, but instruction is based on substantial modification to the form and substance of the general education curriculum. Course content focuses largely on application of state standards through essential life skills that typical students generally acquire in a non-school setting. For example, content in these courses linked to language arts standards might be learning to say one's own name or expressing preferences using non-verbal responses; content in these courses linked to math standards might be learning the concept of "one."			
196350	Adaptive Living Skills (K-3) Basic skills for students with severe motor, sensory, or cognitive intellectual disabilities that present unique and significant challenges to participation in other courses. Grades K - 3	N/A	—
196360	Adaptive Living Skills (4-6) Basic skills for students with severe motor, sensory, or cognitive intellectual disabilities that present unique and significant challenges to participation in other courses. Grades 4 - 6	N/A	—
196370	Adaptive Living Skills (7-8) Basic skills for students with severe motor, sensory, or cognitive intellectual disabilities that present unique and significant challenges to participation in other courses. Grades 7 - 8	N/A	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
196380	Adaptive Living Skills (9-12) Basic skills for students with severe motor, sensory, or cognitive <u>intellectual</u> disabilities that present unique and significant challenges to participation in other courses. Grades 9 – 12.	N/A	—

OTHER COURSES SECTION

Table 41. Other Course Codes (30xxxx)

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
These courses may be included in district programs and/or graduation requirements. However, these courses are not aligned with the academic content standards and do not represent courses for which credit toward meeting legislated graduation requirements is awarded.			
300010	Career Exploration Scheduled time for researching career options.	ELE	—
300020	Community Service (Volunteer Program) Scheduled time for volunteer service projects during or outside the school day. Note: This course cannot earn credit per ORC §3313.60.5.	ELE	—
300030	Study Skills Instruction in strategies to improve learning and develop study skills; e.g., tips to improve study habits and test performance, with limited coverage of new content or the academic content standards for a single or multiple academic areas.	ELE	—
300040	School Publications Scheduled time for production work and related activities of school publications; e.g., advertising and finances, for newspaper and/or yearbook. Activities not aligned with the academic content standards and do not earn English Language Arts credit.	ELE	—
300050	Wellness A course that addresses general wellness strategies. Credit earned is not applied towards meeting graduation requirements for health and physical education due to limited focus on content related to those areas.	ELE	—

Table 42. Humanities Codes (31xxxx)

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
Humanities courses may be included in district programs and may be taught by a teacher holding a valid certificate or instruction may be provided by a team of teachers that collectively hold the appropriate certificates/licenses for the content areas included in the course.			
310010	Humanities (7-8) The study of cultural achievements through the integration of literature, the arts, religion, history, and philosophy. (for grades 7-8)	N/A	—
310020	Humanities The study of cultural achievements through the integration of literature, the arts, religion, history, and philosophy.	N/A	—

Table 43. Driver Education Code (210100)

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
210100	Driver Education Learning experiences provided by the school for the purposes of helping pupils to become good traffic citizens and to operate motor vehicles safely and efficiently.	ELE	—

Table 44. ROTC Military Science Code (220000)

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
220001	ROTC Military Science Organized subject matter and learning activities which are concerned with the development in each student attributes of (1) good citizenship and patriotism, (2) self-reliance, leadership, responsiveness to constituted authority, (3) a knowledge of the basic military skills, and (4) an appreciation of the role of the U.S. military in national defense.	ELE	—

Table 45. Capstone Codes (37xxxx)

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
<u>Capstone courses may address any content area. The subject area for awarding credit and the HQT status of the teacher are dependent on the locally chosen focus of the course.</u>			
<u>370010</u>	<u>Research A research course provides the opportunity to engage in an in-depth study of an academic topic, problem or idea of personal interest. Research methodology and ethical research skills learned in a seminar course are applied and extended as students delve into planning and implementing an investigation around a research question. A process and reflection portfolio is used to document the study. The course culminates in a paper and presentation with an oral defense.</u>	<u>Varies</u>	<u>Varies</u>
<u>370015</u>	<u>Seminar A seminar course is an opportunity to explore academic and real-world topics through cross-curricular discussions. Divergent perspectives are explored by reading and analyzing articles, research studies and foundational, literary and philosophical texts; listening to and viewing speeches, broadcasts and personal accounts; and experiencing artistic works and performances. The ultimate goal for this experience is to develop the ability to analyze information with accuracy and precision then to create and communicate evidence-based arguments.</u>	<u>Varies</u>	<u>Varies</u>

Table 46. Senior Only Industry Credential Codes (38xxxx)

<u>Subject Code</u>	<u>Description</u>	<u>Suggested Subject Area for Credit</u>	<u>Core Subject Area (for HQT)</u>
<p><u>These subject codes start with “38” and end with the four character Assessment Area Code (FA205; see EMIS Manual Section 2.8 Student Assessment Record) of the Industry Credential Code that is associated with the course.</u></p>			