Kansas Board of Regents
Precollege Curriculum Courses Approved for University Admissions

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The precollege curriculum is designed to prepare high school students for university-level work. The list of courses fulfilling the precollege curriculum has been recommended by the Kansas State Department of Education and approved by the chief executive officer of the board of regents or the chief executive officer's designee. Requirements for the precollege curriculum are found in K.A.R. 88-29-11 and 88-29a-11.

Course Title	Course Code	Course Subject Area	Course Description
Strategic Reading	01066	01	Strategic Reading courses are intended to improve a student's vocabulary, critical-thinking and analysis skills, or reading rate and comprehension level. Although these courses typically emphasize works of fiction, they may also include works of nonfiction (including textbooks). Strategic Reading courses often have a time-management focus, offering strategies for note-taking or for understanding and evaluating the important points of a text.
Literature—Independent Study	01097	01	Courses in Literature—Independent Study, often conducted with instructors as mentors, enable students to explore topics of interest related to literature. Independent Study courses may serve as an opportunity for students to expand their expertise in a particular application, to explore a topic in greater detail, or to develop more advanced skills.
Literature—Workplace Experience	01098	01	Literature—Workplace Experience courses provide work experience in a field related to English literature. Goals are typically set cooperatively by the student, teacher, and employer (although students are not necessarily paid). These courses may include classroom activities as well, involving further study of the field or discussion regarding experiences that students encounter in the workplace.
Literature—Other	01099	01	Other Literature courses.
Composition—Independent Study	01147	01	Composition—Independent study, often conducted with instructors as mentors, allow students to explore particular topics within the field of language arts (emphasizing composition). Independent Study courses may serve as an opportunity for students to expand their expertise in a particular application, to explore a topic in greater detail, or to develop more advanced skills.

Composition—Workplace Experience	01148	01	Composition—Workplace Experience courses provide work experience in a field related to English composition. Goals are typically set cooperatively by the student, teacher, and employer (although students are not necessarily paid). These courses may include classroom activities as well, involving further study of the field or discussion regarding experiences that students encounter in the workplace.
Composition—Other	01149	01	Other Composition courses.
Forensic Speech—Inclusive	01152	01	Forensic Speech—Inclusive courses offer students the opportunity to learn how to use oral skills effectively in formal and informal situations. Students learn such skills as logic and reasoning, the organization of thought and supporting materials, and effective presentation of one's voice and body. Often linked to an extracurricular program, these courses introduce students to numerous public speaking situations, and they learn the methods, aims, and styles of a variety of events (e.g., formal debate, Lincoln-Douglas debate, expository speaking, radio broadcast, oral interpretation, and dramatic interpretation). Participation in competition is encouraged, but not always required.
Forensic Speech—Debate	01153	01	Forensic Speech—Debate courses offer students the opportunity to learn how to use oral skills in formal and informal situations. In these courses, students are able to develop such skills as logic and reasoning, research and analysis, organization of thought and supporting materials, argumentative style and skill, and effective presentation of one's voice and body. Often linked to an extracurricular program, these courses introduce students to the methods, aims, and styles used in various kinds of debates (formal debate or Lincoln-Douglas). Participation in competition is encouraged, but not always required.

Forensic Speech—Individual Event	01154	01	Forensic Speech—Individual Event courses offer students the opportunity to learn how to use oral skills in formal and informal situations. Topics included depend upon the event(s) being taught, but they usually emphasize effective presentation of one's voice and body, thoughtful understanding and interpretation of literature, logic and reasoning, and the organization of thought and supporting materials. Often linked to an extracurricular program, these courses introduce students to one or several individual event categories (e.g., exposition, oral interpretation, dramatic interpretation, and radio broadcast). Participation in competition is encouraged, but not always required.
Communications	01155	01	Communications courses focus on the application of written and oral communication skills through a variety of formal and informal experiences. The courses are performance-based and emphasize effective interpersonal and team-building skills. Communications courses may also involve the study of how interpersonal communications are affected by stereotypes, nonverbal cues, vocabulary, and stylistic choices.
Applied English and Communications	01156	01	Applied English and Communications courses teach students communication skills—reading, writing, listening, speaking—concentrating on "real-world" applications. These courses usually emphasize the practical application of communication as a business tool—using technical reports and manuals, business letters, resumes, and applications as examples—rather than emphasize language arts skills as applied to scholarly and literary materials.
Speech—Independent Study	01197	01	English Language and Literature—Independent study courses, often conducted with instructors as mentors, allow students to explore particular topics within the field of language arts (emphasizing speech). Independent Study courses may serve as an opportunity for students to expand their expertise in a particular application, to explore a topic in greater detail, or to develop more advanced skills.

Speech—Workplace Experience	01198	01	Speech—Workplace Experience courses provide work experience in a field related to public speaking and speech. Goals are typically set cooperatively by the student, teacher, and employer (although students are not necessarily paid). These courses may include classroom activities as well, involving further study of the field or discussion regarding experiences that students encounter in the workplace.
Speech—Other	01199	01	Other Speech courses.
Transition Algebra	02055	02	Transition Algebra courses review and extend algebra and geometry concepts for students who have already taken Algebra I and Geometry. Transition Algebra courses include a review of such topics as properties and operations of real numbers; evaluation of rational algebraic expressions; solutions and graphs of first degree equations and inequalities; translation of word problems into equations; operations with and factoring of polynomials; simple quadratics; properties of plane and solid figures; rules of congruence and similarity; coordinate geometry including lines, segments, and circles in the coordinate plane; and angle measurement in triangles including trigonometric ratios.
Particular Topics in Algebra	02058	02	These courses examine a specific topic in algebra, such as linear equations or rational numbers, rather than provide an overview of algebra concepts.
Algebra—Other	02069	02	Other Algebra courses.
Informal Geometry	02071	02	Informal Geometry courses emphasize a practical approach to the study of geometry and deemphasize an abstract, formal approach. Topics typically include properties of and work with plane and solid figures; inductive methods of reasoning and use of logic; concepts of congruence, similarity, parallelism, perpendicularity, and proportion; and rules of angle measurement in triangles.

Principles of Algebra and Geometry	02074	02	Principles of Algebra and Geometry courses combine the study of some pre-algebra and algebra topics with introductory geometry topics. These courses include the study of formulas, algebraic expressions, first degree equations and inequalities, the rectangular coordinate system, area, perimeter, and volume of geometric figures, and properties of triangles and circles.
Particular Topics in Geometry	02075	02	These courses examine specific topics in geometry, such as solid or technical geometry, rather than provide a general study of the field of geometry.
General Applied Math	02151	02	General Applied Math courses reinforce general math skills, extend these skills to include some pre-algebra and algebra topics, and use these skills in a variety of practical, consumer, business, and occupational applications. Course topics typically include rational numbers, measurement, basic statistics, ratio and proportion, basic geometry, formulas, and simple equations.
Occupational Applied Math	02152	02	Occupationally Applied Math courses reinforce general math skills, extend these skills to include some pre-algebra and algebra topics, and use these skills primarily in occupational applications. Course topics typically include rational numbers, measurement, basic statistics, ratio and proportion, basic geometry, formulas, and simple equations.
Technical Math	02153	02	Technical Math courses extend students' proficiency in mathematics, and often apply these skills to technical and/or industrial situations and problems. Technical Math topics may include but are not limited to rational numbers, systems of measurements, tolerances, numerical languages, geometry, algebra, statistics, and using tables, graphs, charts, and other data displays. Technology is integrated as appropriate.

Business Math	02154	02	Business Math courses reinforce general math skills, emphasize speed and accuracy in computations, and use these skills in a variety of business applications. Business Math courses reinforce general math topics (e.g., arithmetic, measurement, statistics, ratio and proportion, exponents, formulas, and simple equations) by applying these skills to business problems and situations; applications might include wages, hourly rates, payroll deductions, sales, receipts, accounts payable and receivable, financial reports, discounts, and interest.
Consumer Math	02157	02	Consumer Math courses reinforce general math topics (such as arithmetic using rational numbers, measurement, ratio and proportion, and basic statistics) and apply these skills to consumer problems and situations. Applications typically include budgeting, taxation, credit, banking services, insurance, buying and selling products and services, home and/or car ownership and rental, managing personal income, and investment.
Mathematics—Independent Study	02297	02	Mathematics—Independent Study courses, often conducted with instructors as mentors, enable students to explore topics of interest related to mathematics. Independent Study courses may serve as an opportunity for students to expand their expertise in a particular application, to explore a topic in greater detail, or to develop more advanced skills.
History of Math	02991	02	History of Math courses include a study of the historical development of numbers, computation, algebra, and geometry. Figures critical to the development of mathematics (e.g., Pythagoras, Pascal, Descartes) or important developments (e.g., pi, decimal fractions, probability theory, calculus) often form the backbone of these classes.

Mathematics—Workplace Experience	02998	02	Mathematics—Workplace Experience courses provide students with work experience in a field related to mathematics. Goals are typically set cooperatively by the student, teacher, and employer (although students are not necessarily paid). These courses may include classroom activities as well, involving further study of the field or discussion regarding experiences that students encounter in the workplace.
Mathematics—Other	02999	02	Other Mathematics courses.
Physical Geography	03007	03	Physical Geography courses equip students with an understanding of the constraints and possibilities that the physical environment places on human development. These courses include discussion of the physical landscape through geomorphology and topography, the patterns and processes of climate and weather, and natural resources.
Concepual Biology	03062	03	These courses provide students with a basic understanding of living things. Topics covered may include ecology and environmental problems such as overpopulation and pollution as well as cells, types of organisms, evolutionary behavior, and inheritance.
Particular Topics in Biology	03063	03	Particular Topics in Biology courses concentrate on a particular subtopic within the field of biology (such as botany, zoology, genetics, and so on) that is not otherwise described within this classification system.
Biology—Independent Study	03097	03	Biology—Independent Study courses, often conducted with instructors as mentors, enable students to explore scientific topics of interest, using advanced methods of scientific inquiry and experimentation. These courses may be offered in conjunction with other rigorous science courses or may serve as an opportunity for students to explore a topic of special interest.
Biology—Workplace Experience	03098	03	Biology—Workplace Experience courses provide work experience in a field related to biology. Goals are typically set cooperatively by the student, teacher, and employer (although students are not necessarily paid). These courses may include classroom activities as well, involving further study of the field or discussion regarding experiences that students encounter in the workplace.

Biology—Other	03099	03	Other Biology courses.
Concepual Chemistry	03105	03	Conceptual Chemistry courses are practical, nonquantitative chemistry courses designed for students who desire an understanding of chemical concepts and applications.
Particular Topics in Chemistry	03108	03	Particular Topics in Chemistry courses concentrate on a particular subtopic within the field of chemistry (such as chromatography and spectrometry) that is not otherwise described in this classification system.
Chemistry—Independent Study	03147	03	Chemistry—Independent Study courses, often conducted with instructors as mentors, enable students to explore scientific topics of interest, using advanced methods of scientific inquiry and experimentation. These courses may be offered in conjunction with other rigorous science courses or may serve as an opportunity to explore a topic of special interest.
Chemistry—Workplace Experience	03148	03	Chemistry—Workplace Experience courses provide work experience in a field related to chemistry. Goals are typically set cooperatively by the student, teacher, and employer (although students are not necessarily paid). These courses may include classroom activities as well, involving further study of the field or discussion regarding experiences that students encounter in the workplace.
Chemistry—Other	03149	03	Other Chemistry courses.
Conceptual Physics	03161	03	Conceptual Physics courses introduce students to the use of chemicals, characteristic properties of materials, and simple mechanics to better describe the world and nonliving matter. The courses emphasize precise measurements and descriptive analysis of experimental results. Topics covered may include energy and motion, electricity, magnetism, heat, the structure of matter, and how matter reacts to materials and forces.
Particular Topics in Physics	03162	03	Particular Topics in Physics courses concentrate on a particular subtopic within the field of physics (such as optics, thermodynamics, quantum physics, and so on) that is not otherwise described in this classification system.

Physics—Independent Study	03197	03	Physics—Independent Study courses, often conducted with instructors as mentors, enable students to explore scientific topics of interest, using advanced methods of scientific inquiry and experimentation. These courses may be offered in conjunction with other rigorous science courses or may provide students with an opportunity to explore a topic of special interest.
Physics—Workplace Experience	03198	03	Physics—Workplace Experience courses provide work experience in a field related to physics. Goals are typically set cooperatively by the student, teacher, and employer (although students are not necessarily paid). These courses may include classroom activities as well, involving further study of the field or discussion regarding experiences that students encounter in the workplace.
Physics—Other	03199	03	Other Physics courses.
Unified Science	03202	03	Unified Science courses combine more than one branch of science into a cohesive study or may integrate science with another discipline. General scientific concepts are explored, as are the principles underlying the scientific method and experimentation techniques.
Applied Biology/Chemistry	03203	03	Applied Biology/Chemistry courses integrate biology and chemistry into a unified domain of study and present the resulting body of knowledge in the context of work, home, society, and the environment, emphasizing field and laboratory activities. Topics include natural resources, water, air and other gases, nutrition, disease and wellness, plant growth and reproduction, life processes, microorganisms, synthetic materials, waste and waste management, and the community of life.
Technological Inquiry	03204	03	Technological Inquiry courses provide students with an understanding of the use of process skills as an integral part of scientific activity and technological development. Students learn how scientific phenomena are explained, measured, predicted, organized, and communicated.

Origins of Science	03205	03	Origins of Science courses explore the body of scientific knowledge and discoveries from an historical perspective, wherein students gain an understanding of how one discovery led to others or to entire revolutions of thought. In these courses, original experiments may be replicated, and students may study primary materials.
Science, Technology and Society	03210	03	Science, Technology, and Society courses encourage students to explore and understand the ways in which science and technology shape culture, values, and institutions and how such factors, in turn, shape science and technology. Topics covered may include how science and technology enter society and how they change as a result of social processes.
Technical Science	03211	03	Technical Science courses introduce students to scientific tools and methods and provide an introduction to chemistry and physics. Topics covered typically include measurement conversion, model creation, use of scientific methods, interpretation of atoms, identification of the properties of common compounds, analysis of chemical equations, the impact of force on linear motion, and the study of various physical phenomena and forms of energy.
Life and Physical Sciences—Independent Study	03997	03	Life and Physical Sciences—Independent Study courses, often conducted with instructors as mentors, enable students to explore scientific topics of interest, using advanced methods of scientific inquiry and experimentation. These courses may be offered in conjunction with other rigorous science courses or may serve as an opportunity to explore a topic of special interest.
Life and Physical Sciences—Workplace Experience	03998	03	Life and Physical Sciences—Workplace Experience courses provide work experience in a field related to life and/or physical science. Goals are typically set cooperatively by the student, teacher, and employer (although students are not necessarily paid). These courses may include classroom activities as well, involving further study of the field or discussion regarding experiences that students encounter in the workplace.
Life and Physical Sciences—Other	03999	03	Other Life and Physical Sciences courses.

Geography—Independent Study	04047	04	Geography—Independent Study courses, often conducted with instructors as mentors, enable students to explore topics of interest within geography. Independent Study courses may provide students with an opportunity to expand their expertise in a particular specialization, to explore a topic of special interest, or to develop more advanced skills.
Geography—Workplace Experience	04048	04	Geography—Workplace Experience courses provide work experience in a field related to geography. Goals are typically set cooperatively by the student, teacher, and employer (although students are not necessarily paid). These courses may include classroom activities as well, involving further study of the field or discussion regarding experiences that students encounter in the workplace.
Geography—Other	04049	04	Other Geography courses.
Western Civilization	04063	04	Western Civilization courses apply an interdisciplinary approach to the study of western cultural traditions, frequently using a chronological framework. Course content typically includes a survey of the major developments in and contributors to art and architecture, literature, religion and philosophy, and culture. These courses may also cover intellectual and political movements.
Particular Topics in World History	04065	04	These courses examine particular topics in world history other than those already described.
World History—Independent Study	04097	04	World History—Independent Study courses, often conducted with instructors as mentors, enable students to explore topics of interest within world history. Independent Study courses may provide students with an opportunity to expand their expertise in a particular period or area, to explore a topic of special interest, or to develop more advanced skills.
World History—Workplace Experience	04098	04	World History—Workplace Experience courses provide work experience in a field related to world history. Goals are typically set cooperatively by the student, teacher, and employer (although students are not necessarily paid). These courses may include classroom activities as well, involving further study of the field or discussion regarding experiences that students encounter in the workplace.

World History—Other	04099	04	Other World History courses.
U.S. History—Workplace Experience	04148	04	U.S. History—Workplace Experience courses provide work experience in a field related to U.S. history. Goals are typically set cooperatively by the student, teacher, and employer (although students are not necessarily paid). These courses may include classroom activities as well, involving further study of the field or discussion regarding experiences that students encounter in the workplace.
Environmental Law	04170	04	Environmental Law courses present a history and philosophy of law and the legal system in the United States, with a particular emphasis on those topics affecting environmental issues, chemical usage, management, cleanup, disposal, and the exposure and legal responsibilities of those workers engaged in associated occupations. Such topics may include contracts, property rights, employer/employee relationships, liability, and constitutional rights and responsibilities with particular attention paid to conservation and environmental issues.
Government, Politics and Law—Independent Study	04197	04	Government, Politics, and Law—Independent Study courses, often conducted with instructors as mentors, enable students to explore topics of interest within one of the fields of Government, Politics, and Law. These courses may provide students with an opportunity to expand their expertise in a particular specialization, to explore a topic of special interest, or to develop more advanced skills.
Government, Politics and Law—Workplace Experience	04198	04	Government, Politics, and Law—Workplace Experience courses provide students with work experience in a field related government, politics, and/or law. Goals are typically set cooperatively by the student, teacher, and employer (although students are not necessarily paid). These courses may include classroom activities as well, involving further study of the field or discussion regarding experiences that students encounter in the workplace.
Government, Politics and Law—Other	04199	04	Other Government, Politics and Law courses.

Economics—Independent Study	04247	04	Economics—Independent Study courses, often conducted with instructors as mentors, enable students to explore topics of interest within the field of economics. Independent Study courses may provide students with an opportunity to expand their expertise in a particular specialization, to explore a topic of special interest, or to develop more advanced skills.
Economics—Workplace Experience	04248	04	Economics—Workplace Experience courses provide work experience in a field related to economics. Goals are typically set cooperatively by the student, teacher, and employer (although students are not necessarily paid). These courses may include classroom activities as well, involving further study of the field or discussion regarding experiences that students encounter in the workplace.
Economics—Other	04249	04	Other Economics courses.
Social Science	04260	04	Social Science courses provide students with an introduction to the various disciplines in the social sciences, including anthropology, economics, geography, history, political science, psychology, and sociology. Typically, these courses emphasize the methodologies of the social sciences and the differences among the various disciplines.
Social Science Research	04261	04	Social Science Research courses emphasize the methods of social science research, including statistics and experimental design.
IB Organizational Studies	04262	04	IB Organization Studies courses prepare students to take the International Baccalaureate Organization Studies exams at either the Subsidiary or Higher levels. These IB courses provide a broad introduction to the principles and practices of enterprises engaged in producing, distributing, and exchanging goods and services in a variety of economic frameworks. A sample of topics explored within these courses include management styles and structures; decision-making methods; and methods for accounting, planning, and communication.

Social Sciences—Independent Study	04297	04	Social Sciences—Independent Study courses, often conducted with instructors as mentors, enable students to explore topics of interest within one of the social science fields. Independent Study courses may provide students with an opportunity to expand their expertise in a particular specialization, to explore a topic of special interest, or to develop more advanced skills.
Social Sciences—Workplace Experience	04298	04	Social Sciences—Workplace Experience courses provide work experience in a field related to the social sciences. Goals are typically set cooperatively by the student, teacher, and employer (although students are not necessarily paid). These courses may include classroom activities as well, involving further study of the field or discussion regarding experiences that students encounter in the workplace.
Social Sciences—Other	04299	04	Other Social Studies courses.
IB Theory of Knowledge	04304	04	Obligatory for every International Baccalaureate degree candidate, IB Theory of Knowledge courses aim to stimulate critical self-reflection of students' knowledge and experiences. Course content generates questions regarding the bases of knowledge and their verification in the disciplines of mathematics, natural sciences, human sciences, and history, with an awareness of moral, political, and aesthetic judgments and biases. Students learn to appreciate the strengths and limitations of various kinds of knowledge; to relate studied subjects to one another, general knowledge, and living experiences; to formulate rational arguments; and to evaluate the role of language in knowledge and as a way to convey knowledge.
Social Studies	04305	04	Social Studies courses enable students to study a group of related subjects addressing the elements and structures of human society that may include economics, geography, history, citizenship, and other social studies-related disciplines.
Philosophy	04306	04	Philosophy courses introduce students to the discipline of philosophy as a way to analyze the principles underlying conduct, thought, knowledge, and the nature of the universe. Course content typically includes examination of the major philosophers and their writings.

Particular Topics in Philosophy	04307	04	These courses examine a particular topic in philosophy, such as aesthetic judgment, ethics, cosmology, or the philosophy of knowledge, rather than providing a more general overview of the subject.
Modern Intellectual History	04308	04	Modern Intellectual History courses provide a historical overview of modern intellectual movements, generally drawing from different disciplines such as political science, economics, and philosophy.
IB Philosophy	04309	04	IB Philosophy courses prepare students to take the International Baccalaureate Philosophy exams at either the Subsidiary or Higher levels. These courses challenge students to reflect upon and question the bases of knowledge and experience, to develop a personal mode of thought, to formulate rational arguments, and to use language to examine several conceptual themes in a thoughtful, philosophical manner.
Particular Topics in Humanities	04310	04	These courses cover particular topics in humanities such as the interrelationships among painting, sculpture, architecture, and music or the exploration of a particular time period rather than provide a general overview of the subject.
Humanities—Independent Study	04347	04	Humanities—Independent Study courses, often conducted with instructors as mentors, enable students to explore topics of interest within the field of humanities. Independent Study courses may provide students with an opportunity to expand their expertise in a particular specialization, to explore a topic of special interest, or to develop more advanced skills.
Humanities—Workplace Experience	04348	04	Humanities—Workplace Experience courses provide work experience in a field related to humanities. Goals are typically set cooperatively by the student, teacher, and employer (although students are not necessarily paid). These courses may include classroom activities as well, involving further study of the field or discussion regarding experiences that students encounter in the workplace.
Humanities—Other	04349	04	Other Humanities courses.

Social Sciences and History—Independent Study	04997	04	Social Sciences and History—Independent Study courses, often conducted with instructors as mentors, enable students to explore topics of interest within one of the fields of social studies. These courses provide students with an opportunity to expand their expertise in a particular specialization, to explore a topic of special interest, or to develop more advanced skills.
Social Sciences and History—Workplace Experience	04998	04	Social Sciences and History—Workplace Experience courses provide work experience in a field related to social sciences and/or history. Goals are typically set cooperatively by the student, teacher, and employer (although students are not necessarily paid). These courses may include classroom activities as well, involving further study of the field or discussion regarding experiences that students encounter in the workplace.
Social Sciences and History—Other	04999	04	Other Social Sciences and History courses.
Physical Education	08001	08	Physical Education courses provide students with knowledge, experience, and an opportunity to develop skills in more than one of the following sports or activities: team sports, individual/dual sports, recreational sports, and fitness/conditioning activities.
Team Sports	08002	08	Team Sports courses provide students with knowledge, experience, and an opportunity to develop skills in more than one team sport (such as volleyball, basketball, soccer, and so on).
Individual/Dual Sports	08003	08	Individual/Dual Sports courses provide students with knowledge, experience, and an opportunity to develop skills in more than one individual or dual sport (such as tennis, golf, badminton, jogging/running, racquetball, and so on).
Recreation Sports	08004	08	Recreation Sports courses provide students with knowledge, experience, and an opportunity to develop skills in more than one recreational sport or outdoor pursuit (such as adventure activities, croquet, Frisbee, wall climbing, bocce ball, fishing, hiking, cycling, and so on).
Fitness/Conditioning Activities	08005	08	Fitness/Conditioning Activities courses emphasize conditioning activities that help develop muscular strength, flexibility, and cardiovascular fitness.

Corps Movement	08006	08	Corps Movement courses emphasize physical conditioning, fundamentals of movement, group precision, and public performance. The courses may be intended for members of various teams, including flag corps, rifle corps, cheerleading squads, and so on.
Adapted Physical Education	08007	08	These courses provide physical education activities (sports, fitness, and conditioning) adapted for students with special needs.
Gymnastics	08008	08	Gymnastics courses are designed to help students develop knowledge and skills in gymnastics, stunts, and tumbling while emphasizing safety. Floor gymnastics may be supplemented by the use of gymnastic equipment such as balance beam, uneven bars, parallel bars, rings, and so on. Gymnastic courses may include other components such as the history of gymnastics and conditioning.
Weight Training	08009	08	Weight Training courses help students develop knowledge and skills with free weights and universal stations while emphasizing safety and proper body positioning; they may include other components such as anatomy and conditioning.
Aquatics/Water Sports	08010	08	Aquatic/Water Sports courses help students develop skills useful or necessary in an aquatic environment. They may focus on swimming and competitive strokes, such as freestyle, breaststroke, butterfly, and so on or may involve team-oriented water sports, such as water polo and relay swimming. These courses may also include (or concentrate exclusively on) diving and/or lifesaving skills.
Tennis	08011	08	Tennis courses help students develop knowledge, skills, and abilities related to the sport of singles or doubles tennis, including shots (such as serves, forehand strokes, backhand strokes, and lobs), scoring, and strategy.
Self-defense	08012	08	Self-defense courses help students develop knowledge, skills, and abilities to defend themselves against attack by others, usually incorporating traditional self-defense methods. Students may also be taught techniques from martial arts, addressing the differences among those arts and their contribution to defense and sport.

Specific Sports Activities	08013	08	Courses in Specific Sports Activities help students develop knowledge, experience, and skills in a single sport or activity (such as basketball, volleyball, track and field, and equestrian events) other than those coded within this section. (Dance is included under the Fine and Performing Arts subject area.)
Physical Education Equivalent	08014	08	These courses award physical education credit for other at-school activities, such as marching band or cheerleading. (Dance is included under the Fine and Performing Arts subject area.)
Off-Campus Sports	08015	08	These courses award physical education credit for off-campus sports activities such as swimming or weight training courses taken at a community center or community college.
Lifetime Fitness Education	08016	08	These courses emphasize acquiring knowledge and skills regarding lifetime physical fitness; content may include related topics such as nutrition, stress management, and consumer issues. Students may develop and implement a personal fitness plan.
Sports Physiology	08017	08	Courses in Sports Physiology examine human anatomy and physiology as they pertain to human movement and physical performance in sports activities. These courses may also emphasize the prevention and treatment of athletic injuries.
Physical Education—Independent Study	08047	08	Courses in Physical Education—Independent Study, often conducted with instructors as mentors, enable students to explore topics of interest related to physical education. Independent Study courses may serve as an opportunity for students to expand their expertise in a particular sport or activity, to explore a topic in greater detail, or to develop more advanced skills.
Physical Education—Workplace Experience	08048	08	Physical Education—Workplace Experience courses provide work experience in a field related to physical education. Goals are typically set cooperatively by the student, teacher, and employer (although students are not necessarily paid). These courses may include classroom activities as well, involving further study of the field or discussion regarding experiences encountered in the workplace.
Physical Education—Other	08049	08	Other Physical Education courses.

Health Education	08051	08	Topics covered within Health Education courses may vary widely, but typically include personal health (nutrition, mental health and stress management, drug/alcohol abuse prevention, disease prevention, and first aid) and consumer health issues. The courses may also include brief studies of environmental health, personal development, and/or community resources.
Health and Fitness	08052	08	Health and Fitness courses combine the topics of Health Education courses (nutrition, stress management, substance abuse prevention, disease prevention, first aid, and so on) with an active fitness component (typically including aerobic activity and fitness circuits) with the intention of conveying the importance of life-long wellness habits.
Community Health	08053	08	Community Health courses cover not only personal health topics (nutrition, stress management, substance abuse prevention, disease prevention, first aid, and so on), but also more general health issues. These additional topics may include (among others) available community resources, fundamentals of the nation's health care system, contemporary world health issues, and career options within the health field.
Special Needs Health Education	08054	08	Special Needs Health Education courses focus on the health requirements of individuals with special needs and emphasize meeting those needs within the home setting. These courses provide information regarding the elderly and individuals with disabilities, handicaps, and/or debilitating illnesses, along with strategies to prepare students for their possible roles as caretakers.
Safety and First Aid	08055	08	Safety and First Aid courses provide specialized instruction in first aid techniques, cardiopulmonary resuscitation (CPR), relief of obstructed airways, and general safety procedures and behaviors. These courses may include such topics as an overview of community agencies and hotlines providing emergency care and information and opportunities for first aid and CPR certification.

Health for Parenting Teens	08056	08	Designed for pregnant teens and/or parents, topics within Health for Parenting Teens courses cover a wide range of both health and parenting issues, typically including prenatal and postnatal care, health and well-being of young parents, child development, stress management, and parental/adult roles. The courses may also involve academic assistance, career exploration, financial management, and so on.
Health and Life Management	08057	08	Health and Life Management courses focus as much on consumer education topics (such as money management and evaluation of consumer information and advertising) as on personal health topics (such as nutrition, stress management, drug/alcohol abuse prevention, disease prevention, and first aid). Course objectives include helping students develop decision-making, communication, interpersonal, and coping skills and strategies.
Substance Abuse Prevention	08058	08	Substance Abuse Prevention courses focus specifically on the health risks of drugs, alcohol and tobacco. These courses provide information on the negative consequences of these products and teach students coping strategies to resist the influences (such as peers and media images) that may entice them to use these substances. Students may also explore the community resources available to them.
Health Education—Independent Study	08097	08	Courses in Health Education—Independent Study, often conducted with instructors as mentors, enable students to explore topics of interest related to health and health education. Independent Study courses may provide students with opportunity to expand expertise in a particular application, to explore a topic of special interest in greater detail, or to develop more advanced skills.
Health Education—Workplace Experience	08098	08	Health Education—Workplace Experience courses provide work experience in a field related to health education. Goals are typically set cooperatively by the student, teacher, and employer (although students are not necessarily paid). These courses may include classroom activities as well, involving further study of the field or discussion regarding experiences encountered in the workplace.
Health Education—Other	08099	08	Other Health Education courses.

Physical Education/Health/Drivers' Education	08201	08	Physical Education/Health/Drivers' Education courses combine a range of activities and topics involving physical skills, human health issues, and safe driving. They are offered in ways that cover two or three of these areas. The physical education portion of these courses draws on team, individual, dual, recreational, and/or conditioning activities. The human health portion typically covers issues such as nutrition, stress management, drug/alcohol abuse prevention, and first aid. The drivers' education portion usually includes legal obligations and responsibilities, rules of the road and traffic procedures, safe driving strategies, and related topics.
Physical, Health, and Safety Education—Independent Study	08997	08	Courses in Physical, Health, and Safety Education—Independent Study, often conducted with instructors as mentors, enable students to explore topics of interest related to physical, health, and safety education. Independent Study courses may serve as an opportunity for students to expand their expertise in a particular application, to explore a topic in greater detail, or to develop more advanced physical, health and/or safety skills.
Physical, Health, and Safety Education—Workplace Experience	08998	08	Physical, Health, and Safety Education—Workplace Experience courses provide work experience in a field related to physical, health, and safety education. Goals are typically set cooperatively by the student, teacher, and employer (although students are not necessarily paid). These courses may include classroom activities as well, involving further study of the field or discussion regarding experiences that students encounter in the workplace.
Physical, Health, and Safety Education—Other	08999	08	Other Physical, Health, and Safety Education courses.
Introduction to Jr. ROTC	09001	09	Introduction to Junior Reserve Officer Training Corps (ROTC) courses introduce students to the purposes and objectives of the Reserve Officer Training Corps program, which seeks to educate high school students in citizenship, promote community service, and instill responsibility. As part of that introduction, course topics typically include a brief history of the military branches in the United States and the basics of military drill, ceremony, and rank structure.

Military Jr. ROTC—unspecified branch	09002	09	Although individual course sequences may vary, the primary objectives of Military Junior Reserve Officer Training Corps (ROTC) courses are to provide students with instruction in the history, organization, role, objectives, and achievements of a particular branch of the U.S. Armed Forces; help them develop personal fitness, strong character, and leadership qualities; and expose them to the career opportunities provided by the U.S. Armed Services. These courses typically cover such topics as military customs, courtesies, rank, drill, and ceremonies and also emphasize citizenship and scholarship. The course content typically includes subjects related to the particular branch being studied (such as map-reading, nautical skills, aerospace technology, or communication technologies), as well as more general subjects (international law, national defense, celestial navigation, and geopolitical strategy).
ROTC Drill	09003	09	Reserve Officer Training Corps (ROTC) Drill courses provide students with an additional opportunity to improve their skills in military precision. These courses emphasize marching style and formations, firearm manipulation, body coordination and mechanics, and performing as a member of an orchestrated team. Class members typically participate in ceremonies and competitions.
Military Leadership	09004	09	Military Leadership courses focus solely on increasing students' leadership skills, particularly as they relate to military operations, customs, and hierarchies. These courses are typically a regular part of the ROTC programs described below (typically the final course within a program series); this Military Leadership course code and title should be used when those descriptions do not apply. The principles and skills taught in these courses include supervision, motivation, evaluation, and setting an example, and their application typically include military drill and inspections, athletic events, and other school activities.

Army Junior ROTC I	09051	09	Army Junior Reserve Officer Training Corps (ROTC) I courses include instruction in the organization and functions of the U.S. Army, leadership skills, and life skills education. The content of these courses cover (but is not limited to) the history and evolution of the Army, including its structure, operations, customs and courtesies; maps and navigation; first aid, personal hygiene, and field sanitation; and substance abuse prevention. These courses also introduce students to principles of leadership and citizenship.
Army Junior ROTC II	09052	09	Army Junior Reserve Officer Training Corps (ROTC) II courses build upon the content of Army Junior ROTC I and include (but are not limited to) ongoing instruction in leadership principles and citizenship; drill and ceremonies; organizational structure; command and staff relationships, functions, and responsibilities; significant military campaigns and leaders; map-reading and orienteering; weapon safety and marksmanship; and survival training.
Army Junior ROTC III	09053	09	Army Junior Reserve Officer Training Corps (ROTC) III courses build upon prior Army Junior ROTC courses, giving more emphasis to leadership development. These courses serve to strengthen students' leadership skills (including planning, problem-solving, motivation, and performance appraisal) and management skills (with regard to time, personnel, and other resources) through allowing them to assume leadership duties. Students study topics introduced in earlier years—such as military history, map-reading and orienteering, marksmanship, and drill and ceremonies—at a more advanced level and are also provided with military service opportunities.
Army Junior ROTC IV	09054	09	Army Junior Reserve Officer Training Corps (ROTC) IV courses focus on practical leadership by assigning students to command and staff positions in which they present instruction to lower Army Junior ROTC classes and continue to study and review staff functions and actions, staff-commander relationships, and leadership principles. Topics introduced in earlier years may be studied at more advanced levels.

Naval Junior ROTC I	09101	09	Naval Junior Reserve Officer Training Corps (ROTC) I courses emphasize citizenship and leadership development, as well as maritime heritage, sea power, and Naval operations and customs. These courses include (but are not limited to) an introduction to the Naval Junior ROTC program, U.S. Navy mission and organization, maritime geography, naval history, basic seamanship, oceanography, and health education.
Naval Junior ROTC II	09102	09	Naval Junior Reserve Officer Training Corps (ROTC) II courses build upon the content of Naval Junior ROTC I. These courses include (but are not limited to) leadership principles and discipline, citizenship, naval opportunities and career planning, naval ships and weaponry, seamanship, meteorology and weather, and survival training. Students continue to learn teamwork, naval history, and military principles.
Naval Junior ROTC III	09103	09	Naval Junior Reserve Officer Training Corps (ROTC) III courses build upon prior Naval Junior ROTC courses. These courses include (but are not limited to) leadership principles and discipline, military justice, international law and the sea, naval intelligence/strategies and national security, and sciences involved in naval operations, such as electricity, electronics, communications technologies, and so on. Students continue to learn teamwork, naval history, and military principles.
Naval Junior ROTC IV	09104	09	Naval Junior Reserve Officer Training Corps (ROTC) IV courses are focused on practical leadership, placing students in positions where they can learn, practice, and understand skills involved in leading others, such as supervision, motivation, evaluation, setting examples, and problem-solving. Application of these skills usually includes military drill and inspections, athletic events, and other school activities. Topics introduced in earlier years may be studied at more advanced levels.

Air Force Junior ROTC I	09151	09	Air Force Junior Reserve Officer Training Corps (ROTC) I courses include both aerospace studies and leadership/life skills education. In these courses, leadership/life skills lessons cover the heritage and development of the Air Force, including its structure, operations, customs, and courtesies. Aerospace topics include the development, history, and impact of flight; aircraft and spacecraft; and the environment in which these crafts operate.
Air Force Junior ROTC II	09152	09	Air Force Junior Reserve Officer Training Corps (ROTC) II courses include both aerospace studies and leadership/life skills education. In these courses, leadership/life skills lessons cover intercommunication skills, drill, and military ceremonies. Aerospace topics emphasize the science of flight, including factors of aerospace power, aircraft flight, and navigation.
Air Force Junior ROTC III	09153	09	Air Force Junior Reserve Officer Training Corps (ROTC) III courses include both aerospace studies and leadership/life skills education. These courses continue to develop students' life and leadership skills and the ways in which they apply to military life. Aerospace topics emphasize space technology and exploration; examine national defense systems; and advance students' knowledge of aviation, propulsion, and navigation.
Air Force Junior ROTC IV	09154	09	Air Force Junior Reserve Officer Training Corps (ROTC) IV courses include both aerospace studies and leadership/life skills education. The life skills education portion of these courses concentrates on leadership and management principles and career opportunities, and aerospace topics include advanced aerodynamics and aeronautics. Course content may also cover elements of national power and relationships between the nations of the world.

Marine Corps Junior ROTC I	09201	09	Marine Corps Junior Reserve Officer Training Corps (ROTC) I courses introduce the Marine Corps Junior ROTC program, with an emphasis on personal growth and responsibility along with general military subjects. These courses include (but are not limited to) physical training; health education, including hygiene, first aid, nutrition, and substance abuse prevention; and communication skills. In these courses, students are introduced to and study Marine Corps values and code of conduct; drill and ceremony; military uniforms, customs, and courtesies; military history; and the Marine Corps structure and chain of command.
Marine Corps Junior ROTC II	09202	09	Marine Corps Junior Reserve Officer Training Corps (ROTC) II courses build upon Marine Corps Junior ROTC I. These courses emphasize personal growth and responsibility, leadership, and citizenship along with military subjects that typically include the mission, organization, and history of the Marine Corps; geography, maps, and navigation; drill and ceremony; and military justice. Students learn about such leadership skills as authority, responsibility, and accountability and citizenship topics including U.S. government structures, documents, and symbols.
Marine Corps Junior ROTC III	09203	09	Marine Corps Junior Reserve Officer Training Corps (ROTC) III courses build upon prior Marine Corps Junior ROTC courses. These courses include (but are not limited to) leadership practice, including training, inspection and evaluation; public service career opportunities; and citizenship responsibilities. These courses cover such personal skills as financial planning, saving and investing, and evaluating credit and insurance terms. Students learn about the structures of other armed service branches, advance their mapping and navigation skills, and may study firearm use, safety and marksmanship. Students continue to learn teamwork, Marine Corps history, and military principles.

Marine Corps Junior ROTC IV	09204	09	Marine Corps Junior Reserve Officer Training Corps (ROTC) IV courses focus on the practical application of skills learned throughout the program: leadership, communication (written and verbal), personal growth, and public service. These courses emphasize drill and ceremony, physical fitness, marksmanship, land navigation, and military history at more advanced levels than in previous courses.
Military Science—Independent Study	09997	09	Courses in Military Science—Independent Study, often conducted with instructors/armed services personnel as mentors, enable students to explore topics of interest related to military science. Independent Study courses may serve as an opportunity for students to expand their expertise in a particular application, to explore a topic in greater detail, or to develop more advanced skills.
Military Science—Workplace Experience	09998	09	Military Science—Workplace Experience courses provide students with work experience within the field of military science and are supported by classroom attendance and discussion. In these courses, goals are set for the employment period, and classroom experience may involve further study in the field, improvement of employability skills, or discussion regarding the experiences and problems that students encounter on the job.
Military Science—Other	09999	09	Other Military Sciences courses.
Introduction to Computers	10001	10	Introduction to Computer courses introduce students to computers and peripheral devices, the functions and uses of computers, the language used in the computer industry, possible applications of computers, and occupations related to computer hardware and software. These courses typically explore legal and ethical issues associated with computer use, as well as how computers influence modern society. Students may also be required to perform some computer operations.

Computing Systems	10002	10	Computing Systems courses offer a broad exploration of the use of computers in a variety of fields. These courses have a considerable range of content, but typically include the introduction of robotics and control systems, computer-assisted design, computer-aided manufacturing systems, and other computer technologies as they relate to industry applications.
Computer and Information Technology	10003	10	Computer and Information Technology courses teach students to operate and use computer and information technology, emphasizing their role as tools to communicate more effectively, conduct research more efficiently, and increase productivity. Course content includes the legal and ethical issues involved with computer technology and use.
Computer Applications	10004	10	In Computer Applications courses, students acquire knowledge of and experience in the proper and efficient use of previously written software packages. These courses explore a wide range of applications, including (but not limited to) word-processing, spreadsheet, graphics, and database programs, and they may also cover the use of electronic mail and desktop publishing.
Business Computer Applications	10005	10	In Business Computer Applications courses, students acquire knowledge of and experience in the proper and efficient use of previously written software packages, particularly those used in the business world. Generally, these courses explore a wide range of applications, including (but not limited to) word-processing, spreadsheet, graphics, and database programs, and they may also cover topics such as electronic mail, desktop publishing, and telecommunications.

Telecommunications	10006	10	Telecommunications courses address the growth in global communications and the emerging equipment and systems needed to successfully communicate in a global environment. These courses cover such topics as data communication protocol and systems, government regulations of the communications industry, and the use of cost-effective and productive tools to transmit messages and data. In these courses, students may learn about such communication systems as e-mail, internet or ecommerce, LAN, WAN, voice transmission, cell phone technology, and traditional teleconferencing.
IB Information Technology in a Global Society	10007	10	IB Information Technology in a Global Society courses prepare students to take the International Baccalaureate Information Technology exams and examine the interaction among information, technology, and society. Course content is designed to help students develop a systematic, problemsolving approach to processing and analyzing information using a range of information tools. In these courses, students also discuss and evaluate how modern information technology affects individuals, relationships among people, and institutions and societies.
Particular Topics in Computer Literacy	10008	10	These courses examine particular topics related to general computer literacy other than those already described, such as privacy issues or instruction in using a particular software application.
Emerging Technologies-Computing	10040	10	New advances in technology offer promise of more efficiency, convergence of existing technologies, improved productivity and represent progressive development. The degree of impact, status, deployment and economic viability affect future opportunities for society. This course offers opportunity to learn, utilize, and appreciate those impacts in future workforce environments.
Computer Literacy—Independent Study	10047	10	Computer Literacy—Independent Study courses, often conducted with instructors as mentors, enable students to explore computer-related topics of interest. Independent Study courses may serve as an opportunity for students to expand their expertise in a particular specialization, to explore a topic in greater detail, or to develop more advanced skills.

Computer Literacy—Workplace Experience	10048	10	Computer Literacy—Workplace Experience courses provide work experience in fields related to computer literacy. Goals are typically set cooperatively by the student, teacher, and employer (although students are not necessarily paid). These courses may include classroom activities as well, involving further study of the field or discussion regarding experiences that students encounter in the workplace.
Computer Literacy—Other	10049	10	Other Computer Literacy courses.
Information Management	10051	10	Information Management courses provide students with the knowledge and skills to develop and implement a plan for an information system that meets the needs of business. Students develop an understanding of information system theory, skills in administering and managing information systems, and the ability to analyze and design information systems.
Database Management and Data Warehousing	10052	10	Database Management and Data Warehousing courses provide students with the skills necessary to design databases to meet user needs. Courses typically address how to enter, retrieve, and manipulate data into useful information. More advanced topics may cover implementing interactive applications for common transactions and the utility of mining data.
Database Applications	10053	10	Database Application courses provide students with an understanding of database development, modeling, design, and normalization. These courses typically cover such topics as SELECT statements, data definition, manipulation, control languages, records, and tables. In these courses, students may use Oracle WebDB, SQL, PL/SQL, SPSS, and SAS and may prepare for certification.
Data Systems/Processing	10054	10	Data Systems/Processing courses introduce students to the uses and operation of computer hardware and software and to the programming languages used in business applications. Students typically use BASIC, COBOL, and/or RPL languages as they write flowcharts or computer programs and may also learn data-processing skills.

Particular Topics in Management Information Systems	10055	10	These courses examine particular topics in management information systems other than those already described.
Management Information Systems—Independent Study	10097	10	Management Information Systems—Independent Study courses, often conducted with instructors as mentors, enable students to explore topics related to management information systems. Independent Study courses may serve as an opportunity for students to expand their expertise in a particular specialization, to explore a topic in greater detail, or to develop more advanced skills.
Management Information Systems—Workplace Experience	10098	10	Management Information Systems—Workplace Experience courses provide work experience in fields related to management information systems. Goals are typically set cooperatively by the student, teacher, and employer (although students are not necessarily paid). These courses may include classroom activities as well, involving further study of the field or discussion regarding experiences that students encounter in the workplace.
Management Information Systems—Other	10099	10	Other Management Information Systems courses.
Network Technology	10101	10	Network Technology courses address the technology involved in the transmission of data between and among computers through data lines, telephone lines, or other transmission media (such as hard wiring, cable television networks, radio waves, and so on). These courses may emphasize the capabilities of networks, network technology itself, or both. Students typically learn about network capabilities—including electronic mail, public networks, and electronic bulletin boards—and network technology—including network software, hardware, and peripherals involved in setting up and maintaining a computer network.
Networking Systems	10102	10	Networking Systems courses are designed to provide students with the opportunity to understand and work with hubs, switches, and routers. Students develop an understanding of LAN (local area network), WAN (wide area network), wireless connectivity, and Internet-based communications with a strong emphasis on network function, design, and installation practices. Students acquire skills in the design, installation, maintenance, and management of network systems that may help them obtain network certification.

Area Network Design and Protocols	10103	10	Area Network Design and Protocols courses address the role of computers in a network system, the Open Systems Interconnection (OSI) model, structured wiring systems, and simple LAN (local area network) and WAN (wide area network) designs.
Router Basics	10104	10	Router Basics courses teach students about router components, start-up, and configuration using CISCO routers, switches, and the IOS (Internetwork Operation System). These courses also cover such topics as TCP/IP protocol, IP addressing, subnet masks, and network trouble-shooting.
NetWare Routing	10105	10	NetWare Routing courses introduce students to such topics as Virtual LANs (VLAN) and switched internetworking, comparing traditional shared local area network (LAN) configurations with switched LAN configurations, and they also discuss the benefits of using a switched VLAN architecture. These courses also may cover routing protocols like RIP, IGRP, Novell IPX, and Access Control Lists (ACLs).
Wide Area Telecommunications and Networking	10106	10	Wide Area Telecommunications and Networking courses provide students with the knowledge and skills to enable them to design Wide Area Networks (WANs) using ISDN, Frame-Relay, and PPP. Students gain knowledge and skills in network management and maintenance and develop expertise in trouble-shooting and assessing the adequacy of network configuration to meet changing conditions.
Wireless Networks	10107	10	Wireless Networks courses focus on the design, planning, implementation, operation, and trouble-shooting of wireless computer networks. These courses typically include a comprehensive overview of best practices in technology, security, and design, with particular emphasis on hands-on skills in (1) wireless LAN set-up and trouble-shooting; (2) 802.11a & 802.11b technologies, products, and solutions; (3) site surveys; (4) resilient WLAN design, installation, and configuration; (5) vendor interoperability strategies; and (6) wireless bridging.

Network Security	10108	10	Network Security courses teach students how to design and implement security measures in order to reduce the risk of data vulnerability and loss. Course content usually includes typical security policies; firewall design, installation, and management; secure router design, configuration, and maintenance; and security-specific technologies, products, and solutions.
Essentials of Network Operating Systems	10109	10	Essentials of Network Operating Systems courses provide a study of multi-user, multi-tasking network operating systems. In these courses, students learn the characteristics of the Linux, Windows 2000, NT, and XP network operating systems and explore a variety of topics including installation procedures, security issues, back-up procedures, and remote access.
Microsoft Certified Professional (MCP)	10110	10	Microsoft Certified Professional courses provide students with the knowledge and skills necessary to be employed as a network administrator in the latest Windows server-networking environment. Topics include installing, configuring, and trouble-shooting the Windows server. These courses prepare students to set up network connections; manage security issues and shares; and develop policies. Students are typically encouraged to take the MCP exam.
Particular Topics in Networking Systems	10111	10	These courses examine particular topics in networking systems other than those already described.
Networking Systems—Independent Study	10147	10	Networking Systems—Independent Study courses, often conducted with instructors as mentors, enable students to explore topics related to networking systems. Independent Study courses may serve as an opportunity for students to expand their expertise in a particular specialization, to explore a topic in greater detail, or to develop more advanced skills.
Networking Systems—Workplace Experience	10148	10	Networking Systems—Workplace Experience courses provide students with work experience in fields related to networking systems. Goals are typically set cooperatively by the student, teacher, and employer (although students are not necessarily paid). These courses may include classroom activities as well, involving further study of the field or discussion regarding experiences that students encounter in the workplace.

Networking Systems—Other	10149	10	Other Networking Systems courses.
Business Programming	10151	10	Business Programming courses provide students with experience in using previously written software packages as well as designing and writing programs of their own. The word-processing, spreadsheet, graphics, and database exercises in these courses contain a business industry focus, and the original programs are written in languages typical of this industry (Visual Basic (VB), C++, Java, BASIC, COBOL, and/or RPL).
Computer Programming	10152	10	Computer Programming courses provide students with the knowledge and skills necessary to construct computer programs in one or more languages. Computer coding and program structure are often introduced with the BASIC language, but other computer languages, such as Visual Basic (VB), Java, Pascal, C++, and COBOL, may be used instead. Initially, students learn to structure, create, document, and debug computer programs, and as they progress, more emphasis is placed on design, style, clarity, and efficiency. Students may apply the skills they learn to relevant applications such as modeling, data management, graphics, and text-processing.
Visual Basic (VB) Programming	10153	10	Visual Basic (VB) Programming courses provide an opportunity for students to gain expertise in computer programs using the Visual Basic (VB) language. As with more general computer programming courses, the emphasis is on how to structure and document computer programs and how to use problem-solving techniques. These courses cover such topics as the use of text boxes, scroll bars, menus, buttons, and Windows applications. More advanced topics may include mathematical and business functions and graphics.
C++ Programming	10154	10	C++ Programming courses provide an opportunity for students to gain expertise in computer programs using the C++ language. As with more general computer programming courses, the emphasis is on how to write logically structured programs, include appropriate documentation, and use problemsolving techniques. More advanced topics may include multi-dimensional arrays, functions, and records.

Java Programming	10155	10	Java Programming courses provide students with the opportunity to gain expertise in computer programs using the Java language. As with more general computer programming courses, the emphasis is on how to structure and document computer programs, using problem-solving techniques. Topics covered in the course include syntax, I/O classes, string manipulation, and recursion.
Computer Programming—Other Language	10156	10	Computer Programming—Other Language courses provide students with the opportunity to gain expertise in computer programs using languages other than those specified (such as Pascal, FORTRAN, or emerging languages). As with other computer programming courses, the emphasis is on how to structure and document computer programs, using problem-solving techniques. As students advance, they learn to capitalize on the features and strengths of the language being used.
AP Computer Science A	10157	10	Following the College Board's suggested curriculum designed to mirror college-level computer science courses, AP Computer Science A courses provide students with the logical, mathematical, and problem-solving skills needed to design structured, well-documented computer programs that provide solutions to real-world problems. These courses cover such topics as programming methodology, features, and procedures; algorithms; data structures; computer systems; and programmer responsibilities.
AP Computer Science AB	10158	10	Following the College Board's suggested curriculum designed to mirror college-level computer science courses, AP Computer Science AB courses (in addition to covering topics included in AP Computer Science A) provide a more formal and extensive study of program design, algorithms, data structures, and execution costs.
IB Computing Studies	10159	10	IB Computer Studies courses prepare students to take the International Baccalaureate Computing Studies exam at either the Subsidiary or Higher level. The courses emphasize problem analysis, efficient use of data structures and manipulation procedures, and logical decision-making. IB Computing Studies courses also cover the applications and effects of the computer on modern society as well as the limitations of computer technology.

Particular Topics in Computer Programming	10160	10	These courses examine particular topics in computer programming other than those already described.
Game Design and Authoring for the Web	10165	10	Game technologies represent the culmination of logic, sequence, tool utilization, and extension of skill. Programming process for this course will utilize all previously learned factors of programming logic, artistry, and interactivity.
Computer Programming—Independent Study	10197	10	Computer Programming—Independent Study courses, often conducted with instructors as mentors, enable students to explore topics related to computer programming. Independent Study courses may serve as an opportunity for students to expand their expertise in a particular specialization, to explore a topic in greater detail, or to develop more advanced skills.
Computer Programming—Workplace Experience	10198	10	Computer Programming—Workplace Experience courses provide students with work experience in fields related to computer programming. Goals are typically set cooperatively by the student, teacher, and employer (although students are not necessarily paid). These courses may include classroom activities as well, involving further study of the field or discussion regarding experiences that students encounter in the workplace.
Computer Programming—Other	10199	10	Other Computer Programming courses.
Web Page Design	10201	10	Web Page Design courses teach students how to design web sites by introducing them to and refining their knowledge of site planning, page layout, graphic design, and the use of markup languages—such as Extensible Hypertext Markup, JavaScript, Dynamic HTML, and Document Object Model—to develop and maintain a web page. These courses may also cover security and privacy issues, copyright infringement, trademarks, and other legal issues relating to the use of the Internet. Advanced topics may include the use of forms and scripts for database access, transfer methods, and networking fundamentals.

Computer Graphics	10202	10	Computer Graphics courses provide students with the opportunity to explore the capability of the computer to produce visual imagery and to apply graphic techniques to various fields, such as advertising, TV/video, and architecture. Typical course topics include modeling, simulation, animation, and image retouching.
Interactive Media	10203	10	Interactive Media courses provide students with the knowledge and skills to create, design, and produce interactive media products and services. The courses may emphasize the development of digitally generated and/or computer-enhanced media. Course topics may include 3D animation, graphic media, web development, and virtual reality. Upon completion of these courses, students may be prepared for industry certification.
Particular Topics in Media Technology	10204	10	These courses examine particular topics in internet design and applications other than those already described.
Animation	10210	10	This course emphasizes the development of digitally generated and/or computer-enhanced media, including 2D and 3D spatial elements, graphic representation, management of movement, environmental representation [including texture, color, value, form, line, and space], recording media, and distribution tools and methodologies. Instruction provides venue for such sophisticated, programming sequences and methodologies as are integrated into actions of the characters creating new behaviors.
Media Technology—Independent Study	10247	10	Media Technology—Independent Study courses, often conducted with instructors as mentors, enable students to explore topics related to media technology. Independent Study courses may serve as an opportunity for students to expand their expertise in a particular specialization, to explore a topic in greater detail, or to develop more advanced skills.

Media Technology—Workplace Experience	10248	10	Media Technology—Workplace Experience courses provide students with work experience in fields related to media technology. Goals are typically set cooperatively by the student, teacher, and employer (although students are not necessarily paid). These courses may include classroom activities as well, involving further study of the field or discussion regarding experiences that students encounter in the workplace.
Media Technology—Other	10249	10	Other Media Technology courses.
Computer Technology	10251	10	Computer Technology courses introduce students to the features, functions, and design of computer hardware and provide instruction in the maintenance and repair of computer components and peripheral devices.
Computer Maintenance	10252	10	Computer Maintenance courses prepare students to apply basic electronic theory and principles in diagnosing and repairing personal computers and input/output devices. Topics may include operating, installing, maintaining, and repairing computers, network systems, digital control instruments, programmable controllers, and related robotics.
Information Support and Services	10253	10	Information Support and Services courses prepare students to assist users of personal computers by diagnosing their problems in using application software packages and maintaining security requirements.
IT Essentials: PC Hardware and Software	10254	10	IT Essentials: PC Hardware and Software courses provide students with in-depth exposure to computer hardware and operating systems. Course topics include the functionality of hardware and software components as well as suggested best practices in maintenance and safety issues. Students learn to assemble and configure a computer, install operating systems and software, and troubleshoot hardware and software problems. In addition, these courses introduce students to networking and often prepare them for industry certification.

CISCO—The Panduit Network Infrastructure Essentials (PNIE)	10255	10	CISCO—PNIE courses provide students with the knowledge to create innovative network infrastructure solutions. These courses offer students basic cable installer information and help them acquire the skills to build and use the physical layer of network infrastructure and develop a deeper understanding of networking devices.
Particular Topics in Information Support and Services	10256	10	These courses examine particular topics in computer support, maintenance, and repair other than those already described.
Educational Trainer	10260	10	Educational Trainer course provides instruction and practice for students who can train teachers, peers, and community in the effective integration of technology. Training on various technology tools, professional demeanor, customer service, and troubleshooting.
Information Support and Services—Independent Study	10297	10	Information Support and Services—Independent Study courses, often conducted with instructors as mentors, enable students to explore topics related to computer information support and services. Independent Study courses may serve as an opportunity for students to expand their expertise in a particular specialization, to explore a topic in greater detail, or to develop more advanced skills.
Information Support and Services—Workplace Experience	10298	10	Information Support and Services—Workplace Experience courses provide students with work experience in fields related to information support and/or service. Goals are typically set cooperatively by the student, teacher, and employer (although students are not necessarily paid). These courses may include classroom activities as well, involving further study of the field or discussion regarding experiences that students encounter in the workplace.
Information Support and Services—Other	10299	10	Other Information Support and Services courses.
Computer and Information Sciences—Independent Study	10997	10	Computer and Information Sciences—Independent Study courses, often conducted with instructors as mentors, enable students to explore computer-related topics of interest. Independent Study courses may serve as an opportunity for students to expand their expertise in a particular specialization, to explore a topic in greater detail, or to develop more advanced skills.

Computer and Information Sciences—Workplace Experience	10998	10	Computer and Information Sciences—Workplace Experience courses provide students with work experience in fields related to computer and/or information sciences. Goals are typically set cooperatively by the student, teacher, and employer (although students are not necessarily paid). These courses may include classroom activities as well, involving further study of the field or discussion regarding experiences that students encounter in the workplace.
Computer and Information Sciences—Other	10999	10	Other Computer and Information Sciences courses.
Introduction to Communication	11001	11	Introduction to Communication courses enable students to understand and critically evaluate the role of media in society. Course content typically includes investigation of visual images, printed material, and audio segments as tools of information, entertainment, and propaganda; improvement of presentation and evaluative skills in relation to mass media; recognition of various techniques for delivery of a particular message; and, in some cases, creation of a media product. The course may concentrate on a particular medium.
Communication Technology	11002	11	Communication Technology courses enable students to effectively communicate ideas and information through experiences dealing with drafting, design, electronic communication, graphic arts, printing process, photography, telecommunications, and computers. Additional topics covered in the course include information storage and retrieval. Drafting equipment may be used to make scale drawings, including multi-view drawing, photographs, and poster mock-ups.
Particular Topics in Communication	11003	11	These courses examine specific topics in communication other than those already described.
Communication—Independent Study	11047	11	Communication—Independent Study courses, often conducted with instructors as mentors, enable students to explore topics of interest related to mass communications. Independent Study courses may serve as an opportunity for students to expand their expertise in a particular application, to explore a topic in greater detail, or to develop more advanced skills.

Communication—Workplace Experience	11048	11	Communication—Workplace Experience courses provide students with work experience in a field related to communication. Goals are typically set cooperatively by the student, teacher, and employer (although students are not necessarily paid). These courses may include classroom activities as well, involving further study of the field or discussion regarding experiences that students encounter in the workplace.
Communication—Other	11049	11	Other Communication courses.
Audio/Visual Production	11051	11	Audio/Visual Production courses provide students with the knowledge and skills necessary for television, video, film, and/or radio production. Writing scripts, camera operation, use of graphics and other visuals, lighting, audio techniques, editing, production principles, and career opportunities are typical topics covered within production courses. Students are usually required to produce their own program or segment. Additional topics such as broadcast industry regulations, radio/TV operation, power of the medium, photography, transmission technology, and so on may be included.
Commercial Photography	11052	11	Commercial Photography courses provide instruction in the use of cameras and laboratory filmprocessing techniques. Topics covered in the course include composition and color dynamics; contact printing; enlarging; developing film; use of camera meters, air brushes, and other photographic equipment; portrait, commercial, and industrial photography; processing microfilm; and preparing copy for printing or for graphic-arts processing.
Photographic Laboratory and Darkroom	11053	11	Photographic Laboratory and Darkroom courses prepare students to develop and print still or motion picture film. Topics covered in the course may include controlling resultant prints; touching up negatives; and finishing, coloring, restoring, and copying prints.

Photo Imaging	11054	11	Photo Imaging courses provide students with the opportunity to effectively communicate ideas and information via digital, film, still and video photography. Topics covered typically include composition, layout, lighting and supplies. More advanced courses may include instruction in specialized camera and equipment maintenance, application to commercial and industrial need and photography business operations.
Video	11055	11	Video courses enable students to explore video communications, incorporating both the technical and artistic aspects of video media. Topics covered in the course include the use of video equipment and techniques, and students typically create a video presentation. Advanced course topics may include creating various forms of film media including silent film; sport and music video; and self portrait video.
Particular Topics in Audio/Video Technology and Film	11056	11	These courses examine specific topics in audio and video technology and film other than those already described.
Photoengraving	11057	11	Photoengraving courses teach students to photograph illustration and other copy that cannot be set in type, to develop negatives, and to prepare photosensitized metal plates for use in printing.
Audio/Video Technology and Film—Independent Study	11097	11	Audio/Video Technology and Film—Independent Study courses, often conducted with instructors as mentors, enable students to explore topics of interest related to A/V technology or film. Independent Study courses may serve as an opportunity for students to expand their expertise in a particular application, to explore a topic in greater detail, or to develop more advanced skills.
Audio/Video Technology and Film—Workplace Experience	11098	11	Audio/Video Technology and Film—Workplace Experience courses provide students with work experience in a field related to audio/visual technology and/or film. Goals are typically set cooperatively by the student, teacher, and employer (although students are not necessarily paid). These courses may include classroom activities as well, involving further study of the field or discussion regarding experiences that students encounter in the workplace.
Audio/Video Technology and Film—Other	11099	11	Other Audio/Video Technology and Film courses.

Journalism	11101	11	Journalism courses (typically associated with the production of a school newspaper, yearbook, or literary magazine) emphasize writing style and technique as well as production values and organization. Journalism courses introduce students to the concepts of newsworthiness and press responsibility; develop students' skills in writing and editing stories, headlines, and captions; and teach students the principles of production design, layout, and printing. Photography and photojournalism skills may be included.
Photojournalism	11102	11	Photojournalism courses expose students to the manner in which photography is used to convey information and experiences. Typically coordinated with production of the school newspaper, yearbook, or other media product, photojournalism courses provide students with the opportunity to improve their photo composition and film development skills, and to apply their art to journalistic endeavors.
Broadcasting Technology	11103	11	Broadcasting Technology courses provide students with the knowledge and skills to produce television broadcast programs. Typically, students prepare and produce short programs, learning the technical aspects of the operation and how to evaluate programming and assess audience reaction and impact.
Publication Production	11104	11	Publication Production courses provide students with the knowledge and skills necessary to produce the school newspaper, yearbook, literary magazine, or other printed publication. Students may gain experience in several components (writing, editing, layout, production, and so on) or may focus on a single aspect while producing the publication.
Particular Topics in Journalism and Broadcasting	11105	11	These courses examine specific topics in journalism and broadcasting other than those already described.
Journalism and Broadcasting—Independent Study	11147	11	Journalism and Broadcasting—Independent Study courses, often conducted with instructors as mentors, enable students to explore topics of interest related to journalism, broadcasting, and mass media. Independent Study courses may serve as an opportunity for students to expand their expertise in a particular application, to explore a topic in greater detail, or to develop more advanced skills.

Journalism and Broadcasting—Workplace Experience	11148	11	Journalism and Broadcasting—Workplace Experience courses provide students with work experience in a field related to journalism or broadcasting. Goals are typically set cooperatively by the student, teacher, and employer (although students are not necessarily paid). These courses may include classroom activities as well, involving further study of the field or discussion regarding experiences that students encounter in the workplace.
Journalism and Broadcasting—Other	11149	11	Other Journalism and Broadcasting courses.
Digital Media Technology	11151	11	These courses are designed to give students the skills necessary to support and enhance their learning about digital medial technology. Topics covered in the course may include internet research, copyright laws, web-publishing, use of digital imagery, electronic forums, newsgroups, mailing lists, presentation tools, and project planning.
Desktop Publishing	11152	11	Desktop Publishing courses integrate the knowledge and skills learning in word processing with the concepts, procedures and application of desktop publishing. Students learn to format, create and proofread brochures, programs, newsletters, web pages, presentations and manuscripts.
Digital Media Design and Production	11153	11	Digital Media Design and Production courses teach students the fundamentals of graphic design and production and provide students with the opportunity to apply these principles to printed media, digital presentation media, and interactive media.
Commercial Graphic Design	11154	11	Commercial Graphic Design courses teach students to use artistic techniques to effectively communicate ideas and information to business and customer audiences via illustration and other forms of digital or printed media. Topics covered may include concept design, layout, paste-up and techniques such as engraving, etching, silkscreen, lithography, offset, drawing and cartooning, painting, collage and computer graphics.

Graphic Technology	11155	11	Graphic Technology courses help students apply artistic and computer techniques to the interpretation of technical and commercial concepts. Topics covered may include computer assisted art and design, printmaking, concept sketching, technical drawing, color theory, imaging, studio techniques, still life modeling, and commercial art business operations. Advanced topics may include topographic arrangements of print and/or electronic graphic and textual products, printing and lithographic equipment and operations, digital imaging, print preparation, desktop publishing and web page design.
Photography and Printing Technology	11156	11	Photography and Printing Technology courses expose students to the tools, materials and processes involved in mass production of photography and printing. Types of printing covered in the course may include intaglio, relief, planographic, screen processes printing, silk screening, serigraphy processes and thermograph. Additional topics may include the use of cameras, composition, imposition, presswork, and computer aided publishing.
Photoengraving	11157	11	Photoengraving courses teach students to photograph illustration and other copy that cannot be set in type, to develop negatives, and to prepare photosensitized metal plates for use in printing.
Print Press Operations	11158	11	These courses expose students to the necessary skills for operating a print press. Topics covered in this course include how to prepare, operate and maintain printing processes.
Particular Topics in Printing Technology and Production	11159	11	These courses examine specific topics in printing production, such as book binding or silk screen print making, other than those already described.
Printing Technology—Independent Study	11197	11	Printing Technology—Independent Study courses, often conducted with instructors as mentors, enable students to explore topics of interest related to the print medium. Independent Study courses may serve as an opportunity for students to expand their expertise in a particular application, to explore a topic in greater detail, or to develop more advanced skills.

Printing Technology—Workplace Experience	11198	11	Printing Technology—Workplace Experience courses provide students with work experience in a field related to printing. Goals are typically set cooperatively by the student, teacher, and employer (although students are not necessarily paid). These courses may include classroom activities as well, involving further study of the field or discussion regarding experiences that students encounter in the workplace.
Printing Technology—Other	11199	11	Other Printing Technology courses.
Communication and Audio/Video Technology—Independent Study	11997	11	Communication and Audio/Video Technology—Independent Study courses, often conducted with instructors as mentors, enable students to explore topics of interest related to mass communication and its technologies. Independent Study courses may serve as an opportunity for students to expand their expertise in a particular application, to explore a topic in greater detail, or to develop more advanced skills.
Communication and Audio/Video Technology—Workplace Experience	11998	11	Communication and Audio/Video Technology—Workplace Experience courses provide students with work experience in a field related to communication or audio/visual technology. Goals are typically set cooperatively by the student, teacher, and employer (although students are not necessarily paid). These courses may include classroom activities as well, involving further study of the field or discussion regarding experiences that students encounter in the workplace.
Communication and Audio/Video Technology—Other	11999	11	Other Communication and Audio/Video Technology courses.
Business/Office Career Exploration	12001	12	Business/Office Career Exploration courses expose students to the occupational opportunities available in the accounting, administration, data processing, management, and secretarial fields. Emphasis is placed on responsibilities, qualifications, work environment, and career paths. These courses may also include consumer education topics, keyboard exposure, and/or hands-on experience within the various occupational areas.

Office Procedures—Comprehensive	12002	12	Office Procedures—Comprehensive courses provide students with numerous opportunities to explore and understand the responsibilities and duties common to most office personnel. These comprehensive courses cover such topics as communication skills, reception and transmission of information via data processing equipment, filing and record management, mail handling, scheduling meetings and conferences, creating itineraries, and word processing.
Office and Administrative Technologies	12003	12	Office and Administrative Technologies courses provide students with instruction and experience in developing technical, problem-solving, and decision-making skills essential for office and/or administrative occupations. Emphasis is placed on integrating and applying knowledge and skills to realistic office and administrative situations utilizing current and relevant technology.
Office Services	12004	12	Office Services courses introduce students to and help them refine clerical and receptionist skills. Course content typically covers filing, telephone, and keyboarding skills; reprographic machinery and procedures; communications skills; and so on.
Keyboarding	12005	12	Keyboarding courses provide students with an introduction to the keyboard (letters, numbers, and symbols), basic machine operation, and proper keystroke technique. As students progress, they improve their speed and accuracy and produce increasingly complex documents. Such courses help students develop keyboard proficiency, document production skills, and problem-solving skills.
Word Processing	12006	12	Word Processing courses introduce students to automated document production using one or more software packages. These courses may introduce keyboarding techniques or may require prior experience; in either case, speed and accuracy are emphasized. A parallel focus is placed on the use of software commands and functions to create, edit, format, and manipulate documents, capitalizing on the power offered by word processing software programs. These courses may also cover file and disk management and other computer-related skills.

Recordkeeping	12007	12	Recordkeeping courses help students to develop knowledge and skills related to the principles and procedures involved in recording personal financial transactions as well as transactions typically undertaken by small businesses. Partial emphasis may be placed on personal banking, budgeting, and income tax calculations; additional emphasis is usually placed on cashier and clerk procedures, inventory control for small businesses, database management, merchandising, and payroll.
Particular Topics in Administration	12008	12	These courses examine specific topics related to business administration not otherwise described, such as a focus on dictation or office machinery, rather than provide a general study of office administration principles and techniques.
Business Communications	12009	12	Business Communications courses help students to develop an understanding and appreciation for effective communication in business situations and environments. Emphasis is placed on all phases of communication: speaking, listening, thinking, responding, reading, writing, communicating nonverbally, and utilizing technology for communication. Business communication functions, processes, and applications in the context of business may be practiced through problem-based projects and realworld application.
Administration—Independent Study	12047	12	Administration—Independent Study courses, often conducted with instructors as mentors, enable students to explore business administration-related topics of interest. Independent Study courses may serve as an opportunity for students to expand their expertise in a particular application, to explore a topic in greater detail, or to develop more advanced skills.
Administration—Workplace Experience	12048	12	Administration—Workplace Experience courses provide students with work experience in fields related to business administration. Goals are typically set cooperatively by the student, teacher, and employer (although students are not necessarily paid). These courses may include classroom activities as well, involving further study of the field or discussion regarding experiences that students encounter in the workplace.
Administration—Other	12049	12	Other Administration courses.

Business Essentials	12050	12	This is a core course designed to give students an overview of the business, marketing and finance career cluster occupations. Students will develop an understanding of how academic skills in mathematics, economics, and written and oral communications are integral components of success in these occupations. Students will examine current events to determine their impact on business and industry and legal and ethical behavior, acquire knowledge of safe and secure environmental controls to enhance productivity, determine how resources should be managed to achieve company goals, and identify employability and personal skills needed to obtain a career and be successful in the workplace. As students learn about different types of business ownership, they will interpret industry laws and regulations to ensure compliance, identify principles of business management, and analyze business practices to determine ethics and social responsibilities.
Introductory Business	12051	12	Introductory Business courses survey an array of topics and concepts related to the field of business. These courses introduce business concepts such as banking and finance, the role of government in business, consumerism, credit, investment, and management. They usually provide a brief overview of the American economic system and corporate organization. Introductory Business courses may also expose students to the varied opportunities in secretarial, accounting, management, and related fields.
Business Management	12052	12	Business Management courses acquaint students with management opportunities and effective human relations. These courses provide students with the skills to perform planning, staffing, financing, and controlling functions within a business. In addition, they usually provide a macro-level study of the business world, including business structure and finance, and the interconnections among industry, government, and the global economy. The course may also emphasize problem-based, real-world applications of business concepts and use accounting concepts to formulate, analyze, and evaluate business decisions.

Entrepreneurship	12053	12	Entrepreneurship courses acquaint students with the knowledge and skills necessary to own and operate their own businesses. Topics from several fields typically form the course content: economics, marketing principles, human relations and psychology, business and labor law, legal rights and responsibilities of ownership, business and financial planning, finance and accounting, and communication. Several topics surveyed in Business Management courses may also be included.
Business Law	12054	12	Business Law courses emphasize legal concepts that are relevant to business and business organizations. Topics examined in these courses typically include contracts, buying/renting property, installment buying, insurance, buyer/seller relationships, negotiable instruments, employment, taxes, insurance, commercial papers, legal organizational structures, and consumer liabilities.
Business Principles and Management	12055	12	Business Principles and Management courses are designed to provide students with an understanding of the American business system, its organizations, and its management. These courses examine the various leadership and management styles of a variety of successful business organizations, large or small.
International Business and Marketing	12056	12	International Business and Marketing courses examine business management and administration in a global economy. Topics covered in this course typically include the principles and processes of export sales, trade controls, foreign operations and related problems, monetary issues, international business and policy, and applications of doing business in specific countries and markets.
Human Resources and Labor Relations	12057	12	Human Resources and Labor Relations courses analyze the functions of conflict resolution and collective bargaining. Typically, students examine the history of the labor movement within the United States, the relationship between management and labor, and how organized labor currently operates.
Human Resources Management	12058	12	Human Resources Management courses provide students with an understanding of the effective use of interpersonal skills in achieving the goals of an organization.

IB Business and Management	12059	12	IB Business and Management courses prepare students to take the International Baccalaureate Business and Management exam at either the Subsidiary or Higher level. In keeping with Individual and Society courses, IB Business and Management promotes problem-solving by identifying the problem, selecting and interpreting data, applying appropriate analytical tools, and recommending solutions by evaluating their quantitative and qualitative implications. These courses also equip students with knowledge and understanding of business terminology, concepts and principles.
Management—Independent Study	12097	12	Management—Independent Study courses, often conducted with instructors as mentors, enable students to explore business management-related topics of interest. Independent Study courses may serve as an opportunity for students to expand their expertise in a particular specialization, to explore a topic in greater detail, or to develop more advanced skills.
Management—Workplace Experience	12098	12	Management—Workplace Experience courses provide students with work experience in fields related to business management. Goals are typically set cooperatively by the student, teacher, and employer (although students are not necessarily paid). These courses may include classroom activities as well, involving further study of the field or discussion regarding experiences that students encounter in the workplace.
Management—Other	12099	12	Other Management courses.
Banking and Finance	12101	12	Banking and Finance courses provide students with an overview of the American monetary and banking system as well as types of financial institutions and the services and products that they offer. Course content may include government regulations; checking, savings, and money market accounts; loans; investments; and negotiable instruments.
Banking	12102	12	Banking courses are similar to Banking and Finance courses, but they focus specifically on banking. These courses may also address examining and applying the methods used for measuring the financial performance of banks in addition to examining specialized brokerage products, current issues, and future trends in banking.

Finance	12103	12	Finance courses are similar to Banking and Finance courses, but they focus specifically on finance, addressing how businesses raise, distribute, and use financial resources while managing risk. Course content typically involves modeling financial decisions (such as borrowing, selling equity or stock, lending or investing) typically undertaken by businesses.
Accounting	12104	12	Accounting courses introduce and expand upon the fundamental accounting principles and procedures used in businesses. Course content typically includes the full accounting cycle, payroll, taxes, debts, depreciation, ledger and journal techniques, and periodic adjustments. Students may learn how to apply standard auditing principles and to prepare budgets and final reports. Calculators, electronic spreadsheets, or other automated tools are usually used. Advanced topics may include elementary principles of partnership and corporate accounting and the managerial uses of control systems and the accounting process.
Business Economics	12105	12	Business Economics courses integrate economic principles (such as free market economy, consumerism, and the role of American government within the economic system) with entrepreneurship/business concepts (such as marketing principles, business law, and risk).
Risk Management and Insurance	12106	12	Risk Management and Insurance courses analyze risk management techniques from the viewpoints of those employed in the industry as well as of business owners seeking to meet risk management needs. Insurance products are evaluated in relation to cost and effectiveness.
Investing	12107	12	Investing courses emphasize the formulation of business and individual investment decisions by comparing and contrasting the investment qualities of cash, stock, bonds, and mutual funds. Students typically review annual reports, predict growth rates, and analyze trends. Stock market simulations are often incorporated into Investing courses.

Advanced Accounting	12108	12	Advanced Accounting courses expand upon the fundamental accounting principles and procedures used in businesses. Course content typically includes the full accounting cycle, payroll, taxes, debts, depreciation, ledger and journal techniques, and periodic adjustments. Students learn how to apply standards auditing principles and to prepare budgets and final reports. Calculators, electronic spreadsheets, or other automated tools are usually used. Topics include principles of partnership and corporate accounting and the managerial uses of control systems and the accounting process and further enhancement of accounting skills.
Finance—Independent Study	12147	12	Finance—Independent Study courses, often conducted with instructors as mentors, enable students to explore business finance-related topics of interest. Independent Study courses may serve as an opportunity for students to expand their expertise in a particular specialization, to explore a topic in greater detail, or to develop more advanced skills.
Finance—Workplace Experience	12148	12	Finance—Workplace Experience courses provide students with work experience in fields related to finance. Goals are typically set cooperatively by the student, teacher, and employer (although students are not necessarily paid). These courses may include classroom activities as well, involving further study of the field or discussion regarding experiences that students encounter in the workplace.
Finance—Other	12149	12	Other Finances courses.
Marketing Career Exploration	12151	12	Geared for students with an interest in marketing, sales, or small business operation, Marketing Career Exploration courses expose students to the opportunities available in retail, wholesale, advertising, and other occupational fields using marketing principles.

Marketing—Comprehensive	12152	12	Marketing—Comprehensive courses focus on the wide range of factors that influence the flow of goods and services from the producer to the consumer. Topics may include (but are not limited to) market research, the purchasing process, distribution systems, warehouse and inventory control, salesmanship, sales promotions, shoplifting and theft control, business management, and entrepreneurship. Human relations, computers, and economics are often covered as well.
Marketing—Fashion	12153	12	Marketing—Fashion courses typically cover the same scope of topics as Marketing— Comprehensive courses (purchasing and distribution systems, advertising, display and sales, management and entrepreneurship, and so on) but do so with particular attention to the fashion industry. In keeping with the focus on the fashion industry, course topics may also include fashion cycles, fashion history, design, style, and coordination.
Marketing—Real Estate	12154	12	Marketing—Real Estate courses typically cover the same scope of topics as Marketing— Comprehensive courses (purchasing, advertising, sales, human relations, management and entrepreneurship, and so on) but do so with particular attention to the real estate industry. In keeping with the focus on real estate, course topics may also include financing, investment, ownership rights, ethics, and other real estate principles.
Marketing—Transportation	12155	12	Marketing—Transportation courses typically cover the same scope of topics as Marketing— Comprehensive courses (purchasing and distribution systems, advertising, display and sales, management, entrepreneurship, and so on) but do so with particular attention to the transportation industry. In keeping with the focus on this industry, topics include identification and proper use of auto parts and accessories and the sales and service of new and used cars, vans, trucks, and related parts.

Marketing—Food/Beverage Industry	12156	12	Marketing—Food/Beverage Industry courses typically cover the same scope of topics as Marketing—Comprehensive courses (purchasing and distribution systems, advertising, display and sales, management, entrepreneurship, and so on) but do so with particular attention to the food and beverage industry. In keeping with the focus on this industry, topics include the unique characteristics and functions of the food and beverage service industry.
Marketing—Insurance	12157	12	Marketing—Insurance courses typically cover the same scope of topics as Marketing— Comprehensive courses (purchasing and distribution systems, advertising, display and sales, management, entrepreneurship, and so on) but do so with particular attention to the sale or underwriting of accident, health, life, marine, automobile, and causality insurance.
Marketing—Floristry	12158	12	Marketing—Floristry courses typically cover the same scope of topics as Marketing— Comprehensive courses (purchasing and distribution systems, advertising, display and sales, management, entrepreneurship, and so on) but do so with particular attention to the floristry industry. In keeping with the focus on this field, topics include the unique characteristics and functions of retail and wholesale floral operations.
Marketing—Hospitality/Tourism	12159	12	Marketing—Hospitality/Tourism courses typically cover the same scope of topics as Marketing—Comprehensive courses (purchasing and distribution systems, advertising, display and sales, management, entrepreneurship, and so on) but do so with particular attention to the travel, tourism, and lodging industry. In keeping with the focus on this field, topics include the unique characteristics and functions of travel services and hotel/motel operations.
Marketing—Merchandising	12160	12	Marketing—Merchandising courses are designed to provide students with practical backgrounds in retailing, with emphasis on merchandising, promotion/display, selling, and career planning. The content of this course may also include fundamental principles of human relations.

Retail Marketing	12161	12	Retail Marketing courses cover marketing principles and concepts related to the provision of goods or services directly to the consumer, emphasizing store operation, advertisement and display of goods, store security, human relations, and business management and ownership.
Internet Marketing	12162	12	Internet Marketing covers the principles and functions of marketing from the standpoint of conducting business on the internet. Typically, students develop such skills as using the internet as a marketing tool, conducting a marketing analysis via the internet, planning marketing support activities, managing an electronic marketing campaign, managing/owning a business via the internet, and analyzing the impact of the internet on global marketing.
Sports and Entertainment Marketing	12163	12	Sports and Entertainment Marketing courses introduce students to and help them refine marketing and management functions and tasks that can be applied in amateur or professional sports or sporting events, entertainment or entertainment events, and the sales or rental of supplies and equipment.
Principles of Marketing	12164	12	Principles of Marketing courses offer students insight into the processes affecting the flow of goods and services from the producer to the consumer. Course content ranges considerably as general marketing principles such as purchasing, distribution, and sales are covered; however, a major emphasis is often placed on kinds of markets; market identification; product planning, packaging, and pricing; and business management.
Principles of Advertising	12165	12	Principles of Advertising courses expose students to the varied concepts underlying the promotion of products. The topics included in Principles of Advertising courses range considerably, but typically include the psychology of advertising, a study of various media, advertising planning and budgeting, and advertising layout and design principles. Course topics may also include an overview of commercial art and packaging.

Marketing Management	12166	12	Marketing Management courses typically cover the same scope of topics as Marketing— Comprehensive courses (purchasing and distribution systems; advertising and sales; and so on) but place a particular emphasis on business management and entrepreneurship, providing exposure to common techniques and problems of management.
Marketing—Other Specialization	12167	12	Marketing—Other Specialization courses typically cover the same scope of topics as Marketing—Comprehensive courses (purchasing and distribution systems, advertising, display and sales, management, entrepreneurship, and so on) but do so with attention to a particular industry not specified above. The course may also cover specific topics related to the particular industry being covered.
Marketing Communications	12168	12	Marketing Communications is an Application-Level course. This course includes activities and discussion related to: advertising, branding, graphic design, packaging, promotion, publicity, sponsorship, public relation, and sales promotion.
Integrated Marketing Applications	12195	12	Integrated Marketing Applications is an Application-Level course. Through this course, students will be actively engaged in utilizing technology and technology applications in the design, production, and implementation of marketing strategies. Students will create print, multi-media, and electronic materials used in the marketing process. Application-level activities will be centered around: advertising, branding, graphic design, packaging, promotion, publicity, sponsorship, public relation, and sales promotion.
Marketing Research	12196	12	Marketing Research will focus on how to: (1) specify information needs and design a research study to meet those needs; (2) collect, analyze and use marketing research data to make effective marketing decisions; (3) communicate the research findings and their implications to various publics.

Marketing—Independent Study	12197	12	Marketing—Independent Study courses, often conducted with instructors as mentors, enable students to explore marketing-related topics of interest. Independent Study courses may serve as an opportunity for students to expand their expertise in a particular specialization, to explore a topic in greater detail, or to develop more advanced skills.
Marketing—Workplace Experience	12198	12	Marketing—Workplace Experience courses provide students with work experience in fields related to marketing. Goals are typically set cooperatively by the student, teacher, and employer (although students are not necessarily paid). These courses may include classroom activities as well, involving further study of the field or discussion regarding experiences that students encounter in the workplace.
Marketing—Other	12199	12	Other Marketing courses.
Cashier/Checker Operations	12201	12	Cashier/Checker Operations courses provide students with the knowledge and skills to operate a cash register and to handle numerous transactions. Topics typically include cash register procedures; handling cash, credit, checks, food stamps, and other forms of legal tender; human relations; stocking and marking merchandise; and theft prevention. Job search and employability skills are often an integral part of the course.
Principles of Selling	12202	12	Principles of Selling courses provide students with the knowledge and opportunity to develop indepth sales competencies. Course content typically includes types of selling, steps in a sale, sales strategies, and interpersonal skills and techniques.
Sales—Independent Study	12247	12	Sales—Independent Study courses, often conducted with instructors as mentors, enable students to explore sales-related topics of interest. Independent Study courses may serve as an opportunity for students to expand their expertise in a particular specialization, to explore a topic in greater detail, or to develop more advanced skills.

Sales—Workplace Experience	12248	12	Sales—Workplace Experience courses provide students with work experience in fields related to sales. Goals are typically set cooperatively by the student, teacher, and employer (although students are not necessarily paid). These courses may include classroom activities as well, involving further study of the field or discussion regarding experiences that students encounter in the workplace.
Sales—Other	12249	12	Other Sales courses.
Business and Marketing—Independent Study	12997	12	Business and Marketing—Independent Study courses, often conducted with instructors or professionals as mentors, enable students to explore business or marketing-related topics of interest. Independent Study courses may serve as an opportunity for students to expand their expertise in a particular specialization, to explore a topic in greater detail, or to develop more advanced skills.
Business and Marketing—Workplace Experience	12998	12	Business and Marketing—Workplace Experience courses provide students with work experience in fields related to business and marketing. Goals are typically set cooperatively by the student, teacher, and employer (although students are not necessarily paid). These courses may include classroom activities as well, involving further study of the field or discussion regarding experiences that students encounter in the workplace.
Business and Marketing—Other	12999	12	Other Business and Marketing courses.
Exploration of Manufacturing Occupations	13001	13	Exploration of Manufacturing Occupations courses introduce and expose students to the career opportunities pertaining to the processing and production of goods. Course topics vary and may include (but are not limited to) systems pertinent to the manufacturing process, properties of various raw materials, and the methods used to transform materials into consumer products. Course activities depend upon the careers being explored; course topics may include entrepreneurship, labor laws, and customer service.

Manufacturing—Comprehensive	13002	13	Manufacturing—Comprehensive courses introduce students to the various methods used to process and transform materials. Processing techniques covered usually include casting, forming, separating, assembling, and finishing. The courses may also include an overview of management techniques in planning, organizing, and controlling various segments of the manufacturing process, including design, engineering, production, and marketing.
Industrial Arts	13003	13	Industrial Arts courses expose students to the tools and machines that they may encounter in manufacturing-related occupations and enable them to develop the skills they need to use these tools in various applications. Course topics typically include (but are not limited to) drawing and planning, electricity, graphic arts, woodwork, leatherwork, metalwork, plastics, and power technology. These courses typically cover general safety and career exploration as well.
Industrial Safety/First Aid	13004	13	Industrial Safety/First Aid courses provide students with instruction in safe operating procedures related to various trades, as well as more general training in emergency first aid and CPR. Course topics may include the importance of standard operation procedures, agencies and regulations related to occupational safety and hazard prevention, and the dangers of particular materials.
Material and Processes	13052	13	Materials and Processes courses expose students to the tools, machines, and processes that may be encountered in manufacturing-related occupations. In particular, these courses stress the analysis, testing, and processing of metals, plastics, woods, ceramics, and composite materials.
Metal and Wood Processing/Production	13053	13	Metal and Wood Processing/Production courses include studying the properties of metals, woods, and composites and using these materials to construct usable products. These courses enable students to experience the process of translating an idea into a finished product, with instruction in planning, designing, selecting materials, and using tools and machines.

Wood Processing/Production	13054	13	Wood Processing/Production courses include studying the properties of woods and composites made from woods and using these materials to construct usable products. These courses enable students to experience the process of translating an idea into a finished product, with instruction in planning, designing, selecting materials, and using tools and machines.
Metal Processing/Production	13055	13	Metal Processing/Production courses include studying the properties of metals and metal alloys and using these materials to construct usable products. These courses enable students to experience the process of translating an idea into a finished product, with instruction in planning, designing, selecting materials, and using tools and machines.
Plastics Processing/Production	13056	13	Plastics Processing/Production courses include studying the properties of plastics and composites and using these materials to construct usable products. These courses enable students to experience the process of translating an idea into a finished product, with instruction in planning, designing, selecting materials, and using tools and machines.
Ceramic Processing/Production	13057	13	Ceramic Processing/Production courses include studying the properties of ceramics and heatresistant composites and using these materials to construct usable products. These courses enable students to experience the process of translating an idea into a finished product, with instruction in planning, designing, selecting materials, and using tools and machines.
Particular Topics in Processing and Production	13058	13	These courses examine specific topics in processing and production, such as substance analysis, other than those already described.
Processing/Production—Independent Study	13097	13	Processing/Production—Independent Study courses, often conducted with instructors as mentors, enable students to explore topics of interest related to processing and production. Independent Study courses may serve as an opportunity for students to expand their expertise in a particular specialization, to explore a topic in greater detail, or to develop more advanced skills.

Processing/Production—Workplace Experience	13098	13	Processing/Production—Workplace Experience courses provide students with work experience in fields related to manufacturing processing and production. Goals are typically set cooperatively by the student, teacher, and employer (although students are not necessarily paid). These courses may include classroom activities as well, involving further study of the field or discussion regarding experiences that students encounter in the workplace.
Processing/Production—Other	13099	13	Other Processing/Production courses.
Production Systems	13101	13	Production Systems courses provide students with knowledge and skills related to manufacturing technologies from conception through production. Although courses vary, students typically analyze markets, design and develop prototypes, plan a marketing or sales strategy, manage a production plan, and manufacture useful products. These courses may also explore the evolution and impact of technology on society's social, cultural, and economic systems and institutions.
Electro-Mechanical Systems	13102	13	Electro-Mechanical Systems courses provide students with instruction and experience in components and equipment that use electricity and the power of physical forces. Students gain an understanding of the principles of electricity and mechanics and their application to gears, cams, levers, circuits, and other devices used in the manufacturing process or within manufactured goods.
Product Development	13103	13	Product Development courses provide students with the opportunity to focus on one or more areas of industrial technology, creatively pursuing new knowledge or solving a technological problem, by designing and building prototypes and working models. Students learn and apply appropriate information in order to complete a project.
Production Systems—Independent Study	13147	13	Production Systems—Independent Study courses, often conducted with instructors as mentors, enable students to explore topics of interest related to manufacturing systems and/or research. Independent Study courses may serve as an opportunity for students to expand their expertise in a particular specialization, to explore a topic in greater detail, or to develop more advanced skills.

Production Systems—Workplace Experience	13148	13	Production Systems—Workplace Experience courses provide students with work experience in fields related to manufacturing systems and/or research. Goals are typically set cooperatively by the student, teacher, and employer (although students are not necessarily paid). These courses may include classroom activities as well, involving further study of the field or discussion regarding experiences that students encounter in the workplace.
Production Systems—Other	13149	13	Other Production Systems courses.
Metalwork Occupations	13201	13	Metalwork Occupations courses provide students with theoretical principles and laboratory experiences related to the planning, manufacturing, assembling, testing, and repairing of parts, mechanisms, and structures in which materials are cast, formed, treated, cut, fused, or otherwise processed in some fashion.
Metalworking	13202	13	Metalworking courses introduce students to the qualities and applications of various metals and the tools used to manipulate and form metal into products. Through one or more projects involving metals, students develop planning, layout, and measurement skills; gain experience in cutting, bending, forging, casting, and/or welding metal; complete projects according to blueprints or other specifications; and may also learn to polish and finish metals. Correct use of metalworking tools and equipment is stressed.
Machining	13203	13	Machining courses enable students to create metal parts using various machine tools and equipment. Course content may include interpreting specifications for machines using blueprints, sketches, or descriptions of parts; preparing and using lathes, milling machines, shapers, and grinders with skill, safety, and precision; developing part specifications; and selecting appropriate materials.
Particular Topics in Machining	13204	13	These courses examine specific topics related to machining, emphasizing a particular type of machine, tool, or procedure, or concentrating on a particular application of machining techniques.

Sheet Metal	13205	13	Sheet Metal courses expose students to the skills and information necessary to lay out, fabricate, assemble, install, maintain, and repair items and structures created from sheet metal components. Students learn the safe and efficient operation of various tools and typically gain skill in blueprint reading, welding, and finishing and polishing metals.
Particular Topics in Sheet Metal	13206	13	In these courses students gain knowledge and skills in particular aspects of sheet metal. Examples include individual courses in radial line development, triangulation fabrication, and so on.
Welding	13207	13	Welding courses enable students to gain knowledge of the properties, uses, and applications of various metals, skills in various processes used to join and cut metals (such as oxyacetylene, shielded metal, metal inert gas, and tungsten arc processes), and experience in identifying, selecting, and rating appropriate techniques. Welding courses often include instruction in interpreting blueprints or other types of specifications.
Particular Topics in Welding	13208	13	In these courses students gain knowledge and skills in particular aspects of welding. Examples include individual courses in each of the following types of welding: gas metal, gas tungsten, and shielded metal and flux core arc welding.
Particular Topics in Metalwork	13209	13	In these courses students gain knowledge and skills in particular aspects of metalwork (such as foundry work or metallurgy) not otherwise described.
Machine Tool Technology 1a	13210	13	A comprehensive, technical level course designed to provide students with the basic theories, equipment and skills needed to efficiently operate machining equipment.
Metalwork—Independent Study	13247	13	Metalwork—Independent Study courses, often conducted with instructors as mentors, enable students to explore metalwork-related topics of interest. Independent Study courses may serve as an opportunity for students to expand their expertise in a particular specialization, to explore a topic in greater detail, or to develop more advanced skills.

Metalwork—Workplace Experience	13248	13	Metalwork—Workplace Experience courses provide students with work experience in the welding, machine technologies, or metalwork fields. Goals are typically set cooperatively by the student, teacher, and employer (although students are not necessarily paid). These courses may include classroom activities as well, involving further study of the field or discussion regarding experiences that students encounter in the workplace.
Metalwork—Other	13249	13	Other Metalwork courses.
Appliance Repai	13301	13	Appliance Repair courses provide students with the knowledge and experience to repair, install, service, and inspect appliances such as stoves, refrigerators, washers, dryers, air conditioners, water heaters, and so on. Students gain an understanding of the mechanics and working systems of these appliances, the skills to read blueprints and specifications, and proficiency in using related tools and products.
Equipment Maintenance and Repair	13302	13	Equipment Maintenance and Repair courses prepare students to adjust, maintain, replace, and repair parts of machinery and to repair tools, equipment, and machines. The courses may have a general emphasis or may focus on a specific type of machinery or equipment related to a particular industry. Depending upon the intent, course topics may include electric, hydraulic, or mechanic systems; control devices, valves, and gates; or supplemental equipment such as fans, hoses, and pipes.
Repair—Independent Study	13347	13	Repair—Independent Study courses, often conducted with instructors as mentors, enable students to explore topics related to repair. Independent Study courses may serve as an opportunity for students to expand their expertise in a particular specialization, to explore a topic in greater detail, or to develop more advanced skills.

Repair—Workplace Experience	13348	13	Repair—Workplace Experience courses provide students with work experience in the fields involving repair, supported by classroom attendance and discussion. Goals are typically set cooperatively by the student, teacher, and employer (although students are not necessarily paid). These courses may include classroom activities as well, involving further study of the field or discussion regarding experiences that students encounter in the workplace.
Repair—Other	13349	13	Other Repair courses.
Manufacturing—Independent Study	13997	13	Manufacturing—Independent Study courses, often conducted with instructors as mentors, enable students to explore topics related to manufacturing. Independent Study courses may serve as an opportunity for students to expand their expertise in a particular specialization, to explore a topic in greater detail, or to develop more advanced skills.
Manufacturing—Workplace Experience	13998	13	Manufacturing—Workplace Experience courses provide students with work experience in fields involving manufacturing, supported by classroom attendance and discussion. Goals are typically set cooperatively by the student, teacher, and employer (although students are not necessarily paid). These courses may include classroom activities as well, involving further study of the field or discussion regarding experiences that students encounter in the workplace.
Manufacturing—Other	13999	13	Other Manufacturing courses.
Exploration of Health Care Occupations	14001	14	Exploration of Health Care Occupations courses expose students to the variety of opportunities available within the health care industry (e.g., such as nursing, therapy, dental care, administrative services, and lab technology). These courses provide experiences in several of these occupational clusters, along with information and knowledge related to the health care industry as a whole.

Health Care Occupations—Comprehensive	14002	14	Health Care Occupations—Comprehensive courses provide students with an orientation to the health care industry and help refine their health care-related knowledge and skills. Topics covered usually include (but are not limited to) an overview of health care delivery; patient care, including assessment of vital signs, body mechanics, and diet; anatomy and physiology; identification and use of medical equipment and supplies; medical terminology; hygiene and disease prevention; first aid and CPR procedures; laboratory procedures; and ethical and legal responsibilities.
Nursing	14051	14	Nursing courses place a special emphasis on the particular knowledge and skills required of nurses and/or nursing assistants and aides while covering general health care topics (i.e., patient care, anatomy and physiology, medical terminology, hygiene and disease prevention, first aid and CPR, and laboratory procedures). Topics covered typically include normal growth and development; bathing, feeding, dressing, and transporting patients; basic pharmacology; doctor, nurse, and patient relationships and roles; medical and professional ethics; death and dying; and care of various kinds of patients (e.g., chronically ill, children, new mothers, and so on).
Nursing—LPN	14052	14	Covering the same scope of topics as Nursing courses, Nursing—LPN courses delve into more depth in order to prepare students for the state's practical nurse licensing examination. Nursing—LPN courses offer the knowledge and experience needed to provide nursing care for patients of all ages, in various stages of sickness or health, and with a variety of disease conditions. Additional topics covered may include community health, nutrition, drug therapy and administration, and mental illness.

Home Health Care	14053	14	Home Health Care courses teach students how to care for individuals within their homes. Course content relates health care practices and procedures to the home environment, and typically includes patient care, comfort, and safety; anatomy and physiology; the prevention of disease and infection; nutrition and meal preparation; human relations; and first aid and CPR. Topics covered may also include therapy strategies, household management, and employability.
Dental Science	14054	14	Dental Science courses expose students to the tools, terminology, and procedures necessary for a career in the dental industry. Course content covers a wide range of topics and typically includes dental anatomy and terminology; the identification and use of dental equipment; dental pathologies and procedures; asepsis; dental laboratory procedures; emergency first aid; and the ethical and legal responsibilities of dental care workers. These courses often explore dental specialties and career options.
Emergency Medical Technology	14055	14	Emergency Medical Technology courses place a special emphasis on the knowledge and skills needed in medical emergencies. Topics typically include clearing airway obstructions, controlling bleeding, bandaging, methods for lifting and transporting injured persons, simple spinal immobilization, infection control, stabilizing fractures, and responding to cardiac arrest. The courses may also cover the legal and ethical responsibilities involved in dealing with medical emergencies.
Surgical Technology	14056	14	Surgical Technology courses emphasize the care and needs of patients undergoing surgery while covering general health care topics (i.e., patient care, anatomy and physiology, medical terminology, hygiene and disease prevention, first aid and CPR, and laboratory procedures). In keeping with that focus, topics may include operation room materials, tools, and procedures; aseptic surgical techniques; preparation and handling of surgical instruments; efficiency in the operating room; and the roles of various medical personnel who are present during surgery.

Vision Care	14057	14	Vision Care courses expose students to the tools, terminology, and procedures necessary for a career in the optometric or optic field. Vision Care courses typically include the physics of light and refraction; the anatomy, physiology, and terminology associated with the eyes; identification and use of optometric and/or optical equipment; optical procedures; human relations; and the ethical and legal responsibilities of vision care workers.
Optometrics	14058	14	Optometrics courses provide students with the knowledge, ability, and experiences to prepare, assemble, and/or fit corrective lenses prescribed by a physician or optometrist. Topics covered may include layout and marking, cutting and chipping, edging and beveling, inspection, alignment, dispensing, and selection of eyewear.
Gerontology	14059	14	Gerontology courses provide students with knowledge and understanding of the processes of adult development and aging. Topics covered may include the study of the biological, economic, psychological, social, and health/fitness aspects of the aging process.
Physical Therapy	14060	14	Physical Therapy courses provide students with the knowledge and skills necessary to work with patients who need to achieve and maintain functional rehabilitation and to prevent malfunction or deformity. Topics covered typically include therapeutic exercises and activities (such as stretching and strengthening), how to train patients to perform the activities of daily living, the use of special equipment, and evaluation of patient progress.
Respiratory Therapy	14061	14	Respiratory Therapy courses provide students with the knowledge and skills necessary to work with patients who have breathing or other cardiopulmonary difficulties or disorders. Topics covered typically include identifying deficiencies and abnormalities of the cardiopulmonary system, understanding the various methods of therapies, and understanding how to use special equipment.

Care of Athletes	14062	14	Care of Athletes courses provide students with the knowledge and skills to understand and perform therapeutic tasks that would be designated by an athletic or fitness trainer. Topics covered may include taping and bandaging, proper use of protective padding, treatment modalities, anatomy and physiology, and medical terminology. Students may learn to measure cardiorespiratory endurance, muscular strength and endurance, flexibility, body composition, and blood pressure. More advanced topics may include injury assessment, the phases of healing, and the use of exercise and equipment to help in the reconditioning of injured athletes.
Particular Topics in Therapeutic Services	14063	14	These courses examine particular topics in medical therapeutic services other than those already described.
Sports Medicine I	14072	14	Sports Medicine I will provide students an overview of the specialized health care needed in the wide world of sports and physical activity. Students will learn what sports medicine is and the multidisciplinary approach to athletic health care. The course will also introduce students to basic body systems in addition to the physical and mental demands of physical activity at all levels. The students will be introduced to such things as kinesiology, bleeding and shock, the bones and soft tissue, the foot, ankle, and lower leg, the knee, the hip and pelvis, the elbow, wrist, and hand, the shoulder, the chest and abdomen, the head and face, the spine, and lastly special considerations in athletes.

Sports Medicine II	14073	14	Sports Medicine II will provide students a hands-on approach to Athletic Training. Topics to be covered are the central training room, the athletic training student-aid program, emergency preparedness, injury game plan, the pre-participation physical examination, rehabilitation and preseason conditioning, nutrition and the athlete, dietary supplements and performance enhancers, sports psychology, assessment and evaluation of sports injuries, therapeutic physical modalities, and proper taping and wrapping. This course allows students to do a series of clinical internships with medical professionals in the community pertaining to sports medicine. These internships are designed for students who have a serious interest in pursuing a career in the sports medicine field.
Therapeutic Services—Independent Study	14097	14	Therapeutic Services—Independent Study courses, often conducted with instructors as mentors, enable students to explore topics of interest related to therapeutic services. Independent Study courses may serve as an opportunity for students to expand their expertise in a particular specialization, to explore a topic in greater detail, or to develop more advanced skills.
Therapeutic Services—Workplace Experience	14098	14	Therapeutic Services—Workplace Experience courses provide students with work experience in fields related to therapeutic services. Goals are typically set cooperatively by the student, teacher, and employer (although students are not necessarily paid). These courses may include classroom activities as well, involving further study of the field or discussion regarding experiences that students encounter in the workplace.
Therapeutic Services—Other	14099	14	Other Therapeutic Services courses.
Dental Laboratory Technology	14101	14	Dental Laboratory Technology courses expose students to the principals, tools, terminology, and procedures necessary for a career in a dental laboratory. These courses typically cover many of the same topics as Dental Science, but emphasize making mouth guards, taking impressions, creating various types of dental molds and models, and fabricating prostheses and dental appliances.

Medical Lab Technology	14102	14	Medical Lab Technology courses provide students with the knowledge and skills necessary for employment in health care-related laboratories. Topics include basic principles of anatomy and physiology, relevant concepts in microbiology and chemistry, and laboratory techniques (including preparation and analysis of various cultures and specimens). The courses may also cover such components as venipuncture, EKG, and CPR procedures.
EKG Technology	14103	14	In EKG Technology courses, students acquire the knowledge and skills to perform electrocardiograph activities and learn about the cardiovascular system (including its function, diseases, and rhythms); EKG machinery; and the use of drugs and their effects. These courses usually include general health care topics as well, such as basic anatomy and physiology, patient care, first aid and CPR, identification and use of medical equipment, and medical terminology.
Phlebotomy	14104	14	In Phlebotomy courses, students acquire knowledge, skills, and experiences related to the drawing of blood and typically learn about such topics as infection control, sterilization practices, medical/hospital procedures and environments, diagnostic procedures, and the process of drawing blood.
Particular Topics in Diagnostic Services	14105	14	These courses examine particular topics in diagnostic services other than those already described.
Diagnostic Services—Independent Study	14147	14	Diagnostic Services—Independent Study courses, often conducted with instructors as mentors, enable students to explore topics related to diagnostic services. Independent Study courses may provide students with an opportunity to expand their expertise in a particular specialization, to explore a topic in greater detail, or to develop more advanced skills.

Diagnostic Services—Workplace Experience	14148	14	Diagnostic Services—Workplace Experience courses provide students with work experience in fields related to diagnostic services. Goals are typically set cooperatively by the student, teacher, and employer (although students are not necessarily paid). These courses may include classroom activities as well, involving further study of the field or discussion regarding experiences that students encounter in the workplace.
Diagnostic Services—Other	14149	14	Other Diagnostic Services courses.
Medical/Clerical Assisting	14151	14	Medical/Clerical Assisting courses enable students to develop knowledge and skills that combine the medical and clerical fields. Students typically develop skills such as patient exam preparation, assessment of vital signs, routine lab procedures, medical transcription, financial accounting, patient and insurance company billing, and record-keeping.
Pharmacy Assisting	14152	14	Pharmacy Assisting courses emphasize the knowledge and skills necessary to assist a pharmacist or pharmacy technician. Course topics and experiences enable students to understand medical terminology, keep and maintain records, label medications, perform computer patient billing, perform stock inventory, and order supplies. These courses also emphasize pharmaceutical classification, drug interactions, and interpersonal/communication skills.
Medical Office Procedures	14153	14	Medical Office Procedures courses expose students to clerical knowledge, abilities, and procedures as they apply to the medical field. These courses typically include (but are not limited to) topics such as medical transcription, medical insurance, financial accounting, scheduling, and patient record-keeping. Medical terminology and routine medical procedures are covered to provide a context for clerical duties.

Medical Terminology	14154	14	In Medical Terminology courses, students learn how to identify medical terms by analyzing their components. These courses emphasize defining medical prefixes, root words, suffixes, and abbreviations. The primary focus is on developing both oral and written skills in the language used to communicate within health care professions.
Particular Topics in Health Information	14155	14	These courses examine particular topics in health Information other than those already described.
Health Information—Independent Study	14197	14	Health Information—Independent Study courses, often conducted with instructors as mentors, enable students to explore topics related to health information systems. Independent Study courses may provide students with an opportunity to expand their expertise in a particular specialization, to explore a topic in greater detail, or to develop more advanced skills.
Health Information—Workplace Experience	14198	14	Health Information—Workplace Experience courses provide students with work experience in fields related to health Information. Goals are typically set cooperatively by the student, teacher, and employer (although students are not necessarily paid). These courses may include classroom activities as well, involving further study of the field or discussion regarding experiences that students encounter in the workplace.
Health Information—Other	14199	14	Other Health Information courses.
Central Service Technology	14201	14	Central Service Technology courses provide students with knowledge and skills related to the procurement, handling, storage, and distribution of sterile goods and equipment. Course components usually include quality assurance, infection control and isolation techniques, medical terminology and processes, decontamination and sterilization, microbiology, and chemistry.

Health Support Services	14202	14	Health Support Services courses provide students with knowledge and skills to be used in activities that support patients' primary health care, such as counseling, health education, disease management, and risk reduction. Because support services can be widely defined, course topics typically also include general health care, such as anatomy and physiology, medical terminology, first aid and CPR procedures, and ethical and legal responsibilities.
Health Unit Coordination	14203	14	Health Unit Coordination courses provide students with instruction and experiences so that they can manage components of nonpatient care activities in health care facilities. Topics covered usually include medical terminology, transcription, and general reception duties and responsibilities; recordkeeping; and stocking medical and office supplies and equipment.
Particular Topics in Support Services	14204	14	These courses examine particular topics in health support services other than those described.
Health Support Services—Independent Study	14247	14	Health Support Services—Independent Study courses, often conducted with instructors as mentors, enable students to explore topics related to health support services. Independent Study courses may provide students with an opportunity to expand their expertise in a particular specialization, to explore a topic in greater detail, or to develop more advanced skills.
Health Support Services—Workplace Experience	14248	14	Health Support Services—Workplace Experience courses provide students with work experience in careers related to health support services. Goals are typically set cooperatively by the student, teacher, and employer (although students are not necessarily paid). These courses may include classroom activities as well, involving further study of the field or discussion regarding experiences that students encounter in the workplace.
Health Support Services—Other	14249	14	Other Health Support Services courses.
Health Science	14251	14	Health Science courses integrate chemistry, microbiology, chemical reactions, disease processes, growth and development, and genetics with anatomy and physiology of the body systems. Typically, these courses reinforce science, mathematics, communications, health, and social studies principles and relate them to health care.

Biotechnology	14252	14	Biotechnology courses involve the study of the bioprocesses of organisms, cells, and/or their components and enable students to use this knowledge to produce or refine products, procedures, and techniques. Course topics typically include laboratory measurement, monitoring, and calculation; growth and reproduction; chemistry and biology of living systems; quantitative problem-solving; data acquisition and display; and ethics. Advanced topics may include elements of biochemistry, genetics, and protein purification techniques.
Pharmacology	14253	14	Pharmacology courses involve a study of how living animals can be changed by chemical substances, especially by the actions of drugs and other substances used to treat disease. Basic concepts of physiology, pathology, biochemistry, and bacteriology are typically brought into play as students examine the effects of drugs and their mechanisms of action.
Particular Topics in Health Sciences	14254	14	These courses examine particular topics in health sciences other than those already described.
Biomedical Innovcation	14255	14	In this capstone course, students will design and conduct experiments related to the diagnosis, treatment, and prevention of disease or illness. They will apply their knowledge and skills to answer questions or to solve problems related to the biomedical sciences. They may work with a mentor or advisor from a university, hospital, physician's office, or industry as they complete their work. Students will be expected to present the results of their work to an adult audience, which may include representatives from the local healthcare or business community or the school's biomedical partnership team.
Health Sciences—Independent Study	14297	14	Health Sciences—Independent Study courses, often conducted with instructors as mentors, enable students to explore health-related topics of interest. Independent Study courses may provide students with an opportunity to expand their expertise in a particular specialization, to explore a topic in greater detail, or to develop more advanced skills.

Health Sciences—Workplace Experience	14298	14	Health Sciences—Workplace Experience courses provide students with work experience in fields involving the health sciences. Goals are typically set cooperatively by the student, teacher, and employer (although students are not necessarily paid). These courses may include classroom activities as well, involving further study of the field or discussion regarding experiences that students encounter in the workplace.
Health Sciences—Other	14299	14	Other Health Sciences courses.
Health Care Sciences—Independent Study	14997	14	Health Care Sciences—Independent Study courses, often conducted with instructors as mentors, enable students to explore health-related topics of interest. Independent Study courses may provide students with an opportunity to expand their expertise in a particular specialization, to explore a topic in greater detail, or to develop more advanced skills.
Health Care Sciences—Workplace Experience	14998	14	Health Care Sciences—Workplace Experience courses provide students with work experience in the health care industry. Goals are typically set cooperatively by the student, teacher, and employer (although students are not necessarily paid). These courses may include classroom activities as well, involving further study of the field or discussion regarding experiences that students encounter in the workplace.
Health Care Sciences—Other	14999	14	Other Health Care Sciences courses.
Exploration of Public Service Careers	15001	15	Exploration of Public Service Careers courses expose students to the duties, responsibilities, requirements, and career opportunities within public service. Course topics vary and may include (but are not limited to) protective services; correction, judicial, and probation services; fire protection and fire fighting; public administration; and social work. Course activities depend upon the career clusters that students explore.

Criminal Justice	15051	15	Criminal Justice courses train students to understand and apply the principles and procedures essential to the U.S. criminal justice system. These courses explore the principles and structure of the justice system and the law, and course content also typically includes investigation, search and arrest, and laboratory, forensic, and trial procedures. Students may also learn CPR and first aid skills, personal defense tactics, and crime prevention techniques.
Corrections	15052	15	Corrections courses provide instruction regarding the principles and techniques used by institutions that incarcerate, rehabilitate, and monitor people accused or convicted of crimes.
Particular Topics in Law Enforcement	15053	15	These courses examine specific topics related to law enforcement (such as forensic science), rather than provide a general study of the field.
Law Enforcement—Independent Study	15097	15	Law Enforcement—Independent Study courses, often conducted with instructors as mentors, enable students to explore topics of interest related to law enforcement. Independent Study courses may serve as an opportunity for students to expand their expertise in a particular application, to explore a topic in greater detail, or to develop more advanced skills.
Law Enforcement—Workplace Experience	15098	15	Law Enforcement—Workplace Experience courses provide work experience in fields related to law enforcement. Goals are typically set cooperatively by the student, teacher, and employer (although students are not necessarily paid). These courses may include classroom activities as well, involving further study of the field or discussion regarding experiences that students encounter in the workplace.
Law Enforcement—Other	15099	15	Other Law Enforcement courses.
Public Safety	15101	15	Public Safety courses introduce students to the field of public safety and extend their knowledge and skills pertaining to the safety and security of homes, workplaces, and the community. These courses cover such topics as policing, law enforcement, emergency service, and private security and corrections and may cover all or a subset of these services.

Security Services	15102	15	Security Services courses provide instruction regarding the safety and security of buildings and facilities and may extend these lessons to include the security and safety of one's self and other human beings.
Particular Topics in Security	15103	15	These courses examine specific topics related to security and protective services, rather than provide a general study.
Security and Protection—Independent Study	15147	15	Security and Protection—Independent Study courses, often conducted with instructors as mentors, enable students to explore topics of interest related the security and protection of the public. Independent Study courses may serve as an opportunity for students to expand their expertise in a particular application, to explore a topic in greater detail, or to develop more advanced skills.
Security and Protection—Workplace Experience	15148	15	Security and Protection—Workplace Experience courses provide work experience in fields related to security and protection. Goals are typically set cooperatively by the student, teacher, and employer (although students are not necessarily paid). These courses may include classroom activities as well, involving further study of the field or discussion regarding experiences that students encounter in the workplace.
Security and Protection—Other	15149	15	Other Security and Protection courses.
Fire Science	15151	15	Fire Science courses introduce students to the field of fire prevention and control and enable them to extend their knowledge through the use of chemical, physical, and engineering principles to understand factors involved in fires. Course topics typically include the chemistry of combustion, factors that influence fire (such as structural design and meteorology), and safety procedures.
Fire Fighting	15152	15	Fire Fighting courses offer students the opportunity to learn fire prevention and control under controlled conditions. Typically, students learn about the organization, rules, requirements, and regulations of fire departments; study and practice the tools and techniques used by firefighters to control or extinguish fires; and examine the behavior of fires. These courses also usually include emergency medical procedures and present fire investigation techniques.

Particular Topics in Fire Management	15153	15	These courses examine specific topics related to fire management (such as hazardous materials handling), rather than provide a general study of the field.
Fire Management—Independent Study	15197	15	Fire Management—Independent Study courses, often conducted with instructors as mentors, enable students to explore topics of interest related fire management. Independent Study courses may serve as an opportunity for students to expand their expertise in a particular application, to explore a topic in greater detail, or to develop more advanced skills.
Fire Management—Workplace Experience	15198	15	Fire Management—Workplace Experience courses provide work experience in fields related to fire management. Goals are typically set cooperatively by the student, teacher, and employer (although students are not necessarily paid). These courses may include classroom activities as well, involving further study of the field or discussion regarding experiences that students encounter in the workplace.
Fire Management—Other	15199	15	Other Fire Management courses.
Public Administration	15201	15	Public Administration courses provide an overview of the structure, roles, and duties of public governments and associated agencies. These courses explore the foundation and evolution of the public service sector, issues related to the provision of services by governmental bodies, and the missions and constraints of various departments within local and state governments. In addition, students may explore a particular public administration topic (such as the tax base and structure, the legislative process, selection of public servants, resource management, and so on) in greater detail.
Community Protection	15202	15	Community Protection courses provide students with information regarding the personnel and agencies concerned with protection of the home, city, state, and nation. Topics covered typically include civil defense and disaster preparedness; crime prevention; pollution control; fire prevention and control; legal and social systems and principles; and public health. These topics may be explored from the viewpoint of a community resident and citizen using these services or of that of one interested in pursuing a public service career.

Public Policy	15203	15	Public Policy courses provide students with the opportunity to design, propose, and analyze programs and policies implemented by government agencies. Activities typically include identifying social issues and problems, generating recommendations, using data to quantify the extent of a problem or evaluate its solution, communicating ideas and findings, and understanding decision-making processes.
Government Service—Independent Study	15247	15	Government Service—Independent Study courses, often conducted with instructors as mentors, enable students to explore topics of interest related the provision of government services. Independent Study courses may serve as an opportunity for students to expand their expertise in a particular application, to explore a topic in greater detail, or to develop more advanced skills.
Government Service—Workplace Experience	15248	15	Government Service—Workplace Experience courses provide work experience in fields related to government service. Goals are typically set cooperatively by the student, teacher, and employer (although students are not necessarily paid). These courses may include classroom activities as well, involving further study of the field or discussion regarding experiences that students encounter in the workplace.
Government Service—Other	15249	15	Other Government Service courses.
Public, Protective, and Government Service—Independent S	15997	15	Public, Protective, and Government Service—Independent Study courses, often conducted with instructors as mentors, enable students to explore topics of interest related to public, protective, and government service. Independent Study courses may serve as an opportunity for students to expand their expertise in a particular application, to explore a topic in greater detail, or to develop more advanced skills.

Public, Protective, and Government Service—Workplace Experience	15998	15	Public, Protective, and Government Service—Workplace Experience courses provide students with work experience in a field related to public, protective, and/or government service. Goals are typically set cooperatively by the student, teacher, and employer (although students are not necessarily paid). These courses may include classroom activities as well, involving further study of the field or discussion regarding experiences that students encounter in the workplace.
Public, Protective, and Government Service—Other	15999	15	Other Public, Protective, and Government Service courses.
Exploration of Hospitality Careers	16001	16	Exploration of Hospitality Careers courses survey a wide array of topics while exposing students to the variety of career opportunities in hospitality fields (such as food service, lodging, tourism, and recreation). These courses serve to introduce students to the general field of hospitality, providing an opportunity to identify a focus for continued study.
Exploration of Restaurant, Food and Beverage Services	16051	16	Exploration of Restaurant, Food, and Beverage Services courses provide students with an overview of the restaurant, food, and beverage service industry. Topics covered include industry terminology, the history of restaurant, food, and beverage services, introduction to marketing, and the various careers available in the industry.
Restaurant, Food and Beverage Services—Comprehensive	16052	16	Restaurant, Food, and Beverage Services—Comprehensive courses provide students with knowledge and skills related to commercial and institutional food service establishments. Course topics range widely, but usually include sanitation and safety procedures, nutrition and dietary guidelines, food preparation (and quantity food production), and meal planning and presentation. Restaurant, Food, and Beverage Service courses may include both “back-of-the-house” and “front-of-the-house” experiences, and may therefore also cover reservation systems, customer service, and restaurant/business management.

Food Service	16053	16	Food Service courses provide instruction regarding nutrition, principles of healthy eating, and the preparation of food. Among the topics covered are large-scale meal preparation, preserving nutrients throughout the food preparation process, use and care of commercial cooking equipment, food storage, advances in food technology, sanitation, management, and the careers available in the food service industry.
Nutrition and Food Preparation	16054	16	Nutrition and Food Preparation courses provide students with knowledge and skills about food preparation and/or production, with a strong emphasis on nutrition, balanced diets, and satisfying special dietary needs. Topics typically include assessing nutrient content, the science of food and nutrition, physiology and utilization of nutrients. Course content may also cover additives, contaminants, foodborne illnesses, and food technology.
Restaurant Management and Operations	16055	16	Restaurant Management and Operations courses provide students with knowledge and skills related to commercial and institutional food service establishments, with an emphasis on management. Course topics therefore include guest service and relationships, planning, resource management, and other topics related to managing and operating restaurants.
Culinary Art Specialty	16056	16	Culinary Art Specialty courses provide instruction in a particular type of cooking or culinary style. Examples of such specialty fields include baking, creating and decorating wedding cakes, Middle Eastern cuisine, and so on. These courses emphasize skills specific to the type of culinary art being studied.
Particular Topics in Restaurant, Food and Beverage Services	16057	16	These courses examine specific topics related to Restaurant, Food, and Beverage Services, such as catering, rather than provide a general study of the industry or of specific topics already described.

Restaurant, Food and Beverage Services—Independent Study	16097	16	Restaurant, Food, and Beverage Services—Independent Study courses, often conducted with instructors as mentors, enable students to explore topics of interest within the restaurant, food, and beverage services industry. Independent Study courses may serve as an opportunity for students to expand their expertise in a particular application, to explore a topic in greater detail, or to develop more advanced skills.
Restaurant, Food and Beverage Services—Workplace Experience	16098	16	Restaurant, Food, and Beverage Services—Workplace Experience courses provide work experience in fields related to restaurant, food, and beverage services. Goals are typically set cooperatively by the student, teacher, and employer (although students are not necessarily paid). These courses may include classroom activities as well, involving further study of the field or discussion regarding experiences that students encounter in the workplace.
Restaurant, Food and Beverage Services—Other	16099	16	Other Restaurant, Food and Beverage Service courses.
Exploration of Lodging Careers	16101	16	Exploration of Lodging Careers courses provide an overview of the lodging industry. Topics covered include lodging terminology, the history of lodging, introduction to marketing, and the various careers available in the lodging industry.
Lodging—Comprehensive	16102	16	Lodging—Comprehensive courses introduce students to the lodging industry and refine their related knowledge and skills. Topics covered typically include property management, guest psychology and relationships, lodging operations, food and beverage services, and other topics related to support services within the lodging industry.
Institutional Maintenance	16103	16	Institutional Maintenance courses present the knowledge and skills required for service work within institutions. Topics covered typically include housekeeping and laundry services, care and cleaning of facilities, and safety and sanitation procedures, in addition to career opportunities, business responsibilities, and other types of ongoing maintenance.
Particular Topics in Lodging	16104	16	These courses examine specific topics in lodging such as convention planning or hotel management rather than provide a general study of the industry or of specific topics already described.

Lodging—Independent Study	16147	16	Lodging—Independent Study courses, often conducted with instructors as mentors, enable students to explore topics of interest within the lodging industry. Independent Study courses may serve as an opportunity for students to expand their expertise in a particular application, to explore a topic in greater detail, or to develop more advanced skills.
Lodging—Workplace Experience	16148	16	Lodging—Workplace Experience courses provide work experience in fields related to lodging. Goals are typically set cooperatively by the student, teacher, and employer (although students are not necessarily paid). These courses may include classroom activities as well, involving further study of the field or discussion regarding experiences that students encounter in the workplace.
Lodging—Other	16149	16	Other Lodging courses.
Introduction to Travel and Tourism	16151	16	Introduction to Travel and Tourism courses provide an overview of the travel and tourism industry. Topics covered in this course may include travel and tourism terminology, the history of travel, introduction to marketing, and the various careers available in travel and tourism.
Travel and Tourism—Comprehensive	16152	16	Travel and Tourism—Comprehensive courses provide the knowledge and skills necessary to work in the travel industry such as sales techniques, marketing principles, and entrepreneurial skills. Additional skills learned in these courses typically include travel agency procedures, airline reservation systems, public relations, hotel/motel registration systems and services, and conference and convention planning.
World Travel and Tourism	16153	16	World Travel and Tourism courses provide the knowledge and skills necessary to work in the travel industry, with a focus on travel outside of the United States. Topics covered may include geography of the continents; customs, cultures, and tourist destinations in other countries; special documentation needed for international travel; and planning events to client specifications.

Eco-tourism	16154	16	Eco-tourism courses provide the knowledge and skills necessary to work in the travel industry, with particular attention paid to conservation and environmental issues surrounding travel and tourism. Topics covered may include recreational opportunities related to on- and off-site attractions and environmental and ecological principles.
Particular Topics in Travel and Tourism	16155	16	These courses examine specific topics in travel and tourism such as the airline reservation and ticketing system rather than provide a general study of the industry or of specific topics already described.
Travel and Tourism—Independent Study	16197	16	Travel and Tourism—Independent Study courses, often conducted with instructors as mentors, enable students to explore topics of interest within the travel and tourism industry. Independent Study courses may serve as an opportunity for students to expand their expertise in a particular application, to explore a topic in greater detail, or to develop more advanced skills.
Travel and Tourism—Workplace Experience	16198	16	Travel and Tourism—Workplace Experience courses provide work experience in fields related to travel and tourism. Goals are typically set cooperatively by the student, teacher, and employer (although students are not necessarily paid). These courses may include classroom activities as well, involving further study of the field or discussion regarding experiences that students encounter in the workplace.
Travel and Tourism—Other	16199	16	Other Travel and Tourism courses.
Exploration of Recreation, Amusement and Attractions	16201	16	Exploration of Recreation, Amusement, and Attractions courses provide an overview of the recreation industry. Topics covered in this course may include industry terminology; the history of recreation, amusement, and attractions; introduction to marketing; and the various careers available in the industry.

Recreation, Amusement and Attractions—Comprehensive	16202	16	Recreation, Amusement, and Attractions—Comprehensive courses provide students with the attitudes, skills, and knowledge needed for employment in theme parks, attractions and outdoor recreation facilities, exhibitions, and event planning. Topics covered may include planning trade shows, fairs, and conferences; outdoor recreation and management; financial transactions; salesmanship; guest services and satisfaction; culture and customs; computer and industry technology; eco-tourism; client information; and planning specialized events while incorporating themes, timelines, budgets, target audiences, agendas, and public relations.
Particular Topics in Recreation, Amusement and Attractions	16203	16	These courses examine specific topics in recreation, amusement, and attractions such as local opportunities rather than provide a general study of the industry.
Recreation, Amusement and Attractions—Independent Study	16247	16	Recreation, Amusement, and Attractions—Independent Study courses, often conducted with instructors as mentors, enable students to explore topics of interest within the recreation, amusement, and attractions industry. Independent Study courses may serve as an opportunity for students to expand their expertise in a particular application, to explore a topic in greater detail, or to develop more advanced skills.
Recreation, Amusement and Attractions—Workplace Experience	16248	16	Recreation, Amusement, and Attractions—Workplace Experience courses provide work experience in fields related to recreation, amusement, and attractions. Goals are typically set cooperatively by the student, teacher, and employer (although students are not necessarily paid). These courses may include classroom activities as well, involving further study of the field or discussion regarding experiences that students encounter in the workplace.
Recreation, Amusement and Attractions—Other	16249	16	Other Recreation, Amusement and Attractions courses.
Hospitality and Tourism—Independent Study	16997	16	Hospitality and Tourism—Independent Study courses, often conducted with instructors as mentors, enable students to explore topics of interest within the hospitality and tourism industry. Independent Study courses may serve as an opportunity for students to expand their expertise in a particular application, to explore a topic in greater detail, or to develop more advanced skills.

Hospitality and Tourism—Workplace Experience	16998	16	Hospitality and Tourism—Workplace Experience courses provide work experience in fields related to hospitality and tourism. Goals are typically set cooperatively by the student, teacher, and employer (although students are not necessarily paid). These courses may include classroom activities as well, involving further study of the field or discussion regarding experiences that students encounter in the workplace.
Hospitality and Tourism—Other	16999	16	Other Hospitality and Tourism courses.
Construction Careers Exploration	17001	17	Construction Career Exploration courses expose students to the opportunities available in construction-related trades, such as carpentry, masonry, air conditioning/refrigeration, plumbing, and so on. Students learn about the processes involved in construction projects and may engage in a variety of small projects. These courses emphasize responsibilities, qualifications, work environment, rewards, and career paths within construction-related fields.
Construction—Comprehensive	17002	17	Construction—Comprehensive courses provide students with basic knowledge and skills required for construction of commercial, residential, and institutional structures. These courses provide experiences and information (typically including career opportunities and training requirements) regarding construction-related occupations such as carpentry, cabinetmaking, bricklaying, electrical trades, plumbing, concrete masonry, and so on. Students engage in activities such as reading blueprints, preparing building sites, starting foundations, erecting structures, installing utilities, finishing surfaces, and providing maintenance.

Carpentry	17003	17	Carpentry courses provide information related to the building of wooden structures, enabling students to gain an understanding of wood grades and construction methods and to learn skills such as laying sills and joists; erecting sills and rafters; applying sheathing, siding, and shingles; setting door jambs; and hanging doors. Carpentry courses may teach skills for rough construction, finish work, or both. Students learn to read blueprints, draft, use tools and machines properly and safely, erect buildings from construction lumber, perform finish work inside of buildings, and do limited cabinet work. Carpentry courses may also include career exploration, good work habits, and employability skills.
Framing Carpentry	17004	17	Framing Carpentry courses provide students with much of the same knowledge as general carpentry courses (knowledge of various types and grades of woods, proper and safe use of hand and power tools, and site selection and preparation), but place a special emphasis on construction methods applicable to floor, wall, roof, and/or stair framing. Course content may also include insulation installation and painting.
Particular Topics in Carpentry	17005	17	These courses cover specific aspects of building construction or carpentry. All coursework focuses upon a particular skill or set of skills related to one subtopic, such as floor framing, wall and partition framing, interior finishing, or exterior finishing.
Woodworking	17006	17	Woodworking courses introduce students to the various kinds of woods used in industry and offer experience in using selected woodworking tools. Students design and construct one or more projects and may prepare a bill of materials. Correct and safe use of tools and equipment is emphasized. As students advance, they focus on learning the terminology necessary to use power tools successfully, developing skills to safely use these tools in the workshop and becoming familiar with various kinds of wood-finishing materials. Advanced students typically design a project, prepare bills of materials, construct, and finish proposed projects.

Cabinetmaking	17007	17	Cabinetmaking courses provide students with experience in constructing cases, cabinets, counters, and other interior woodwork. Students learn to distinguish between various types of furniture construction and their appropriate applications, and how to use various woodworking machines and power tools for cutting and shaping wood. Cabinetmaking courses cover the different methods of joining pieces of wood, how to use mechanical fasteners, and how to attach hardware. Initial topics may resemble those taught in Woodworking courses; more advanced topics may include how to install plastic laminates on surfaces and how to apply spray finishes.
Masonry	17008	17	Masonry courses enable students to learn to construct interior and exterior walls, columns, doorways, window openings, fireplaces, chimneys, and foundations from brick and concrete block. Along with other activities, students may mix and spread cement and mortar, read blueprints and plans, and estimate materials needed for a project. Other topics may also include how to layout buildings on footings and how to establish grades using a surveying transit.
Building Maintenance	17009	17	Building Maintenance courses train students to maintain commercial, industrial, and residential buildings and homes. Instruction is provided in the basic maintenance and repair of air conditioning, heating, plumbing, electrical, and other mechanical systems. Topics covered may include identifying and using hand and power tools safely; installing and repairing floor coverings, walls, and ceilings; installing and repairing doors, windows, screens, and cabinets; applying finishes to prepared surfaces; and repairing roofs, masonry, plumbing, and electrical systems.
Home Maintenance	17010	17	Home Maintenance courses provide students with knowledge and skills related to devices and systems found in the home. Course content may include electrical wiring, plumbing, window and door repair and installation, wall and floor repair and finishing, furniture repair and finishing, and small appliance repair.

Wall Finishings	17011	17	Wall Finishings courses prepare students to finish exterior or interior surfaces by applying protective coating materials such as paint, lacquer, wallpaper, plaster, or stucco. Course topics may include instruction in making, mixing, and matching paint colors; applying coating with various types of equipment; applying wallpaper; lathing, preparing surfaces, smoothing, and finishing.
Upholstering	17012	17	Upholstering courses prepare students in all aspects of upholstering furniture. Topics covered may include installing, repairing, arranging, and securing the springs, filler, padding and cover materials of chairs, couches and mattresses; cutting, sewing and trimming; cushion filling, tufting, and buttoning; and wood refinishing.
Commercial Construction Technology	17014	17	A course to introduce students to the basic skills pertaining to commercial construction.
Commercial Construction Careers	17015	17	Comprehensive and application courses designed to teach knowledge and skills required to construct commercial buildings.
Heavy Highway Construction	17016	17	Heavy Highway Construction.
General Construction—Independent Study	17047	17	General Construction—Independent Study courses, often conducted with instructors as mentors, enable students to explore construction-related topics of interest. Independent Study courses may serve as an opportunity for students to expand their expertise in a particular application, to explore a topic in greater detail, or to develop more advanced skills.
General Construction—Workplace Experience	17048	17	General Construction—Workplace Experience courses provide work experience in a field related to construction. Goals are typically set cooperatively by the student, teacher, and employer (although students are not necessarily paid). These courses may include classroom activities as well, involving further study of the field or discussion regarding experiences that students encounter in the workplace.
General Construction—Other	17049	17	Other General Construction courses.

Air Conditioning	17051	17	Air Conditioning courses offer students specialized training related to the design, installation, and repair of air conditioning systems for residential and commercial use. These courses may emphasize the theory and design of electrical, electronic, mechanical, and pneumatic control systems used in air conditioning systems; they might also (or instead) focus on procedures used in troubleshooting, servicing, and installing components of air conditioning systems.
Refrigeration	17052	17	Refrigeration courses provide students with exposure to and training in the theories, equipment, and skills needed to design, install, and repair commercial and residential refrigeration systems. Course topics typically include the theory of thermodynamics, measurement of pressures and temperatures, components and common accessories of refrigeration systems, and repair and safety procedures.
Heating	17053	17	Heating courses offer students training specific to the design, installation, and repair of heating systems for residential use. Topics typically include electric, gas, and/or steam systems; ventilation procedures; safety practices; and installation and trouble-shooting techniques.
Air Conditioning/Refrigeration	17054	17	Air Conditioning/Refrigeration courses enable students to develop the combined skills and knowledge to install, maintain, adjust, and repair both air conditioning and refrigeration systems.
Air Conditioning, Heating, and Refrigeration	17055	17	In Air Conditioning, Heating, and Refrigeration courses, students learn the basic principles of these systems, along with how to identify and safely use tools/equipment used in the trade.
Heating, Ventilation, and Air Conditioning	17056	17	These courses synthesize basic and advanced principles in heating, ventilation, and air conditioning and include topics such as air filtration methods, humidity control, and the installation and maintenance of heat pumps, furnaces, and air conditioners. Students also learn about climate control systems; electrical wiring; systems design; sizing, fabricating, and installing ductwork; installing and maintaining climate control systems; and safety.

Particular Topics in HVACR	17057	17	These courses offer students specialized training in aspects or topics that are common to various climate control systems (heating, ventilation, air conditioning, and refrigeration systems); such topics may include electrical components, diagrams and blueprints, welding and soldering techniques, and so on.
Plumbing	17058	17	Plumbing courses provide students with instruction in installing waste and vent systems, water and gas pipes, trim, and fixtures. Skills taught include cutting and joining various types of pipe (for instance, steel, plastic) using various methods (cement, seat method, and so on).
Plumbing and Heating	17059	17	Plumbing and Heating courses address the installation, assembly, maintenance, and repair of piping, plumbing, heating equipment, and water and drainage systems. Topics covered include the computation of heat losses and BTU requirements and blueprint reading. Students gain experience with electric, gas, and oil furnaces; vacuum pumps; air compressors; and mechanical and pneumatic testing equipment.
HVAC & Plumbing Systems	17060	17	Course designed to teach basic skills required for installation of HVAC and plumbing systems.
Pipefitting Technology	17061	17	Course design to teach exposure to and training in the theories, equipment and skills needed to perform pipefitting techniques.
Skilled Mechanical Crafts	17062	17	A course to introduce students to the basic skills necessary for occupations in skilled mechanical crafts (plumbing, HVAC, pipefitting, sheet metal, refrigeration).
Air Conditioning, Heating and Plumbing—Independent Study	17097	17	Air Conditioning, Heating, and Plumbing—Independent Study courses, often conducted with instructors as mentors, enable students to explore topics of interest related to air conditioning, heating and plumbing. Independent Study courses may serve as an opportunity for students to expand their expertise in a particular application, to explore a topic in greater detail, or to develop more advanced skills.

Air Conditioning, Heating and Plumbing—Workplace Experience	17098	17	Air Conditioning, Heating, and Plumbing—Workplace Experience courses provide work experience in a field related to air conditioning, heating, and/or plumbing. Goals are typically set cooperatively by the student, teacher, and employer (although students are not necessarily paid). These courses may include classroom activities as well, involving further study of the field or discussion regarding experiences that students encounter in the workplace.
Air Conditioning, Heating and Plumbing—Other	17099	17	Other Air Conditioning, Heating and Plumbing courses.
Exploration of Electricity/Electronics	17101	17	Exploration of Electricity/Electronics courses offer instruction in the theory of electricity and in the terminology, skills, and safety procedures common to careers involving electricity and electronics. Topics include (but are not limited to) Ohm's law, electrical equipment, wire systems, and so on; career exploration is often (but not always) an integral part of these courses.
Electricity—Comprehensive	17102	17	Electricity—Comprehensive courses provide a survey of the theory, terminology, equipment, and practical experience in the skills needed for careers in the electrical field. These courses typically include AC and DC circuitry, safety, and the National Electrical Code and may cover such skills as those involved in building circuits; wiring residential, commercial, and/or industrial buildings; installing lighting, power circuits, and cables; and estimating job costs. As students progress, their projects become more complex and expansive. In these courses, safety is stressed, and a career exploration component may be offered.
Residential Wiring	17103	17	Covering many of the same topics as Electricity—Comprehensive courses, Residential Wiring courses apply the knowledge and skills that students acquire to the electrical systems found in family dwellings. Because these courses emphasize residential electricity, topics may also include cable installation, telephone systems, and the installation of lighting fixtures, outlets, and so on. Maintenance and repair skills are often included as course topics.

Industrial Electricity	17104	17	Covering many of the same topics as Electricity—Comprehensive courses, Industrial Electricity courses apply the knowledge and skills that students acquire to the electrical systems used in industry. Because of this emphasis, these courses may also cover the installation of transformers and control devices, emergency generator systems, and other industrial applications.
Particular Topics in Electricity	17105	17	These courses provide students with specialized knowledge and help them develop skills in particular topics concerning the nature, behavior, and application of electrical current.
Electronics—Comprehensive	17106	17	Electronics—Comprehensive courses provide a survey of the theory, terminology, equipment, and practical experience in the skills needed for careers in the electronic field as well as typically cover the theory of electricity. Course topics may include AC, DC, analog, and integrated circuitry and solid state and digital devices, amplifiers, and semiconductors. Skills covered may involve the repair, maintenance, and building of electronic equipment such as radios, television sets, and industrial equipment.
Particular Topics in Electronics	17107	17	Individual courses in this category offer specialized training in topics related to electronics such as diodes, transistors, digital techniques, solid-state devices, analog circuits, and microprocessors.
Electricity/Electronics—General	17108	17	Electricity/Electronics—General courses teach fundamental concepts of electricity and electronics, including safety procedures, and may introduce students to the available occupations in electrical and electronic industries. Topics covered typically include components of circuits; reading schematics and diagrams; electricity and electronics as sources of energy; signal transmission; and using equipment common to these occupations, such as ammeters, voltmeters, capacitor checkers, transistor testers, signal generators, and ohmmeters.
Particular Topics in Electricity/Electronics	17109	17	These courses provide instruction in the theory and skills needed in fields involving electricity and electronics and related fields that focus on electrical wiring or electronic signals.

Analog and Digital Circuits	17110	17	In these courses, analog and digital circuits and systems are compared. Topics covered include binary and continuously variable currents and signals (typically in the context of voltage), waveforms, signal loss and distortion, modulation, and signal processing. These courses may also introduce other media, such as sound waves and liquids.
Analog Circuits	17111	17	Analog Circuit courses emphasize currents and voltages that have continuously variable signals and, due to that emphasis, concentrate on signal modulation, transmission and reception, signal loss and distortion, and waveforms. These courses may also address conversion techniques.
Digital Circuits	17112	17	Digital Circuit courses emphasize currents and voltages that have binary states and, due to that emphasis, concentrate on transmission and reception of binary data, signal loss, and processing circuitry. These courses may also address conversion techniques.
Electricity/Electronics—Independent Study	17147	17	Electricity/Electronics—Independent Study courses, often conducted with instructors as mentors, enable students to explore electricity- or electronics-related topics of interest. Independent Study courses may serve as an opportunity for students to expand their expertise in a particular application, to explore a topic in greater detail, or to develop more advanced skills.
Electricity/Electronics—Workplace Experience	17148	17	Electricity/Electronics—Workplace Experience courses provide students with work experience in a field related to electricity and/or electronics. Goals are typically set cooperatively by the student, teacher, and employer (although students are not necessarily paid). These courses may include classroom activities as well, involving further study of the field or discussion regarding experiences that students encounter in the workplace.
Electricity/Electronics—Other	17149	17	Other Electricity/Electronics courses.

Architecture and Construction—Independent study	17997	17	Architecture and Construction—Independent Study courses, often conducted with instructors as mentors, enable students to explore architecture and construction-related topics of interest. Independent Study courses may serve as an opportunity for students to expand their expertise in a particular application, to explore a topic in greater detail, or to develop more advanced skills.
Architecture and Construction—Workplace Experience	17998	17	Architecture and Construction—Workplace Experience courses provide students with work experience in a field related to architecture or construction. Goals are typically set cooperatively by the student, teacher, and employer (although students are not necessarily paid). These courses may include classroom activities as well, involving further study of the field or discussion regarding experiences that students encounter in the workplace.
Architecture and Construction—Other	17999	17	Other Architecture and Construction courses.
Introduction to Agriculture and Natural Resources	18001	18	Introduction to Agriculture courses survey a wide array of topics within the agricultural industry, exposing students to the many and varied types of agriculture and livestock career opportunities and to those in related fields (such as natural resources). These courses serve to introduce students to the agricultural field, providing them an opportunity to identify an area for continued study or to determine that their interest lies elsewhere. They often focus on developing communication skills, business principles, and leadership skills.
Agriculture—Comprehensive	18002	18	Agriculture—Comprehensive courses cover a wide range of agricultural topics, including plant and animal science, production, and processing; agricultural mechanics, including tool and machine operation and repair; construction and repair of farm structures; business operations and management; and the careers available in the agricultural industry. They may also include topics such as chemical and soil science, ecology, agricultural marketing, and veterinary science.

Agriculture and Natural Resources—Comprehensive	18003	18	Agriculture and Natural Resources—Comprehensive courses cover a wide range of topics concerning agriculture and natural resources, including plant and animal science, production, and processing; environmental science and conservation; ecology; agricultural mechanics; agricultural construction; business operations and management; and the careers available in the agricultural/natural resources industry. They may also include topics such as chemical and soil science, forestry, agricultural marketing, and veterinary science.
Introduction to Floral Design	18004	18	This is an introductory course that allows the students to explore the floral careers and the floral design business.
Internship in Agriculture Food and Natural Resource Cluster	18048	18	Provides students to gain knowledge and skills for various Agriculture Careers. Students will provide a detailed log of experiences and hours while participating.
Advaned Internship	18049	18	This course allows additional time for students to be exposed to careers in an internship area as related to the AFNR cluster in a specific career.
Supervised Agricultural Experience	18050	18	This is an application level course designed to provide students in the AFNR cluster with electronic record keeping experience. This course will allow the student to develop personal financial literacy and make decisions based on actual experiences in developing and managing a SAE.
Plant Production/Science	18051	18	Plant Production/Science courses provide knowledge about the propagation of plants for food and fiber. These courses may cover such topics as soil science, irrigation, pest and weed control, food and fiber processing, and farm operations. They may also cover the knowledge and skills needed to produce all types of crops or may emphasize a particular area of the agricultural industry.

General Horticulture	18052	18	General Horticulture courses expose students to the art and science of growing plants, shrubs, trees, flowers, fruits, and vegetables. In doing so, they cover a wide variety of topics, including greenhouse and nursery operations, soils and media mixtures, fruit and vegetable production, turf/golf course management, interior and exterior plantscaping, irrigation systems, weed and pest control, and floral design.
Ornamental Horticulture	18053	18	Similar to General Horticulture, Ornamental Horticulture courses provide information regarding the care and propagation of plants, flowers, trees, and shrubs, but place a special emphasis on those used for decorative and aesthetic purposes. Because of this particular emphasis, Ornamental Horticulture courses usually concentrate on nurseries and greenhouses and on the floristry industry.
Turf and Landscape Management	18054	18	Turf and Landscape Management courses provide instruction that incorporates plant science, soil and media mixtures, plant identification and optimal environments, and landscape design. These courses emphasize applying such knowledge and skill to the design, establishment, and maintenance of lawns, parks, open space, and similar environments.
Soil Science	18055	18	Soil Science courses involve the study of soil properties, including soil chemistry, biology, fertility, mineralogy, and hydrology. Topics covered may also include soil conservation, irrigation, and management.
Particular Topics in Plant Systems	18056	18	These courses examine specific topics related to Plant Systems, such as floral design, hydroponics, or landscaping, rather than provide a general study of plant systems or horticulture.
Floriculture and Greenhouse Management	18057	18	Plant Identification and floral design are necessary knowledge skills along with the selection of greenhouse plants and management of greenhouses for production of plants and flowers in the industry.

Plant and Soil Science	18058	18	Courses expose students to the art and science of growing plants, shrubs, trees, flowers, fruits, agriculture crops and vegetables. In doing so, they cover a wide variety of topics, including greenhouse and nursery operations, soils & media mixtures, soil chemistry, fertility, mineralogy, hydrology, soil conservation, irrigation, fruit and vegetable production, turf/golf course management, interior and exterior plantscaping, irrigation systems, weed & pest control, & floral design.
Landscape Science I	18059	18	Courses provide instruction that incorporates plant science, soil and media mixtures, plant identification and optimal environments, and landscape design. These courses emphasize applying such knowledge & skill to the design, establishment, and maintenance of lawns, parks, open space & similar environments. This course would include opportunities to design public and private spaces.
Principles of Agricultural Science - Plant	18060	18	Provides an overview of the plant industry, careers and the anatomical, taxonomy, physiological structures of plants. Photosynthesis, respiration and transpiration of plants and the interdependence of plants and their growth. Soilless systems, Reproduction, plant diseases and marketing of plant products.
Landscape Science II	18061	18	Student may develop career opportunities through internships with local Horticulture Businesses. Advanced knowledge and skills will be developed in plant genetics. Biotechnology through science based research projects, advanced based designs utilizing tropical, specialty and non-native plants.
Turf and Landscape	18062	18	Course provides instruction in plant identification and landscape design. The principles of turf selection, maintenance and design of irrigations systems for public and private systems. Turf diseases. Insects and fertilizer usage are covered in this course.
Floriculture	18063	18	Prepares students for the floral design business with a basic floral ID and arrangements used in the floral industry for special occasions.

Floriculture and Landscape Design	18064	18	Courses provide instruction that incorporates plant science, soil and media mixtures, plant identification in the florist industry and landscape design. These courses emphasize applying such knowledge & skill to the design, floral arrangements for various occasions and design public and private facilities internal and external areas.
Landscape Design	18065	18	Course that prepares students to maintain indoor and outdoor environments. Includes instruction in plant science, climate, irrigation, nutrition, irrigation, and turf management.
Floral Design	18066	18	Course that prepare students for the flower catering services with instruction in purchasing, storage, delivery, floral design and arranging for various occasions.
Nursery and Landscape Design	18067	18	Courses provide instruction that incorporates plant science, soil and media mixtures, plant identification and optimal environments, and landscape design. These courses emphasize applying such knowledge & skill to the design, establishment, and maintenance of lawns, parks, open space & similar environments.
Greenhouse Production and Management	18068	18	Students will have the opportunity to produce, market different types of greenhouse plants grown in the schools greenhouse. Skills in management, plant identification, pests control, starting plants, watering, fertilizing, and salesmanship will be developed.
Floral Design II	18069	18	Allows student to develop plans for selection of various flowers, greens and arrangement for floral occasions followed up by marketing and cost plans.
Plant Systems—Independent Study	18097	18	Courses in Plant Systems—Independent Study, often conducted with instructors as mentors, enable students to explore topics of interest related to plant systems. Independent Study courses may serve as an opportunity for students to expand their expertise in a particular application, to explore a topic in greater detail, or to develop more advanced skills.

Plant Systems—Workplace Experience	18098	18	Plant Systems—Workplace Experience courses provide work experience in fields related to plant systems (care, propagation, and processing). Goals are typically set cooperatively by the student, teacher, and employer (although students are not necessarily paid). These courses may include classroom activities as well, involving further study of the field or discussion regarding experiences that students encounter in the workplace.
Plant Systems—Other	18099	18	Other Plant Systems courses.
Animal Production/Science	18101	18	Animal Production/Science courses impart information about the care and management of domestic and farm animals. These courses may cover animal nutrition, health, behavior, selection, reproduction, anatomy and physiology, facilities, product processing, and marketing. Students may study a particular species (swine, cattle, horses, fowl, sheep, and so on), or they may learn how to care for and maintain livestock as a more inclusive study.
Small Animal Care	18102	18	Small Animal Care courses focus on the care and management of small animals. Animal nutrition, health, behavior, reproduction and breeding, anatomy and physiology, facilities, handling and training, and grooming are typical areas of study. Course topics may include kennel operations and sales.
Large Animal Care	18103	18	Large Animal Care courses focus on the care and management of large animals. Animal nutrition, health, behavior, reproduction and breeding, anatomy and physiology, facilities, handling and training, and grooming are typical areas of study. Course topics may include product processing and marketing.
Equine Science	18104	18	Equine Science courses focus on the care and management of horses. Animal nutrition, health, behavior, reproduction and breeding, anatomy and physiology, facilities, handling and training, and grooming are typical areas of study.
Veterinary Science	18105	18	Veterinary Science courses impart information about the causes, diagnosis, and treatment of diseases and injuries of animals, typically emphasizing domestic and farm animals. Course topics focus on anatomy and physiology, nutrition, behavior, and reproduction, but may also include other areas of study as appropriate.

Particular Topics in Animal Systems	18106	18	These courses examine specific topics related to animal care and management, production, or processing, such as equine training or animal waste management, rather than provide a general study of animal care and the systems related to their growth and management.
Advanced Animal Science or Animal Science II	18107	18	Courses impart information about the causes, diagnosis, & treatment of diseases & injuries of animals, typically emphasizing domestic and farm animals. Topics focus on anatomy & physiology, nutrition, behavior, & reproduction, but may also include other areas of study as appropriate.
Principles of Agricultural Science - Animals	18108	18	Overview of the animal industry. Anatomical and Physiological Structures of animals, Naming of animals, nutrition, reproduction, genetics, animal health, selection, marketing and animal products.
Animal Systems—Independent Study	18147	18	Courses in Animal Systems—Independent Study, often conducted with instructors as mentors, enable students to explore topics of interest related to animal systems. Independent Study courses may serve as an opportunity for students to expand their expertise in a particular application, to explore a topic in greater detail, or to develop more advanced skills.
Animal Systems—Workplace Experience	18148	18	Animal Systems—Workplace Experience courses provide work experience in fields related to animal systems (management, care, and/or processing). Goals are typically set cooperatively by the student, teacher, and employer (although students are not necessarily paid). These courses may include classroom activities as well, involving further study of the field or discussion regarding experiences that students encounter in the workplace.
Animal Systems—Other	18149	18	Other Animal Systems courses.

Agribusiness Management	18201	18	Agribusiness Management courses provide students with the information and skills necessary for success in agribusiness and in operating entrepreneurial ventures in the agricultural industry. These courses may cover topics such as economic principles, budgeting, risk management, finance, business law, marketing and promotion strategies, insurance, and resource management. Other possible topics include developing a business plan, employee/employer relations, problem-solving and decisionmaking, commodities, and building leadership skills. These courses may also incorporate a survey of the careers within the agricultural industry.
Agricultural Entrepreneurship	18202	18	Agricultural Entrepreneurship courses focus on the personal skills necessary for success in entrepreneurial ventures in the agricultural industry. Topics include setting goals, assessing and solving problems, evaluating financial progress and success, business planning, information management and evaluation, and recordkeeping.
Agricultural Leadership	18203	18	Agricultural Leadership courses help students develop leadership skills with a focus on opportunities in the food, fiber, and natural resources industries. Topics may include but are not limited to human relationships and effective communication, decision-making and problem-solving, leadership qualities and styles, and ensuring successful completion of group activities.
Particular Topics in Agribusiness	18204	18	These courses examine specific topics related to Agribusiness, such as international agriculture or commodities, rather than provide a general study of agribusiness principles.
Agriculture Communications	18205	18	Courses help students develop leadership skills with a focus on opportunities in the food, fiber, & natural resources industries. Topics may include but are not limited to human relationships and effective communication, decision-making and problem-solving, leadership qualities and styles, and ensuring successful completion of group activities.

Agribusiness—Independent Study	18247	18	Courses in Agribusiness—Independent Study, often conducted with instructors as mentors, enable students to explore topics of interest related to agribusiness. Independent Study courses may serve as an opportunity for students to expand their expertise in a particular application, to explore a topic in greater detail, or to develop more advanced skills.
Agribusiness—Workplace Experience	18248	18	Agribusiness—Workplace Experience courses provide work experience in fields related to agribusiness. Goals are typically set cooperatively by the student, teacher, and employer (although students are not necessarily paid). These courses may include classroom activities as well, involving further study of the field or discussion regarding experiences that students encounter in the workplace.
Agribusiness—Other	18249	18	Other Agribusiness Courses
Agricultural Production	18301	18	Agricultural Production courses combine content related to animal and plant production, providing comprehensive coverage of the production functions of the agricultural industry. These courses typically cover such topics as care and management of farm animals, crop production and harvesting, plant and animal insect and disease control, efficient resource management, and farm management.
Agricultural Processing	18302	18	Agricultural Processing courses impart the knowledge and skills needed to bring animal and plant products to market. They may cover a wide variety of topics, including care and maintenance of animals or plants, quality selection and preservation, equipment care and sanitation, government regulations, and marketing and consumer trends. Agricultural Processing courses may present an overview of agricultural processing or may specialize in particular types of products.

Plant Processing	18303	18	Plant Processing courses impart the knowledge and skills needed to bring plant products to market. They may cover a wide variety of topics, including plant production, quality selection and preservation, equipment care and sanitation, government regulations, and marketing and consumer trends. Plant Processing courses may present an overview of product processing or may specialize in specific plant products.
Animal Processing	18304	18	Animal Processing courses impart the knowledge and skills needed to bring animal products to market. Although these courses may present an overview of animal care and maintenance, they typically emphasize quality selection, product preservation, equipment care and sanitation, government regulations, and marketing and consumer trends. Animal Processing courses may present an overview of several types of animal products or may specialize in particular products, such as meat, leather, wool, dairy products, and so on.
Food Product Processing	18305	18	Food Product Processing courses impart the knowledge and skills needed to produce and manufacture food products for the consumer market. These courses focus on food products while covering a variety of topics, such as quality selection and preservation, equipment care and sanitation, government regulations, marketing, consumer trends, and product research and development.
Aquaculture	18306	18	Aquaculture courses impart the knowledge and skills needed for producing fish, plants, and other species living in an aquatic environment, and course topics typically include the selection, propagation, harvesting, and marketing of those species. Instruction may also address aquatic and marine biology, ecosystems, water quality and management, and business practices.

Agriculture and Society	18307	18	Agriculture and Society courses provide an overview of the importance of, impact on, and relationships between agricultural endeavors and society at large. These courses typically emphasize economic and environmental factors and impacts (such as urban and agricultural water use) and the influences of society on agricultural endeavors (including production, processing, and distribution). Current technological advances (such as genetic engineering) may also be discussed.
Agricultural Biotechnology	18308	18	Agricultural Biotechnology courses apply biological principles and understanding to plant and animal science in order to produce or refine agricultural products. Course topics typically include but are not limited to microbiology, genetics, growth and reproduction, structural basis of function in living systems, chemistry of living systems, quantitative problem-solving, and data acquisition and display. These courses also often cover the ethics of biotechnology.
Particular Topics in Agricultural Production/Processing	18309	18	These courses examine specific topics related to producing and processing agricultural products (such as meat cutting) rather than provide a general study of production or processing.
Food Science II	18310	18	Allows students to develop knowledge and skills used by the food supply careers as a nutritionist, food chemist, chef, or process engineer. Emphasis will be placed on food chemistry, nutrition and digestion, quality food factors, food safety and biotechnology. Students will be able to explore food preparation of another country and to understand and appreciate ethnic foods from a global perspective which includes hands on laboratory experiences.
Advanced Plant and Animal Science	18311	18	Includes a study of the animal and plant production, management, marketing of products, by products, consumer awareness and safety involved in producing consumable products. Nutrition, breeding, reproduction, disease prevention, and pesticide control are included in this class.

Agricultural Production and Processing—Independent Study	18347	18	Courses in Agricultural Production and Processing—Independent Study, often conducted with instructors as mentors, enable students to explore topics of interest related to agricultural production and processing. Independent Study courses may serve as an opportunity for students to expand their expertise in a particular application, to explore a topic in greater detail, or to develop more advanced skills.
Agricultural Production and Processing—Workplace Experience	18348	18	Agricultural Production and Processing—Workplace Experience courses provide students with work experience in fields related to agricultural production and processing. Goals are typically set cooperatively by the student, teacher, and employer (although students are not necessarily paid). These courses may include classroom activities as well, involving further study of the field or discussion regarding experiences that students encounter in the workplace.
Agricultural Production and Processing—Other	18349	18	Other Agricultural Production and Processing courses.
Agriculture Mechanics/Equipment/Structures	18401	18	Agriculture Mechanics/Equipment/Structures courses provide students with the skills and knowledge that are specifically applicable to the tools and equipment used in the agricultural industry. While learning to apply basic industrial knowledge and skills (engine mechanics, power systems, welding, and carpentry, among others), students may explore a broad range of topics, including the operation, mechanics, and care of farm tools and machines; the construction and repair of structures integral to farm operations; a study of electricity and power principles; and safety procedures.
Agriculture Mechanics and Equipment	18402	18	Agriculture Mechanics and Equipment courses provide students with the engineering and power technology principles, skills, and knowledge that are specifically applicable to the agricultural industry. Typical topics include the operation, maintenance, and repair of power, electrical, hydraulic, and mechanical systems.

Agriculture Structures	18403	18	Agriculture Structures courses provide students with the skills and knowledge that are specifically applicable to the construction, maintenance, and repair of structures integral to the agricultural industry, including but not limited to animal enclosures, irrigation systems, and storage facilities. In these courses, students typically study design, planning, and construction knowledge and skills (such as survey, carpentry, plumbing, concrete, and electrical systems), in addition to the safe operation of tools and machines.
Agriculture Welding	18404	18	Agriculture Welding courses provide students with the skills and knowledge that are specifically applicable to the tools and equipment used in the agricultural industry. In learning to apply basic industrial knowledge and skills (engines, power, welding, and carpentry, among others), students may explore a broad range of topics, including the operation, mechanics, and care of farm tools and machines; the construction and repair of structures integral to farm operations; an introduction or review of electricity and power; and safety procedures.
Particular Topics in Agricultural Mechanics and Construction	18405	18	These courses examine specific topics related to agricultural mechanics and construction, such as specific vehicles or structures, rather than provide a general study of mechanics and construction techniques.
Advanced Agricultural Welding II	18407	18	Courses provide students with the skills & knowledge that are specifically applicable to the welding industry with advance blueprint reading and welding in the OH, V and H position along with pipe welding and TIG welding that could result in welding certification.
Agricultural Welding III	18408	18	The student will gain skills and knowledge for the G.T.A.W. (Gas tungsten arc welding) process. Equipment setup, welding safety, welding in the flat and horizontal position and perform visual inspection of welds. This course ties in with the AWS SENSE certification and is articulated to post – secondary.

Agricultural Fabrication	18409	18	Courses provide students with the skills & knowledge that are specifically applicable to the construction, maintenance, and repair of structures integral to the agricultural industry, including but not limited to animal enclosures, irrigation systems, & storage facilities. In these courses, students typically study design, planning, & construction knowledge & skills (such as survey, carpentry, plumbing, concrete, & electrical systems), in addition to the safe operation of tools and machines.
Small Gas Engines	18410	18	Courses provide students with the opportunity to learn how to service & recondition small engines, typically emphasizing two and four-cycle engines. Courses provide student with opportunities to troubleshoot and repair speed controls, lubrication, ignition, fuel, power transfer, cooling, exhaust, and starting systems; use hand, power, and overhaul tools; and read and interpret service manuals and parts' catalogs. Applications may include lawn mowers, tractors, tillers, power tools.
Agricultural Power	18411	18	Courses enable students to understand the principles underlying various kinds of mechanics (aircraft, auto, diesel, & marine) and how energy is converted, transmitted, & controlled. Topics typically include maintaining & servicing machines, engines & devices while emphasizing energy sources, electricity, and power transmission. The courses may also provide information on career opportunities within the field of mechanics and/or transportation.
Agricultural Metals	18412	18	Course provide instruction in layout and design of metal skills, soldering, brazing and other cold metal work.
Agricultural Plastics	18413	18	Course provides students the opportunity to explore plastics in Agriculture and how plastics are used in the Ag Industry.
Agricultural Welding IV	18414	18	The student will gain necessary knowledge and skills for S.M.A.W (shielded metal arc welding) G.M.A.W (Gas Metal Arc Welding) G.T.A.W for the AWS SENSE welding certification. Additional course work in basic math and metal measurements, use of blueprints and symbols in welding designs, and basic metallurgy and metal identification will complete the welding certification.

Agricultural Mechanics and Construction—Independent Study	18447	18	Courses in Agricultural Mechanics and Construction—Independent Study, often conducted with instructors as mentors, enable students to topics of interest related to agricultural mechanics and/or construction. Independent Study courses may serve as an opportunity for students to expand their expertise in a particular application, to explore a topic in greater detail, or to develop more advanced skills.
Agricultural Mechanics and Construction—Workplace Experience	18448	18	Agricultural Mechanics and Construction—Workplace Experience courses provide work experience in fields related to agricultural mechanics and construction. Goals are typically set cooperatively by the student, teacher, and employer (although students are not necessarily paid). These courses may include classroom activities as well, involving further study of the field or discussion regarding experiences that students encounter in the workplace.
Agricultural Mechanics and Construction—Other	18449	18	Other Agricultural Mechanics and Construction courses.
Wildlife Management	18501	18	Often with an emphasis on the conservation of natural resources and frequently including outdoor recreation topics, Wildlife Management courses provide students with the opportunity to understand and appreciate the importance of maintaining the land and ecological systems that enable nondomesticated animals to thrive. Wildlife Management courses emphasize how humans and animals may both take advantage of the same land or how to gain economic benefits from the land while not degrading its natural resources or depleting plant or animal populations.
Forestry	18502	18	Forestry courses provide students with the information and experience necessary for the cultivation, management, and care of forests or timberlands. Forestry courses cover topics such as the processes of regeneration and reforestation, harvesting and conservation of natural resources, erosion and pest control, trail development and maintenance, mapping and surveying, operation of forestry tools, government regulations, environmental stewardship, and recreational use of forests.

Forestry Harvesting	18503	18	Forestry Harvesting courses involve the study of methods to manage, protect, and harvest timber stands and specialty forest crops; equipment maintenance and repair; the selection, planting, transplanting, and harvesting of trees; forest management; and safety procedures.
Natural Resources Management	18504	18	Natural Resources Management courses combine the fields of ecology and conservation with planning for the efficient use and preservation of land, water, wildlife, and forests. Within the general area of natural resources management, these courses usually cover specific topics and uses, such as hunting or fishing preserves, forest production and management, wildlife preservation, and human outdoor recreation.
Particular Topics in Natural Resources	18505	18	These courses examine specific topics related to natural resources, such as urban forestry or hunter education, rather than provide a general study of natural resource principles and topics.
Environmental Resources and Wildlife	18506	18	Courses combine the fields of ecology & conservation with planning for the efficient use and preservation of land, water, wildlife, and forests. Within the general area of natural resources management, these courses usually cover specific topics & uses, such as hunting or fishing preserves, forest production and management, wildlife ID, production and/or ecosystems management and preservation, and human outdoor recreation.
Energy Resources in Agriculture	18507	18	Course will cover the modern sources of energy that are used in agriculture related to wind, ethanol, and Biodiesel fuels.
Natural Resources—Independent Study	18547	18	Courses in Natural Resources—Independent Study, often conducted with instructors as mentors, enable students to explore topics of interest related to natural resources. Independent Study courses may serve as an opportunity for students to expand their expertise in a particular application, to explore a topic in greater detail, or to develop more advanced skills.

Natural Resources—Workplace Experience	18548	18	Natural Resources—Workplace Experience courses provide students with work experience in fields related to natural resources. Goals are typically set cooperatively by the student, teacher, and employer (although students are not necessarily paid). These courses may include classroom activities as well, involving further study of the field or discussion regarding experiences that students encounter in the workplace.
Natural Resources—Other	18549	18	Other Natural Resources courses.
Agriculture, Food, and Natural Resources—Independent Study	18997	18	Courses in Agriculture, Food, and Natural Resources—Independent Study, often conducted with instructors as mentors, enable students to explore topic of interest related to agriculture, food, and natural resources. Independent Study courses may serve as an opportunity for students to expand their expertise in a particular application, to explore a topic in greater detail, or to develop more advanced skills.
Agriculture, Food, and Natural Resources—Workplace Experience	18998	18	Agriculture, Food, and Natural Resources—Workplace Experience courses provide students with work experience in fields related to agriculture, food, and natural resources. Goals are typically set cooperatively by the student, teacher, and employer (although students are not necessarily paid). These courses may include classroom activities as well, involving further study of the field or discussion regarding experiences that students encounter in the workplace.
Agriculture, Food, and Natural Resources—Other	18999	18	Other Agriculture, Food, and Natural Resources courses.
Human Services Career Exploration	19001	19	Human Services Career Exploration courses introduce and expose students to the career opportunities pertaining to the provision of personal and consumer services for other human beings. Course topics vary and may include (but are not limited to) caring for others, education, cosmetology, apparel/textiles, entrepreneurship, labor laws, and customer service. Course activities depend upon the careers being explored.

Child Care	19051	19	Child Care courses provide students with knowledge about the physical, mental, emotional, and social growth and development of children from birth through childhood. Main topics include the fundamentals of working with infants, toddlers, and older children; providing healthy environments; evaluating child care settings; and the practices, regulations, and opportunities in the child care industry. Often, Child Care courses provide students with practical experience in a child care center. Advanced topics may include various learning theories; development of activities; operation of a child care center; recognition of childhood diseases, abuse, and neglect; and first aid/emergency training.
Child Development	19052	19	Child Development classes provide students with knowledge about the physical, mental, emotional, and social growth and development of children from conception to pre-school age, emphasizing the application of this knowledge in child care settings. These courses typically include related topics such as the appropriate care of infants, toddlers, and young children.
Elder Care	19053	19	Elder Care courses emphasize the care of human beings as they grow older. These courses involve the study of the biological, physiological, social, and psychological needs and concerns of the elderly, and deal with the aging process, death, and dying in a realistic manner. Elder Care courses may cover work and personal habits appropriate to the field, and may also offer the opportunity to explore various careers.
Caregiving Service	19054	19	Caregiving Service courses emphasize the care of human beings who are unable or who need assistance to care for themselves. These courses involve the study of the biological, physiological, social, and psychological needs and concerns of young children, the elderly, and/or the disabled. Additional topics may include planning daily routines; appropriate environments and activities; growth and aging processes; and techniques for managing a center or working in others' homes.

Cosmetology—Nail Specialization	19105	19	Cosmetology—Nail Specialization courses offer students experience in providing manicures, pedicures, and nail extension treatments. These courses may also include topics such as hygiene, entrepreneurship, human relations, and other related subject matter.
Cosmetology—Nail Specialization	19105	19	Cosmetology—Nail Specialization courses offer students experience in providing manicures, pedicures, and nail extension treatments. These courses may also include topics such as hygiene, entrepreneurship, human relations, and other related subject matter.
Cosmetology—Facial Specialization	19106	19	Cosmetology—Facial Specialization courses offer students information and experience related to skin care, the provision of facials, make-up application, and facial massage. These courses may also include topics such as hygiene and sanitation, human anatomy and skin conditions, entrepreneurship, and/or human relations.
Cosmetology—Facial Specialization	19106	19	Cosmetology—Facial Specialization courses offer students information and experience related to skin care, the provision of facials, make-up application, and facial massage. These courses may also include topics such as hygiene and sanitation, human anatomy and skin conditions, entrepreneurship, and/or human relations.
Particular Topics in Cosmetology	19107	19	These courses examine specific topics related to cosmetology not otherwise described, such as electrolysis, rather than providing a general study.
Particular Topics in Cosmetology	19107	19	These courses examine specific topics related to cosmetology not otherwise described, such as electrolysis, rather than providing a general study.
Cosmetology—Independent Study	19147	19	Cosmetology—Independent Study courses, often conducted with instructors as mentors, enable students to explore topics of interest related to cosmetology. Independent Study courses may serve as an opportunity for students to expand their expertise in a particular application, to explore a topic in greater detail, or to develop more advanced skills.

Cosmetology—Independent Study	19147	19	Cosmetology—Independent Study courses, often conducted with instructors as mentors, enable students to explore topics of interest related to cosmetology. Independent Study courses may serve as an opportunity for students to expand their expertise in a particular application, to explore a topic in greater detail, or to develop more advanced skills.
Cosmetology—Workplace Experience	19148	19	Cosmetology—Workplace Experience courses provide students with work experience in the cosmetology field. Goals are typically set cooperatively by the student, teacher, and employer (although students are not necessarily paid). These courses may include classroom activities as well, involving further study of the field or discussion regarding experiences that students encounter in the workplace.
Cosmetology—Workplace Experience	19148	19	Cosmetology—Workplace Experience courses provide students with work experience in the cosmetology field. Goals are typically set cooperatively by the student, teacher, and employer (although students are not necessarily paid). These courses may include classroom activities as well, involving further study of the field or discussion regarding experiences that students encounter in the workplace.
Cosmetology—Other	19149	19	Other Cosmetology Care courses.
Cosmetology—Other	19149	19	Other Cosmetology Carecourses.
Teaching Profession	19151	19	Teaching Profession courses introduce students to the principles underlying teaching and learning, the responsibilities and duties of teachers, and the techniques of imparting knowledge and information. These courses typically expose students to and train them in classroom management, student behavior, leadership and human relations skills, assessment of student progress, teaching strategies, and various career opportunities in the field of education.

Educational Methodology	19152	19	Educational Methodology courses prepare students to teach and guide others. These courses typically provide opportunities for students to develop their own teaching objectives, to design lesson plans, and to experience teaching in a controlled environment. Students examine and practice teaching strategies, learning styles, time management and planning strategies, presentation and questioning skills, classroom management, and evaluation techniques.
Educational Methodology	19152	19	Educational Methodology courses prepare students to teach and guide others. These courses typically provide opportunities for students to develop their own teaching objectives, to design lesson plans, and to experience teaching in a controlled environment. Students examine and practice teaching strategies, learning styles, time management and planning strategies, presentation and questioning skills, classroom management, and evaluation techniques.
Early Childhood Education	19153	19	Early Childhood Education courses address child development, care, and education issues, so that students can guide the development of young children in an educational setting. Study typically includes planning and implementing developmentally appropriate activities, basic health and safety practices, and legal requirements for teaching young children.
Early Childhood Education	19153	19	Early Childhood Education courses address child development, care, and education issues, so that students can guide the development of young children in an educational setting. Study typically includes planning and implementing developmentally appropriate activities, basic health and safety practices, and legal requirements for teaching young children.
Particular Topics in Education	19154	19	These courses examine specific topics in education other than those already described, such as management of school-age children, rather than providing a general study of the teaching profession.

Teaching as a Career	19155	19	Courses introduce students to the principles underlying teaching and learning, the responsibilities and duties of teachers, and the techniques of imparting knowledge and information. These courses typically expose students to and train them in classroom management, student behavior, leadership, and human relations skills, assessment of student progress, teaching strategies and various career opportunities in the field of education. This course includes advanced work experience opportunities.
Teaching Internship	19156	19	Courses prepare students to teach and guide others. These courses typically provide opportunities for students to develop their own teaching objectives, to design lesson plans, and to experience teaching in a controlled environment. Students examine and practice teaching strategies, learning styles, time management and planning strategies, presentation and questioning skills, classroom management, and evaluation techniques. This course includes advanced work experience opportunities.
Education—Independent Study	19197	19	Education—Independent Study courses, often conducted with instructors as mentors, enable students to explore topics of interest related to education. Independent Study courses may serve as an opportunity for students to expand their expertise in a particular application, to explore a topic in greater detail, or to develop more advanced skills.
Education—Workplace Experience	19198	19	Education—Workplace Experience courses provide students with work experience in fields related to education. Goals are typically set cooperatively by the student, teacher, and employer (although students are not necessarily paid). These courses may include classroom activities as well, involving further study of the field or discussion regarding experiences that students encounter in the workplace.
Education—Other	19199	19	Other Education Carecourses.

Clothing and Textiles	19201	19	Clothing and Textiles courses introduce students to and expand upon the various aspects of apparel, garment construction, and the textile industry, conveying the commercial application of design principles, production processes, and maintenance techniques. These courses usually address the selection, characteristics, care, and repair of various textiles; operation and care of commercial sewing machines; design, construction, and production of fabrics and/or garments; and career opportunities in the garment or textile industry.
Clothing/Textile Maintenance	19202	19	Clothing/Textile Maintenance courses provide students with the knowledge and skills to clean, care for, and maintain clothing and textiles. Course topics typically include dry cleaning and laundering techniques, identifying fabrics and the optimal cleaning agents and processes, instruction in altering and repairing garments, and the safe use of the equipment, tools, and agents.
Apparel Construction	19203	19	Apparel Construction courses provide students with the knowledge and skill to construct, alter, and repair clothing and textile products. Course topics typically include taking measurements, creating and preparing patterns, and various sewing techniques; topics may also include customer service, fashion design principles, and business management. These courses may also offer specialized knowledge in a particular type of garment.
Apparel and Textile Services	19204	19	Apparel and Textile Services courses introduce students to and expand upon various services that concern the care and maintenance of apparel, textiles, and furnishing. Course topics may include upholstery, dry cleaning, commercial sewing, and tailoring.
Home Furnishing	19205	19	Home Furnishing courses provide students with basic knowledge regarding furnishing and decorating home environments. While exploring design principles, personal needs and style, and decision-making, students may also explore the following topics: color, texture, furniture styles and arrangement, lighting, window treatments, floor and wall coverings, and home improvement/modification. Home Furnishing courses may also cover architectural style and design and take a larger look at housing problems or current housing issues.

Home Furnishings Production	19206	19	Home Furnishings Production courses enable students to plan, select, and construct upholstery, slip covers, draperies and other window treatments, and other home accessories. Some courses may emphasize upholstery exclusively. Course content typically includes proper use of equipment, interior decorating principles, and employability skills.
Particular Topics in Apparel and Furnishings	19207	19	These courses examine specific topics in apparel and furnishings other than those already described, such as tailoring or shoe repair, rather than providing a general study.
Apparel and Furnishings—Independent Study	19247	19	Apparel and Furnishings—Independent Study courses, often conducted with instructors as mentors, enable students to explore topics of interest related to apparel, textiles, and furnishings. Independent Study courses may serve as an opportunity for students to expand their expertise in a particular application, to explore a topic in greater detail, or to develop more advanced skills.
Apparel and Furnishings—Workplace Experience	19248	19	Apparel and Furnishings—Workplace Experience courses provide students with work experience in fields related to apparel, textiles, and furnishings. Goals are typically set cooperatively by the student, teacher, and employer (although students are not necessarily paid). These courses may include classroom activities as well, involving further study of the field or discussion regarding experiences that students encounter in the workplace.
Apparel and Furnishings—Other	19249	19	Other Apparel and Furnishings Carecourses.
Human Services—Independent Study	19997	19	Human Services—Independent Study courses, often conducted with instructors as mentors, enable students to explore topics of interest related to providing human services. Independent Study courses may serve as an opportunity for students to expand their expertise in a particular application, to explore a topic in greater detail, or to develop more advanced skills.

Human Services—Workplace Experience	19998	19	Human Services—Workplace Experience courses provide students with work experience in a field related to the provision of human services. Goals are typically set cooperatively by the student, teacher, and employer (although students are not necessarily paid). These courses may include classroom activities as well, involving further study of the field or discussion regarding experiences that students encounter in the workplace.
Human Services—Other	19999	19	Other Human Services Care courses.
Exploration of Transportation, Distribution and Logistics	20001	20	Exploration of Transportation, Distribution, and Logistics courses introduce students to careers that involve the planning, management, and movement of people, materials, and products using any of several modes of transport. Such careers may also involve infrastructure, vehicular maintenance and repair, and operating or managing facilities that hold what is being transported. Therefore, specific course topics vary widely and depend upon the careers being explored.
Truck and Bus Driving	20051	20	Truck and Bus Driving courses instruct students in the proper and safe handling and operation of trucks and buses. Strategies for driving in hazardous conditions, observing laws and regulations, loading cargo or passengers, documenting cargo loads, and expectations of driving careers are all typical course topics.
Heavy Equipment Operation	20052	20	Heavy Equipment Operation courses enable students to safely operate the heavy equipment used for mining, construction, and utility industries. Typically, courses also include light maintenance principles and techniques.
Aviation	20053	20	Aviation courses provide students with an understanding of the science of flight and typically include the history, regulations, and possible career paths within the aviation industry. Aviation courses usually cover physics, the relationships of weight and balance, principles of navigation and flight control, ground and airport operations and services, and Federal Aviation Agency regulations.

Boat Operation	20054	20	Boat Operation courses typically cover operation and maintenance of marine vehicles, marine navigation, and emergency procedures, as well as other skills necessary or useful for work or life at sea (e.g., loading and unloading or cooking). Specific topics may include docking and undocking a vessel, engine maintenance, commercial fishing, firefighting aboard ship, and CPR.
Operation—Independent Study	20097	20	Operation—Independent Study courses, often conducted with instructors as mentors, enable students to explore topics of interest related to the operation of vehicles. Independent Study courses may serve as an opportunity for students to expand their expertise in a particular application, to explore a topic in greater detail, or to develop more advanced skills.
Operation—Workplace Experience	20098	20	Operation—Workplace Experience courses provide students with work experience in fields related to the operation of vehicles. Goals are typically set cooperatively by the student, teacher, and employer (although students are not necessarily paid). These courses may include classroom activities as well, involving further study of the field or discussion regarding experiences that students encounter in the workplace.
Operation—Other	20099	20	Other Operation courses.
Energy/Power	20101	20	Energy/Power courses focus on one or several aspects of energy and power in transportation and work. Course content may include various sources of energy and their use in society (for example, characteristics, availability, conversion, storage, environmental impact, and socioeconomic aspects of various energy sources); principles involved in various means of energy transfer, such as electricity/electronics, hydraulics, pneumatics, heat transfer, and wind/nuclear/solar energies; and the transmission and control of power through mechanical or electrical devices such as motors and engines.

Power and Mechanics	20102	20	Power and Mechanics courses enable students to understand the principles underlying various kinds of mechanics (aircraft, auto, diesel, and marine) and how energy is converted, transmitted, and controlled. Topics typically include maintaining and servicing machines, engines, and devices while emphasizing energy sources, electricity, and power transmission. The courses may also provide information on career opportunities within the field of mechanics and/or transportation.
Introduction to Automobiles	20103	20	Primarily intended as a personal automobile mechanics course, but also useful for students exploring future careers in automotive technologies, Introduction to Automobiles courses expose students to the various mechanical systems in automobiles and provide basic experience in maintenance tasks. The course may also cover career opportunities in the automotive and/or transportation fields.
Automotive Mechanics—Comprehensive	20104	20	Automotive Mechanics—Comprehensive courses emphasize the diagnosis and repair of automobile engines and support systems such as brakes, cooling, drive trains, electrical/electronics components, emission, fuel, ignition, steering, suspension, and transmissions. Course topics often include the comprehension and use of repair manuals, safety, and employability skills (including shop management and entrepreneurship).
Particular Topics in Automotive Mechanics	20105	20	These courses provide instruction in the mechanics of a particular system or condition, such as transmissions, brakes, fuel, exhaust, or electrical systems, rather than providing a general study of diagnosis and repair of automobile mechanics.
Automotive Service	20106	20	Automotive Service courses emphasize preventative auto maintenance and automobile troubleshooting. Course content typically includes tune-up, oil change, and lubrication skills; tire replacement, alignment, and balancing; and basic knowledge of brake, cooling, electrical, emission, fuel, ignition, steering, suspension, and transmission systems. These courses may also include public relations, sales techniques, and service station management.

Diesel Mechanics—Comprehensive	20107	20	Diesel Mechanics—Comprehensive courses prepare students to maintain and repair diesel engines and related systems. Specific course topics may include principles underlying diesel engines, analyzing electrical circuits and systems, troubleshooting and repairing cooling systems, testing and repairing air conditioning charging systems, reading and interpreting service manuals, and identifying the principles and components of fuel injection systems. Courses may also cover safety, employability skills, and entrepreneurship.
Particular Topics in Diesel Mechanics	20108	20	These courses cover specific topics relevant to occupations involving the maintenance and repair of vehicles with diesel engines, such as buses and trucks. One topic (or several closely related topics) concerning diesel mechanics is covered in specific detail in this type of course.
Small Vehicle Mechanics	20109	20	Small Vehicle Mechanics courses equip students with the knowledge and skill to repair and maintain engines in small vehicles (e.g., motorcycles, all-terrain vehicles, snowmobiles, and mopeds). Topics include (but are not limited to) maintaining frames and suspension, wheels and brakes, and drive trains; servicing fuel, exhaust, and electrical systems; performing tune-ups; and maintaining and repairing engines. Students may also learn safety on the job, employability skills, and entrepreneurship.
Small Engine Mechanics	20110	20	Small Engine Mechanics courses provide students with the opportunity to learn how to service and recondition small engines, typically emphasizing two- and four-cycle engines. These courses provide students with opportunities to troubleshoot and repair speed controls, lubrication, ignition, fuel, power transfer, cooling, exhaust, and starting systems; use hand, power, and overhaul tools; and read and interpret service manuals and parts' catalogs. Applications may include lawn mowers, tractors, tillers, power tools, and so on.

Marine Mechanics	20111	20	The content of Marine Mechanics courses includes the service and repair of electrical, mechanical, power transfer, hydraulic, fuel, and cooling systems as applied to boat and/or ship engines; boat rigging; trailers; and marine-related merchandise. Courses may also cover communication, human relations, and employability skills, as well as safe, efficient work practices.
Heavy Equipment Mechanics	20112	20	Heavy Equipment Mechanics courses include the service and repair of electrical, mechanical, power transfer, hydraulic, fuel, and cooling systems of heavy equipment such as that used in mining, construction, and utility industries.
Aircraft Power Plant	20113	20	Aircraft Power Plant courses provide students with the information necessary to troubleshoot, test, repair, and install aircraft engines. Course content usually includes engine ignition, electrical, lubrication, cooling, exhaust, and fuel systems, along with aircraft instrumentation and safety features.
Aircraft Airframe	20114	20	Aircraft Airframe courses offer students information and instruction related to the structure and mechanics of aircraft, typically including hydraulic, pneumatic, instrumental, fuel, electrical, cabin atmosphere, and landing gear systems. Aircraft Airframe courses may also cover aircraft metals and coverings and related welding skills.
Automotive Detailing and Reconditioning	20115	20	Automotive Detailing and Reconditioning courses provide students with knowledge and skills related to repairing, refinishing, and detailing automobiles. Course topics typically include painting and refinishing, plastics and adhesives, damage analysis, and repair, in addition to occupational safety, employability, and entrepreneurship skills.

Automotive Body Repair and Refinishing—Comprehensive	20116	20	Automotive Body Repair and Refinishing courses provide students with knowledge and skills regarding the repair and refinishing of damaged or used cars. Course content may include (but is not limited to) stretching and shrinking auto body sheet metal; welding skills; frame and metal straightening; repair of fiberglass and synthetic materials; removing, repairing, and installing auto body parts such as panels, hoods, doors, and windows/glass; preparing vehicles and vehicle surfaces for refinishing; painting; applying body fillers; and estimating material and labor costs.
Particular Topics in Automotive Body Repair and Refinishing	20117	20	These courses provide specific instruction in individual topics relevant to the repair and refinishing of automobile bodies and surfaces. One topic or several closely related topics (such as nonstructural part replacement, auto body welding, or plastic repair) receive particular attention in this type of course.
Boat Repair/Refinishing	20118	20	Boat Repair/Refinishing courses convey a broad range of information and skills about how to repair and refinish boat mechanics, structures, and surfaces. In these courses, students become proficient in marine terminology, learn how to describe types of marine manufacturing and occupations, and prepare new and existing wood, fiberglass, and metal surfaces for painting or refinishing. These courses often cover safety, employability skills, and entrepreneurship.
Mechanics and Repair—Independent Study	20147	20	Mechanics and Repair—Independent Study courses, often conducted with instructors as mentors, enable students to explore topics of interest related to the maintenance of vehicles and engines. Independent Study courses may serve as an opportunity for students to expand their expertise in a particular application, to explore a topic in greater detail, or to develop more advanced skills.

Mechanics and Repair—Workplace Experience	20148	20	Mechanics and Repair—Workplace Experience courses provide students with work experience in fields related to the maintenance of vehicles and engines. Goals are typically set cooperatively by the student, teacher, and employer (although students are not necessarily paid). These courses may include classroom activities as well, involving further study of the field or discussion regarding experiences that students encounter in the workplace.
Mechanics and Repair—Other	20149	20	Other Mechanics and Repair courses.
Distribution—Comprehensive	20151	20	Distribution—Comprehensive courses provide students with knowledge and skills related to the safe and efficient delivery of commodities to various markets. Course content typically includes the comparative advantages of various forms of transportation, distribution networks, processes for tracking large shipments of material, transportation of goods in a safe and secure manner, and packaging.
Warehouse Operations	20152	20	Warehouse Operations courses convey the principles and processes underlying the receiving, loading and unloading, tracking, and storing of large quantities of materials. Course topics typically include a variety of logistical implications for moving materials by several different modes of transportation, safety and security, and appropriate storage techniques.
Distribution and Logistics—Independent Study	20197	20	Distribution and Logistics—Independent Study courses, often conducted with instructors as mentors, enable students to explore topics of interest related to distribution and logistics. Independent Study courses may serve as an opportunity for students to expand their expertise in a particular application, to explore a topic in greater detail, or to develop more advanced skills.
Distribution and Logistics—Workplace Experience	20198	20	Distribution and Logistics—Workplace Experience courses provide students with work experience in fields related to distribution and logistics. Goals are typically set cooperatively by the student, teacher, and employer (although students are not necessarily paid). These courses may include classroom activities as well, involving further study of the field or discussion regarding experiences that students encounter in the workplace.

Distribution and Logistics—Other	20199	20	Other Distribution and Logistics courses.
Transportation, Distribution and Logistics—Independent Study	20997	20	Transportation, Distribution, and Logistics—Independent Study courses, often conducted with instructors as mentors, enable students to explore topics of interest related to transportation, distribution, and logistics. Independent Study courses may serve as an opportunity for students to expand their expertise in a particular application, to explore a topic in greater detail, or to develop more advanced skills.
Transportation, Distribution and Logistics—Workplace Experience	20998	20	Transportation, Distribution, and Logistics—Workplace Experience courses provide students with work experience in fields related to transportation, distribution, and logistics. Goals are typically set cooperatively by the student, teacher, and employer (although students are not necessarily paid). These courses may include classroom activities as well, involving further study of the field or discussion regarding experiences encountered in the workplace.
Transportation, Distribution and Logistics—Other	20999	20	Other Transportation, Distribution and Logistics courses.
Pre-Engineering Technology	21001	21	Pre-Engineering Technology courses integrate technology-oriented applications of mathematics and science into pre-engineering activities for students. Course topics may include material sciences, technology processes, enterprises, and career opportunities.
Engineering Applications	21002	21	Engineering Applications courses provide students with an overview of the practical uses of a variety of engineering applications. Topics covered usually include hydraulics, pneumatics, computer interfacing, robotics, computer-aided design, computer numerical control, and electronics.
Engineering Technology	21003	21	Engineering Technology courses provide students with the opportunity to focus on one or more areas of industrial technology. Students apply technological processes to solve real engineering problems; develop the knowledge and skills to design, modify, use, and apply technology; and may also design and build prototypes and working models. Topics covered in the course include the nature of technology, use of technology, and design processes.

Principles of Engineering	21004	21	Principles of Engineering courses provide students with an understanding of the engineering/technology field. Students typically explore how engineers use various technology systems and manufacturing processes to solve problems; they may also gain an appreciation of the social and political consequences of technological change.
Engineering—Comprehensive	21005	21	Engineering—Comprehensive courses introduce students to and expand their knowledge of major engineering concepts such as modeling, systems, design, optimization, technology-society interaction, and ethics. Particular topics often include applied engineering graphic systems, communicating technical information, engineering design principles, material science, research and development processes, and manufacturing techniques and systems. The courses may also cover the opportunities and challenges in various branches of engineering.
Engineering Design	21006	21	Engineering Design courses offer students experience in solving problems by applying a design development process. Often using solid modeling computer design software, students develop, analyze, and test product solutions models as well as communicate the features of those models.
Engineering Design and Development	21007	21	Engineering Design and Development courses provide students with the opportunity to apply engineering research principles as they design and construct a solution to an engineering problem. Students typically develop and test solutions using computer simulations or models but eventually create a working prototype as part of the design solution.
Digital Electronics	21008	21	Digital Electronics courses teach students how to use applied logic in the development of electronic circuits and devices. Students may use computer simulation software to design and test digital circuitry prior to the actual construction of circuits and devices.
Robotics	21009	21	Robotics courses develop and expand students' skills and knowledge so that they can design and develop robotic devices. Topics covered in the course may include mechanics, electrical and motor controls, pneumatics, computer basics, and programmable logic controllers.

Computer Integrated Manufacturing	21010	21	Computer Integrated Manufacturing courses involve the study of robotics and automation. Building on computer solid modeling skills, students may use computer numerical control (CNC) equipment to produce actual models of their three-dimensional designs. Course topics may also include fundamental concepts of robotics, automated manufacturing, and design analysis.
Civil Engineering	21011	21	Civil Engineering courses expose students to the concepts and skills used by urban planners, developers, and builders. Students may be trained in soil sampling and analysis, topography and surveying, and drafting or blueprint-reading. Additional course topics may include traffic analysis, geologic principles, and urban design.
Civil Engineering and Architecture	21012	21	Civil Engineering and Architecture courses provide students with an overview of the fields of Civil Engineering and Architecture while emphasizing the interrelationship of both fields. Students typically use software to address real world problems and to communicate the solutions that they develop. Course topics typically include the roles of civil engineers and architects, project-planning, site-planning, building design, project documentation, and presentation.
Aerospace Engineering	21013	21	Aerospace Engineering courses introduce students to the world of aeronautics, flight, and engineering. Topics covered in the course may include the history of flight, aerodynamics and aerodynamics testing, flight systems, astronautics, space life systems, aerospace materials, and systems engineering.
Biotechnical Engineering	21014	21	Biotechnical Engineering courses enable students to develop and expand their knowledge and skills in biology, physics, technology, and mathematics. Course content may vary widely, drawing upon diverse fields such as biomedical engineering, biomolecular genetics, bioprocess engineering, agricultural biology, or environmental engineering. Students may engage in problems related to biomechanics, cardiovascular engineering, genetic engineering, agricultural biotechnology, tissue engineering, biomedical devices, human interfaces, bioprocesses, forensics, and bioethics.
Particular Topics in Engineering	21015	21	These courses examine specific topics in engineering other than those already described.

Research in Environmental Science and Engineering	21016	21	Research in Environmental Science and Engineering courses examine the mutual relationships between organisms and their environment to identify and analyze environmental problems, evaluate the relative risks associated with the problems, and examine engineering solutions for resolving and/or preventing them. Topics covered include environmental and ecological processes, energy and sustainability, interconnected biological and human systems, the impact of humans on natural systems, cultural and societal contexts of environmental problems, and the utilization of engineering designs that will ensure sustainable systems.
Engineering—Independent Study	21047	21	Engineering—Independent Study courses, often conducted with instructors as mentors, enable students to explore topics of interest related to engineering. Independent Study courses may serve as an opportunity for students to expand their expertise in a particular application, to explore a topic in greater detail, or to develop more advanced skills.
Engineering—Workplace Experience	21048	21	Engineering—Workplace Experience courses provide students with work experience in an engineering-related field. Goals are typically set cooperatively by the student, teacher, and employer (although students are not necessarily paid). These courses may include classroom activities as well, involving further study of the field or discussion regarding experiences that students encounter in the workplace.
Engineering—Other	21049	21	Other Engineering courses.
Technological Literacy	21051	21	Technological Literacy courses expose students to the communication, transportation, energy, production, biotechnology, and integrated technology systems and processes that affect their lives. The study of these processes enables students to better understand technological systems and their applications and uses.

Technological Processes	21052	21	Technological Processes courses provide students with the opportunity to focus on one or more areas of industrial technology, applying technological processes to solve real problems and developing the knowledge and skills to design, modify, use, and apply technology appropriately. Students may examine case studies, explore simulations, or design and build prototypes and working models.
Emerging Technologies	21053	21	Emerging Technologies courses emphasize students' exposure to and understanding of new and emerging technologies. The range of technological issues varies widely but typically include lasers, fiber options, electronics, robotics, computer technologies, CAD/CAM, communication modalities, and transportation technologies.
Technology Innovation and Assessment	21054	21	Technology Innovation and Assessment courses use engineering design activities to help students understand how criteria, constraints, and processes affect design solutions and provide students with the skills to systematically assess technological developments or solutions. Course topics may include brainstorming, visualizing, modeling, simulating, constructing, testing, and refining designs.
Aerospace Technology	21055	21	Aerospace Technology courses introduce students to the technology systems used in the aerospace industry and their interrelationships. Examples of such systems include satellite communications systems, composite materials in airframe manufacturing, space station constructions techniques, space shuttle propulsion systems, aerostatics, and aerodynamics.
Particular Topics in Technology Applications	21056	21	These courses examine specific topics in technology applications other than those already described.
Technology—Independent Study	21097	21	Technology—Independent Study courses, often conducted with instructors as mentors, enable students to explore topics of interest related to technology systems and processes. Independent Study courses may serve as an opportunity for students to expand their expertise in a particular application, to explore a topic in greater detail, or to develop more advanced skills.

Technology—Workplace Experience	21098	21	Technology—Workplace Experience courses provide students with work experience in a field related to technological systems and structures. Goals are typically set cooperatively by the student, teacher, and employer (although students are not necessarily paid). These courses may include classroom activities as well, involving further study of the field or discussion regarding experiences that students encounter in the workplace.
Technology—Other	21099	21	Other Technology courses.
Drafting Careers Exploration	21101	21	Geared for students with an interest in careers that use drafting skills and applications, Drafting Careers Exploration courses expose students to the opportunities available for draftspeople (engineering, architectural, industrial, and so on). These courses serve to introduce basic skills and the field in general, providing students with the opportunity to identify a focus for continued study or to determine that their interests lie elsewhere.
Drafting—General	21102	21	Drafting—General courses, usually offered as a sequence of courses, introduce students to the technical craft of drawing illustrations to represent and/or analyze design specifications and then refine the skills necessary for this craft. Drafting—General courses use exercises from a variety of applications to provide students with the knowledge and experience to develop the ability to perform freehand sketching, lettering, geometric construction, and multiview projections and to produce various types of drawings (working, detail, assembly, schematic, perspective, and so on). Computer-aided drafting (CAD) systems (if available) are typically introduced and used to fulfill course objectives.

Drafting—Architectural	21103	21	Drafting—Architectural courses introduce students to and help them refine the technical craft of drawing illustrations to represent and/or analyze design specifications, using examples drawn from architectural applications. These courses are intended to help students develop general drafting skills, but place a particular emphasis on interior and exterior residential (and light commercial) design, site orientation, floor plans, electrical plans, design sketches, and presentation drawings. In addition, students may prepare scale models.
Drafting—Civil/Structural	21104	21	Drafting—Civil/Structural courses introduce students to and help them refine the technical craft of drawing illustrations to represent and/or analyze design specifications, using examples drawn from civil engineering and/or structural applications. These courses are intended to help students develop general drafting skills, but place a particular emphasis on skills needed for typography and survey work.
Drafting—Electrical/Electronic	21105	21	Drafting—Electrical/Electronic courses introduce students to and help them refine the technical craft of drawing illustrations to represent and/or analyze design specifications, using examples drawn from electric and/or electronic fields. These courses are intended to help students develop general drafting skills, but place a particular emphasis on those skills needed for electrical and electronic schematics.
Drafting—Technical/Mechanical	21106	21	Drafting—Technical/Mechanical courses introduce students to and help them refine the technical craft of drawing illustrations to represent and/or analyze design specifications, using examples drawn from industrial applications. These courses are intended to help students develop general drafting skills, but place a particular emphasis on sectioning, auxiliary views, revolutions, and surface development. In these courses, students typically learn basic machining and fabrication processes as they draw schematic diagrams featuring cams, gears, linkages, levers, pulleys, and so on.

CAD Design and Software	21107	21	Frequently offered as an intermediary step to more advanced drafting courses (or as a concurrent course), CAD Design and Software courses introduce students to the computer-aided drafting systems available in the industry.
Blueprint Reading	21108	21	Blueprint Reading courses provide students with the knowledge and ability to interpret the lines, symbols, and conventions of drafted blueprints. They generally emphasize interpreting, not producing, blueprints, although the courses may provide both types of experiences. Blueprint Reading courses typically use examples from a wide variety of industrial and technological applications.
Research & Design for Pre-Construction	21109	21	Advanced research and application course that covers specific topics in design & pre-construction (drafting/architecture) to include management and “green design” skills.
GIS Technology	21111	21	GIS Technology courses provide familiarity with tools necessary to design and utilize discipline specific data. Areas covered are: Mapping, Cartography and Computer Assisted Drafting, Photogrammetry and Remote Sensing, Spatial Statistics, and Geographic Information Display Systems. Students will learn to identify appropriate tools for specific tasks and work with data input from maps, aerial photos, and satellite imagery to build further representation utilizing the tools covered.
GIS Spatial Application	21112	21	GIS Spatial Applications courses apply technology skills to build and utilize representations of three-dimensional space to provide location information, data collection, and statistical information to build representations appropriate for use in areas such as conservation, urban planning, flight, human networks, geographic surveying and topography, and patterns and processes related to multidimensional data.
Drafting—Independent Study	21147	21	Drafting—Independent Study courses, often conducted with instructors as mentors, enable students to explore drafting-related topics of interest. Independent Study courses may serve as an opportunity for students to expand their expertise in a particular application, to explore a topic in greater detail, or to develop more advanced skills.

Drafting—Workplace Experience	21148	21	Drafting—Workplace Experience courses provide work experience in a field related to drafting. Goals are typically set cooperatively by the student, teacher, and employer (although students are not necessarily paid). These courses may include classroom activities as well, involving further study of the field or discussion regarding experiences that students encounter in the workplace.
Drafting—Other	21149	21	Other Drafting courses.
Advanced Drafting/CAD	21150	21	An advanced level course that provides students with the knowledge and skills needed to utilize CAD design and software.
Foundations of Eletronics	21201	21	Foundations of Electronics courses offer instruction in the basic concepts of electronics and electronic components; electrical quantities and units; basic circuits, laws and measurements; circuit components; multiple-load circuits; complex-circuit analysis; magnetism and electromagnetism; alternating current and voltage; power in ac circuits; capacitance; inductance; transformers; R, C, and L circuits; electric motors; instruments and measurements; algebraic, trigonometric, and logarithmic tenets as applied to electronic components, theory of electricity and in the terminology, skills, and safety procedures common to careers involving electricity and electronics. Students will demonstrate acceptable soldering and de-soldering techniques, knowledge of surface mount technology, methods for building circuitry and proper utilization of electronic components such as capacitors, LEDs, and transistors.
Project Management and Resource Scheduling	21205	21	Project Management courses provide students with the information and skills necessary for success in managing projects and operating logistical ventures in technology, business, and industry. This course covers scheduling of resources (including personnel, budget, timelines, and equipment), utilization of Gantt charts, economic principles within the workplace, and risk management. Other possible topics include developing a business plan, finance, business law, marketing and promotion strategies, insurance employee/employer relations, problem-solving and decision-making, and building leadership skills. These courses may also incorporate a survey of the careers within technology and engineering industries.

Materials Science and Engineering	21252	21	Materials Science and Engineering courses expose students to the tools, machines, and processes that may be encountered in the interface between manufacturing and engineering. In particular, these courses stress the study of properties and analysis of those materials: testing and processing metals, plastics, woods, ceramics, and composite materials utilized in the process of constructing usable products. These courses enable students to experience development of an idea into a finished product, with instruction in planning, designing, selecting materials, and using appropriate tools and machines.
Engineering and Technology—Independent Study	21997	21	Engineering and Technology—Independent Study courses, often conducted with instructors as mentors, enable students to explore topics of interest related to engineering and/or technology. Independent Study courses may serve as an opportunity for students to expand their expertise in a particular application, to explore a topic in greater detail, or to develop more advanced skills.
Engineering and Technology—Workplace Experience	21998	21	Engineering and Technology—Workplace Experience courses provide students with work experience in a field related to engineering or technology. Goals are typically set cooperatively by the student, teacher, and employer (although students are not necessarily paid). These courses may include classroom activities as well, involving further study of the field or discussion regarding experiences that students encounter in the workplace.
Engineering and Technology—Other	21999	21	Other Engineering and Technology courses.
Study Skills	22003	22	Study Skills courses prepare students for success in high school and/or for postsecondary education. Course topics may vary according to the students involved, but typically include reading improvement skills, such as scanning, note-taking, and outlining; library and research skills; listening and note-taking; vocabulary skills; and test-taking skills. The courses may also include exercises designed to generate organized, logical thinking and writing.

Tutoring Practicum	22054	22	Tutoring Practicum courses provide students with the opportunity to offer tutorial assistance to their peers or to younger students. After an initial training period during which students learn how to work with other students and how to make use of the available resources (e.g., staff, written material, audiovisual aids, and so on), students engage in tutoring and assisting others who need or request help.
Leadership	22101	22	Leadership courses are designed to strengthen students' personal and group leadership skills. Typically intended for students involved in extracurricular activities (especially as officers of organizations or student governing bodies), these courses may cover such topics as public speaking, effective communication, human relations, parliamentary law and procedures, organization and management, and group dynamics.
School Governance	22103	22	School Governance courses convene students as an entire student body to discuss common concerns, organize groups for action, make decisions, and solve school-related problems. Because of the nature of these courses, they are typically offered at private, alternative, or experimental schools.
Community Service	22104	22	Community Service courses provide students with the opportunity to volunteer their time, energy, and talents to serve a community project or organization. These courses are usually (but not always) conducted with a seminar component, so that students can use their volunteer experiences to learn how to solve problems, make decisions, and communicate effectively.
Values Clarification	22105	22	Values Clarification courses enable students to explore individual and societal actions and implications in order to help them develop personal values and make decisions about their lives. Examples of discussion topics include philosophy and religion, world resource allocation, genetic engineering, environmental issues, and death-related issues (euthanasia, suicide, and abortion).

Seminar	22106	22	Seminar courses vary widely, but typically offer a small peer group the opportunity to investigate areas of interest. Course objectives may include improvement of research and investigatory skills, presentation skills, interpersonal skills, group process skills, and problem-solving and criticalthinking skills. Seminars aimed at juniors and seniors often include a college and career exploration and planning component.
Career Exploration	22151	22	Career Exploration courses help students identify and evaluate personal goals, priorities, aptitudes, and interests with the goal of helping them make informed decisions about their careers. These courses expose students to various sources of information on career and training options and may also assist them in developing job search and employability skills.
Employability Skills	22152	22	Employability Skills courses help students match their interests and aptitudes to career options with a focus on using employment information effectively, acquiring and improving job-seeking and interview skills, composing job applications and resumes, and learning the skills needed to remain in and advance within the workplace. Course content may also include consumer education and personal money management topics.
Diversified Occupations	22153	22	Diversified Occupations courses help students enter the workforce through career exploration, job search and application, and the development of positive work attitudes and work-related skills. These courses typically cover such topics as career planning and selection, money management, communication skills, interpersonal business relationships and behaviors, and personal responsibility. Employment may be a required component of these courses, or students may be required to enroll concurrently in a work experience course.

Family and Consumer Science—Comprehensive	22201	22	Family and Consumer Science—Comprehensive courses are inclusive studies of the knowledge and skills that are useful for the efficient and productive management of the home. Course topics typically include foods and nutrition; clothing; child development and care; housing design, decoration, and maintenance; consumer decisions and personal financial management; and interpersonal relationships.
Food and Nutrition	22202	22	Food and Nutrition courses provide students with an understanding of food's role in society, instruction in how to plan and prepare meals, experience in the proper use of equipment and utensils, and background on the nutritional needs and requirements for healthy living. Some classes place a heavier emphasis on the nutritional components of a balanced diet, while others concentrate on specific types of food preparation. Although these courses may present career opportunities in the food service industry, their emphasis is not career-related.
Food Science	22203	22	Food Science courses offer opportunities to study the composition, structure, and properties of foods and the chemical changes that occur during the processing, storage, preparation, and consumption of food. These courses often explore the effects of various materials, microorganisms, and processes on food products through laboratory experiments.
Child Development/Parenting	22204	22	Child Development/Parenting courses provide students with knowledge about the physical, mental, emotional, and social growth and development of children from conception to pre-school age. In addition, these courses help students discover how parents should respond to the various stages of childhood. Course content typically includes topics such as prenatal and birth processes; responsibilities and difficulties of parenthood; fundamentals of children's emotional and physical development; and the appropriate care of infants, toddlers, and young children.

Clothing/Sewing	22205	22	Clothing/Sewing courses introduce students to and expand their knowledge of various aspects of wearing apparel, sewing, and fashion. These courses typically include wardrobe planning; selection, care, and repair of various materials; and construction of one or more garments. They may also include related topics, such as fashion design, fashion history, the social and psychological aspects of clothing, careers in the clothing industry, and craft sewing.
Life Skills	22206	22	Life Skills courses provide students with information about a wide range of subjects to assist them in becoming wise consumers and productive adults. These courses often emphasize such topics as goal-setting, decision-making, and setting priorities; money and time management; relationships; and the development of the self. Practical exercises regarding selecting and furnishing houses, meeting transportation needs, preparing food, selecting clothing, and building a wardrobe are often integral to these classes. In addition, specific topics such as insurance, taxation, and consumer protection may also be covered.
Self Management	22207	22	Self-Management courses introduce students to the skills and strategies helpful in becoming more focused, productive individuals. These courses typically emphasize goal-setting; decision-making; managing time, energy, and stress; and identifying alternatives and coping strategies. They may also allow students to explore various career and lifestyle choices.
Family Living	22208	22	Family Living courses emphasize building and maintaining healthy interpersonal relationships among family members and other members of society. These courses often emphasize (but are not limited to) topics such as social/dating practices, human sexuality and reproduction, marriage preparation, parenthood and the function of the family unit, and the various stages of life. They may also cover topics related to individual self-development, career development, personal awareness, and preparation for the responsibilities of a family member and wage earner.

Personal Development	22209	22	Similar to Family Living courses, but more focused on the individual, Personal Development courses emphasize strengthening self-esteem, recognizing and resisting negative peer pressure, and developing coping skills for dealing with changes within one's self and within others. These courses may also have a substance-abuse prevention component.
Consumer Economics/Personal Finance	22210	22	Consumer Economics/Personal Finance courses provide 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.
Home Décor	22211	22	Home Décor courses provide students with knowledge and skills regarding interior design and decoration of the home for the individual or family. While exploring design principles, personal needs and style, and decision-making, students may have an opportunity to explore such topics as color, texture, furniture styles and arrangement, lighting, window treatments, floor and wall coverings, and home improvement/modification. These courses emphasize personal (rather than commercial) use and application of home décor principles.
Interior Design	22212	22	An application course to instruct students in skills necessary to design interior spaces that acknowledge client needs, legislated codes, historic, current, and future trends, and public policy. The first half of this course would be taught to FACS students only. The Drafting students would have taken intro to drafting, followed by this in the second semester.
Nutritional and Health Science	22213	22	Nutrition & Health Science courses focus on biological systems and personal health topics such as nutrition, stress management, drug/alcohol abuse prevention as functions of biological impact on body systems. Key biological concepts addressed include: homeostasis, metabolism, inheritance of traits, feedback systems, and defense against disease.

Family and Consumer Science—Independent Study	22247	22	Family and Consumer Science—Independent Study courses, often conducted with instructors as mentors, enable students to explore topics of interest related to home- and self-management. Independent Study courses may provide students with an opportunity to expand their expertise in a particular application, to explore a topic in greater detail, or to develop more advanced skills.
Family and Consumer Science—Other	22249	22	Other Family and Consumer Science courses.
Career and Community Connections	22250	22	Career and Community Connections is the Application level course for the learner to apply technical skills in a professional learning experience, unpaid or paid, outside or within the school environment. Included will be continued development and finalization of the student's portfolio. Career and Community Connections provides the opportunity for learners to focus on career related topics, team building and effectiveness in the world of work, and acquiring job-seeking skills and retention needed to advance within the workplace.
Miscellaneous—Workplace Experience	22998	22	Miscellaneous—Workplace Experience courses provide students with work experience in a field related to their interests. Goals are typically set cooperatively by the student, teacher, and employer (although students are not necessarily paid). These courses may include classroom activities as well, involving further study of the field or discussion regarding experiences that students encounter in the workplace. Note: if the particular subject area is known, use the code associated with the Workplace Experience course within that subject area.