ODE EMIS MANUAL

Section 4.7:
Subject Codes

Ohio | Department of Education

Version 3.3
July 14, 2014

REVISION HISTORY

The revision history provides a means for the readers to easily navigate to the places in the manual where updates have occurred. Where there has been a significant change or update it will be highlighted. Minor changes, such as typos, formatting, and grammar are not highlighted.

Version	Date	Effective Date (FY & Reporting Period)	Change #	Description
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.
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.
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.
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.

Version	Date	Effective Date (FY & Reporting Period)	Change #	Description
3.3	4/14/14	FY14N	1009	A number of math subject code descriptions have been updated to align with new standards. Subject code110050 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 algin 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.

TABLE OF CONTENTS

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
~~120000~~	~~**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.~~ ~~(This subject code will be deleted in FY13; subject code 120001 is the replacement.)~~	~~FAR~~	~~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	**Printmaking** Linoleum block printing, woodblock printing, silk-screen printing, and etching are studied as processes for expressing ideas. Professional printmakers' products are also examined.	FAR	Arts
020290	**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.	FAR	Arts
029902	**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.	FAR	Arts
020320	**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.	FAR	Arts
029100	**Studio Art – Drawing** A course in drawing for students who are highly motivated and have previous training in art.	FAR	Arts
029110	**Studio Art – 2D Design** A course in two-dimensional art design for students who are highly motivated and have previous training in art.	FAR	Arts
029120	**Studio Art – 3D Design** A course in three-dimensional art design for students who are highly motivated and have previous training in art.	FAR	Arts
029999	**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.	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	**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.	BUS	—
030500	**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.	BUS, MTH	Mathematics
030600	**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.	BUS, ENG	English
030900	**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.	BUS	—
031500	**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.	BUS	—
031700	**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.	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
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
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

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
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 *nine*. 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 *ten*. 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 *eleven*. 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
050190	**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 *twelve*. 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
050014	**Intervention English** This course is designed for remedial study with emphasis on the English language arts Academic Content Standards and the Ohio Graduation Test.	ENG	English

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
050119	**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.	ENG	Reading
051905	**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.	ENG	English
050220	**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.	ENG	English
050300	**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.	ENG	English
050400	**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.	ENG	English
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

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
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)
~~230000~~	~~**Family & Consumer Sciences**~~ ~~Content from a combination of the various areas of family and consumer sciences.~~ ~~(This subject code will be deleted in FY13; subject code 230001 is the replacement.)~~	~~HEC~~	~~—~~
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	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
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
060107	**Latin** The study of the language, literature, and culture of Ancient Rome and its influence on modern civilization.	FLR	Foreign Language
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

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
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
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, gram-mar, 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

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
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
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	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
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 ~~pre~~K-3 portions of Ohio's ~~academic content standards for mathematics.~~New Learning Standards for Mathematics.	N/A	Mathematics
110150	**Mathematics 4-6** Includes content in the 4-6 portions of Ohio's ~~academic content standards for mathematics.~~New Learning Standards for Mathematics.	N/A	Mathematics
110175	**Mathematics 7-8** Includes content in the 7-8 portions of Ohio's ~~academic content standards for mathematics.~~New Learning Standards for Mathematics.	N/A	Mathematics
110050	**Advanced Mathematics/Pre-Algebra 6-8** (not for high school credit) Optional program that accelerates completion of the K-8 program and prepares students to enroll in high school level courses prior to grade 9. FY14 will be the last year for this subject code; it will be deleted as of FY15.	N/A	Mathematics

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
110060	**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.	MTH	Mathematics
The following course would receive high school mathematics credit if taught by a 7-12 or 4-9 licensed mathematics teacher.			
110065	**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.	MTH	Mathematics

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

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
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.~~high school level content through topic-focused, discrete courses.~~			
110301	**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.~~In-depth study of algebraic concepts and processes to represent and solve problems that involve variable quantities. Includes using and relating graphical and symbolic representations and techniques.~~	MTH	Mathematics
111200	**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.~~In-depth study of two and three-dimensional geometry including representing problem situations using geometric models, deductive reasoning, and geometry from an algebraic perspective.~~	MTH	Mathematics

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
110302	**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.~~Further study of algebraic concepts and processes such as matrices, vectors, and logarithmic and trigonometric functions.~~	MTH	Mathematics
110099	**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.~~The study of advanced topics in functions, algebra, geometry, and data analysis including the conceptual underpinnings of calculus.~~	MTH	Mathematics
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.~~9-12 portion of Ohio's academic content standards using an integrated approach. All content standards, e.g., algebra, geometry, and data analysis, are included in each course.~~			
110010	**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. ~~**Integrated Mathematics I**~~ ~~The first course in a four-year sequence which addresses the grades 9-12 portion of Ohio's academic content standards for mathematics using an integrated approach.~~	MTH	Mathematics
110020	**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. ~~**Integrated Mathematics II**~~ ~~The second course in a four-year sequence that extends understanding of and addresses new content in algebra, geometry, data analysis, and probability.~~	MTH	Mathematics

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
110030	**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. ~~**Integrated Mathematics III**~~ ~~The third course in a four-year sequence that expands the study of algebra, geometry, data analysis, probability, and/or discrete mathematics to include greater depth of understanding and application.~~	MTH	Mathematics
110040	**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. ~~**Integrated Mathematics IV**~~ ~~The fourth course in a four-year sequence that addresses advanced content in algebra, geometry, data analysis, probability, discrete mathematics, and/or conceptual underpinnings of calculus.~~	MTH	Mathematics
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.~~Three-year program or sequence of courses that addresses high school level content through concrete models and real-world situations and with less emphasis on symbol-manipulation and formal mathematical structure. See Program Model A for mathematics on the ODE website for description of applications driven mathematics.~~			
110480	**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 require the respective Algebra I or Mathematics I End-of-Course exam.~~Includes courses with an algebra focus such as Basic Algebra, Informal Algebra, or Applied Algebra.~~	MTH	Mathematics
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 require the respective Geometry or Mathematics II End-of-Course exam.~~Includes courses with a geometry focus such as Basic Geometry, Informal Geometry, or Applied Geometry.~~	MTH	Mathematics

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
110500	**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.~~Includes new, high school level content with an emphasis on application that expands the study of algebra, geometry, data analysis, probability, and/or discrete mathematics.~~	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

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
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 ~~or no new~~ of the high school level content found in the New Learning Standards for Mathematics.~~, such as pre-algebra, general mathematics, business mathematics and consumer mathematics courses based on the benchmarks and indicators found in the grades 6-8 portion of the Ohio Academic Content Standards.~~	MTH	Mathematics
111350	**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.	MTH	Mathematics
111300	**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.	MTH	Mathematics
111600	**Trigonometry** In-depth study of trigonometric and circular functions including modeling, graphing, and connecting to polar coordinates, complex numbers, and series.	MTH	Mathematics
111850	**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.~~Content includes new topics and revisits some previously addressed topics with increased emphasis on symbol manipulation and mathematical structure.~~	MTH	Mathematics
111500	**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.	MTH	Mathematics

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
119550	**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.	MTH	Mathematics
110600	**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.	MTH	Mathematics
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.)~~Course that address concepts and skills below the 9-12 portion of Ohio's academic content standards for mathematics should be coded as 111950 Intervention 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 (~~Pre~~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.~~Early childhood science course for grades preK-3 which enables all students to develop standards-based knowledge and skills. Course includes changes on the earth and in the sky, living and nonliving environmental resources, rocks and soil, sky and earth cycles; characteristics and diversity of plants and animals, habitats, interactions between living things and their environment, interdependence and survival of plants and animals in Ohio, heredity; characteristics of objects and how they move, forces, physical interactions and changes, sources of energy, light and sound; natural or manmade objects, tools and materials, building/using technology, purpose, process and effects of science and technology; design process; different ways people learn about science, science in all societies, the nature of science investigation; measurement, tools and safety; ethical practices; scientific inquiry involving wondering, questioning, investigating, and communicating.~~	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.~~Middle childhood science course for grades 4-6 which enables all students to develop standards-based knowledge and skills. Course includes rocks, weather, erosion, the Earth and it's place in the solar system; diversity of animal classifications and adaptations, plant classifications and adaptations, ecosystems; forces and motion, physical and chemical changes in matter, thermal and electric energy and energy transfer; renewable and nonrenewable resources ,helpful and harmful results, technology and human lives, design processes, technology and the environment; documentation of science investigations, careers in science, thinking scientifically in daily life; using results and data, explanation of observations and investigations, methods of investigation, facts and theories; safely conducting investigations, measuring and collecting, formulating conclusions, and communicating findings.~~	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.~~Middle childhood science course for grades 7-8 which enables all students to develop standards-based knowledge and skills. Course includes rocks and minerals, weather and climate, space, plate tectonics, theories related to the changes of the Earth's surface; cells, reproduction, diversity and factors of ecosystems, similarities and differences among species, survival of species; chemical and physical changes, nature of energy, conservation of matter and energy, forces and motion, waves; technological design and influences on the quality of life, abilities to do technological design, ethical issues of technology, design solutions, history and relationships between culture, society and technology; skills of scientific inquiry, science practiced in everyday life, validity of scientific experiments, ethical practices, describing and explaining in science; conducting safe investigations using proper tools, applying mathematics skills, evaluating and analyzing variables of data, and drawing valid conclusions based on evidence.~~	N/A	Science
132212	**Integrated Sciences I: Physical Sciences** High school science course that contributes to the Ohio Graduation Test and develops standards-based knowledge and skills. Course includes atoms, chemical reactions, physical properties, mixtures and solutions, laws of motion, forces, energy, waves, historical perspectives and emerging issues; processes within and on the Earth, Earth's history through geologic evidence, resources; relationship between technology and science; diversity of scientific investigations, scientific theories, scientific literacy, scientific conclusions, and modeling investigations. FY14 will be the last year for this subject code; it will be deleted as of FY15.	SCI	Science
132214	**Integrated Sciences II: Biological Sciences** High school science course that contributes to the Ohio Graduation Test and develops standards-based knowledge and skills. Course includes cells, genetics and DNA, diversity of life, ecology, biological evolution, historical perspectives and emerging issues; processes within and on the Earth, Earth's history through geologic evidence, resources; scientific advances and emerging technologies; nature of science inquiry, ethics in science, science and careers, and modeling investigations. FY14 will be the last year for this subject code; it will be deleted as of FY15.	SCI	Science

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
132216	**Integrated Sciences III: Environmental Sciences** High school science course to develop standards-based knowledge and skills. Course includes interactions between humans and the Earth; ecosystems, environmental factors, biological evolution, populations, diversity; matter and energy, relationships; human interactions with science and technology, understanding technology; research, science and society; application of science processes, and techniques and research. FY14 will be the last year for this subject code; it will be deleted as of FY15.	SCI	Science
132900	**Intervention Science** High school science course for students who have previously completed Physical Science and Biology and~~, which includes little or no new content from courses previously taken by students who~~ have taken but ~~have~~ not yet ~~successfully~~ 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~~s~~** 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.~~High school science course that contributes to the Ohio Graduation Test and develops standards-based knowledge and skills. Course includes atoms, chemical reactions, physical properties, mixtures and solutions, laws of motion, forces, energy, waves, historical perspectives and emerging issues; relationship between technology and science; diversity of scientific investigations, scientific theories, scientific literacy, scientific conclusions, and modeling investigations.~~	SCI	Science

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
132230	**Biology~~ical Sciences~~** 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.~~High school science course that contributes to the Ohio Graduation Test and develops standards-based knowledge and skills. Course includes cells, genetics and DNA, diversity of life, ecology, biological evolution, historical perspectives and emerging issues; scientific advances and emerging technologies; nature of science inquiry, ethics in science, science and careers, and modeling investigations.~~	SCI	Science
132350	**Environmental Science~~s~~** 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.~~High school science course to develop standards-based knowledge and skills. Course includes interactions between humans and the Earth; ecosystems, environmental factors, biological evolution, populations, diversity; matter and energy, relationships; human interactions with science and technology, understanding technology; research, science and society; application of science processes, and techniques and research.~~	SCI	Science
132240	**Earth and Space Sciences** High school science course to develop standards-based skills and concepts in the earth and space sciences. Course includes energy in the Earth system, geochemical cycles, origin and evolution of the Earth system, and origin and evolution of the universe. FY14 will be the last year for this subject code; it will be deleted as of FY15.	SCI	Science

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
134250	**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	SCI	Science
130301	**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. ~~The study of the composition, structure, properties of, and changes in matter, including the accompanying energy phenomena.~~	SCI	Science
130302	**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. ~~The study of matter and energy, including the study of phenomena associated with mechanics, heat, wave motion, sound, electricity and magnetism, light, and atomic and nuclear structure.~~	SCI	Science
132330	**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. ~~Advanced high school course that contributes to competencies beyond the Ohio Graduation Test.~~ 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~~, including~~ concepts in anatomy, physiology, ecology, behavior, evolution, genetics, cell biology, microbiology, diversity, growth, ~~and~~ or human biology.	SCI	Science

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
132326	**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 that contributes to competencies beyond the Ohio Graduation Test.~~ 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~~ing~~ concepts in inorganic, organic, analytical, physical, or and biological chemistry.	SCI	Science
132340	**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 that contributes to competencies beyond the Ohio Graduation Test.~~ 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, ~~and~~ or natural resources.	SCI	Science
132325	**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 that contributes to competencies beyond the Ohio Graduation Test.~~ 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~~ing~~ concepts in mechanics, electricity, magnetism, thermodynamics, waves, optics, atomic and nuclear physics, radioactivity, relativity, ~~and~~ or quantum mechanics.	SCI	Science
139960	**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.	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
139905	**Physics B** Course includes topics in both classical and modern physics. Course provides instruction in each of the following five content areas: Newtonian mechanics, fluid mechanics and thermal physics, electricity and magnetism, waves and optics, and atomic and nuclear physics. FY14 will be the last year for this subject code; it will be deleted as of FY15.	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.~~Course provides instruction in each of the following five content areas: electrostatics; conductors, capacitors, and dielectrics; electric circuits; magnetic fields; and electromagnetism.~~	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.~~Course provides instruction in each of the following six content areas: kinematics; Newton's laws of motion; work, energy, and power; system of particles and linear momentum; circular motion and rotation; and oscillations and gravitation.~~	SCI	Science

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
139997	**Other Science** Any introductory level high school science course that includes content typically taught at the 9th or 10th 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.~~A science course offered in high school that contains subject matter that aligns with grades 9 and 10 science standards, but is different in scope than any other subject codes described in this Section.~~	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 11th or 12th 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.~~An advanced science course offered in high school that contains subject matter that aligns with grades 11 or 12 science standards, but is different in scope than any other advanced science codes described in this Section.~~	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

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
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
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	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
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)
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.			
290035	**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.	N/A	—
290040	**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.	N/A	—
290045	**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.	N/A	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
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.			
290050	**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.	TEC	—
290100	**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.	TEC	—
290110	**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.	TEC	—
290120	**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.	TEC	—
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	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
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	—
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	—
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	—
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	—
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	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
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	—
200905	**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.	TEC	—

Table 18. Technology Education Codes (10xxxx)

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.			
102285	**Technological Literacy K-3** Instruction that includes content in the K-3 portion of Ohio's academic content standards for technology.	N/A	—
102290	**Technological Literacy 4-6** Instruction that includes content in the 4-6 portion of Ohio's academic content standards for technology.	N/A	—
102295	**Technological Literacy 7-8** Instruction that includes content in the 7-8 portion of Ohio's academic content standards for technology.	N/A	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
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.			
102300	**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.	TEC	—
107450	**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.	TEC	—
101700	**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.	TEC	—
101720	**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.	TEC	—
101730	**Issues and Problems in Technology** The study of themes concerning technology, society, and the environment.	TEC	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
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.			
100100	**Construction** The study of the technology and the socioeconomic contributions of those industries concerned with residential, civic industrial, civil, and transportation structures.	TEC	—
100800	**Home Mechanics** The study of the tools, materials, and processes involved in the upkeep and repair of the home, its equipment and devices.	TEC	—
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.			
101300	**Manufacturing** The study of the technology and the socioeconomic contributions of industries concerned with the creation of durable consumer products.	TEC	—
101350	**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.	TEC	—
101800	**Service Industries** The study of the technology of industries concerned with the maintenance and repair of consumer and/or industrial products.	TEC	—
101900	**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.	TEC	—
101410	**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.	TEC	—
101500	**Plastics** Information and skills concerned with the production, processing, and use of plastics, composites and related factors such as occupations, economics, and consumer information.	TEC	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
100200	**Industrial Crafts** Information and skills concerned with handcrafts and the craft industry, including its tools, materials, processes, products, and occupations.	TEC	—
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.			
100300	**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.	TEC	—
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	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
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 Systems Codes (01xxxx)

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
010105	**Agriculture, Food and Natural Resources** 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.	CTA	—
010110	**Communications and Leadership** 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.	CTA	—
010115	**Business Management for Agricultural and Environmental Systems** Learners will examine elements of business, identify organizational structures and identify and apply management skills. Learners will develop 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 and apply concepts of ethics and professionalism while understanding related business regulations.	CTA	—
010120	**Structural Engineering** 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.	CTA	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
010155	**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.	CTA	—
010190	**Agricultural and Environmental Systems Capstone** The capstone course is an opportunity for students to solve problems and demonstrate that they have achieved the requisite knowledge and skills in their chosen Agricultural and Environmental Systems career field pathway. The course is designed to assess cognitive, affective and psychomotor learning and to do so in a student-centered and student-directed manner. The capstone requires the application of learning to a project that serves as an instrument of evaluation.	CTA	—
010210	**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.	CTA	—
010215	**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.	CTA	—
010220	**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.	CTA	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
010225	**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.	CTA	—
010230	**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.	CTA	—
010235	**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.	CTA	—
010240	**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.	CTA	—
010610	**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.	CTA	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
010615	**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.	CTA	—
010620	**Agronomic Systems** 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 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. Students will employ communication, business, and management strategies appropriate for the industry.	CTA	—
010625	**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. 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.	CTA	—
010630	**Landscape Design and Build** 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.	CTA	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
010635	**Turf Science and Management** The course will apply principles of science, engineering, and business to support the establishment and maintenance of residential, athletic and recreational turf. Instruction in establishment, care, production, and marketing of turf grass along with safe operation and maintenance of specialized equipment will be provided. Environmental awareness and conservation practices will be applied. Students will employ communication, business, and management strategies appropriate for the industry.	CTA	—
010710	**Natural Resources** Learners 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. Students will be introduced to management practices related to managing air and water quality along with requirements for managing solid and liquid waste. Communications, business principles and leadership skill development are essential to the program.	CTA	—
010715	**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.	CTA	—
010716	**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.	CTA	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
010717	**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.	CTA	—
010718	**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.	CTA	—
010720	**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.	CTA	—
010725	**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.	CTA	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
010730	**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.	CTA	—
010735	**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.	CTA	—
010740	**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.	CTA	—
010745	**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.	CTA	—
010910	**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.	CTA	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
010915	**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.	CTA	—
010920	**Livestock Science** 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.	CTA	—
010925	**Small Animal Science** 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.	CTA	—
010930	**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.	CTA	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
010935	**Equine Science 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.	CTA	—
010940	**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.	CTA	—
011010	**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.	CTA	—
011015	**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.	CTA	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
011020	**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.	CTA	—
011025	**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.	CTA	—
011030	**Applications of Food Science and 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.	CTA	—
012010	**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.	CTA	—
012015	**Laboratory Techniques and Safety** 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.	CTA	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
012020	**Applications of Genetics** 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.	CTA	—
012025	**Bioinformatics** 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.	CTA	—

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

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
340005	**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.	CTA, TEC	—
340010	**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.	CTA	—
340015	**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.	CTA	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
340020	**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.	CTA	—

Table 21. Career Field 03: Business & Administrative Services Codes (14xxxx)

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
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.	CTA, BUS, TEC	—
140075	**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.	CTA, BUS	—
140300	**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.	CTA, BUS, TEC	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
140310	**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.	CTA, BUS, TEC	—
140320	**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.	CTA, BUS, TEC	—
140800	**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.	CTA, BUS, TEC	—

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

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
170005	**Construction Technologies** Combined with specialization competencies utilizing business and industry technical standards and a math, science, ELA, technology, and business process framework, develops technical literacy in construction systems leading to pathways in pre-construction and design, construction management, apprenticeship and specialization areas (e.g., carpentry, electrical, masonry, environmental control technologies, etc.) and post-secondary articulation. FY15 will be the last year for this subject code; it will be deleted as of FY16.	CTA, TEC	—
170100	**Environmental Control Technologies** Utilizes industry standards and a math, science, ELA and technology framework to introduce concepts of installation, repair and maintenance of residential, commercial, and industrial air-conditioning systems. FY15 will be the last year for this subject code; it will be deleted as of FY16.	CTA, TEC	—
171001	**Carpentry** Utilizes industry standards and a math, science, ELA and technology framework to introduce concepts of layout, construction and repair of residential and commercial structures. FY15 will be the last year for this subject code; it will be deleted as of FY16.	CTA, TEC	—
171002	**Electrical Trades** Utilizes industry standards and a math, science, ELA and technology framework to introduce concepts of layout, assembly, installation, testing, and maintenance of electrical fixtures and apparatus, and the wiring used in electrical systems. FY15 will be the last year for this subject code; it will be deleted as of FY16.	CTA, TEC	—
171003	**Heavy Equipment (Construction)** Classroom and practical work experiences concerned with the operation, maintenance and repair of heavy-duty construction equipment and the gasoline or diesel engines powering the equipment. FY15 will be the last year for this subject code; it will be deleted as of FY16.	CTA, TEC	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
171004	**Brick, Block and Cement Masonry** Utilizes industry standards and a math, science, ELA and technology framework to introduce concepts of cutting, chipping and fixing in position of brick and concrete block. FY15 will be the last year for this subject code; it will be deleted as of FY16.	CTA	—
171005	**Interior Design Applications** Utilizes industry standards and a math, science, ELA and technology framework to introduce concepts of the interior construction industry; including painting, wallpapering, flooring, tiling, drywall, trim, lighting and more. FY15 will be the last year for this subject code; it will be deleted as of FY16.	CTA	—
171007	**Plumbing and Pipefitting** Utilizes industry standards and a math, science, ELA and technology framework to introduce concepts of layout, assembly, installation, alteration and repair of piping systems and related fixtures and fittings. FY15 will be the last year for this subject code; it will be deleted as of FY16.	CTA, TEC	—
171011	**Building and Property Maintenance** Utilizes industry standards and a math, science, ELA and technology framework to introduce concepts of the physical structure of an office building, factory, apartment building, house, or similar structure in good repair. FY15 will be the last year for this subject code; it will be deleted as of FY16.	CTA, TEC	—
171017	**Building Technology** Utilizing industry standards and a math, science, ELA and a technology framework introduces concepts across multiple areas of construction. Areas include carpentry, electrical trades, masonry, and plumbing and related technical topics. FY15 will be the last year for this subject code; it will be deleted as of FY16.	CTA, TEC	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
171100	**Custodial Services** Utilizes industry standards and a math, science, ELA and technology framework to introduce concepts of layout, assembly, installation, testing, and maintenance of electrical fixtures and apparatus, and the wiring used in electrical systems. FY15 will be the last year for this subject code; it will be deleted as of FY16.	CTA	—
171805	**Construction – Design-Build** Utilizes industry standards and a math, science, ELA and technology framework to introduce concepts of designing, planning, managing, building and maintaining the built environment. FY15 will be the last year for this subject code; it will be deleted as of FY16.	CTA, TEC	—
171806	**Construction – Management** Classroom and laboratory experiences combining advanced academics and the skills and knowledge essential to the construction industry. Focus is on supervision, planning and management of the construction process. The program will follow the state TCP and culminate in an associate degree. FY15 will be the last year for this subject code; it will be deleted as of FY16.	CTA, TEC	—
173601	**Wood Product Technologies** Utilizing business and industry, math, science and technology standards, introduces concepts of wood product materials and technologies; design and production of window frames, molding, trims and panels; and wood crafting skills including the design and manufacture of wood products such as furniture, moldings, trims, fixtures and cabinetry. FY15 will be the last year for this subject code; it will be deleted as of FY16.	CTA, TEC	—
178000	**Construction** Students will learn principles in basic safety (10-hr OSHA), construction math, hand and power tool are and operation, blueprint reading, material handling, communication and employability skills. An emphasis will be placed on safe and green construction practices.	CTA	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
178029	**Construction Pre-Apprenticeship/Capstone** The capstone course provides opportunities for students to apply knowledge, attitudes and skills that were learned in Construction programs 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.	CTA	—
178001	**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.	CTA	—
178003	**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.	CTA	—
178004	**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.	CTA	—
178005	**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.	CTA	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
178006	**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.	CTA	—
178002	**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.	CTA	—
178007	**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.	CTA	—
178008	**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.	CTA	—
178009	**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.	CTA	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
178010	**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.	CTA	—
178011	**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.	CTA	—
178012	**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.	CTA	—
178013	**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.	CTA	—
178014	**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.	CTA	—
178015	**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.	CTA	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
178016	**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.	CTA	—
178017	**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 aboveground 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.	CTA	—
178018	**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.	CTA	—
178019	**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.	CTA	—
178020	**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.	CTA	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
178021	**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.	CTA	—
178022	**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.	CTA	—
178023	**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.	CTA	—
178024	**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.	CTA	—
178025	**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.	CTA	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
178026	**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.	CTA	—
178027	**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, identity 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.	CTA	—
178028	**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.	CTA	—

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

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
350001	**Introduction to Education and Training** Provides options for students to explore Education and Training career field to allow students to pursue the career pathways.	CTA	—
350011	**Teaching Professions** Major career courses to prepare students for entry level, technical and professional career option within the teaching professions.	CTA	—
350201	**Early Childhood Education** Preparation for employment in childcare services, child development, and early childhood education within the childcare and guidance industries.	CTA	—

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

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
171821	**Computational Science and Engineering** Combined with Engineering Science (subject code 171815), utilizes business and industry technical standards and math, science and technology framework to introduce concepts of the utilization of mathematical formulas to serve as forecasting models across multiple industries in a problem-based format. FY15 will be the last year for this subject code; it will be deleted as of FY16.	CTA, TEC	—
171822	**Aerospace Engineering** Combined with Engineering Science (171815), utilizes business and industry technical standards and a math, science, and technology framework to introduce concepts of pre-engineering related to aerospace in the Project Lead The Way model and leads to post-secondary articulation. FY15 will be the last year for this subject code; it will be deleted as of FY16.	CTA	—
171402	**Power Transmission** Utilizing business and industry technical standards and a math, science, ELA, technology and business process framework, develops technical literacy in erecting and maintaining power lines and circuits for transmission and distribution of electrical power, and assembling and erecting related equipment and structures. FY15 will be the last year for this subject code; it will be deleted as of FY16.	CTA	—
171504	**Telecommunications** Utilizing business and industry technical standards and a math, science, ELA, technology and business process framework, develops technical literacy in the assembly, installation, operation, maintenance and repair of telecommunications equipment. FY15 will be the last year for this subject code; it will be deleted as of FY16.	CTA, TEC	—
171815	**Engineering Science** Utilizing business and industry standards and a pre-calculus/trigonometry, science and technology framework introduces pre-engineering skills, problem-solving and critical thinking in the areas of introduction to engineering, principles of engineering, digital electronics, and engineering design and development in the Project Lead the Way model and leads to post-secondary articulation. FY15 will be the last year for this subject code; it will be deleted as of FY16.	CTA, TEC	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
171816	**Computer Integrated Manufacturing** Combined with Engineering Science (171815), utilizes business and industry technical standards and a math, science, and technology framework to introduce concepts of pre-engineering related to robotic manufacturing in the Project Lead the Way model and leads to post-secondary articulation. FY15 will be the last year for this subject code; it will be deleted as of FY16.	CTA, TEC	—
171817	**Civil Engineering and Architecture** Combined with Engineering Science (171815), utilizes business and industry technical standards and a math, science, and technology framework to introduce concepts of pre-engineering related to civil engineering and architecture in the Project Lead the Way model and leads to post-secondary articulation. FY15 will be the last year for this subject code; it will be deleted as of FY16.	CTA, TEC	—
171818	**Fuel Cell Technologies** Combined with Engineering Technologies – Emerging (subject code 171815), utilizes business and industry technical standards and a math, science, and technology framework to introduce concepts of pre-engineering related to fuel cell types, materials, function, and design in the Project Lead the Way model and leads to post-secondary articulation. FY15 will be the last year for this subject code; it will be deleted as of FY16.	CTA, TEC	—
171819	**Materials Joining Technologies** Combined with Engineering Technologies – Emerging (subject code 171815), utilizes industry technical standards and a math, science, and technology framework to introduce concepts of pre-engineering related to robotics, material science and nanofabrication in welding in the Project Lead the Way model and leads to post-secondary articulation. FY15 will be the last year for this subject code; it will be deleted as of FY16.	CTA, TEC	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
175000	**Biomedical Science** Utilizing business and industry, mathematics, science and technology standards, introduces concepts of biomedical science including principles of the biomedical sciences, human body systems, medical interventions, and science research. This is a Project Lead the Way program only. FY15 will be the last year for this subject code; it will be deleted as of FY16.	CTA	—
170007	**Engineering Systems** Combined with specialization competencies utilizing business and industry technical standards and a math, science, ELA, technology and business process framework, develops technical literacy in engineering and science leading to pathways in the engineering and science career field. FY15 will be the last year for this subject code; it will be deleted as of FY16.	CTA, TEC	—
171600	**Energy Science** Utilizing industry standards and a math, science, ELA and a technology framework introduces concepts of solar, wind, fossil fuel, nuclear, geothermal, biomass, and fuel cell energy and leads to post-secondary. FY15 will be the last year for this subject code; it will be deleted as of FY16.	CTA, TEC	—
171810	**Engineering Technology** Combined with the first course in the pathway and utilizing business and industry technical standards and a math, science, ELA, technology framework, introduces concepts of engineering related to mechanical, electrical and industrial engineering and leads to post-secondary education. FY15 will be the last year for this subject code; it will be deleted as of FY16.	CTA, TEC	—
171820	**Biotechnical Engineering** Combined with Engineering Science (subject code 171815), utilizes business and industry technical standards and a math, science, and technology framework to introduce concepts of biotechnical engineering, genomics, bioprocesses, agricultural, environmental, and biomedical science in a problem-based format. FY15 will be the last year for this subject code; it will be deleted as of FY16.	CTA, TEC	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
171825	**Engineering Design and Development** Combined with Engineering Science (subject code 171815) and an elective Project Lead the Way Course introduces concepts of formal research and design in the construction of a solution to an engineering or societal problem. FY15 will be the last year for this subject code; it will be deleted as of FY16.	CTA, TEC	—
175001	**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 and3D 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.	CTA	—
175002	**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.	CTA	—
175003	**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.	CTA	—
175004	**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.	CTA	—
175005	**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.	CTA	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
175006	**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.	CTA	—
175007	**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.	CTA	—
175008	**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.	CTA	—
175009	**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 apprenticeship.	CTA	—
175015	**Pre-Engineering (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	—

Table 25. Career Field 07: Finance Codes (14xxxx)

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
140025	**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.	CTA, BUS	—
140100	**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.	CTA, BUS	—
140110	**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.	CTA, BUS	—

Table 26. 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 27. Career Field 09: Health Science Codes (07xxxx)

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
070005	**Health Science** Utilizing business and industry technical standards and a math, science, ELA, technology, and business process framework combined with specialized competencies develops technical literacy in the Health Science Career Field leading to pathways in Clinical Healthcare Services, Health Information Management, Health Support Services and Bioscience Research & Development and specialization areas (e.g. physical therapy, dental assisting, medical assisting, nursing, radiology, surgical technology, etc.) with post-secondary articulation. FY15 will be the last year for this subject code; it will be deleted as of FY16.	CTA	—
070101	**Dental Assistant** Utilizing business and industry technical standards, math, science, ELA, social studies and technology with a business process framework, instruction includes concepts, subject matter and laboratory experience to assist the dentist in the dental operatory, clerical functions, and selected dental laboratory work. FY15 will be the last year for this subject code; it will be deleted as of FY16.	CTA	—
070103	**Dental Laboratory Technology** Utilizing business and industry technical standards, math, science, ELA, social studies and technology with a business process framework, introduces subject matter and experiences in producing restorative appliances authorized by a dentist. FY15 will be the last year for this subject code; it will be deleted as of FY16.	CTA	—
070203	**Medical Laboratory Technology** Utilizing business and industry technical standards, math, science, ELA, social studies and technology with a business process framework, introduces concepts, subject matter and experiences to perform diagnostic analytic laboratory tests including phlebotomy techniques. FY15 will be the last year for this subject code; it will be deleted as of FY16.	CTA	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
070204	**Phlebotomy** Utilizing business and industry technical standards, math, science, ELA, social studies and technology with a business process framework, introduces subject matter and experiences to lead to a recognized, portable credential as a certified phlebotomist. FY15 will be the last year for this subject code; it will be deleted as of FY16.	CTA	—
070302	**Practical Nursing** Utilizing business and industry technical standards, math, science, ELA, social studies and technology with a business process framework, instruction includes subject matter and supervised clinical experiences to provide direct nursing care under the supervision of a registered nurse, licensed physician, dentist, or chiropractor. FY15 will be the last year for this subject code; it will be deleted as of FY16.	CTA	—
070303	**Nurse Assisting** Utilizing business and industry technical standards, math, science, ELA, social studies and technology with a business process framework, introduces concepts, subject matter and clinical experiences in the care of individuals under the supervision of a nurse. FY15 will be the last year for this subject code; it will be deleted as of FY16.	CTA	—
070305	**Surgical Technology** Utilizing business and industry technical standards, math, science, ELA, social studies and technology with a business process framework, introduces concepts, subject matter and experiences as a general assistant on the surgical team in the operating suite. FY15 will be the last year for this subject code; it will be deleted as of FY16.	CTA	—
070307	**Home Health** Utilizing business and industry technical standards, math, science, ELA, social studies and technology with a business process framework, introduces concepts, subject matter and experiences to assist elderly, convalescent, or handicapped in their homes for daily living needs. FY15 will be the last year for this subject code; it will be deleted as of FY16.	CTA	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
070410	**Exercise Science/Sports & Recreation Healthcare** Utilizing business and industry technical standards and math, science, ELA, and technology framework, in the study of organ systems, study of movement & associated functional response and adaptations, understand scientific basis underlying exercise-induced physiological responses in athletic training, biomechanics, exercise physiology and nutrition for the prevention, diagnosis and treatment of injuries. FY15 will be the last year for this subject code; it will be deleted as of FY16.	CTA	—
070603	**Optometric Occupations** Utilizing business and industry technical standards, math, science, ELA, social studies and technology with a business process framework, instruction includes concepts, subject matter and experience to prepare, assemble, and/or fit corrective lenses prescribed by a physician, optometrist or optician. FY15 will be the last year for this subject code; it will be deleted as of FY16.	CTA	—
070904	**Medical Assistant** Utilizing business and industry technical standards, math, science, ELA, social studies and technology with a business process framework, instruction includes concepts, subject matter and experience to perform functions and procedures concerned with the diagnosis and treatment of patients under the supervision of a physician. FY15 will be the last year for this subject code; it will be deleted as of FY16.	CTA	—
070906	**Community Health Aide** Utilizing business and industry technical standards, math, science, ELA, social studies and technology with a business process framework, instruction includes concepts, subject matter and experience to serve as a liaison between professional health workers and the recipients of health services. FY15 will be the last year for this subject code; it will be deleted as of FY16.	CTA	—
070912	**Pharmacy Technician** Utilizing business and industry technical standards, math, science, ELA, social studies and technology with a business process framework, instruction includes concepts, subject matter and experiences to work in a pharmacy under the supervision of a pharmacist. FY15 will be the last year for this subject code; it will be deleted as of FY16.	CTA	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
070913	**Health Unit Coordinator** Utilizing business and industry technical standards, math, science, ELA, social studies and technology with a business process framework, introduces concepts, subject matter and experiences to manage components of non-patient care activities in health care facilities. FY15 will be the last year for this subject code; it will be deleted as of FY16.	CTA	—
071100	**Clinical Health Care Services** Combined with specialized competencies and utilizing business and industry technical standards with a math, science, ELA, social studies and technology framework involved in changing the health status of a patient/client over time through performance of tests or evaluations to identify the presence or absence of illness or injury that creates a picture of the health status of an individual at a single point of time. FY15 will be the last year for this subject code; it will be deleted as of FY16.	CTA	—
070994	**Patient Care Technician** Utilizing business and industry technical standards, math, science, ELA, social studies and technology with a business process framework, introduces concepts, subject matter and experiences to perform clinical skills such as blood collection, EKGs, catheterization, recording vital signs and patient treatments, and other tasks related to patient care in a variety of healthcare environments under the direct supervision of a registered nurse or other medical professionals. FY15 will be the last year for this subject code; it will be deleted as of FY16.	CTA	—
074820	**Diagnostic Pathway** A clustered program utilizing business and industry technical standards, math, science, ELA, social studies and technology with a business process framework, instruction includes concepts, subject matter and experiences in health careers that focus on diagnostic procedures to determine status of body functions/systems, cause and nature of diseases and disorders. FY15 will be the last year for this subject code; it will be deleted as of FY16.	CTA, TEC	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
074830	**Therapeutic Pathway** A clustered program utilizing business and industry technical standards, math, science, ELA, social studies and technology with a business process framework, instruction includes concepts, subject matter and experiences in health careers that focus on care and treatment of individuals for the promotion and maintenance of wellness; prevention and treatment of physical, mental and emotional disorders. FY15 will be the last year for this subject code; it will be deleted as of FY16.	CTA	—
074840	**Health Support Pathway** Utilizing business and industry technical standards, math, science, ELA, social studies and technology with a business process framework, introduces concepts, subject matter and experiences for health support services careers, including operation, resource management, esthetics and aseptic procedures of the physical plant to ensure a healthy and well equipped environment in healthcare. FY15 will be the last year for this subject code; it will be deleted as of FY16.	CTA	—
074850	**Biotechnology** Utilizing business and industry technical standards, math, science, ELA, social studies and technology with a business process framework, introduces concepts and subject matter in classroom and laboratory experiences in the bioprocesses of organisms, cells or their components to create products or solve problems. Program concentrates on biomedical, environmental, pharmaceutical, bioinformatics and bioethics. FY15 will be the last year for this subject code; it will be deleted as of FY16.	CTA, TEC	—
074890	**Health Information Management Services** A clustered program utilizing business and industry technical standards, math, science, ELA, social studies and technology with a business process framework, introduces concepts, subject matter and experiences for health careers that focus on compilation, maintenance and retrieval of records, reports and statistical data on health services. FY15 will be the last year for this subject code; it will be deleted as of FY16.	CTA, TEC	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
072000	**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.	CTA	—
072005	**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.	CTA	—
072010	**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.	CTA	—
072015	**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.	CTA	—
072020	**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.	CTA	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
072025	**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.	CTA	—
072030	**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.	CTA	—
072035	**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.	CTA	—
072040	**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.	CTA	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
072045	**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.	CTA	—
072050	**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.	CTA	—
072055	**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.	CTA	—
072060	**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.	CTA	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
072065	**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.	CTA	—
072070	**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.	CTA	—
072075	**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.	CTA	—
072080	**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.	CTA	—
072085	**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.	CTA	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
072090	**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.	CTA	—
072095	**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.	CTA	—
072100	**Clinical Laboratory Techniques** Students will apply practical application of a wide range of clinical duties. Topics covered will include hematology, urinalysis, hemastostatic 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.	CTA	—
072105	**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 apprenticeship.	CTA	—
072110	**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.	CTA	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
072115	**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.	CTA	—
072120	**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.	CTA	—
072125	**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.	CTA	—
072130	**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.	CTA	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
072135	**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.	CTA	—
072140	**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.	CTA	—
072145	**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.	CTA	—
072150	**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.	CTA	—

Table 28. Career Field 10: Hospitality & Tourism Codes (33xxxx)

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
330005	**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.	CTA	—
330010	**Lodging** Preparation for careers in the management, marketing and operations of lodging facilities.	CTA, BUS	—
330015	**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.	CTA, BUS	—
330020	**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.	CTA, BUS	—

Table 29. 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 disabilities, domestic violence, physical/emotional abuse, poverty and community resources.	CTA	—
172602	**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.	CTA	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
172601	**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.	CTA	—
990371	**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).	CTA	—

Table 30. Career Field 12: Information Technology Codes (14xxxx)

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
140200	**Information Technology I (Career Technical)** This course is designed to serve as the first course in a Career-Technical program in information technology. Based on information technology basics (9th and 10th grade competencies) and other fundamental skills drawn from it WORKS.OHIO, the Ohio Career Field Technical Content Standards for Information Technology, this course must lead to a specialized program in Information Support and Services, Network Systems, Programming and Software Development or Interactive Media. FY15 will be the last year for this subject code; it will be deleted as of FY16.	CTA, BUS, TEC	—
140210	**Information Support and Services (Career Technical)** An instructional program that provides training for careers dealing in information technology deployment and information systems management and support. FY15 will be the last year for this subject code; it will be deleted as of FY16.	CTA, BUS, TEC	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
140220	**Network Systems (Career Technical)** An instructional program that provides training for careers in communication network systems planning, administration, and management. FY15 will be the last year for this subject code; it will be deleted as of FY16.	CTA, BUS, TEC	—
140230	**Programming and Software Development (Career Technical)** An instructional program that provides training for careers dealing with hardware and software programming to design, develop, and implement computer systems and software. FY15 will be the last year for this subject code; it will be deleted as of FY16.	CTA, BUS, TEC	—
140240	**Interactive Media (Career Technical)** An instructional program that provides training in the area of interactive multi-media development that includes creating, designing, and producing interactive multimedia products and services and digitally-generated or computer-enhanced media. FY15 will be the last year for this subject code; it will be deleted as of FY16.	CTA, BUS, TEC	—
145120	**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.	CTA	—
145115	**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.	CTA	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
145015	**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 apprenticeship. (75)	CTA	—
145020	**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.	CTA	—
145025	**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.	CTA	—
145030	**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.	CTA	—
145100	**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.	CTA	—
145080	**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.	CTA	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
145085	**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	CTA	—
145095	**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.	CTA	—
145090	**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.	CTA	—
145005	**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.	CTA	—
145125	**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.	CTA	—
145105	**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.	CTA	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
145035	**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.	CTA	—
145045	**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.	CTA	—
145040	**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.	CTA	—
145050	**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.	CTA	—
145065	**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.	CTA	—
145060	**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.	CTA	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
145055	**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 trouble-shoot the routing process. Students will examine the use of Virtual Local Area Networks (VLANs) to create logically separate networks.	CTA	—
145075	**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.	CTA	—
145110	**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.	CTA	—
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 31. Career Field 13: Law & Public Safety Codes (17xxxx)

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
172801	**Fire Fighter Training** Utilizing business and industry, math, science and technology standards, provides concept of paid, full-time firefighter. The training program must be chartered through the Ohio Department of Public Safety or have an agreement with a chartered fire fighter training program. FY15 will be the last year for this subject code; it will be deleted as of FY16.	CTA	—
172802	**Criminal Justice** Utilizing business and industry, math, science and technology standards, introduces concept of training provided by officially designated law enforcement agencies. The program must be certified by the Ohio Peace Officers Training Commission. FY15 will be the last year for this subject code; it will be deleted as of FY16.	CTA	—
172808	**Private Security** A one-year program utilizing business and industry, math, science and technology standards, introduces concept of physical and personal security, internal loss and facility access. FY15 will be the last year for this subject code; it will be deleted as of FY16.	CTA	—
172810	**Career Paths for the Law Profession** Utilizing business and industry, math, science and technology standards, introduces knowledge and skills to prepare students for entry level, technical and professional career options within the law and public administration professions. FY15 will be the last year for this subject code; it will be deleted as of FY16.	CTA	—
172811	**Emergency Medical Technician – Secondary** Utilizing business and industry, math, science and technology standards, instructs to the level of EMT-Basic. This course must include the Ohio Department of Public Safety approved EMT-Basic curriculum and be provided through an accredited ODPS provider. This course is a minimum of 450 hours with the ODPS curriculum limited to the senior level. FY15 will be the last year for this subject code; it will be deleted as of FY16.	CTA	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
172812	**Public Safety – Core** Utilizing business and industry, math, science and technology standards, introduces concept of knowledge and skills applicable to public safety careers, e.g., Firefighter, EMT-Basic, and Criminal Justice. This course is to be taught only in conjunction with an approved senior level specialized public safety program. FY15 will be the last year for this subject code; it will be deleted as of FY16.	CTA	—
172815	**Criminal Science Technology** Utilizing business and industry standards as framework for application of clinical and criminal laboratory science, evidentiary testing & analysis, study of society's formal control system, investigative techniques, criminal law, criminal process, administration of Justice System, computer applications, record-keeping, and reconstruction techniques. FY15 will be the last year for this subject code; it will be deleted as of FY16.	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	—
170913	**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.	CTA	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
170914	**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.	CTA	—
170915	**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.	CTA	—
170916	**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.	CTA	—
170342	**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.	CTA	—
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	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
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 32. Career Field 14: Manufacturing Technologies Codes (17xxxx)

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
170370	**Automation & Robotics** Utilizing business and Industry, math, English, science and technology standards, introduces concepts of Automation and Robotics technologies: Computer Numerical Control (CNC), Data Acquisition and Analysis, Electrical/Electronic controls, Fluid Power, Robotics and Programmable Logic Controllers (PLC). FY15 will be the last year for this subject code; it will be deleted as of FY16.	CTA	—
170006	**Manufacturing Technologies** Combined with specialization competencies utilizing business and industry technical standards and a math, science, ELA, technology, and business process framework, develops technical literacy in manufacturing systems, leading to pathways in manufacturing operations, product design and material production and post-secondary articulation. FY15 will be the last year for this subject code; it will be deleted as of FY16.	CTA, TEC	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
171012	**Integrated Systems Technology** Utilizing business and industry, math, science and technology standards, introduces concept of the maintenance of machinery and mechanical equipment of an industrial plant or factory. FY15 will be the last year for this subject code; it will be deleted as of FY16.	CTA	—
171300	**Manufacturing Design and Development** Utilizing business and industry, math, English, science and technology standards, introduces concepts of Design and Development Technologies: Design Process, Teamwork and Project Management, Marketing, Technical Applications, Modeling, Materials and Quality Assurance. FY15 will be the last year for this subject code; it will be deleted as of FY16.	CTA, TEC	
171503	**Electronics** Utilizing business and industry, math, science, and technology standards, introduces concepts of electronic theory and practice. FY15 will be the last year for this subject code; it will be deleted as of FY16.	CTA, TEC	—
172302	**Precision Machining** Utilizing business and industry, math, science, and technology standards, introduces concepts related to set-up and operation; and the control of various metal working equipment. FY15 will be the last year for this subject code; it will be deleted as of FY16.	CTA, TEC	—
172306	**Welding and Cutting** Utilizing business and industry, math, science, and technology standards, introduces concepts of metal welding, brazing and flame cutting. FY15 will be the last year for this subject code; it will be deleted as of FY16.	CTA, TEC	—
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	**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.	CTA	—
176002	**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.	CTA	—
176003	**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.	CTA	—
176004	**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.	CTA	—
176005	**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.	CTA	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
176006	**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.	CTA	—
176007	**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.	CTA	—
176008	**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 apprenticeship.	CTA	—

Table 33. Career Field 15: Marketing Codes (04xxxx)

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
040805	**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.	CTA, BUS	—
040810	**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.	CTA, BUS	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
040815	**Marketing Communications** Preparation for careers that inform, remind, and/or persuade a target audience including advertising, public relations, and multimedia marketing communications.	CTA, BUS	—
041900	**Supply Chain Management** Preparation for the strategic operation and management of marketing systems with emphasis on logistics components, including purchasing and warehousing.	CTA, BUS	—
042010	**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.	CTA, BUS	—
042015	**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.	CTA, BUS	—
042020	**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.	CTA, BUS	—
042025	**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.	CTA, BUS	—
042030	**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.	CTA, BUS	—
042035	**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.	CTA, BUS	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
042040	**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.	CTA, BUS	—
042045	**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.	CTA, BUS	—
044110	**Entrepreneurship** Preparation for starting new ventures that create, power and change business activity – meaning new markets, new products, new production methods and new businesses.	CTA, BUS	—
044100	**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.	CTA, BUS	—

Table 34. Career Field 16: Transportation Systems Codes (17xxxx)

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
170350	**Transportation Systems** 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. FY15 will be the last year for this subject code; it will be deleted as of FY16.	CTA	—
170301	**Auto Collision Repair** Specialized learning experiences concerned with all phases of the repair of damaged vehicle bodies and frames. Areas of Instruction may include: Paint and Refinishing, Mechanical/Electrical Repair, Structural and Non-Structural Repair. FY15 will be the last year for this subject code; it will be deleted as of FY16.	CTA, TEC	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
170302	**Auto Technology** Learning experiences involving the service and repair of the mechanical components of the vehicle. The focus of the program will be in the ASE areas of Electrical/Electronic Systems, and Suspension and Steering, Brakes and Engine Performance. FY15 will be the last year for this subject code; it will be deleted as of FY16.	CTA, TEC	—
170303	**Auto Specialization** Specialized learning experiences that involve more intensive training in a single automotive system. Examples may include Automotive Detailing, Custom Car Prep, High Performance, Alternative Fuel, Engine Repair, Transmission Service. FY15 will be the last year for this subject code; it will be deleted as of FY16.	CTA, TEC	—
170400	**Aviation Occupations** Classroom and practical experiences that include instruction relating to aircraft maintenance, operation, and ground support. Instructor and program must be certified by the Federal Aviation Administration (FAA). FY15 will be the last year for this subject code; it will be deleted as of FY16.	CTA, TEC	—
170401	**Aircraft Maintenance** This is the official FAA – Aviation Maintenance Air Frame and Powerplant Course. 1800 hour program. Instructor and program must be certified by the Federal Aviation Administration (FAA) in airframe and power plant. FY15 will be the last year for this subject code; it will be deleted as of FY16.	CTA, TEC	—
170403	**Ground Operations** This program is geared toward the Airport Environment and activities concerning the ground support of commercial aircraft, terminal and hanger activities. FY15 will be the last year for this subject code; it will be deleted as of FY16.	CTA, TEC	—
170801	**Maritime Occupations** Utilizing rigorous academics and Maritime industry standards introduce concepts of deck, engineering and other careers in the maritime industry. FY15 will be the last year for this subject code; it will be deleted as of FY16.	CTA	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
171200	**Medium/Heavy Truck Technician** This program focuses on the service and repair of trucks. Instruction includes the diagnosis, maintenance and repair of diesel engines operational systems. ASE areas of concentration are: Diesel Engines, Suspension and Steering, Brakes, Electrical/Electronic Systems and Preventive Maintenance Inspection. FY15 will be the last year for this subject code; it will be deleted as of FY16.	CTA, TEC	—
173100	**Power Equipment Technology** Training in this program focuses on 2 and 4 cycle gasoline powered engines and their use in outdoor power and recreational equipment. This includes the basic service and preventative maintenance of equipment. FY15 will be the last year for this subject code; it will be deleted as of FY16.	CTA, TEC	—
177000	**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.	CTA	—
177001	**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.	CTA	—
177002	**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.	CTA	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
177003	**Automotive Braking, Suspension, and Steering Systems (Undercarriage Systems)** 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.	CTA	—
177004	**Ground Transportation HVAC** 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.	CTA	—
177005	**Truck Braking, Suspension, and Steering Systems (Undercarriage Systems)** 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.	CTA	—
177006	**Automotive Engine Performance** 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.	CTA	—
177007	**Truck Diesel Engines** 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.	CTA	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
177008	**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.	CTA	—
177009	**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.	CTA	—
177010	**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.	CTA	—
177011	**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.	CTA	—
177012	**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.	CTA	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
177013	**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.	CTA	—
177014	**Aviation Ground Maintenance** 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.	CTA	—
177015	**Aviation Airframe** 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.	CTA	—
177016	**Aircraft Electrical Systems** 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.	CTA	—
177017	**Aircraft Powerplant** 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.	CTA	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
177018	**Aircraft Fuel Systems** 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.	CTA	—
177019	**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.	CTA	—
177020	**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.	CTA	—
177021	**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.	CTA	—
177022	**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.	CTA	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
177023	**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 apprenticeship.	CTA	—

Career Based Intervention Section

Table 35. Career Based Intervention (CBI) Codes (25xxxx)

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
250510	**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".)	ENG	Language Arts
250519	**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".)	ENG	Reading
251110	**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".)	MTH	Mathematics
251310	**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".)	SCI	Science
251510	**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".)	SOC	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
252525	**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.	CTA	—

Career Development Section

Table 36. Career Development Codes (99xxxx)

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
990361	**Entrepreneurship Skills (Career Technical)** Exploring owning your own business.	CTA	—
990362	**Employability Skills (Career Technical)** Work related skills for entering, competing and advancing in a changing work world.	CTA	—

Family and Consumer Sciences (Career Technical) Section

Table 37. Family and Consumer Sciences Codes (09xxxx)

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
090192	**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.	CTA	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
090193	**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.	CTA	—
090194	**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.	CTA	—
090700	**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.	—	—
091025	**Child Development** Provide students with knowledge of how parents and child care providers meet the needs of infants and young children to provide for healthy growth and development. Prominent theories of child psychology will be studied.	CTA	—
091050	**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.	CTA	—
091051	**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.	CTA	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
091400	**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.	CTA	—
091401	**Career Search II (Includes Mentorship)** 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.	CTA	—
091410	**Transitions and Careers** Students develop personal assets of a healthy, responsible citizen and family member who are responsible for their academic, career and personal growth.	—	—
090050	**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.	—	—
091077	**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.	CTA	—
091200	**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.	CTA	—
091300	**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.	CTA	—

INTERNATIONAL BACCALAUREATE COURSES SECTION

Table 38. 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
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
320750	**IB Second Language – Swahili** 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)
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
321500	**IB Design Technology** Based upon the most current International Baccalaureate Program curriculum.	TEC	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
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	—

Table 39. 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
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	—

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
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 40. 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
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

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
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 41. 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 42. 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 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 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 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 disabilities that present unique and significant challenges to participation in other courses. Grades 9 – 12.	N/A	—

OTHER COURSES SECTION

Table 43. 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 44. 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 collective 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 45. 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 46. ROTC Military Science Code (220000)

Subject Code	Description	Suggested Subject Area for Credit	Core Subject Area (for HQT)
~~220000~~	~~**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.~~ ~~(This subject code will be deleted in FY13; subject code 220001 is the replacement.)~~	~~ELE~~	~~—~~
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	—