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Program of Studies for Kentucky Schools

Grades K-12

JUNE 1982

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Kentucky Department of Education
Raymond Barber, Superintendent

PROGRAM OF STUDIES FOR KENTUCKY SCHOOLS

GRADES K—12

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EDUCATIONAL BULLETIN VOL. L NO. 1



MESSAGE FROM THE SUPERINTENDENT

This revision of the "Program of Studies for Kentucky Schools, K-12" represents the Department of Education's efforts to improve public education at all grade levels. Curriculum revision and the updating of educational programs should be a continuous process. Likewise, periodic review and reassessment of programs are essential to a system of public education that is committed to providing optimum educational opportunities for all children and youth.

This publication was approved by the State Board of Education on June 22, 1982. It is our hope that the revision will enable elementary, secondary, and vocational schools to continue their progress toward new standards of excellence.

Raymond Barber

Raymond Barber

Superintendent of Public Instruction

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ACKNOWLEDGEMENTS

The Kentucky Department of Education expresses sincere appreciation to the Program of Studies Advisory Committee, the local systems who made their staff members and students available for assistance, and the Department's professional and secretarial staff who supplied most of the research, assembly, editing, and review. During the past four years, these persons contributed extensive time and expertise, and their combined efforts made possible both the original Program of Studies and its 1982 revision.

It is hoped that this document will be of significant value in the improvement of curriculum, the grade placement of courses, and the assignment of school personnel. Districts utilizing the publication are encouraged to evaluate it and to submit their comments and suggestions for improvement to the Bureau of Instruction.

Donald B. Hunter

Assistant Superintendent for Instruction

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PREFACE

LEGAL BASE

The following statutes and regulations provide a legal base for this publication:

KRS 156.160 Adoption of rules and regulations by state board of education.

The state board of education shall adopt rules and regulations relating to:

(1) Minimum courses of study for the different grades and kinds of common schools, and regulations governing educational equipment of the schools.

(2) Grading, classifying and accrediting all common schools, and for determining the scope of instruction that may be offered in the different classes of schools, and the minimum requirements for graduation from the courses offered.

704 KAR 3:304 Required program of studies

Section 1. Pursuant to the authority vested in the State Board of Education by KRS 156.070 and 156.160, the "Program of Studies for Kentucky Schools, Grades K-12," as adopted on May 11, 1982, is hereby filed with the Legislative Research Commission and incorporated by reference. Copies may be obtained from the Department of Education.

KRS 161.020 Certificates required of school employees; filing requirements; validity and terms for renewal.

(1) No person shall be eligible to hold the position of superintendent principal, teacher, supervisor, director of pupil personnel, or other public school position for which certificates may be issued, or receive salary for services rendered in such position, unless he holds a certificate of legal qualifications for such position.

(2) No person shall enter upon the duties of a position requiring certification qualifications until his certificate has been filed or credentials registered with the board of education employing him.

NOTE: The accreditation process requires that a teacher be teaching in the program area identified on his/her certificate. This requirement is incorporated by reference into regulations.

EDUCATIONAL GOALS

The following goal statements were adopted by the State Board of Education as a part of the "Standards for Accreditation of Kentucky School Districts."

Whereas, each citizen of the Commonwealth must be assured of an opportunity to achieve full potential consistent with his or her abilities, the following goals of education are affirmed.

(1) Each pupil should attain competency in the basic learning skills consistent with his or her ability.

(2) Each pupil's progress through the educational system should be based on achievement.

(3) Each graduate should be qualified for further education and/or employment.

(4) Each pupil should be taught and strongly encouraged to develop ethical standards of behavior, an understanding of the responsibilities of a citizen, and sound habits of personal, physical, and mental health.

(5) Each pupil should be provided an opportunity to develop a positive and realistic concept of self and others.

(6) Each pupil should develop his or her capacity to reason, analyze, and make responsible decisions.

(7) The school should build upon and expand the interest of its students in vocational, recreational, artistic and aesthetic areas, as well as transmit specific knowledge.

INSTRUCTIONAL IMPROVEMENT AND CURRICULUM DEVELOPMENT

Overview of Plans and Process

Instructional improvement and curriculum development are the foundation of the total educational program. In Kentucky, these concepts are addressed in a variety of ways to meet situations unique to each local school district in the state. However, there are two plans and a process required by the Department of Education to ensure that local districts are provided with a comprehensive systematic approach to educational planning. These are:

- the Educational Improvement Plan (EIP)
- the Master Inservice Education Plan (MIEP)
- the accreditation process

Coordinating these two plans (EIP and MIEP) for instructional and curriculum improvement is desirable and many districts have made efforts to correlate the component parts of the two plans. Educators are acknowledging that curriculum improvement is largely dependent on inservice training of staff to acquire knowledges and skills necessary to establish curriculum objectives and to help pupils in attaining these. In support of these two plans is the accreditation process which requires districts to comply with predetermined indicators showing effective curriculum and instruction.

Instructional Improvement and Curriculum Development

Regardless of the format and/or management of the EIP and the MIEP at the local and state levels, each has a procedure which yields valuable data for planning a total educational improvement program. The state-wide testing program (required by the Educational Improvement Act) and the needs assessment process (required by the Master Inservice Education Plan) are isolated here for they are processes basic to instructional and curriculum improvement.

1. The state-wide testing program provides local districts with data which may be used for different purposes. Among those related to curriculum and instruction are:

    a. data for examination of the strengths and weaknesses of particular grade levels in the basic skills areas;

    b. data for comparison of performances among the grade levels;

    c. longitudinal data for determining trends over a period of years (for example, progress in certain basic skills areas);

    d. category objectives for the basic skills areas which districts may key to their basal textbooks and local curriculum material; and,

    e. data for the needs assessment process.

2. The needs assessment process provides information on:

   a. staff perceptions of needs and levels of knowledge;

   b. building level and/or district-wide needs; and

   c. short-term and long-range needs for instructional and curriculum improvement.

Both of these procedures provide specific information for planning those kinds of instructional improvement activities that will assist teachers in implementing successful practices and using curriculum materials effectively. For example, if test results indicate that little progress has been made over the years in reading, then this becomes a priority area for staff training activities. Needs assessment data may verify this curricular weakness and give more specific information on how the staff perceives the weakness. With these sources, instructional improvement activities are planned to bring about needed changes in the reading program and in reading instruction in the district. Among the instructional improvement activities that may be planned are local materials development, teacher-specific training workshops, and teacher observations of successful practices/ programs in neighboring districts.

These two procedures - standardized test results and a needs assessment - are integral parts of a comprehensive process for curriculum and instructional improvement. Both steps furnish concrete data upon which teachers and administrators make curricular and instructional decisions to promote pupil achievement.

Accreditation Process

A process which also focuses on curriculum development and instructional improvement is the state accreditation process. Standard IV (Curriculum and Learning Environment) of the "Standards for Accreditation of Kentucky School Districts" identifies quality indicators for the total instructional program. Several indicators which are particularly relevant to curriculum development are:

1) A written plan for implementing the program of instruction for grades K-12

2) Knowledge and skills expected of pupils in grades K-8 are established in reading, composition, and mathematics

3) Written scope and sequence/written teacher lesson plans

Locally developed curriculum materials (scope and sequence, skills lists, etc.) specify objectives for courses in the program areas. Correlating these to both the category objectives of the state testing program (CTBS/U) and to the district's basal textbook program, clarifies exactly what a pupil is expected to learn in each program area. Further, teacher lesson plans need to reflect methods and content appropriate to the course objectives. Inclusion of these aspects of curriculum in the accreditation process directs attention to specific materials and practices that characterize an effective curriculum and learning environment.

If a district indicates in its self-study that it has a deficiency in curriculum and instruction, the Department's on-site visiting team will reflect this information in its report on the overall educational system. The district will then be required to develop an Accreditation Improvement Plan which outlines how the cited deficiencies will be corrected. For those deficiencies related to curriculum and instruction, for example the lack of a scope and sequence, the action plan may propose to use inservice education as the means for getting a scope and sequence developed for the district. For more specific information on the accreditation process see "Standards for the Accreditation of Kentucky School Districts."

PROGRAM OF STUDIES: AN OVERVIEW

The Program of Studies for Kentucky Schools K-12 provides administrators and teachers in local districts with a basis for establishing and/or revising their curriculum. The following sections serve as an overview of the educational program: kindergarten; elementary; middle childhood; secondary; total program. Pertinent information on accreditation is included.

I. KINDERGARTEN EDUCATION

Kindergarten programs place emphasis on "learning by doing." Scheduling reflects large blocks of time for independent choice, "hands-on" activities, and discovery learning rather than "paper and pencil oriented" table activities. Children also receive instruction in areas such as art, music, physical education, and library science.

II. ELEMENTARY EDUCATION

The elementary curriculum for all pupils in grades 1-5 includes the following areas:

LANGUAGE ARTS, including reading, writing, spelling, oral and written English, literature, handwriting, listening skills, and creative writing is taught 150 minutes per day minimum.

MATHEMATICS, with emphasis on concept development, computational skills, problem solving, and the application of same to practical situations is taught 60 minutes per day minimum.

SCIENCE, including "hands-on" experiences is taught separately and/or integrated in the regular program the equivalent of 120 minutes per week minimum.

SOCIAL STUDIES, including citizenship, attitudes, values, and responsibilities is taught separately and/or integrated in the regular program the equivalent of 120 minutes per week minimum.

PHYSICAL EDUCATION AND SAFETY is taught the equivalent of 100 minutes per week minimum.

FINE ARTS, including art, music, and drama is taught separately and/or integrated in the regular program the equivalent of 120 minutes per week minimum.

HEALTH, including safety, is taught separately and/or integrated in the regular program the equivalent of 60 minutes per week minimum. Safety will be appropriately included in all areas of the curriculum.

III. MIDDLE CHILDHOOD EDUCATION

The middle childhood curriculum for all pupils in grades 6-8 includes the following areas:

LANGUAGE ARTS, including reading, is taught daily (one hour minimum). If spelling or reading is removed from language arts, then 45 minutes for the remaining program is adequate; and spelling or reading is taught 120 minutes per week minimum.

MATHEMATICS is taught the equivalent of 45 minutes per day minimum.

SCIENCE is taught the equivalent of 45 minutes per day minimum.

SOCIAL STUDIES is taught the equivalent of 45 minutes per day minimum.

PHYSICAL EDUCATION AND SAFETY is taught the equivalent of 15 minutes daily.

HEALTH, including safety, is taught separately and/or integrated in the regular program the equivalent of 60 minutes per week minimum.

In addition to the programs mentioned above, each pupil at the middle childhood level receives instruction in the following areas unless an alternative indicator is approved by the Superintendent of Public Instruction.

APPLIED ARTS/CAREER EXPLORATION is taught the equivalent of 75 minutes per week minimum.

ART is taught the equivalent of 75 minutes per week minimum.

MUSIC is taught the equivalent of 75 minutes per week minimum.

IV. SECONDARY EDUCATION

All pupils in grades 9-12 shall fulfill the minimum unit requirements indicated below for high school graduation (704 KAR 3:305). Also, a local district shall fulfill the program area level requirements indicated below for accreditation. These requirements pertain to a four-year high school.

	GRADUATION	ACCREDITATION
PROGRAM AREA	MINIMUM UNIT REQUIREMENT	PROGRAM AREA LEVEL REQUIREMENTS
Language Arts	3 units	4 levels
Social Studies*	2 units	3 levels
Mathematics	2 units	3 levels
Science	2 units	3 levels
Health	½ unit	1 level
Physical Education	½ unit	1 level
Art	--	3 levels
Music	--	3 levels
Foreign Language	--	3 levels
Industrial Arts/Industrial Education Level I and II	--	2 levels
Business Education	--	3 levels
Home Economics	--	3 levels
Total units required:	10	
Total electives	8	
GRAND TOTAL	18	

*NOTE: The units required for social studies consist of one unit in U.S. History and one unit in Citizenship. A unit in Citizenship - 2205 - shall be required of pupils graduating in 1984. A local board of education may offer in the 7th or 8th grade a full year course in Citizenship and, when a pupil successfully completes such a course, the Citizenship requirement for graduation will have been met. Successful completion of the Citizenship requirement at the 7th or 8th grade level shall not be substituted for either of the two social studies units required for high school graduation.

Accreditation Commentary. Standard IV of the "Standards for Accreditation of Kentucky School Districts" concerns curriculum and sets the minimum number of program area level requirements offered in a school district (refer to above chart). The program area levels provide an overall normal progression of course offerings based, for the most part, on the degree of difficulty. The levels are not indications of grade levels, but rather a means of providing for differentiation in the content of the program areas.

It is the responsibility of local administrators and teachers to select and arrange course offerings in order for:

1) the pupils to meet high school graduation requirement; and

2) the district to meet accreditation requirements.

Further information to assist school districts in the selection and arrangement of course offerings is provided in the academic and vocational offerings sections of this manual.

V. TOTAL PROGRAM

A. A local board of education may set local requirements beyond the minimum unit requirements established by the State Board of Education. Required courses shall be distributed as uniformly as possible over the four-year period (e.g., excessive requirements in the 9th grade should not force out desirable electives). Every effort shall be made to provide for individual needs and to assist pupils in making the best possible course selections. Pupils shall be encouraged to maximize their educational opportunities by participating in programs and courses for the four-year high school experience.

B. Six hours of actual school work shall constitute a school day. Three hundred class minutes per week shall be the minimum requirement for granting one high school unit of credit. This requirement may be met by using the 60-minute class period five times per week or by devoting equivalent gross time in an approved program.

The State Board of Education, in an official meeting on June 22, 1982, approved the following resolution relating to the minimum school day of six hours:

RESOLUTION

BE IT RESOLVED that the State Board of Education interprets the minimum school day of six (6) hours as defined in KRS 158.060 and 703 KAR 2:010 Section 5 as not including lunch or recess, unless a local board of education can show through a written plan, adopted by the local board and approved by the Superintendent of Public Instruction, that such are an integral and meaningful part of the total instructional program (as defined in the 1982 Program of Studies) of the school district and are otherwise approvable under 703 KAR 2:010 Section 5.

C. Local boards of education may establish mini-courses and/or programs from the courses included in this publication. Fractional units of credit may be earned by the pupil. The intent of this provision is to permit the nine-week program (¼ unit of credit) for schools wishing to enrich the curriculum and provide more exploratory opportunities for students. A unit of credit shall not be awarded for completion of a course that is the same as a course for which the pupil already has received credit.

D. A pupil less than 21 years of age and currently enrolled in high school may be permitted to earn, upon the recommendation and approval of the principal, a maximum of three units by correspondence, provided that no more than two units are earned in any one calendar year. Institutions

from which the pupil receives correspondence instruction must be recognized by the State Board of Education and accredited by a regional accreditation agency.

E. It is recognized that certain extracurricular activities contribute significantly to the educational objectives of schools. Extracurricular activities are under the direct supervision of the school and serve to supplement the instructional program.

F. The local school district shall be responsible for the appropriate class or grade assignment of a pupil transferring from a nonaccredited secondary school. Previous credit earned by a student in a nonaccredited school shall be awarded by the local school district according to one of the following methods:

a) the pupil passes an examination of similar nature and content to the examination used for other pupils receiving credit for a particular course; or
b) the pupil achieves an average grade in a higher level course by the twelfth week of school.

The courses successfully completed by examination or performance shall be counted toward minimum high school graduation requirements in the local school district.

HOW TO USE THIS DOCUMENT

The purpose of the Program of Studies is to furnish the local school district with the information needed to build its curriculum. The manual is divided into two major sections: academic course offerings and vocational course offerings. The program areas in both sections are presented with the following information.

1. A chart illustrates the possible course offerings and:

   a. the suggested grade level(s) for teaching the course;
   b. a four digit code number used by teachers in completing Part V of the P.S.D. Form (Professional Staff Data)*; and,
   c. the maximum number of high school units a pupil may earn for a course.

2. A brief overview of the program area is provided.

3. A course description is given for each course offering named in the program area chart.

4. Teacher certification requirements are identified for each course offering.

Also included in the preface of the manual are general program descriptions which may have application across the various program areas. These include: kindergarten, gifted education, and education for exceptional children.

*Note: Code numbers are not assigned to functional courses for exceptional children. The codes assigned to class plans will continue to be used on the P.S.D. Form by special education teachers.

EDUCATION FOR EXCEPTIONAL CHILDREN

Exceptional pupils, as defined by KRS 157.200, are those children under twenty-one (21) years of age who differ in one or more respects from average or normal children in physical, mental, learning, emotional or social characteristics and abilities to such a degree that they need special education services. These pupils require Individual Education Programs (IEPs) planned by an Admissions and Release Committee (ARC). The IEP should specify the curricula modifications for a program of studies which would address the individual needs of the exceptional pupil.

Program for Earning a Diploma

An exceptional pupil shall be provided the opportunity to progress through a program of studies leading to receipt of a graduation diploma when the IEP plan specifies such a program. Such specification is based upon the ARC's determination that the pupil has potential for success in the program. The ARC must review the pupil's progression in the program at least annually. The pupil following this program of studies shall receive instruction from qualified personnel in the required areas of English, mathematics, science, social studies, health and physical education. Instruction is also provided, as needed, in vocational education, art, music and any other curricula areas which will benefit the pupil and meet the unit requirements for graduation.

Vocational training through regular or special vocational programs shall be provided for those exceptional pupils who may not be pursuing further education after high school graduation (college, professional schools, etc.). The type and degree of vocational training to be provided shall be specified in the pupil's IEP. This component of the IEP is developed as a collaborative effort of the appropriate ARC and vocational education personnel.

Specific curriculum content of the program of studies may be modified for an individual pupil if such modification is recommended by the ARC. For exceptional pupils who are mainstreamed into regular education classes, this modification may be accomplished through minimal teacher-revision of the regular courses for individual exceptional pupils. For exceptional pupils who are not mainstreamed for these courses, the modified content may be offered in "functional" courses taught by special education teachers. Some pupils may be mainstreamed for some courses and not for others. Modifications will usually take the form of altered teaching methods and/or increased emphasis upon functional life skill components of the subject matter. Functional course descriptions are provided within each required subject area in this document. Although functional courses are not included in elective subject areas, modification of described courses may be essential and such courses may be taught by the regular education teacher or the special education teacher depending upon the appropriate placement of the pupil. Pupils completing such courses of instruction shall earn unit credits for these courses.

Non-Diploma Program

When the ARC determines that the severity of an exceptional pupil's handicap(s) (e.g., trainable mentally handicapped, multi-handicapped, etc.) precludes a course of study leading to receipt of a diploma, an alternative program shall be offered. This program shall be based upon pupil needs, be specified in the IEP, and be reviewed at least annually. The pupil who completes such a course of study is entitled to recognition for achievement. This may be accomplished by awarding a certificate of attendance or other similar recognition. See 707 KAR 1:051 to 1:059.

EDUCATION FOR THE GIFTED

Gifted children and youth are those who, by virtue of outstanding abilities, are capable of high performance and who have been identified by professionally qualified persons. These are pupils who require differentiated educational programs and/or services beyond those normally provided by the regular school program in order to realize their potential.

Gifted pupils form a unique segment of Kentucky's school population and exist at all levels of society regardless of sex, race, socio-economic background, ethnic origins or handicapping conditions. They are identified by their outstanding intellectual abilities, creativity, and talents, and shall receive educational experiences commensurate with their abilities.

In order to develop the talents and abilities of these pupils, educational programs shall be offered that are significantly different from those provided in the regular classroom. These programs shall consist of challenging, diverse, and complex experiences with provisions for the development of leadership potential. Further, the programs shall be conducted in an environment which makes it possible for the pupils to reach the highest levels of learning and accomplishement of which they are capable.

Proper identification of gifted pupils is essential. To ensure accuracy in identification, it is necessary to use multiple criteria which recognize varied facets of a pupil's gifts. Criteria for identification shall include potential abilities as determined by qualified individuals, or other valid means such as: peer, self, teacher, parent, or citizen nomination. The abilities may be found singly or in combination in either academic or visual and performing areas.

Differentiated educational programs designed to meet the needs of gifted pupils may follow one or more of several models. Each model is appropriately designed to enhance the abilities of the pupils and to complement the activities and experiences provided generally within the regular program. Each school district shall determine the most feasible model to use in the education of its gifted pupils based upon its recognition of their needs and abilities. Regardless of the model selected, it must be recognized that programs for the gifted shall be qualitatively different from those offered to the majority of the pupil population.

KINDERGARTEN

Course Descriptions and Program Requirements

The kindergarten program provides opportunities for children to experience growth in the areas of cognitive, physical and affective development. The environment is one which promotes a positive self-image, communication skills, and a positive attitude toward learning. Handicapped children of kindergarten age are included in regular or special kindergarten programs.

Learning experiences stressing cognitive growth are concrete and utilize extensive manipulative materials. Physical activities, which help develop large and small muscles, are also a major concern in kindergarten programs.

Whether programs follow the one-half day or all-day schedule, consideration is given to the developmental characteristics of the five-year old. Accordingly, the schedule reflects a balance of active and quiet periods, structured and non-structured learning situations, and child-directed and teacher-directed activities.

Experiences are integrated in the following areas:

LANGUAGE ARTS - The language experience approach is utilized in developing skills in oral communication; auditory and visual discrimination; and, memory.

MATH - Experiences in classification, positional relationships, size and shape discrimination, number recognition, and counting are provided with concrete manipulative materials.

SCIENCE - Science experiences develop an awareness of the physical and biological sciences. Environmental awareness activities complement all areas of instruction.

SOCIAL STUDIES - Social studies activities reflect both the child's developing self-awareness and awareness of others. Career and consumer experiences are also included in social studies instruction.

HEALTH AND SAFETY - Basic information relating to safety rules and self-care is stressed.

PHYSICAL EDUCATION - Children at the primary level need to participate in physical activities that will help them manage and control their bodies in a wide variety of experiences involving locomotor, non-locomotor, and manipulative skills. These movement experiences include large muscle activities such as running, climbing, bending, stretching, throwing, catching, and kicking, and opportunities to learn and practice these motor skills are provided in rhythms, gymnastics, and games. Based upon the characteristic needs of these children, implications for the physical education program include: frequent change of activity and frequent rest periods; affection, praise, and

encouragement from adults; and, opportunities to plan and work with other children.

Daily experiences in all areas of creative expression, i.e., art, music, and dramatic play, are provided.

Teacher Certification for Kindergarten:

KGT Endorsement for Kindergarten Classroom Teaching
PKB Provisional Certificate for Kindergarten Teacher
PKE Provisional Certificate for Early Childhood Education
SKE Standard Certificate for Early Childhood Education
Certification for elementary classroom teaching issued initially prior September 1, 1971

ACADEMIC COURSE OFFERINGS

ART EDUCATION

COURSE	CODE	K	1	2	3	4	5	6	7	8	9	10	11	12	MAXIMUM HIGH SCHOOL UNITS
Art	2805	X	X	X	X	X	X	X	X	X					
General Art I	2801										X	X	X	X	1
General Art II	2802											X	X	X	1
Specialized Art I	2803												X	X	1
Specialized Art II	2804													X	2

The State Board of Education does not require units in art for high school graduation.

In middle childhood education, art is taught the equivalent of 75 minutes per week minimum.

In elementary education, fine arts are taught separately and/or integrated in the regular program the equivalent of 120 minutes per week minimum.

Course Descriptions and Program Requirements

Of much importance are opportunities for all individuals to develop a keen awareness of themselves and their environment through art experiences. Learning activities are carefully planned to provide a continuous program of constructive, creative experience geared to the individuals' interests. There is not one correct way to teach art; art education must be unique to each school, each group of children, and each individual. Therefore, each teacher must find the most effective way to teach. The major goals in the art education program are:

- -development of aesthetic concepts leading to mature value judgments;
- -understanding of art as an aspect of cultural heritage; and
- -finding satisfying individual expression through a variety of materials and processes.

Elementary Program

The kindergarten child lives in a world of spontaneity, newness, and beauty. Joy is received through touching, tasting, smelling, hearing, and seeing. Art is an important means of communication. Children heighten their curiosity and responsiveness through opportunities to hold, to feel, to examine, and to react to those forms which have high visual and tactile qualities. Skills and techniques are developed through involvement in two-dimensional and three-dimensional expressions which include processes of selecting, arranging, constructing, and decision-making. The child learns to express through the disciplines of drawing, painting, sculpture, printmaking, ceramics, architecture, fabric design, and communication media

(photography, filming, and radio). Also, the child develops aesthetic judgment while sharing work and talking about the art of others. The child comprehends relationships of art to other areas of study such as social studies, literature, music, environmental studies, and to various cultures and times.

By the end of the elementary years the child shall:

-express individual ideas in both two-and three-dimensional art forms using a variety of art media;

-understand concepts involving color, line, shape, texture, and space;

-relate to the principles of design, balance, movement, etc;

-show self-confidence and respect for work;

-demonstrate an awareness of art in the daily environment;

-have an understanding of art as a part of present and past cultures; and

-initiate and work with ideas pertaining to art and art media.

The middle school years are a time in a pupil's life when concepts formed earlier begin to change. The art program must be planned so that it will contribute to both growth and awareness. The middle school pupil is deeply self-centered and, at the same time, eager to relate to others and to become involved in the adult world. The art program can be dynamic when it is related to all aspects of life: human relations, family living, the community, ecology, communications, city planning, and even the question of what one wears to look one's best.

With the new focus on the middle school and the general interest in humanism, the art program cannot be isolated from the mainstream of activity in other subject areas. Art experiences motivate learning experiences in all other areas and, in turn, can enrich these same areas with relevant media. Integrated projects provide opportunities to experience the natural environment in all its qualities of color, sound, movement, texture, fragrance, and space. The pupil is encouraged to explore, discover, experiment, create, and express, with emphasis on individual awareness, aesthetic experience and creativity.

Secondary Program

Frequently, in secondary art programs the curriculum is based entirely on the teachers' own interests and skills. This is not a recommended procedure. A broad offering which meets the needs and interests of all pupils is possible and shall be provided regardless of the teacher's special interest. The design of the program provides instruction that is basic to the whole spectrum of art so that the high school graduate is capable of specializing in the area most appealing. One art form should not hold preference over another. Concepts should be taught so that a foundation for all disciplines can be developed.

The secondary school program should be designed as a continuation of the foundation program. Courses should provide for both two-dimensional and three-dimensional studies with art criticism, art history, and aesthetics supporting and overlapping the entire art program. The program should develop visual sensitivity and aesthetic judgment so that each individual can understand art and relate it to the environment and experience it personally in a changing society. The disciplines of drawing and painting, sculpture, printmaking, ceramics, architecture, fabric design and communication media (photography, filming, and radio) are included.

ELEMENTARY ART 2805

Suggested Grade Level: K-8

Teacher Certification for Elementary School Art 2805:

Grades K-8: For ASIS units any certificate with E80 Endorsement for Elementary School Art; for non ASIS units any certification for elementary school classroom teaching.

Grades 5-6: Certification for middle grades (junior high) with either:
A80 area: art B80 major: art C80 minor: art

Grades 7-8: Any certification with either:
A80 area: art B80 major: art C80 minor: art

Description: The child initially needs an opportunity to express self with many types of materials, but then ordered learning experiences to develop skills and abilities are needed. The course of study includes both two-and three-dimensional activities, and a step-by-step plan for learning the basic theories and vocabulary of art.

GENERAL ART I 2801

Suggested Grade Level: 9-12 Credit: 1

Teacher Certification for General Art I 2801 (ASIS units and basic units):

Any certification with either:
A80 area: Art
B80 major: Art
C80 minor: Art

Description: This course is introductory and exploratory in nature. Units from both two-dimensional and three-dimensional areas are included. The disciplines of drawing, painting, sculpture, printmaking, ceramics, architecture, fabric design and communication media (photography, film, and radio) are introduced.

Activities provide for:

-becoming perceptually aware; seeing art in nature and in the man-made environment;

-understanding the role of art in cultural heritage;

-understanding and using the language of art in criticizing art forms;

-developing skills and techniques for satisfying self-expression;

-acquiring the ability to make aesthetic judgments;

-integrating aesthetic concepts into various areas of study; and

-self-evaluating and developing a good self-concept.

The first offering for credit is designed to include the three major goals of art education identified earlier.

GENERAL ART II 2802

Suggested Grade Level: 11-12 Credit: 1

Teacher Certification for General Art II 2802:(ASIS units and basic units):

Any certification with either:
A80 area: Art
B80 major: Art
C80 minor: Art

Description: A prerequisite to this course is General Art I. Pupils have an opportunity to advance to a higher level of understanding and skill development in the areas introduced in General Art I.

SPECIALIZED ART I 2803

Suggested Grade Level: 11-12 Credit: 1

Teacher Certification for Specialized Art I 2803 (ASIS units and basic units):

Any certification with either:
A80 area: Art
B80 major: Art
C80 minor: Art

Description: Pupils may choose to study in-depth the areas introduced in previous studies. Individualized studies of special interests are encouraged. For example, some pupils may be doing painting while some may be doing ceramics.

SPECIALIZED ART II 2804

Suggested Grade Level: 12 Credit: 1 or 2

Teacher Certification for Specialized Art II 2804 (ASIS units and basic units):

Any certification with either:
A80 area: Art
B80 major: Art
C80 minor: Art

Description: This course provides for advanced studies of individual student interests. Experimental Courses for interdisciplinary projects are encouraged. See Art Education Guidelines for additional information.

CAREER DEVELOPMENT

COURSE	CODE	11	12	MAXIMUM HIGH SCHOOL UNITS
Career Development I	2910	X		1
Career Development II	2911		X	1

Course Descriptions and Program Requirements

CAREER DEVELOPMENT I 2910

Suggested Grade Level: 11 Credit: 1

Teacher Certification for Career Development I 2910:

Certification for secondary school classroom teaching

Description: This course is designed to prepare pupils for the world of work by providing an opportunity for skills development in four major areas: (1) basic academic skills (remediation will be emphasized in noted areas of deficiency); (2) employability and functional life skills; (3) career choice skills; and (4) career knowledge skills (as gained through a variety of resources including but not limited to actual work experience, job simulation, shadowing, field trips, and guest speakers).

As a part of classroom instruction, pupils establish an individualized learning plan by reviewing an approved list of employability and functional life skills and determining the areas in which they have the greatest need. Using this information, the pupil (with the teacher's approval) adopts a series of learning objectives to be reached during the course. The pupil and teacher assign a set of learning activities which are directed toward the successful completion of each objective selected. In addition, a starting date is assigned to each learning activity, and the teacher notes the ending date of each activity as it is satisfactorily completed.

Decisions for placement in a work-experience site are based on assessment of the pupil's aptitudes, expressed interest, prior experiences, abilities, and maturation level. Prior to each placement, an employability plan is prepared by each pupil in cooperation with the teacher and/or the work site supervisor (employer). Pupils rotate to new work experience sites at least once every nine weeks. (There may be several work experience sites located within each business or agency; therefore, pupils may be permitted to remain within the setting for a longer period of time if their employability plan reflects opportunity for new learning experiences). Pupils are evaluated by their work site supervisor after each placement and, where applicable, these evaluations may be utilized by the teacher in assigning grades.

In addition to the individualized guidance and counseling that each pupil receives during the processes of assessment, work site selection, and the development and completion of learning objectives, opportunities are provided for participation in group guidance activities. The purpose of

these activities is to enhance the pupil's social, personal, and communication skill development.

While not mandatory, pupils may receive some form of remuneration for their work experiences. The ratio of classroom instruction to laboratory experience (work experience sites) may be flexible as long as the following criteria are met:

1. sufficient time is devoted to classroom instruction and counseling in order to meet the first three components outlined in the description for this course;

2. the number of hours the pupil spends at the work site does not violate applicable Child Labor Laws;

3. pupils receiving wages or stipends from funds derived from federal legislation are allowed to spend the required number of hours outlined by federal guidelines as long as such activity does not violate the other criteria as outlined in this description;

4. the total time the pupil spends in classroom instruction and laboratory experience equals at least 175 hours; and

5. pupils may fullfill all or a portion of their required laboratory experience after school and/or on weekends if prior approval is obtained from the local board of education.

CAREER DEVELOPMENT II 2911

Suggested Grade Level: 12 Credit: 1

Teacher Certification for Career Development II 2911

Certification for secondary school classroom teaching

Description: This course is a continuation of Career Development I as described above with the exception that the learning objectives for each pupil are progressively more complex in this second year program. Career Development I is a prerequisite for enrollment in Career Development II.

DRIVER AND TRAFFIC SAFETY EDUCATION

COURSE	CODE	10	11	12	MAXIMUM HIGH SCHOOL UNITS
Driver and Traffic Safety Education	2840	X	X	X	½

Course Descriptions and Program Requirements

Secondary Program

Driver and traffic safety education affords pupils the minimum performance capabilities for operating motor vehicles and helps them learn to make wise decisions and to become responsible drivers.

DRIVER AND TRAFFIC SAFETY EDUCATION 2840

Suggested Grade Level: 10-12 Credit: ½

Teacher Certification for Driver and Traffic Safety Education 2840:

Any certification with S84 Endorsement for Driver Education

Description: This course provides classroom and laboratory experiences designed to enable motor vehicle operators to become safe and efficient highway users. Also, the pupils acquire knowledge about the highway transportation system so that they may contribute to its improvement.

The ultimate goal of traffic safety education is to enable drivers to operate their vehicles safely, efficiently, and responsibly. Each pupil should pass minimum performance levels as outlined in the Driver and Traffic Safety Education Guide, Kentucky Department of Education.

In order to receive an instruction permit or an operator's license, the pupil must be at least 16 years old. If the pupil is 16 or 17 years old, the pupil's father or mother must sign the application. If this is not possible, one of the following persons (in the order named) must sign the application: guardian, employer, or other person willing to assume the obligation. The obligation is that the person signing becomes liable with the minor for any damages caused by negligence while the pupil is operating a motor vehicle. Also, persons 16, 17, and 18 years of age are required to present a birth certificate as proof of age when applying for an instruction permit.

ENGLISH AS A SECOND LANGUAGE (ESL)

COURSE	CODE	1	2	3	4	5	6	7	8	9	10	11	12	MAXIMUM HIGH SCHOOL UNITS
Elementary ESL	2311	X	X	X	X	X	X	X	X					
ESL I	2312									X	X	X	X	1
ESL II	2313									X	X	X	X	1
ESL III	2314									X	X	X	X	1
ESL IV	2315									X	X	X	X	1

English as a Second Language (ESL) may be substituted for English I, II, III, and/or IV in school programs where ESL is offered for credit.

Course Descriptions and Program Requirements

English as a Second Language (ESL) is a sequential course of study which teaches English vocabulary and structures using second/foreign language teaching techniques. Instruction includes the development of skills in listening, speaking, reading, and writing in English.

English as a Second Language is offered to speakers of other languages who have limited or no ability to speak, read, and/or write in English.

There are growing numbers of elementary and secondary children who come from other countries. Pupils whose native language is other than English and who have difficulty speaking, reading, writing or understanding the English language are identified as having limited English proficiency (LEP).

These pupils shall be screened to identify those who must be administered an English language proficiency test. This preliminary screening focuses on the English reading level of the pupils. Pupils below the established district reading norm as measured by standardized tests or other objective indicators shall be administered an English language proficiency test to determine what skill areas need remediation.

In order to ensure equal educational opportunities to the limited English proficient pupil, services must be offered that are designed to improve the English language proficiency of that pupil. Such services supplement the regular school curriculum and are designed to improve English language proficiency. Types of services may include a sequential program of instruction by grade level, supplemental instruction, work with aides/ tutors, and individualized instruction in the classroom.

Sufficient numbers of LEP pupils in a school will warrant the establishment of a sequential ESL program taught by a certified ESL teacher. A sequence of skills development in ESL has been published by the Department of Education entitled Skills Continua. The skills continuum for ESL appears in chart form and is divided into four skill areas: listening comprehension, speaking, reading, writing, as well as culture and grammatical structure.

Elementary Program

Individualized instruction by the regular classroom teacher and/or a tutor who may be a reading teacher or employed specifically for tutorial assistance is usually the mode of instruction in schools where there is a small enrollment of limited English proficient (LEP) pupils, and/or where pupils indicate some proficiency in English. Services to the LEP pupil in these situations shall include instruction in the four skill areas of listening comprehension, speaking, reading, and writing in the English language and/or tutorial help in reviewing and preparing assignments in the other courses or subjects that the pupil is taking.

Where larger numbers of LEP pupils justify the inclusion of a basic classroom unit in ESL, an elementary certified teacher shall have an endorsement in ESL in order to provide a sequential program of instruction. Such a program must include the four skill areas of listening comprehension, speaking, reading, writing, as well as the culture and grammatical structure of the English language.

Secondary Program

In school programs for limited English proficient (LEP) pupils where English as a second language (ESL) is offered for credit and/or in lieu of the usual graduation requirements in English, a secondary school teacher shall have an endorsement to teach ESL and be certified to teach English or any foreign language. Such a program of instruction shall include the four skill areas of listening comprehension, speaking, reading, writing, as well as culture and the grammatical structure of the English language.

Schools with small numbers of LEP pupils and/or where such pupils indicate some proficiency in English services may be limited to supplementary instruction in the four basic skills of listening comprehension, speaking, reading, and writing in the English language and/or tutorial help in reviewing and preparing assignments in the other courses that the pupil is taking.

NOTE: LEP pupils in grades 9-12 may earn up to four units of credit in ESL in place of the required English units for high school graduation. However, if no sequential program is offered by a certified ESL teacher, tutorial assistance may be provided. With this particular mode of instruction, pupils would not earn units of credit in ESL.

ELEMENTARY ESL-2311

Suggested Grade Level: 1-8

Teacher Certification for ESL 2311:

Any certification with E36: Endorsement for teaching English as a second language grades 1-8

Description: The elementary program in English as a Second Language (ESL) offers a sequential course of study which teaches English vocabulary and structures using second/foreign language teaching techniques, and it

includes instruction in the four skill areas of listening comprehension, speaking, reading, writing, as well as the culture, customs, and traditions of the American people.

ESL I - 2312

Suggested Grade Level: 9-12 Credit: 1

Teacher Certification for ESL 2312:

Certification with S36: Endorsement for teaching English as a second language grades 7-12

Description: The development of the four basic language skills is stressed: listening comprehension, speaking, reading, and writing. Also emphasized are the culture, customs, and traditions of the American people.

ESL II - 2313

Suggested Grade Level: 9-12 Credit: 1

Teacher Certification for ESL 2313:

Certification with S36: Endorsement for teaching English as a second language grades 7-12

Description: Level II continues development in the four basic language skills: listening comprehension, speaking, reading, and writing. Emphasis continues on the culture, customs, and traditions of the American people.

ESL III - 2314

Suggested Grade Level: 9-12 Credit: 1

Teacher Certification for ESL 2314:

Certification with S36: Endorsement for teaching English as a second language grades 7-12

Description: Level III continues development in the four basic language skills: listening comprehension, speaking, reading, and writing. Emphasis continues on the culture, customs, and traditions of the American people.

ESL IV - 2315

Suggested Grade Level: 9-12 Credit: 1

Teacher Certification for ESL 2315:

Certification with S36: Endorsement for teaching English as a second language grades 7-12

Description: Level IV continues development in the four basic language skills; listening comprehension, speaking, reading, and writing. Emphasis continues on the culture, customs, and traditions of the American people.

FOREIGN LANGUAGES

COURSE	CODE	1	2	3	4	5	6	7	8	9	10	11	12	MAXIMUM HIGH SCHOOL UNITS
French	2421-2425	X	X	X	X	X	X	X	X	X	X	X	X	4
German	2441-2445	X	X	X	X	X	X	X	X	X	X	X	X	4
Hebrew	2481-2485	X	X	X	X	X	X	X	X	X	X	X	X	4
Latin	2411-2415	X	X	X	X	X	X	X	X	X	X	X	X	4
Russian	2451-2455	X	X	X	X	X	X	X	X	X	X	X	X	4
Spanish	2431-2435	X	X	X	X	X	X	X	X	X	X	X	X	4

Course Descriptions and Program Requirements

Language is a primary system of communication because man is a social being. No individual, county, state, or nation can be a completely independent entity in our highly interdependent world. Consequently, Kentucky pupils must have access to multilingual education in order to expand their social understanding and their cultural experiences beyond the confines of a single culture.

Knowledge of the native language alone may not suffice in our increasingly multicultural society. Pupils need experiences that assure them the competencies to attain self-fulfillment, to express ideas, and to increase opportunities for employment. Second language study provides a wealth of enriching and liberating humanistic experiences.

The College Entrance Examination Board provides guidelines for the Advanced Placement Courses, any of which may be included in or substituted for the regular Level III, Level IV, and Level V courses in French, German, Latin, and Spanish. These programs are recommended for gifted pupils. Teachers must have a language major to teach these courses.

A sequence of skills development in Foreign Language has been published by the Department of Education entitled Skills Continua. The skills continuum for foreign language appears in chart form and is divided into four skill areas: listening comprehension, speaking, reading, writing, as well as culture and grammatical structures.

Elementary Program

A sequential program stressing language skills development is encouraged at whatever level the program is initiated, whether at the elementary or middle school level. However, if this program cannot be offered, foreign language instruction may take the form of short-term exploratory courses in the various languages immediately prior to the initiation of a sequential program. Such an exploratory course does not stress language skills development, but instead creates an awareness of a foreign culture by introducing pupils to its peoples, customs and ideas, as well as conversational expressions.

Elementary and middle school foreign language instruction capitalizes for educational purposes, on the natural capacities of children for imitating and assimilating the sound and structure systems of a second language with a

minimum of interference from the native language. Initial instruction of foreign language in the elementary school, therefore, focuses on the development of listening comprehension, and speaking facility. Reading and writing are not stressed until pupils have demonstrated facility in listening and speaking. Teaching techniques are adapted to the developmental levels of the pupils and content is selected to provide a high degree of correspondence to their natural interests. The use of professionally developed audio materials or a good instructional television program is encouraged.

Secondary Program

The development of the four basic language skills -- listening comprehension, speaking, reading, and writing -- is stressed. The program also includes materials and teaching strategies which direct the pupil toward developing a facility for analyzing and interpreting the culture and traditions of a country and its people against the background experiences of the pupils own environment. The practical, intellectual, and aesthetic values of language learning are made evident to the pupil.

Foreign languages may be offered as year-long courses or as a series of sequential short-term courses ranging in length, for example, from nine to eighteen weeks, thus providing a rich variety of experiences to accommodate the varying abilities, needs, and interests of middle school pupils.

Pupil-centered activities are utilized to develop conversational skills, cultural awareness, and linguistic proficiency. Diverse approaches to foreign language teaching such as the use of minicourses, career oriented courses, interdisciplinary courses, learning activity packets, multi-level materials, individualized instruction, independent study, credit by examination, advanced placement, multisensory equipment and materials, and pupil exchange programs provide opportunities to meet the needs and interests of all pupils in Kentucky. A Level V program may be offered to gifted pupils in grade 12 who completed Level I of a language in the 7th and/or 8th grade and desire to continue study in the same language through grade 12.

A well-developed foreign language program also encourages pupils to participate at regional and state festivals, in national written examinations, language clubs and honor societies; to engage in personal and business correspondence with native speakers; to visit and live among people who use the language; and to organize programs which focus on the target culture's holidays, celebrations, and ethnic traditions. Such programs provide opportunities for authentic use of the language. Varied approaches and highly interesting activities in foreign language instruction provide unique opportunities and challenges for pupils to develop competencies in communication and to gain new insights into cultural diversity.

Pupils who begin the study of a foreign language at the high school level are encouraged to study it a minimum of three years, if proficiency in the language is a goal.

LEVEL I

Suggested Grade Level: 7-12 — Credit: 1 (grades 9-12)

French I 2421	Hebrew I 2481	Russian I 2451
German I 2441	Latin I 2411	Spanish I 2431

Description: The development of the four basic language skills is stressed: listening comprehension, speaking, reading, and writing. Also emphasized are the culture, customs, and traditions of the people whose language is studied.

The course may be offered in grades 7-8 as a two-year course, or as a one-year course in the eighth grade without credit. However, pupils who successfully complete this course in the 8th grade shall enroll in Level II of the language in the 9th grade for credit.

LEVEL II

Suggested Grade Level: 9-12 — Credit: 1

French II 2422	Hebrew II 2482	Russian II 2452
German II 2442	Latin II 2412	Spanish II 2432

Description: Level II in the various languages continues development in the four basic language skills: listening comprehension, speaking, reading, and writing. Emphasis continues on the culture, customs, and traditions of the people whose language is studied.

LEVEL III

Suggested Grade Level: 10-12 — Credit: 1

French III 2423	Hebrew III 2483	Russian III 2453
German III 2453	Latin III 2413	Spanish III 2433

Description: Level III in the various languages continues development in the four basic language skills: listening comprehension, speaking, reading, and writing. Emphasis continues on the culture, customs, and traditions of the people whose language is studied. An introduction to literary readings is offered.

LEVEL IV

Suggested Grade Level: 11-12 — Credit: 1

French IV 2424	Hebrew IV 2484	Russian IV 2454
German IV 2444	Latin IV 2414	Spanish IV 2434

Description: Level IV in the various languages continues development in the four basic language skills: listening comprehension, speaking, reading, and writing. Emphasis continues on the culture, customs, and traditions of the people whose language is studied. The study of literary readings continues.

LEVEL V

Suggested Grade Level: 12 — Credit: 1

French V 2425	Hebrew V 2485	Russian V 2455
German V 2445	Latin V 2415	Spanish V 2435

Description: Level V is recommended for gifted pupils who began their study of language in the 7th and/or 8th grade and desire to continue study in the same language in grades 9 through 12. The study of language and literature continues.

CERTIFICATION FOR LEVELS I-V

Teacher certification with an area or major in the specific language to be taught is required for Levels I, II, III, IV, and V:

A40 area:	foreign languages	B48 major:	Hebrew
A42 major:	French	B45 major:	Russian
A44 major:	German	B43 major:	Spanish
		B41 major:	Latin

In addition, grades 7-9, certification for middle school (junior high) with J40 junior high major: foreign languages.

Additional certification options for Levels I, II:

C42 minor:	French	C41 minor:	Latin
C44 minor:	German	C45 minor:	Russian
C58 minor:	Hebrew	C43 minor:	Spanish

Note: It is recommended that teachers have a major in the specific language to be taught for Level III and Level IV.

Teachers for Level V must have an area of concentration or a major in the specific language to be taught.

HEALTH EDUCATION

COURSE	CODE	K	1	2	3	4	5	6	7	8	9	10	11	12	MAXIMUM HIGH SCHOOL UNITS
Health and Safety	2851	X	X	X	X	X	X	X	X	X	X				½
Contemporary Health Issues	2852											X	X	X	1
Education for Exceptional Children: Functional Health and Safety											X				½

The State Board of Education requires one-half unit in health for high school graduation.

In middle childhood education, health, including safety, is taught separately and/or integrated in the regular program the equivalent of 60 minutes per week minimum.

In elementary education, health, including safety, is taught separately and/or integrated in the regular program the equivalent of 60 minutes per week minimum.

Course Descriptions and Program Requirements

Elementary Program

Health instruction is required in grades K-8. Safety instruction is an integral part of the health instruction program. In the kindergarten and primary grades, health and safety instruction guides the children in developing desirable health attitudes and knowledge through everyday experiences in a healthful environment. In the fourth, fifth, and sixth grades, in addition to necessary health guidance, instruction assists pupils in becoming increasingly aware of the value of community, personal, and family health. In the 4th, 5th, 6th grades, instruction is provided to pupils to make them aware of the value of community, personal, and family health. Also included in instruction is health guidance.

Secondary Program

Health instruction is based on the concept that health deals with physical, mental and social well-being. It is multidisciplinary in nature, its content largely derived from medicine, public health, and the physical, biological, and social sciences. Its scope is broad, covering such diverse areas as: the nature of disease; the complexity of nutrition; effects of radiation; behavioral aspects of accident prevention; an understanding of health and medical care programs; the significance of international health problems; alcoholism; drug abuse; the selection of health products and services; environmental issues; community health services; foundations of mental health; and, preparation for marriage and parenthood. The course content is practical and related to the daily lives of pupils.

HEALTH AND SAFETY 2851

Suggested Grade Level: K-9 Credit: ½

Teacher Certification for Health and Safety 2851:

Grades 1-8: Any certification for elementary school classroom teaching

Grades 5-9: Certification for middle grades (junior high) with either:
J54 junior high major: biology-health
C89 minor: health

Grades 7-12: Any high school certification with either:

A86 area:	health-physical education-recreation	B85 major:	health-safety
B87 major:	health-physical education	C87 minor:	health-physical education
B89 major:	health	C89 minor:	health

Description: This course emphasizes the use of health values in decision-making. The curriculum content includes alcoholism, drug abuse, personal hygiene, accident prevention, family living, environmental health, nutrition, venereal disease, and consumer health.

CONTEMPORARY HEALTH ISSUES 2852

Suggested Grade Level: 10-12 Credit: 1

Teacher Certification for Contemporary Health Issues 2852:

Any certification with either:
A86 area: health-physical education-recreation
B87 major: health-physical education
B89 major: health
B85 major: health-safety
C87 minor: health-physical education
C89 minor: health

Description: This is an elective course focusing on current health problems or areas of interest. Examples of topics that could be included are: venereal disease, preparation for marriage and parenthood, air/water pollution, drug use and addiction, nutrition, community health services, and consumer education. In addition to current issues discussed, the course emphasizes a variety of topics such as value clarification, dealing with aggressive behaviors, decision-making skills, life-coping skills, and other issues which possibly could provide a reduction in many of our contemporary health problems.

A variety of instructional approaches are used when implementing this elective course. Consideration is given to phase-electives, modular and

mini-courses, and other innovative methods together with the standard yearly or semester course. An example of the modular approach is to define nine contemporary health issues and, of these, select six to study in depth. The Contemporary Health Issues course may serve as an elective providing a maximum of one additional credit in health education.

EDUCATIONAL COURSES FOR EXCEPTIONAL CHILDREN

FUNCTIONAL HEALTH AND SAFETY

Suggested Grade Level: 9 Credit: ½

Teacher Certification for Functional Health and Safety:

Certification in some category of special education for the secondary school grades.

Description: This course will emphasize development and maintenance of good physical and mental health. Included are the effects of proper food, exercise and rest upon personal appearance, vitality, and well being. Proper care of skin, hair, nails, teeth, eyes, and ears is stressed. Preparation for marriage and parenthood, and the effects of drug and alcohol abuse will be covered.

This course also emphasizes safety and common sense practices in the home, school and community, including appropriate behaviors. Safe driving habits, first aid, prevention of accidents, how to seek assistance in emergencies, and what to do in disaster or life-threatening situations are also covered.

LANGUAGE ARTS

COURSE	CODE	1	2	3	4	5	6	7	8	9	10	11	12	MAXIMUM HIGH SCHOOL UNITS
Elementary Language Arts	2305	X	X	X	X	X	X	X	X					
English I	2301									X				1
English II	2302										X			1
English III	2303											X		1
English IV	2304												X	1
Composition	2322									X	X	X	X	4
Oral Communication	2331									X	X	X	X	1
Journalism	2321									X	X	X	X	2
Dramatics	2351									X	X	X	X	2
Reading	2310									X	X	X	X	4
Media	2306									X	X	X	X	1
Education for Exceptional Children:														
Functional English I										X				1
Functional English II											X			1
Functional English III												X		1

The State Board of Education requires three units in language arts (inclusive of English I, II, and III or their short-term equivalents) for high school graduation. Other language arts courses may serve as a fourth English credit or as an elective.

NOTE: English as a Second Language (ESL) may be substituted for English I, II, III, and/or IV.

In middle childhood education, language arts is taught 60 minutes per day minimum.

In elementary education, language arts is taught 150 minutes per day minimum.

Course Descriptions and Program Requirements

Elementary Program

The language arts program develops the expressive and receptive behaviors comprising effective communication in the life experience of individuals. The program is based upon nurturing the thinking processes and applying the communication behaviors in the areas of self-care, social functioning, vocational capability, academic achievement, and aesthetic appreciation. Upon completion of the planned developmental language arts program in the elementary school, each individual should have acquired both the ability and desire to communicate effectively.

The language arts program aims to develop the skills of literacy (reading, writing, speaking, listening, thinking, and observing) and to increase each

pupil's confidence, pleasure, and creativity in practicing these skills. The various facets of this program are offered as interdependent and correlated studies, planned to increase competence through a deliberate balance in content and in skills.

Every elementary language arts program incorporates the skills of reading, writing, spelling, listening, and speaking at every grade level through a sequential plan based on diagnostic-prescriptive techniques designed to meet the specific needs of each pupil. A consistent management/monitoring system for tracking each pupil's progress in language arts is used throughout the pupil's school years, 1-12.

A variety of approaches is used to teach reading including, but not limited to, sight words, language experience, phonics, basal readers, and content area texts. In addition, a variety of teaching strategies such as small and large group instruction, team teaching, tutoring, cross-grade instruction, and cross-curricular instruction are used for teaching the various language arts skills.

Secondary Program

A minimum of three units of English is required, but four units are recommended and may be required by a local district. Each school district shall be responsible for planning its own program based on a careful study of its courses, its community, and its pupils. To provide a rich variety of experiences to accommodate the varying abilities, needs, and interests of pupils, year-long courses, short-term courses, or a combination of both may be offered. From the year-long course (36 weeks), the pupil earns one unit of credit. Short-term and/or phase-elective courses yield credit proportional to their length. Courses designed by individual schools or school districts to satisfy other desired goals are encouraged. These courses, however, shall be approved by the State Board of Education.

Regardless of the design, the thrust of the program shall be language, reading, composition and literature. In local districts where a phase-elective program is offered, provisions are made to ensure that pupils select a variety of substantial courses with an appropriate mix of both literature and composition. To further ensure the quality of all English courses, the basic areas of reading, writing, listening, and speaking are incorporated into each and every course offering, regardless of the specific content involved. In addition, the curriculum provides instruction in the receptive and expressive uses of nonverbal communication, media utilization, and dramatic expression. To provide greater opportunities for pupil success and satisfaction, a variety of instructional approaches is used in the classroom when implementing a language arts program.

Reading, which underlies the entire school experience, is planned as a continuing program that reinforces and extends those skills previously acquired. Although all pupils with reading problems are given assistance prior to the 9th grade, it must be remembered that the acquisition of

reading skills is a life-long process. In the event that pupils at the secondary level are still having reading difficulties, an effort is made to plan courses to meet the individuals' reading needs. Reading instruction is reality-based, utilizing print materials from all content areas and aiding in the development of thinking and study skills that underlie effective learning. Provision is made for meeting the reading needs of pupils with varied levels of proficiency including developmental, recreational, accelerated, remedial, corrective, and survival skill needs.

Literature is of aesthetic and humanistic value and also serves to promote skill development. Language studies stress not only the systematic nature of language but also the dynamic essential role it plays in human affairs. The composing process encourages freedom of fluency in expression, then builds toward increased control over content and form. Studies in media focus on the expanded techniques of communication, such as radio, television, and film, to examine both their methods and effectiveness. Additionally, a humanities course which examines literature in a social and historical context may be considered a language arts class. Upon completion of the planned developmental language arts program, each individual should have acquired both the ability and the desire to communicate effectively.

ELEMENTARY LANGUAGE ARTS 2305

Suggested Grade Level: 1-8

Teacher Certification for Elementary Language Arts 2305:

Grades 1-8: Any certification for elementary classroom teaching

Grades 5-8: Certification for the middle grades (junior high) with
J30 junior high major: English-Communications

Grades 7-8: Any certification with either:
A30 area: English
B30 major: English
C30 minor: English

Description: The elementary language arts program strives for the global goal of effective communication among human beings and the narrower goals of specific skill acquistion in reading, writing, spelling, listening, and speaking. A total language process is stressed and the interdependence of all language skills realized.

The foundation of the entire language arts program is established prior to the child entering school because attainment of any skill depends on the

child's acquisition of an oral language base. Once the child enters school, the oral language base must be refined and broadened through the prereading skills of auditory perception, visual perception, and speaking and listening activities. The language base expands through a variety of word recognition techniques, and comprehension in all communication forms results.

Reading expertise grows throughout grades 1-6 as the pupil learns phonetic analysis and structural analysis, broadens sight word vocabulary, and develops context clues strategies. Skills for "unlocking" new words must not be taught in isolation, for reading is not merely the ability to call words; it is understanding printed material. Comprehension, therefore, must be stressed in oral and silent reading, as well as in listening, speaking and writing.

A child's language arts development is sequential. First, the child hears a word and through experience learns its meaning. Next, the child says the word and correctly utilizes it in context. This usage enables reading and comprehending from print. Finally, the child can correctly utilize the word in a written context. When a child first begins to write, fluency and meaning are stressed. Refinements in spelling, grammar and usage are progressive steps taken throughout elementary school. The child progresses from simple sentence writing in 1st grade to multi-paragraph reports and stories in the 6th.

The middle school years are a time to assess which language arts competencies each pupil has acquired and to prepare for the communication skill application required in all high school content specific classes. During this time, the pupils' abilities to listen, speak, read, and write are refined. This is the time to remediate pupils whose reading skills are not sophisticated enough for application to content textbooks.

A pupil's understanding and appreciation of literature grow in the middle school years. Pupils must also be taught how to make the transition from fictional basal readers to non-fiction print materials. They must refine their thinking and study skills for the move to departmentalized learning. In essence, the middle school curriculum helps the pupil broaden all communication/language skills so they can be applied in a variety of contexts and integrated into all areas of experience, both in and out of school.

To assure that all pupil's needs are met, a sequential diagnostic-prescriptive program in the language arts must be implemented in each grade. A management/monitoring system is used to track each individual's progress. Finally, a variety of approaches and modalities must be integrated into the curriculum, 1-8.

ENGLISH I 2301

Suggested Grade Level: 9 Credit: 1

Teacher Certification for English I 2301:

Any certification with either:
A30 area: English
B30 major: English
J30 junior high major: English-Communications
C30 minor: English

Description: This course is built upon pupils' language art abilities gained in the elementary and junior high program. Content includes basic types of literature, a formal grammar sequence, and oral and written composition. A speech unit is also suggested.

Additionally, 9th graders reading two or more years below grade level receive individualized reading instruction in accordance with the 9th grade reading program guidelines. This course may be taught as a full year course or divided as one semester each of literature and composition. The major emphasis is on determining and improving skill levels of individuals in reading, oral/written composition, and understanding/appreciation of literature.

ENGLISH II 2302

Suggested Grade Level: 10 Credit: 1

Teacher Certification for English II 2302

Any certification with either:
A30 area: English
B30 major: English
C30 minor: English

Description: This course helps all pupils continue building skills in English language arts. Content includes: oral and written composition; literature, including essays and short stories; and a journalism unit. This course or divided as one semester each of literature and composition. The major emphasis is on increasing competence and confidence in writing/speaking and in reading/interpreting literature.

ENGLISH III 2303

Suggested Grade Level: 11 Credit: 1

Teacher Certification for English III 2303:

Any certification with either:
A30 area: English
B30 major: English
C30 minor: English

Description: This course continues to develop pupils' competencies in the skill areas of language arts. Content includes instruction in oral and written composition; study skills, and reference and research techniques; and exploration of literary genres, cultural heritage, and literary appreciation which focuses upon American literature. The course may be taught as a full year course or divided into a semester each of literature and composition. Special emphasis is placed upon the historical significance, understanding, and appreciation of American literature, and improvement of speaking and writing skills.

ENGLISH IV 2304

Suggested Grade Level: 12 Credit: 1

Teacher Certification for English IV 2304:

Any certification with either:
A30 area: English
B30 major: English
C30 minor: English

Description: This course offers continued refinement of pupils' abilities in skills of language arts. Content includes appropriate experiences in oral and written composition and continued sophistication in language use such as recognition of propaganda. Exploration of literary genres, cultural heritage, historical significance, and literary appreciation focus on English or World Literature. This course may be taught as a full year course or divided as one semester each of literature and composition. The major emphasis is on English/world literary heritage and techniques of oral and written communication.

COMPOSITION 2322

Suggested Grade Level: 9-12 Credit: 1

Teacher Certification for Composition 2322:

Grade 9: Any certification with either:
A30 area: English
B30 major: English
C30 minor: English
J30 junior high major: English-Communications

Grades 10-12: Any certification with either:
A30 area: English
B30 major: English
C30 minor: English

Description: This course is taught systematically, following a definite sequence (from year to year) to assure coverage and practice of all necessary skills and to avoid needless repetition. Although a variety of approaches may be utilized to organize a sequential program, several essential components must be included. The fundamental skills of language mechanics, spelling, vocabulary usage, and organizational abilities lead to basic sentence and paragraph construction. In addition, pupils receive instruction in various types of writing, including functional, academic, and creative composition.

ORAL COMMUNICATION 2331

Suggested Grade Level: 9-12 Credit: 1

Teacher Certification for Oral Communication 2331:

Any certification with either:
A30 area: English
B30 major: English
B33 major: Speech
B34 major: Dramatics-Speech
C30 minor: English
C33 minor: Speech
C34 minor: Dramatics-Speech

Description: This class encompasses some training in areas of small-group dynamics, listening skills, critical analysis of oral and non-verbal messages, oral interpretation of literature, information-gathering techniques, and physical training of body and voice. Because speech, a social act, is so closely related to human psychology and sociology, speech education also focuses on the study of interpersonal relationships and verbalization to represent thoughts and feelings.

JOURNALISM 2321

Suggested Grade Level: 9-12 Credit: 2

Teacher Certification for Journalism 2321:

Any certification with either:
A30 area: English
B30 major: English
B32 major: Journalism
C30 minor: English
C32 minor: Journalism

Description: This course introduces the unique characteristics of journalistic expression. Content includes writing, editing, and proofreading of articles for use in mass media. The course may include the writing of editorials, features, news articles, sports articles, and magazine articles. The writing and publishing of newspapers and writing copy for yearbooks may be included. Some history of journalism and its historical and cultural impact is included.

DRAMATICS 2351

Suggested Grade Level: 9-12 Credit: 1

Teacher Certification for Dramatics 2351:

Any certification with either:
A30 area: English
B30 major: English
B35 major: Dramatics
B34 major: Dramatics-Speech
C30 minor: English
C35 minor: Dramatics
C34 minor: Dramatics-Speech

Description: This course provides pupils with details of drama as a type of literature. Content includes the major types and styles of dramatic literature, including tragedy, comedy, melodrama, classicism, romanticism, realism, impressionism, and expressionism. The course may explore the philosophic attitude of the dramatist and background on the historical period and the culture of the intended audience. Pupils also are introduced to the art of criticism. Emphasis is placed upon the study of structure, plot, and techniques and character revelation through movement and dialogue in addition to narrative. Stage performances or oral interpretation may serve to enhance the pupil's understanding and appreciation of the works studied.

READING 2310

Suggested Grade Level: 9-12 Credit: 4

Teacher Certification for Reading 2310:

Grade 9: Any certification with either:

A30 area: English
B30 major: English
C30 minor: English
S39 Endorsement for Reading Specialist Grades 7-12 (preferred)
J30 junior high major: English-Communications

Grades 10-12: Any certification with either:

A30 area: English
B30 major: English
C30 minor: English
S39 Endorsement for Reading Specialist Grades 7-12 (preferred)

Description: This class has a two-fold purpose. First, it corrects deficiencies in reading which interfere with pupils' expected progress. The content includes on-going diagnostic and remedial activities for individual pupils or groups of pupils, designed to correct and prevent reading difficulties which interfere with expected progress in developing reading study skills in all content areas. Second, it helps pupils develop all aspects of reading proficiency. Content includes learning experiences designed to develop sequentially the various aspects of reading proficiency needed by an adult reader. Individualized programs with materials and pacing suited to each pupil's unique abilities are utilized. This section includes content materials.

MEDIA 2306

Suggested Grade Level: 9-12 Credit: 1

Teacher Certification for Media 2306:

Any certification with either:

A30 area: English
B30 major: English
B32 major: Journalism
C30 minor: English
C32 minor: Journalism

Description: This course helps pupils understand the cultural, historical, and social impact of mass media and the artistic features unique to each medium. Content includes mass media's influence on the communication process and on society in general. Electronic media (radio and television), printed media (newspapers and magazine), and the film are viewed as forms of entertainment, communication, and education. Emphasis is placed upon the various techniques of mass media, and pupil development of basic language arts skills as applied to the various mediums is stressed.

FUNCTIONAL ENGLISH I

Suggested Grade Level: 9 Credit: 1

Teacher Certification for Functional English I:

Certification in some category of special education for the secondary school grades.

Description: This course will assist pupils in the development of oral communication and reading skills. The course will emphasize listening, speaking and sequencing skills, study skills, and the utilization of resources such as the dictionary, encyclopedia, and telephone. Emphasis will continually be placed on individual reading and spelling skills.

FUNCTIONAL ENGLISH II

Suggested Grade Level: 10 Credit: 1

Teacher Certification for Functional English II:

Certification in some category of special education for the secondary school grades.

Description: This course will assist pupils in the development of correct word usage, capitalization, abbreviation, punctuation, and handwriting skills. Included are the generation and writing of ideas into a meaningful sequence. Also to be stressed is the selection of reading materials for information and for pleasure. Emphasis will continually be placed on individual reading and spelling skills.

FUNCTIONAL ENGLISH III

Suggested Grade Level: 11 Credit: 1

Teacher Certification for Functional English III:

Certification in some category of special education for the secondary school grades.

Description: This course will assist pupils in the improvement of written expression skills. Included are written explanations, friendly letters, beginning compositions, writing resumes and completing forms. Emphasis will continually be placed on individual reading and spelling skills.

MATHEMATICS

COURSE	CODE	1	2	3	4	5	6	7	8	9	10	11	12	MAXIMUM HIGH SCHOOL UNITS
Elementary Mathematics	2701	X	X	X	X	X	X	X	X					
General Mathematics	2702							X	X					
Fundamental Mathematics	2705								X	X				1
General Math I	2706									X	X			1
General Math II	2709										X	X	X	1
Pre-Algebra	2718								X					
Algebra I	2710									X	X			1
Algebra II	2711										X	X		1
Geometry	2712									X	X	X		1
Trigonometry	2713											X	X	½
Analytic Geometry	2716											X	X	½
Math Functions	2704											X	X	1
Advanced Math	2703												X	1
Probability and Statistics	2707											X	X	½
Introduction to Computers	2714										X	X	X	1
Computer Math	2715										X	X	X	1
Consumer Math	2717											X	X	½
Calculus	2708												X	1
Business Math	2747										X	X	X	1
Education for Exceptional Children: Functional Mathematics I										X				1
Functional Mathematics II											X			1

The State Board of Education requires two units in mathematics for high school graduation.

In middle childhood education, mathematics is taught the equivalent of 45 minutes per day minimum.

In elementary education, mathematics is taught 60 minutes per day minimum.

Course Descriptions and Program Requirements

Mathematics is a way of thinking, recording, comparing, evaluating, and measuring quantitative relationships, and it is the focal point in the language of communication in the technological world of today. Mathematics plays an increasingly important role in shaping events that affect every human being. Today's schools have moved from teaching mathematics simply as a skill for its own sake to its being essential in understanding our world.

Elementary Program

The elementary mathematics program includes understanding of mathematical concepts, competency in computational skills, and instruction in their application. Emphasis is given to the development of meaning and understanding as a foundation for the mechanical manipulation of numbers. Many firsthand experiences with concrete materials are used to provide the child a basis for understanding numbers and explaining arithmetical processes. Learning mathematics is a gradual developmental process, and concrete experiences to develop understanding precede emphasis on speed and mastery. All schools shall provide instruction in the International Metric System of Measurement. Such instruction may be in addition to the present instruction concerning the system of weights and measures in the schools.

To provide continuity, the planned program is based on a scope and sequence of topics with due consideration given to the individual needs of the child. The Department of Education has developed a mathematics skills continuum which is available upon request. It is suggested that the continuum be used as an example or a model in developing a curriculum based on the needs of the children in the local district.

The National Council of Teachers of Mathematics recommends that problem solving be the focus of school mathematics in the 1980s. Learning to solve problems is the main reason for studying mathematics. Solving word problems in texts is one form of problem solving, but pupils also experience non-textbook problems. Some problems arise from the "pupil's world" and reflect that world in a manner pupils will accept as relevant. Some problems are activity-oriented, i.e., they should make it necessary for a pupil to do something other than be limited to paper-and-pencil activity, such as measuring, collecting data, constructing, experimenting, etc.

The middle school mathematics program provides pupils with many problem solving experiences to exercise, confirm, and further develop all the basic skills learned in previous levels of mathematics. The active experiences are individualized and include exploration, manipulation of objects, experimentation, and interaction with peers, as well as independent investigation and study. Pupils are taught at this level to apply techniques used in one situation to a new and unfamiliar situation.

Pupils in the middle school are in a unique stage of development. An educational environment sensitive to this uniqueness shall be provided. Enhancement of the child's self-concept through planned successful mathematical experiences is a frequent occurrence for each individual in the middle school.

Secondary Program

In the secondary program, the usual progression of coursework is Fundamental Mathematics, General Mathematics I, Algebra I, and either Geometry or Algebra II. Pupils may enter this sequence at any point, depending upon their level of preparation. It is important to note that General Mathematics II is not intended as an introduction to further work but is consumer-oriented and is designed for pupils not likely to pursue a scientific career.

It is strongly recommended that college-bound pupils who envision a career in a scientific discipline take four years of high school mathematics beginning with Algebra I and including Geometry, Algebra II, and Trigometry. Both girls and boys should be encouraged equally to take more mathematics courses in preparation for future mathematics-related career opportunities. Able pupils who plan non-scientific careers should at least take Algebra I and Geometry.

The grade levels recommended for the various courses are not considered rigid requirements. However, these grade levels are indicative of the grade, or grades, from which the vast majority of pupils have reached the preparedness level necessary for the course. Schools that are in a phase-elective program or mini-courses or plan to go into such a program may wish to break these courses outlined into nine or twelve-week modules; or some of the semester courses may be covered in two nine-week or one twelve-week time periods. It is hoped that each school will adapt this program of studies to its own time frame based on needs, interests, and abilities of its pupils.

ELEMENTARY MATHEMATICS 2701

Suggested Grade Level: 1-8

Teacher Certification for Elementary Mathematics 2701:

Grades 1-8: Any certification for elementary classroom teaching

Grades 5-8: Certification for middle grades (junior high) with J71 junior high major: mathematics

Grades 7-8: Any certification with either:
A70 area: mathematics-physical science
B71 major: mathematics
C71 minor: mathematics

Description: Elementary mathematics can be organized into strands. A strand can be thought of as a unifying thread that is woven through the

elementary school program from the 1st through the 8th grade. Examples of these strands are: numeration, number theory, operations on whole numbers, operations on rational numbers, problem solving, calculator skills, computer literacy, geometry, measurement, charts, tables and graphs, probability, statistics and estimation.

GENERAL MATHEMATICS 2702

Suggested Grade Level: 7-8

Teacher Certification for General Mathematics 2702:

Any certification for elementary classroom teaching

Any certification with either:
- A70 area: mathematics-physical science
- J71 junior high major: mathematics
- B71 major: mathematics
- C71 minor: mathematics

Description: General Mathematics at these grade levels is designed to reinforce skills in basic operations learned in elementary mathematics and to allow pupils to explore unfamiliar areas and application of math. Learning opportunities are activity-oriented and are provided in the following basic skill areas: problem-solving; applying math to everyday situations; alertness to the reasonableness of results; estimation and approximation; appropriate computational skills, geometry; measurement; reading, interpreting, and constructing tables, charts, and graphs; and using math to predict.

FUNDAMENTAL MATHEMATICS 2705

Suggested Grade Level: 9 Credit: 1

Teacher Certification for Fundamental Mathematics 2705:

Any certification with either:
- A70 area: mathematics-physical science
- J71 junior high major: mathematics
- B71 major: mathematics
- C71 minor: mathematics

Description: This course is designed for pupils who have not fully grasped the basics of grade school mathematics and need more practice in developing arithmetical skills. Topics may include basic integer arithmetic, prime factorization, greatest common divisor, least common multiple, fractions, decimals, rational and irrational numbers, proportion, percentage, simple and compound interest, metric system (linear measure, volume, weight and temperature), conversion within a system, area of simple plane figures, and volume of simple solids.

In treatment of all these topics, the emphasis is on those skills necessary for an individual to function successfully in today's society.

NOTE: For this course it would be most helpful if pupils could have access to some sort of computing equipment, for example, an inexpensive pocket calculator.

GENERAL MATH I 2706

Suggested Grade Level: 9-10 Credit: 1

Teacher Certification for General Math I 2706:

Grade 9: Any certification with either:
A70 area: mathematics-physical science
J71 junior high major: mathematics
B71 major: mathematics
C71 minor: mathematics

Grades 10-12: Any certification with either:
A70 area: mathematics-physical science
B71 major: mathematics
C71 minor: mathematics

Description: This course is designed for those pupils who have mastered elementary mathematics but not to a sufficient degree of proficiency to attain success in a more abstract course. Topics include a review and extension of those skills listed for Fundamental Mathematics plus a basic introduction to algebra and geometry as commonly encountered in everyday affairs.

NOTE: Inductive reasoning and pattern guessing are useful techniques for teaching the concepts in this course.

GENERAL MATH II 2709

Suggested Grade Level: 10-12 Credit: 1

Teacher Certification for General Math II 2709:

Any certification with either:
A70 area: mathematics-physical science
B71 major: mathematics
C71 minor: mathematics

Description: This course is consumer-oriented and is designed to equip the pupil with the practical applications of mathematics that arise in life situations and careers. Topics may include the metric system, shop mathematics, elementary business mathematics, simple geometric construction, reading and constructing graphs, rectangular coordinates, indirect measurement, and elementary probability and statistics.

PRE-ALGEBRA 2718

Suggested Grade Level: 8

Teacher Certification for Pre-Algebra 2718:

Any certification for elementary classroom teaching

Any certification with either:
A70 area: mathematics-phsyical science
B71 major: mathematics
J71 junior high major: mathematics
C71 minor: mathematics

Description: Pupils enrolled in pre-algebra are provided an opportunity to fully master the basic computational and problem solving skills encountered in earlier grades. In addition, content may include such basic algebraic concepts as the meaning of a variable, use of a variable in a formula, and use of a variable in an applied situation. Mathematical sentences involving both equalities and inequalities are included at this level.

ALGEBRA I 2710

Suggested Grade Level: 9-10 Credit: 1

Teacher Certification for Algebra I 2710:

Grade 9: Any certification with either:
A70 area: mathematics-physical science
J71 junior high major: mathematics
B71 major: mathematics
C71 minor: mathematics

Grades 9-12: Any certification with either:
A70 area: mathematics-physical science
B71 major: mathematics
C71 minor: mathematics

Description: To give pupils an understanding of basic algebra, the concepts, skills, structure, and applications are emphasized. Instruction in number theory, graphs, positive and negative numbers, mathematical sentences, polynomials, and linear equations with one and two variables may be included.

ALGEBRA II 2711

Suggested Grade Level: 10-11 Credit: 1

Teacher Certification for Algebra II 2711:

Any certification with either:
A70 area: mathematics-physical science
B71 major: mathematics
C71 minor: mathematics

Description: In order to provide pupils with detailed knowledge of algebra, emphasis is placed on in-depth development of algebraic functions. Content includes an extension of the material covered in Algebra I. Additional topics may include: mathematics and science, the number system, polynomials, algebraic fractions, exponents and radicals, sets and equations, simultaneous equations and matrices, inequalities, functions and relations, algebraic functions, exponential and logarithmic functions, trigonmetric functions of angles, trigonometric functions of real numbers, analytic geometry, intuitive integration, intuitive differentiation, and hyperbolic functions.

GEOMETRY 2712

Suggested Grade Level: 9-11 Credit: 1

Teacher Certification for Geometry 2712:

Grade 9: Any certification with either:
- A70 area: mathematics-physical science
- J71 junior high major: mathematics
- B71 major: mathematics
- C71 minor: mathematics

Grades 10-12: Any certification with either:
- A70 area: mathematics-physical science
- B71 major: mathematics
- C71 minor: mathematics

Description: In order for pupils to have an understanding of and appreciation for geometric concepts, emphasis is placed on discovery, proof, and application of geometric relationships and principles. Content includes constructions, logic, points, lines, planes, angles, triangles, similarity and congruence, similar polygons, circles, geometric solids, formulas, locus, coordinate geometry, and transformations.

TRIGONOMETRY 2713

Teacher Certification for Trigonometry 2713: Credit: ½

Any certification with either:
- A70 area: mathematics-physical science
- B71 major: mathematics
- C71 minor: mathematics

Description: In order to provide pupils with the background necessary for the advanced study of math or science, emphasis is placed on applications in mathematics, science, and technology. Content includes trigonometric functions, applications, graphs of functions, inverse trigonometric functions, equations, complex numbers, triangle solutions, vectors, and functional properties.

ANALYTIC GEOMETRY 2716

Suggested Grade Level: 11-12

Credit: ½

Teacher Certification for Analytic Geometry 2716:

Any certification with either:
A70 area: mathematics-physical science
B71 major: mathematics
C71 minor: mathematics

Description: To acquaint pupils with analytic geometry, the content includes coordinate systems and lines, conic sections, transformations, and vectors. Pupils also understand and construct proofs.

MATH FUNCTIONS 2704

Suggested Grade Level: 11-12

Credit: 1

Teacher Certification for Math Functions 2704:

Any certification with either:
A70 area: mathematics-physical science
B71 major: mathematics
C71 minor: mathematics

Description: The topics in this course may include work in the area of linear functions, quadratic functions, cubic functions, polynomic functions, rational functions, the absolute value function, the greatest integer function, logarithmic functions, exponential functions, inverse functions, circular and/or trigonometric functions, graphs of functions, mathematical induction, and sequences and series.

NOTE: Where applicable, functions that arise in nature are discussed and studied.

ADVANCED MATH 2703

Suggested Grade Level: 12 Credit: 1

Teacher Certification for Advanced Math 2703:

Any certification with either:
A70 area: mathematics-physical science
B71 major: mathematics
C71 minor: mathematics

Description: The topics for this course include basic logic, properties of groups and fields, sequences and series, algebra of vectors and analytic geometry, relations and functions, complex numbers, graphs, polynomial functions, and exponential and logarithmic functions, matrices as they relate to analytic geometry, space geometry, and probability.

PROBABILITY AND STATISTICS 2707

Suggested Grade Level: 11-12 Credit: ½

Teacher Certification for Probability and Statistics 2707:

Any certification with either:
A70 area: mathematics-physical science
B71 major: mathematics
C71 minor: mathematics

Description: This course is designed to familiarize pupils with the statistics they hear on television or radio and read in the newspaper. Topics may include: answers to the questions "What are statistics?" and "What is probability?"; measurement and definition influences on statistics; sampling; graphic display of data; measures of central tendency; measures of dispersion; index numbers, such as the Consumer Price Index; finite probability and Baye's theorem; random variables; binomial and normal descriptions; sampling description and the central limit theorem; estimation of standard error; confidence intervals; and, tests of significance.

INTRODUCTION TO COMPUTERS 2714

Suggested Grade Level: 10-12 Credit: 1

Teacher Certification for Introduction to Computers 2714:

Any certification with either:
- A70 area: mathematics-physical science
- B61 major: accounting
- B71 major: mathematics
- C71 minor: mathematics
- C72 minor: computer science

Description: Introduction to Computers provides hands-on experiences in computer operations. The content includes writing and running a short computer program. The pupil becomes familiar with the main uses of the computer as a tool for both work and personal purposes. The pupil also learns of computer-related jobs available in data processing, word processing, and other fields. This course is cross-referenced with Introduction to Computers in the section on vocational course offerings.

COMPUTER MATH 2715

Suggested Grade Level: 10-12 Credit: 1

Teacher Certification for Computer Math 2715:

Any certification with either:
- A70 area: mathematics-physical science
- B71 major: mathematics
- C71 minor: mathematics
- C72 minor: computer science

Description: This course is similar to Introduction to Computers, but presents the material at a more sophisticated level and is designed for the well-prepared pupil. The emphasis is on computer programming and integrates the programming ability with mathematical concepts the pupil has studied or is studying.

NOTE: Courses in programming of computers at the high school level are, of necessity, limited to schools which have access to computers. (Although it is possible to teach a programming language from a purely theoretical point of view, the most successful courses require that pupils actually submit programs to be run on a machine.) The language or languages which form the central content of the course determines the type of computer use available to a school.

CONSUMER MATH 2717

Suggested Grade Level: 11-12 Credit: ½

Teacher Certification for Consumer Math 2717:

Any certification with either:
A70 area: mathematics-physical science
B71 major: mathematics
C71 minor: mathematics

Description: This course involves the study of the mathematics applicable to: family purchases, contractual agreements, and maintenance; cost of travel; various kinds of bank accounts and purchasing plans; loans; income taxes; types of insurance; annuities; stocks and bonds; and, other applications of mathematics to business situations.

CALCULUS 2708

Suggested Grade Level: 12 Credit: 1

Teacher Certification for Calculus 2708:

Any certification with either:
A70 area: mathematics-physical science
B71 major: mathematics
C71 minor: mathematics

Description: This course is not to be offered for credit except as a full-year course for which one unit is awarded. Otherwise, not more than six weeks as a part of Advanced Mathematics is to be devoted to this subject. Any course offered under this title is for advanced placement and is offered at the 12th grade only. For a description of an acceptable course, see AB or BC outlines presented in the Advanced Placement Manual.

BUSINESS MATHEMATICS 2747

Suggested Grade Level: 10-12

Teacher Certification for Business Mathematics 5647:

Any certification with either:
A60 area: business education
A70 area: mathematics-physical science

B60 major: business education (commerce)
B61 major: accounting
B62 major: secretarial practice
B63 major: basic business
B64 major: general business
B65 major: accounting-secretarial practice
B66 major: accounting-general business
B67 major: general business-secretarial practice
B69 major: secretarial studies
B71 major: mathematics
C71 minor: mathematics

Description: Business mathematical skills are taught in calculating fractions, percentages, and decimals for areas such as: buying, selling, pricing, investing, taxes, payroll, insurance, transportation, depreciation, interest, and business management. An introduction to the metric system is included as a unit of study. This offering enables the pupil to develop skill in the "touch method" of using the electronic calculator for basic math calculations. This course is cross-referenced with Business Mathematics in the the section on vocational course offering.

FUNCTIONAL MATHEMATICS I

Suggested Grade Level: 9 Credit: 1

Teacher Certification for Functional Mathematics I:

Certification in some category of special education for the secondary school grades.

Description: This course offers a mathematics program for the handicapped pupil based on individualized assessment of the pupil's competencies/needs in mathematics. Activities shall include problem-solving, application of basic arithmetic functions to functional life situations, and basic computational skills of addition, subtraction, multiplication, division, fractions and decimals.

FUNCTIONAL MATHEMATICS II

Suggested Grade Level: 10 Credit: 1

Teacher Certification for Functional Mathematics II:

Certification in some category of special education for the secondary school grades.

Description: This course is a continuation of Functional Math I dependent upon the level of skill of each pupil. Activities shall be expanded to include application of basic arithmetic functions to appropriate job situations.

MILITARY SCIENCE

(Reserve Officers Training Corps)

COURSE	CODE	9	10	11	12	MAXIMUM HIGH SCHOOL UNITS
Air Force Junior ROTC	2909	X	X	X	X	4
Army Junior ROTC	2909	X	X	X	X	4
Marine Junior ROTC	2909	X	X	X	X	4
Naval Junior ROTC	2909	X	X	X	X	4

Course Descriptions and Program Requirements

Air Force Junior ROTC Program

The AFJROTC program is specifically designed for high school pupils to develop leadership, citizenship, self-discipline, character, respect for constituted authority, an interest in the military service, and an understanding of the requirements for National Security. It emphasizes the aerospace science aspects at each grade level, 9-12.

AEROSPACE EDUCATION I 2909

Suggested Grade Level: 9 Credit: 1

Teacher Certification for Aerospace Education I:

The Certificate for Specialized Professional School Services endorsed for the position of Senior Instructor, Junior Reserve Officers Training Corps.

The Certificate for Specialized Professional School Services endorsed for the position of Junior Instructor, Junior Reserve Officers Training Corps.

Description: This is an introductory course to the entire spectrum of aerospace. Subcourses include aircraft design and purpose, spacecraft and boosters, basic flight and propulsion systems. The relationship of the Air Force Community is studied in relation to national defense. Leadership principles, close order drill and citizenship are introduced.

AEROSPACE EDUCATION II 2909

Suggested Grade Level: 10 Credit: 1

Teacher Certification for Aerospace Education II:

The Certificate for Specialized Professional School Services endorsed for the position of Senior Instructor, Junior Reserve Officers Training Corps.

The Certificate for Specialized Professional School Services endorsed for the position of Junior Instructor, Junior Reserve Officers Training Corps.

Description: Aerospace studies is continued with emphasis on flight. The following topics are also studied: the use of maps and charts; principles and physical laws of flight together with future developments; construction of airfields; relationship between civilian community aviation and the military; national objectives and policies of the United States and the armed forces; and techniques of ceremonial drill.

AEROSPACE EDUCATION III 2909

Suggested Grade Level: 11 Credit: 1

Teacher Certification for Aerospace Education III:

The Certificate for Specialized Professional School Services endorsed for the position of Senior Instructor, Junior Reserve Officers Training Corps.

The Certificate for Specialized Professional School Services endorsed for the position of Junior Instructor, Junior Reserve Officers Training Corps.

Description: This course continues aerospace studies focusing upon the physiological aspects of aviation in spaceflight. The pupil examines medical and engineering technology for spaceflight and is introduced to the spaceflight of other nations. Discussions on organization, functions, and capabilities of the United States Department of Defense are conducted. Aerospace counseling and career opportunities are a part of this course.

AEROSPACE EDUCATION IV 2909

Suggested Grade Level: 12 Credit: 1

Teacher Certification for Aerospace Education IV:

The Certificate for Specialized Professional School Services endorsed for the position of Senior Instructor, Junior Reserve Officers Training Corps.

The Certificate for Specialized Professional School Services endorsed for the position of Junior Instructor, Junior Reserve Officers Training Corps.

Description: Emphasis in this course is placed upon developing effective leadership. Pupils develop survival and first aid skills under emergency conditions. There is a focus on the basis for national power and the relationship of United States military in the defense of the United States. Career counseling and communication skills together with problem solving and logical thinking are studied. Also, world alliances, spread of communism and capitalism/Marxism are defined. Leadership skills are demonstrated through practical application.

Army Junior ROTC Program

The Army Junior ROTC program is a cooperative effort on the part of the Army and the host institution to provide secondary school pupils opportunities for all-around development. The program provides excellent training opportunities in citizenship, administration, management, supervision, leadership responsibilities, and the opportunity for the exercise of authority and respect for school rules and law and order. Satisfactory completion of the program can lead to advanced placement credit in Senior ROTC or advanced rank in the active Army, Army Reserve, or the National Guard.

ARMY JUNIOR ROTC LD-I 2909

Suggested Grade Level: 9 Credit: 1

Teacher Certification for Army Junior ROTC LD-I

The Certificate for Specialized Professional School Services endorsed for the position of Senior Instructor, Junior Reserve Officers Training Corps.

The Certificate for Specialized Professional School Services endorsed for the position of Junior Instructor, Junior Reserve Officers Training Corps.

Description: The following topics are a major part of this course: insight into ethical values and principles that underlie good citizenhip including integrity, responsibility, and respect for constituted authority; development of leadership potential with attendant abilities to live and work cooperatively with others; knowledge of educational and vocational opportunities to function effectively as a member of the military team; familiarity with the history, purpose, and structure of the military services with emphasis on accomplishments of the United States Army; appreciation of the importance of physical fitness in maintaining good health; and, ability to think logically and to communicate effectively both orally and in writing.

Introduction to leadership development is also included in this course emphasizing: introduction to ROTC and the Army; hygiene and first aid; map reading; weapons, weapons safety, and marksmanship; leadership development and drill; and, methods of instruction.

ARMY JUNIOR ROTC LD-II 2909

Suggested Grade Level: 10 Credit: 1

Teacher Certification for Army Junior ROTC LD-II

The Certificate for Specialized Professional School Services endorsed for the position of Senior Instructor, Junior Reserve Officers Training Corps.

The Certificate for Specialized Professional School Services endorsed for the position of Junior Instructor, Junior Reserve Officers Training Corps.

Description: The topics named in the course description above are continued at this level. Leadership development continues on an intermediate level: intermediate map reading; marksmanship; methods of instruction; weapons; leadership development and drill; battalion organization; the United States Army: people, places, and times; leadership theory; and selected optional subjects.

ARMY JUNIOR ROTC LD-III 2909

Suggested Grade Level: 11 Credit: 1

Teacher Certification for Army Junior ROTC LD-III:

The Certificate for Specialized Professional School Services endorsed for the position of Senior Instructor, Junior Reserve Officers Training Corps.

The Certificate for Specialized Professional School Services endorsed for the position of Junior Instructor, Junior Reserve Officers Training Corps.

Description: The same course description continues for the third level of Army Junior ROTC LD-III. Leadership Development continues on an applied level: applied leadership; psychology of leadership; seminar in leadership and management; leadership and small unit leader problems; leadership and drill; applied marksmanship; methods of instruction; map reading; service opportunities; the development of the Army; and, selected optional subjects.

ARMY JUNIOR ROTC LD-IV 2909

Suggested Grade Level: 12 Credit: 1

Teacher Certification for Army Junior ROTC LD-IV:

The Certificate for Specialized Professional School Services endorsed for the position of Senior Instructor, Junior Reserve Officers Training Corps.

The Certificate for Specialized Professional School Services endorsed for the position of Junior Instructor, Junior Reserve Officers Training Corps.

Description: The same course description continues for the fourth level Army Junior ROTC LD-IV. Leadership development continues on an advanced level: leadership development and drill; advanced methods of instruction (practical application); staff functions and procedures; and selected optional subjects.

Marine Junior ROTC Program

The Marine Corps Junior ROTC program is designed for secondary pupils to learn about their obligations as American citizens. The basic objectives are to develop informed citizens, to strengthen character, to promote an understanding of the basic elements and requirements for national security, to help form habits of self-discipline, and to develop respect for and an understanding of the need for constituted authority in a democratic society.

These objectives are met using the academic curriculum, close order drill, marksmanship training, physical fitness, uniform inspections, and field trips.

MARINE JUNIOR ROTC LD-I 2909

Suggested Grade Level: 9 Credit: 1

Teacher Certification for Leadership Education I:

The Certificate for Specialized Professional School Services endorsed for the position of Senior Instructor, Junior Reserve Officers Training Corps.

The Certificate for Specialized Professional School Services endorsed for the position of Junior Instructor, Junior Reserve Officers Training Corps.

Description: This is an introductory course presenting basic knowledge in each major subcourse which includes: leadership training, drill, ceremonies, physical fitness, marksmanship, military orientation and organization (emphasis is placed upon drill).

MARINE JUNIOR ROTC LD-II 2909

Suggested Grade Level: 10 Credit: 1

Teacher Certification for Leadership Education II:

The Certificate for Specialized Professional School Services endorsed for the position of Senior Instructor, Junior Reserve Officers Training Corps.

The Certificate for Specialized Professional School Services endorsed for the position of Junior Instructor, Junior Reserve Officers Training Corps.

Description: Pupils are provided advanced material in each subcourse with emphasis placed upon markmanship training and weapons, with leadership roles assigned among peer groups. Subcourses include: leadership training, drill, ceremonies, physical fitness, marksmanship, and military orientation and organization.

MARINE JUNIOR ROTC LD-III 2909

Suggested Grade Level: 11 Credit: 1

Teacher Certification for Leadership Education III

The Certificate for Specialized Professional School Services endorsed for the position of Senior Instructor, Junior Reserve Officers Training Corps.

The Certificate for Specialized Professional School Services endorsed for the position of Junior Instructor, Junior Reserve Officers Training Corps.

Description: This course provides pupils material that emphasizes

leadership training and application. Subcourses include: leadership training, drill, ceremonies, physical fitness, marksmanship, military orientation and organization.

MARINE JUNIOR ROTC LD-IV 2909

Suggested Grade Level: 12 Credit: 1

Teacher Certification for Leadership Education IV:

The Certificate for Specialized Professional School Services endorsed for the position of Senior Instructor, Junior Reserve Officers Training Corps.

The Certificate for Specialized Professional School Services endorsed for the position of Junior Instructor, Junior Reserve Officers Training Corps.

Description: This course emphasizes practical application in leadership billets under personal tutelage of the Senior Instructor. Also stressed are the skills and attitudes the pupil-citizen will need upon graduation. Primarily, emphasis is placed upon leadership skills with participation in community service programs. Efforts are oriented toward procedures in real-life projects or practical exercise.

Naval Junior ROTC Program

The NJROTC program provides an opportunity for secondary school pupils to learn about their personal obligations as American citizens to contribute toward national security. The basic objectives of the program are to develop leadership, citizenship, self-discipline, character, respect for authority, an interest in the military services, and an understanding of the basic elements and requirements of national security. These objectives are met using the academic curriculum, marching, shooting, swimming, physical fitness, uniform inspections, and other activities.

NAVAL SCIENCE I 2909

Suggested Grade Level: 9 Credit: 1

Teacher Certification of Naval Science I:

The Certificate for Specialized Professional School Services endorsed for the position of Senior Instructor, Junior Reserve Officers Training Corps.

The Certificate for Specialized Professional School Services endorsed for the position of Junior Instructor, Junior Reserve officers Training Corps.

Description: Naval Science I is an orientation course. Topics include seapower, naval history, operations, communications, leadership, health, navigation, basic seamanship, and comparative governments.

NAVAL SCIENCE II 2909

Suggested Grade Level: 10 Credit: 1

Teacher Certification for Naval Science II:

The Certificate for Specialized Professional School Services endorsed for the position of Senior Instructor, Junior Reserve officers Training Corps.

The Certificate for Specialized Professional School Services endorsed for the position of Junior Instructor, Junior Reserve Officers Training Corps.

Description: Naval Science II continues basic orientation, navigation, naval history, and leadership. Other topics include oceanography, ecology, first aid, personal hygiene, national security, shipboard indoctrination, and career planning.

NAVAL SCIENCE III 2909

Suggested Grade Level: 11 Credit: 1

Teacher Certification for Naval Science III:

The Certificate for Specialized Professional School Services endorsed for the position of Senior Instructor, Junior Reserve Officers Training Corps.

The Certificate for Specialized Professional School Services endorsed for the position of Junior Instructor, Junior Reserve Officers Training Corps.

Description: Naval Science III continues naval history, navigation, and leadership. It introduces meteorology, seapower, astronomy, military justice, survival, basic electronics, government, and citizenship.

NAVAL SCIENCE IV 2909

Suggested Grade Level: 12 Credit: 1

Teacher Certification for Naval Science IV:

The Certificate for Specialized Professional School Services endorsed for the position of Senior Instructor, Junior Reserve Officers Training Corps.

The Certificate for Specialized Professional School Services endorsed for the position of Junior Instructor, Junior Reserve Officers Training Corps.

Description: Naval Science IV topics include career planning; fundamentals of international law; advanced leadership; naval strategy; navigation, piloting, and maneuvering; mapping, charting and geodesy; nuclear propulsion and naval engineering; naval ordnance and missiles; naval and national intelligence organization; and research and development in today's Navy.

MUSIC

COURSE	CODE	K	1	2	3	4	5	6	7	8	9	10	11	12	MAXIMUM HIGH SCHOOL UNITS
General Music	2820	X	X	X	X	X	X	X	X	X	X	X			1
Keyboard Class	2822								X	X	X	X	X	X	4
Choral Music	2824						X	X	X	X	X	X	X	X	4
Instrumental Music	2834						X	X	X	X	X	X	X	X	4
Music History and/or Appreication	2821 2831											X	X	X	1
Theory of Music	2823											X	X	X	2
Conducting Vocal	2835												X	X	1
Conducting Instrumental	2836												X	X	1
Supervised Individual Study	2828											X	X	X	2

The State Board of Education does not require units in music for high school graduation.

In middle childhood education, music is taught the equivalent of 75 minutes per week minimum.

In elementary education, fine arts (inclusive of music) are taught separately and/or integrated in the regular program the equivalent of 120 minutes per week minimum.

Course Descriptions and Program Requirements

Elementary Program

The elementary program is developed around three main concepts: awareness, discovery, and exploration. The awareness level in grades K-2 includes singing, playing rhythm instruments, movement, listening to music, and beginning ear training through hand-singing.

The discovery level in grades 3-4 adds creativity/composition on a beginning level, reading notation, using instruments such as the autoharp and recorder, and recognizing forms and patterns.

Level three, exploration, in grades 5-6 builds on previous knowledge by using more advanced vocal, instrumental, reading, and musicological (factual) skills. This does not mean that these concepts are assigned to the grades in which they are mentioned in an arbitrary manner. To the contrary, elements of each concept are found in all levels of instruction. But it is important to keep this sequence in mind when a continuum of skills and activities is being developed for an elementary music curriculum. This sequence leads into the middle school program.

Secondary Program

Music in the middle school program is a continuation of the elementary program, but is more sophisticated. In addition to general music for every pupil, performing groups should become the outgrowth of the general program. Band, orchestra, and choir, as well as instruction on classroom instruments such as the guitar, recorder and autoharp, are available to pupils who desire such an outlet. At the high school level, it is important to have a wide range of subjects and activities that will accommodate the needs of a diverse school population. Some pupils have a desire to perform in one or more of the organizations; others want to go beyond performing into music history, theory, conducting, and composition. A good high school program reflects an awareness of these needs.

Music is a natural partner for all programs that are included in the school curriculum. The affective or aesthetic qualities of music do much to instill in the individual an appreciation for the "good" things of life, thus building character, morality, and a respect and love for the environment. The implications for career and consumer education are great. The pupil is exposed to the world of work in music and is led to make intelligent choices in musical "products and hardware" as well as the realm of the music itself.

A comprehensive program is aimed at making all pupils aware of the many faceted nature of the subject and helping each of them to build a relationship with music that gives satisfaction and personal growth during the school years and throughout life.

The content of the music program contains objectives which provide opportunities for pupils to attain the following broad goals:

performing: to discover, develop, and evaluate their talents and abilities relative to musical performance;

listening: to develop the ability to make aesthetic judgments based on critical listening and analysis of music;

reading: to interpret rhythm, melody, harmony, form, and expression as they appear in musical notation through both cognitive and psychomotor response;

creating: to develop an additional avenue of self-expresssion by improvising, creating, and making music alone and with others; and,

valuing: to grow in the appreciation, understanding, and enjoyment of music as a source of personal fulfillment.

GENERAL MUSIC 2820

Suggested Grade Level: K-10 Credit: 1

Teacher Certification for General Music 2820:

Grades K-8: For ASIS units any certificate with E83 Endorsement for Elementary School Music; for non ASIS units any certification for elementary school classroom teaching.
A81 area: instrumental music
A82 area: vocal music

Grades 5-9: Certification for middle grades (junior high) with either:
A83 area: music
B83 major: music
C83 minor: music

Grades 7-12: Any certification with either:
A81 area: instrumental music
A82 area: vocal music
A83 area: music
B83 major: music
C83 minor: music

Description: This course is an outgrowth and expansion of the elementary and middle childhood music programs. It includes group instruction on keyboard instruments, guitar, recorder, singing, elementary music theory, history, and some composing. The general music course is analogous to a survey course, while each specialized course enables the pupil to pursue in greater depth a particular type of experience. This course is recommended for grade 9.

KEYBOARD CLASS 2822

Suggested Grade Level: 9-12 Credit: 1

Teacher Certification for Keyboard Class 2822 (ASIS units and basic units):

Any certification with either:
A81 area: instrumental music
A82 area: vocal music
A83 area: music
B83 major: music
C83 minor: music

Description: This course provides keyboard experiences and skill development through the use of electronic units. (This does not preclude the use of regular pianos, but the electronic set-up with a control unit for the instructor is most desirable.) In addition to skill development, this course includes music theory and composition. This course may be repeated, depending upon time and teacher load, for a maximum of 4 credits.

CHORAL MUSIC 2824

Suggested Grade Level: 9-12 Credit: 1

Teacher Certification for Choral Music 2824 (ASIS units and basic units):

Any certification with either:
A82 area: vocal music
A83 area: music
B83 major: music
C83 minor: music

Description: This course teaches music through group performance. The choral groups study and perform a widely varied program of music literature. A natural outgrowth of this course is appropriate performance, festivals, and concerts. This course has several subheadings:

(1) Mixed Chorus
(2) Girls Chorus
(3) Boys Chorus
(4) Madrigal Chorus
(5) Swing Choir
(6) Voice Class

Any or all that are regularly scheduled classes receive full credit.

INSTRUMENTAL MUSIC 2834

Suggested Grade Level: 9-12 Credit: 1

Teacher Certification for Instrumental Music 2834 (ASIS units and basic units):

Any certification with either:
A81 area: instrumental music
A83 area: music
B83 major: music
C83 minor: music

Description: This course teaches music through group performance. It is an ensemble of wind, percussion, and string players organized to study, rehearse, and perform the repertory for this media. It may take several forms:

(1) band
(2) orchestra
(3) woodwind ensemble

(4) brass ensemble
(5) percussion ensemble
(6) string ensemble
(7) jazz or stage band
(8) guitar

Any or all that are regularly scheduled classes receive full credit.

MUSIC APPRECIATION 2831

Suggested Grade Level: 9-12 Credit: 1

Teacher Certification for Music Appreciation 2831 (ASIS units and basic units):

Any certification with either:
A81 area: instrumental music
A82 area: vocal music
A83 area: music
B83 major: music
C83 minor: music

Description: This course is a study of selected exemplars of Western music. It includes listening skills, especially emphasizing the formal structure of music as an aid to continued growth in listening to and learning about music.

MUSIC HISTORY 2821

Suggested Grade Level: 9-12 Credit: 1

Teacher Certification for Music History 2821 (ASIS units and basic units):

Any certification with either:
A81 area: instrumental music
A82 area: vocal music
A83 area: music
B83 major: music
C83 minor: music

Description: This is a survey of Western music and its relationship to music of other cultures. It is similar to music appreciation except that

it is more systematic and structured. The pupils develop knowledge of the evolution of musical styles.

THEORY OF MUSIC 2823

Suggested Grade Level: 9-12 Credit: 1

Teacher Certification for Theory of Music 2823 (ASIS units and basic units):

Any certification with either:
- A81 area: instrumental music
- A82 area: vocal music
- A83 area: music
- B83 major: music
- C83 minor: music

Description: This course begins with the rudiments of music (scales, clefs, key signatures, etc.) and progresses to analysis and music composition. Also included are ear-training, sight-singing, and keyboard experiences. For those pupils who desire an in-depth study of theory, a second year class may be offered.

CONDUCTING (VOCAL) 2835
CONDUCTING (INSTRUMENTAL) 2836

Suggested Grade Level: 11-12 Credit: 1

Teacher Certification for Conducting (Vocal) 2835 (ASIS units and basic units):

Any certification with either:
- A82 area: vocal music
- A83 area: music
- B83 major: music
- C83 minor: music

Teacher Certification for Conducting (Instrumental) 2836 (ASIS units and basic units):

Any certification with either:
- A81 area: instrumental music
- A83 area: music

B83 major: music
C83 minor: music

Description: This course is for the serious music pupil who has sufficient skills to study a music score intelligently. The conducting pupil is able to use these skills to elicit a proper response from the ensemble that is being conducted. Ideally, the pupil is a member of a performing group.

SUPERVISED INDIVIDUAL STUDY 2828

Suggested Grade Level: 10-12 Credit: 1

Teacher Certification for Supervised Individual Study 2828 (ASIS units or basic units):

Any certification with either:
A81 area: instrumental music
A82 area: vocal music
A83 area: music
B83 major: music
C83 minor: music

Description: This course provides credit to the pupil for in-depth study of voice, a particular instrument, music composition, or research in a variety of topics or areas that are deemed worthy by the instructor. One credit represents the maximum per year that a pupil could receive for independent study. It would be possible for a study to receive less credit in instances where time or other factors made it impossible or unnecessary to devote full time to the study.

PHYSICAL EDUCATION

COURSE	CODE	1	2	3	4	5	6	7	8	9	10	11	12	MAXIMUM HIGH SCHOOL UNITS
Elementary Physical Education	2880	X	X	X	X	X	X	X	X					
Physical Education I	2881									X				1
Physical Education II	2882										X	X	X	1
Physical Education III	2883											X	X	1
Physical Education IV	2884												X	1
Adapted Physical Education	2885	X	X	X	X	X	X	X	X	X	X	X	X	1

The State Board of Education requires one-half unit course in physical education for high school graduation.

In middle childhood education, physical education and safety is taught the equivalent of 15 minutes daily or 75 minutes per week minimum on a nine-week basis, semester, etc.

In elementary education, physical education and safety is taught the equivalent of 100 minutes per week minimum.

Course Descriptions and Program Requirements

Elementary Program

Physical education is a program of instruction emphasizing a variety of significantly planned movement activities selected and taught according to the characteristic needs and interests of children. The basic aims of physical education are to contribute to the optimum physical, mental, and emotional growth of each individual and to develop positive attitudes toward physical activity. This is in an effort to enhance the individual's self-image and to improve the quality of life.

Secondary Program

Secondary physical education includes a planned progressive program of instruction including team games, individual and dual activities, co-educational activities, dance, gymnastics and tumbling, rhythm, physical fitness, games and relays, swimming and water safety, adapted activities, and outdoor education. The program provides opportunities for the inclusion of environmental education and consumer education. Pupil and program evaluation are included.

ELEMENTARY PHYSICAL EDUCATION 2880

Suggested Grade Level: K-8

Teacher Certification for Elementary Physical Education 2880:

Grades K-8: For ASIS units any certificate with E88 Endorsement for Elementary School Physical Education; for non ASIS units any certification for elementary school classroom teaching.

Grades 5-8: Certification for middle grades (junior high) with either:
A86 area: health-physical education-recreation
B87 major: health-physical education
B88 major: physical education
C87 minor: health-physical education
C88 minor: physical education

Grades 7-8: Any certificate with either:
A86 area: health-physical education-recreation
B87 major: health-physical education
B88 major: physical education
C87 minor: health-physical education
C88 minor: physical education

Description: Elementary and middle childhood physical education includes planned sequential instruction in movement exploration, low organization activities, rhythmic activities, self-testing activities (stunts, tumbling), fundamental motor skills, physical fitness, adapted activities, lead-up games, swimming, and outdoor education. The program provides opportunities for the inclusion of environmental education and consumer education, as well as coordinating activities whenever possible with other subject areas in the curriculum. Pupil and program evaluations are included.

PHYSICAL EDUCATION I 2881

Suggested Grade Level: 9-12 Credit: 1 or ½

Teacher Certification for Physical Education I 2881 (ASIS units and basic units):

Any certification with either:
A86 area health-physical education-recreation
B87 major: health-physical education
B88 major: physical education
C87 minor: health-physical education
C88 minor: physical education

Description: Physical Education I is the basic secondary physical education course required of all pupils. It provides an extension of instruction received during elementary and middle childhood physical education in activities selected according to individual needs and interests of pupils. A variety of activities are introduced which stress the development of basic skills, physical fitness, and positive attitudes toward activity.

PHYSICAL EDUCATION II 2882

Suggested Grade Level: 10-12 Credit: 1

Teacher Certification for Physical Education II 2882 (ASIS units and basic units):

Any certification with either:
- A86 area: health-physical education-recreation
- B87 major: health-physical education
- B88 major: physical education
- C87 minor: health-physical education
- C88 minor: physical education

Description: The program in Physical Education II is primarily an individual improvement program with emphasis on carry-over values.

PHYSICAL EDUCATION III 2883

Suggested Grade Level: 11-12 Credit: 1

Teacher Certification for Physical Education III 2883 (ASIS units and basic units):

Any certification with either:
- A86 area: health-physical education-recreation
- B87 major: health-physical education
- B88 major: physical education
- C87 minor: health-physical education
- C88 minor: physical education

Description: Emphasis in Physical Education III is given to providing pupils a choice of activities in which advanced skills are developed and new skills acquired.

PHYSICAL EDUCATION IV 2884

Suggested Grade Level: 12 Credit: 1

Teacher Certification for Physical Education IV 2884 (ASIS units and basic units):

Any certification with either:
- A86 area: health-physical education-recreation
- B87 major: health-physical education
- B88 major: physical education
- C87 minor: health-physical education
- C88 minor: physical education

Description: Along with advanced skill instruction in pupil-selected activities, individuals receive opportunities for leadership development training, independent study, and research projects in the Physical Education IV course.

ADAPTED PHYSICAL EDUCATION 2885

Suggested Grade Level: 1-12 Credit: 1

Teacher Certification for Adapted Physical Education 2885 (ASIS units and basic units):

Grades K-8: Any certificate with E88 Endorsement for Elementary School Physical Education

Grades 5-9: Certification for middle grades (junior high) with either :
A86 area: health-physical education-recreation
B87 major: health-physical education
B88 major: physical education
C87 minor: health-physical education
C88 minor: physical education

Grades 7-12: Any certification with either:
A86 area: health-physical education-recreation
B87 major: health-physical education
B88 major: physical education
C87 minor: health-physical education
C88 minor: physical education

Description: The adapted physical education program is designed for pupils who cannot safely or successfully engage in unrestricted participation in the regular physical education program. The adapted program shall be both psychologically and physically sound and shall be based on the unique needs of the individuals who make up the classes. It may be determined that slight modification of the regular physical education program will appropriately meet the needs of the handicapped pupil(s). In this case, the handicapped pupil(s) may be scheduled with the regular class(es). Caution must be exercised that the handicapped pupil(s) are not subjected to the generalized approach of the regular program.

When it is determined by individual assessment of need that an adaptive physical education program is an integral part of the handicapped pupil's individualized program, federal legislation requires the inclusion of physical education in the Individual Education Program (IEP). This component of the Individual Education Program (IEP) is developed as a collaborative effort of the Admissions and Release Committee, including physical education personnel.

It is essential that adequate medical guidance be available for teachers of adapted physical education. The possibility of serious impairment requires that programs of adapted physical education shall not be attempted without the diagnosis and written recommendations of a physician. There shall be an effective referral service among physicians, physical educators, and parents aimed at proper safeguards and maximum pupil benefits.

SCIENCE

COURSE	CODE	1	2	3	4	5	6	7	8	9	10	11	12	MAXIMUM HIGH SCHOOL UNITS
Elementary Science	2502	X	X	X	X	X	X							
Integrated Science	2536						X	X	X	X				1
Introduction to Biological Science (Life Science)	2511							X						
Introduction to Earth-Space Science	2563								X					
Introduction to Chemistry & Physics	2530									X	X	X	X	1
Biology I	2517									X	X	X	X	1
Chemistry I	2521										X	X	X	1
Physics I	2532										X	X	X	1
Earth Science	2561										X	X	X	1
Anatomy & Physiology	2510										X	X	X	1
Advanced Biology (Biology II)	2516											X	X	1
Advanced Physics (Physics)	2538											X	X	1
Advanced Chemistry (Chemistry II)	2524											X	X	1
Special Topics in Biological Science	2512										X	X	X	2
Special Topics in Physical Science	2564										X	X	X	2
Education for Exceptional Children:														
Functional Science I										X				1
Functional Science II											X			1

The State Board of Education requires two units in science for high school graduation.

In middle childhood education, science is taught the equivalent of 45 minutes per day minimum.

In elementary education, science is taught separately and/or integrated in the regular program the equivalent of 120 minutes per week minimum.

Course Descriptions and Program Requirements

Elementary Program

Science experiences shall be introduced in the first year of school. Inquiry science is planned at each level to provide proper scope and sequence of concept and skill development through the subsequent grades, with at least one-half time spent in investigative laboratory activities to develop inquiry skills. The science curriculum consists of biological and physical sciences for each grade and is related to the experiences that pupils encounter in the real world.

Pupil participation in laboratory experiences is included as an integral part of all science courses, grades 1-8. These experiences must be those which develop scientific processes and skills in order that pupils may discover scientific principles rather than merely verify those given by the text or the teacher.

Whether the middle school curriculum is of an integrated or specialized nature, emphasis is on the investigative approach to ensure full continuity with the inquiry method taught at the elementary level.

Secondary Program

It is recommended that pupils be counseled toward a balance between the physical and biological sciences in grades 7-12.

ELEMENTARY SCIENCE 2502

Suggested Grade Level 1-6

Teacher Certification for Elementary Science 2502:

Grades 1-6: Any certification for elementary classroom teaching

Grades 5-6: Certification for middle grades (junior high) with either:
- J50 junior high school major: science
- C51 minor: biology
- C52 minor: chemistry
- C53 minor: physics
- C56 minor: earth science
- C57 minor: geology

INTRODUCTION TO BIOLOGICAL SCIENCE (Life Science) 2511

Suggested Grade Level: 7

Teacher Certification for Introduction to Biological Science (Life Science) 2511:

Any certification for elementary classroom teaching
Any certification with either:
A50 area: science
R51 area: science limited to biology
B50 major: science
J50 junior high major: science
B51 major: biology
B54 major: biology-health
C51 minor: biology

Description: This course is designed to develop an understanding of the interrelationships of plants and animals. Individual and group laboratory experiences comprise at least 50% of the course.

INTRODUCTION TO EARTH-SPACE SCIENCE 2563

Suggested grade Level: 8

Teacher Certification for Introduction to Earth-Space Science 2563:

Any certification for elementary classroom teaching

Any certification with either:
A50 area: science
R51 area: science limited to biology
R53 area: science limited physics
R56 area: science limited to earth science
A70 area: mathematics-physical science
J50 junior high school major: science
B50 major: science
B51 major: biology
B52 major: chemistry
B53 major: physics
B54 major: biology-health
B56 major: earth science
C51 minor: biology
C52 minor: chemistry
C53 minor: physics
C56 minor: earth science
C57 minor: geology

Description: This course has as its major objective to broaden the pupil's basic understanding of the earth, the universe, and their relationship to the environment. To ensure continuance of the inquiry approach, methods are built upon laboratory skills gained in previous courses.

INTRODUCTION TO CHEMISTRY AND PHYSICS 2530

Suggested Grade Level: 9-12 Credit: 1

Teacher Certification for Introduction to Chemistry and Physics 2530:

Grade 9: Certification for middle grades (junior high) with J50 junior high major: science

Grades 9-12: Any certification with either:
- A50 area: science
- R52 area: science limited to chemistry
- R53 area: science limited to physics
- A70 area: mathematics-physical science
- B50 major: science
- B52 major: chemistry
- B53 major: physics
- C52 minor: chemistry
- C53 minor: physics

Description: This course introduces pupils to techniques and methods employed in both chemistry and physics with emphasis on laboratory work in solving problems of a scientific nature. Normally, it is offered in grade 9, but it can be made available in grades 9-12. Individual and group laboratory experiences comprise at least 50% of the course. It is recommended that the instructor of this course have at least 21 hours in physical science.

BIOLOGY I 2517

Sugguested Grade Level: 9-12 Credit: 1

Teacher Certification for Biology I 2517:

Grade 9: Certification for middle grades (junior high) with J50 junior high major: science

Grades 9-12: Any certification with either:
A50 area: science
R51 area: science limited to biology
B50 major: science
B51 major: biology
B54 major: biology-health
C51 minor: biology

Description: Biology I offers pupils exploratory experiences and activities in the fundamental concepts of life. Biology I expands and refines the biological concepts introduced in the elementary and middle school/junior high grades. Laboratory/field experiences are an integral component of Biology I.

CHEMISTRY I 2521

Suggested Grade Level: 10-12 Credit: 1

Teacher Certification for Chemistry I 2521:

Any certification with either:
A50 area: science
R52 area: science limited to chemistry
A70 area: mathematics-physical science
B50 major: science
B52 major: chemistry
C52 minor: chemistry

Description: Chemistry I offers pupils general laboratory experiences and activities in the concepts of the chemistry through the study of the composition of substances and of their effects upon one another.

PHYSICS I 2532

Suggested Grade Level: 10-12 Credit: 1

Teacher Certification for Physics I 2532:

Any certification with either:
A50 area: science
R53 area: science limited to physics
A70 area: mathematics-physical science
B50 major: science
B53 major: physics
C53 minor: physics

Description: Physics I offers pupils general laboratory experiences and activities in the concepts of the physical interactions of matter and energy.

EARTH SCIENCE 2561

Suggested Grade Level: 10-12 Credit: 1

Teacher Certification for Earth Science 2561:

Any certification with either:
- A50 area: science
- R56 area: science limited to earth science
- A70 area: mathematics-physical science
- B23 major: geography-geology
- B50 major: science
- B56 major: earth science
- C23 minor: geography-geology
- C56 minor: earth science
- C57 minor: geology

Description: This course is a study of the nature of the earth's environment.

ANATOMY AND PHYSIOLOGY 2510

Suggested Grade Level: 10-12 Credit: 1

Teacher Certification for Anatomy and Physiology 2510:

Any certification with either:
- A50 area: science
- R51 area: science limited to biology
- B50 major: science
- B51 major: biology
- B54 major: biology-health
- C51 minor: biology

Description: This is a course for pupils who have obtained one credit in biology. It deals with the study of the structure and function of the living body. It is recommended that the instructor have a major in the biological sciences.

ADVANCED BIOLOGY (Biology II) 2516

Suggested Grade Level: 11-12 Credit: 1

Teacher Certification for Advanced Biology (Biology II) 2516:

Any certification with either:
- A50 area: science
- R51 area: science limited to biology
- B50 major: science
- B51 major: biology
- B54 major: biology-health
- C51 minor: biology

Description: Biology II offers pupils advanced level experiences in the concepts of biology. Laboratory techniques are developed to acquaint the pupil with appropriate investigative methods and techniques used by scientists.

ADVANCED PHYSICS (Physics II) 2538

Suggested Grade Level: 11-12 Credit: 1

Teacher Certification for Advanced Physics (Physics II) 2538:

Any certification with either:
- A50 area: science
- R53 area: science limited to physics
- A70 area: mathematics-physical science
- B50 major: science
- B53 major: physics
- C53 minor: physics

Description: Physics II offers pupils advanced-level and enrichment experiences in the physical interactions of matter with an expansion and refinement of the physical concepts introduced in Physics I. The pupil is provided with a more mature presentation of Physics and the concepts in this course are reinforced through the application of relevant principles to both familiar and unfamiliar situations.

ADVANCED CHEMISTRY (Chemistry II) 2524

Suggested Grade Level: 11-12 Credit: 1

Teacher Certification for Advanced Chemistry (Chemistry II) 2524:

Any certification with either:
- A50 area: science
- R52 area: science limited to chemistry
- A70 area: mathematics-physical science
- B50 major: science
- B52 major: chemistry
- C52 minor: chemistry

Description: Chemistry II offers pupils advanced-level and enrichment experiences in concepts involving chemical changes of matter. Laboratory activities and investigations are presented in the spirit of inquiry and research. Advanced-level laboratory techniques are developed to further the pupils ability to pursue a chemical science related career.

SPECIAL TOPICS IN BIOLOGICAL SCIENCE 2512

Suggested Grade Level: 10-12 Credit: 2

Teacher Certification for Special Topics in Biological Science 2512:

Any certification with either:
- A50 area: science
- R51 area: science limited to biology
- B50 major: science
- B51 major: biology
- B54 major: biology-health
- C51 minor: biology

Description: This course may be offered in grades 10-12. It is recommended that the instructor have a major in biology. This course may be offered when the need arises. The course may be in modules of varying lengths or as a complete one year course. A pupil may receive two units of credit in Special Topics in Biological Science and courses are offered only

in schools where facilities are provided and teachers are properly certified. Special Topics in Biological Science may include such courses as:

Ecology (Urban, fresh water, terrestrial)
Environmental Studies
Marine Biology
Zoology
Botany
Horticulture
Heredity and Embryology
Microbiology
Comparative Anatomy

NOTE: Pupils shall complete one course in Biology before enrolling in Special Topics in Biological Science.

SPECIAL TOPICS IN PHYSICAL SCIENCE 2564

Suggested Grade Level: 10-12 Credit: 2

Teacher Certification for Special Topics in Physical Science 2564:

Any certification with either:
A50 area: science
R52 area: science limited to chemistry
R53 area: science limited to physics
R56 area: science limited to earth science
A70 area: mathematics-physical science
B50 major: science
B52 major: chemistry
B53 major: physics
B56 major: earth science
C52 minor: chemistry
C53 minor: physics
C56 minor: earth science
C57 minor: geology

Description: This course may be offered in grades 10-12. It is recommended that the instructor have a major in one of the physical sciences or have a science area certification. This course may be offered when the need arises. The course may be offered in modules of varying lengths or as a complete one-year course. A pupil may receive two units of credit

in Special Topics in Physical Science, and the courses are offered only in schools where facilities are provided and teachers are properly certified. Special Topics in Physical Science may include such courses as:

Astronomy
Automotive Physics
Electronics
Chemistry of Foods
Consumer Chemistry
Aerospace
Oceanography
Meteorology
Physical Geography
Computer Science

NOTE: Pupils should have completed one course in the Physical Sciences before enrolling in Special Topics in Physical Science.

FUNCTIONAL SCIENCE I

Suggested Grade Level: 9 Credit: 1

Teacher Certification for Functional Science I:

Certification in some category of special education for the secondary school grades.

Description: In this course, pupils will learn how to use thermometers, weather vanes, and barometers. They will investigate water, ice, water vapor, and thunderstorms, and will examine soil, rocks, fossils, and maps. Pupils will also study plants and animals and their relationship to humans. Emphasis will be placed on application of information gained to daily living skills.

FUNCTIONAL SCIENCE II

Suggested Grade Level: 10 Credit: 1

Teacher Certification for Functional Science II:

Certification in some category of special education for the secondary school grades.

Description: This course should be a continuation of Functional Science I dependent upon the level of demonstrated knowledge of each pupil.

SOCIAL STUDIES

COURSE	CODE	1	2	3	4	5	6	7	8	9	10	11	12	MAXIMUM HIGH SCHOOL UNITS
Interdisciplinary Social Studies	2202	X	X	X	X	X	X	X	X					
Multidisciplinary Area Studies	2203				X	X	X	X	X					
Kentucky Studies	2242										X	X	X	1
Citizenship	2205							X	X	X	X			1
Basic Economics	2281									X	X	X	X	1
Sociology	2261										X	X	X	1
Geography	2221										X	X		1
U.S. History	2243											X	X	1
Political Science	2271												X	1
World Civilization	2246										X	X	X	1
Anthropology	2262										X	X	X	1
Psychology	2207									X	X	X	X	1
Humanities	2219										X	X	X	1
Global Issues	2273									X	X	X	X	1
Education for Exceptional Children: Functional														
Social Studies I										X	X			1
Social Studies II											X	X		1
Social Studies III												X	X	1

The State Board of Education requires two units of Social Studies for high school graduation. These two units must include one unit in U.S. History and one unit in Citizenship.

In middle childhood education, Social Studies is taught the equivalent of 45 minutes per day minimum.

In elementary education, Social Studies is taught separately and/or integrated in the regular program the equivalent of 120 minutes per week minimum.

Course Descriptions and Program Requirements

The social studies program is defined to include inquiry into group behavior; human interaction; human relationships; social, economic, and political activities in a variety of cultures; and the cultural heritage in the past, present, and future. The program is based on four foundations: social, psychological, disciplinary, and philosophical. Social studies contributes to the goals of education in the areas of thinking and decision-making, self-realization, human relationships, civic responsibility, economic competence, and learning how to learn.

Citizenship education is an integral part of social studies education. As social studies programs are designed or selected, careful attention is given to the proper inclusion of goals which assure positive attitudinal development toward responsible citizenship. In grades 1-8, the social studies teacher may use modeling, behavior modification, values clarification, moral dilemmas, case studies, law-related activities, class meetings, teacher-pupil planning, discussion and experiential activities to aid pupils in citizenship development. The concepts of justice, freedom, authority, diversity, property, participation, responsibility, and privacy may be developed in a sequence of activities for grades 1-12.

Elementary Program

The primary pupil learns about self at the beginning of the school career and each year following. The pupil learns about responsibility to family, neighborhood, state, region, nation, hemisphere, and the world. An understanding is gained of dependence, independence, and interdependence within and between social institutions (economic, social, political, religious and educational). And, the pupil develops a clearer perception of the present, past and future. Although social studies must look to the social sciences for much of its content, skills, and ideas, social studies also includes citizenship education, values clarification, current events, the real social world, related arts and crafts projects, significant holidays, special events, and the contributions of great men and women.

Social studies instruction shall be offered at each grade level, 1-5. Attention is given to the specific concepts, skills, and attitudes/values offered at each grade level, and how these concepts and skills relate to the subsequent levels of instruction. Unless a detailed social studies curriculum guide is available at the local school level, it is recommended that a basal social studies textbook series, agreed upon by the teachers involved, be used as the point of departure for units of study so that a developmental sequence of concepts, processes, skills, and values is maintained. Social studies at the middle school level may be an extension of the 1-5 social studies curriculum or multidisciplinary area studies may be selected in keeping with the suggested program of studies for grades 6-8.

Secondary Program

In the secondary program the focus continues to be the "what" (principles) and the "why" (explanations) of human behavior. In order to arrive at a meaningful understanding of people, pupils must investigate their past (history); the environment in which they live (geography); their needs and desires (psychology); how they fit into the society (sociology); how their culture has shaped them (anthropology); the influences that they exert on others and the influence that others exert upon them (political science); and how they are supported financially (economics).

Emerging social concerns impacting the social studies curriculum include ethnic studies, environmental studies, consumer economics, career education, law-focused education, intercultural and international education, global perspectives, substance abuse, and a value orientation which emphasizes the value process and the understanding and appreciation of democratic values in a pluralistic nation and world.

INTERDISCIPLINARY SOCIAL STUDIES 2202

Suggested Grade Level: 1-8

Teacher Certification for Interdisciplinary (Unified) Social Studies 2202:

Grades 1-8: Any certification for elementary school classroom teaching;

Grades 5-8: Certification for middle grades (junior high) with J20 junior high major: social studies

Grades 7-8: Any certification with either:

A20 area: social studies
R21 area: social studies limited to anthropology
R22 area: social studies limited to geography
R24 area: social studies limited to history
R26 area: social studies limited to sociology
R27 area: social studies limited to political science
R28 area: social studies limited to economics
B20 major: social studies
B24 major: history
C24 minor: history

Description: The following grade-by-grade overview presents the dominant themes in each grade. District or local curriculum guides may include, but need not duplicate, these dominant themes.

Grade 1. Family, School, and Community Life:
The family; our school and other schools; the family at work; neighbors at work; community workers; the fire station; the supermarket; the shopping center; government services; workers supply needs; division of labor; family roles; rural and city life; families and schools at home and abroad; homes of the future; career awareness; map and globe skills; and, cooperative and problem-solving skills.

Grade 2. Community Studies:
Community workers; public services; food, shelter, and clothing; transportation; community; comparative study of communities; historical material on the community; specialization and division of labor within and among communities; future developments; career awareness; the need for rules; map and globe concepts.

Grade 3. City Communities Around the World:
Urban life; cities and city growth; pioneer communities; native Americans; in-depth study of the local city or community; local government; case studies of Louisville or Lexington, Washington, New York, London, Tokyo, Ibaden, etc.; interdependence among communities; urban problems, planning, and renewal; ancient cities; past, present, and future changes in cities; technology and human and natural resources; ways people adapt to change; knowledge of occupations; values and value systems; map skills; and, organization, inquiry, and social responsibilities.

Grade 4. Our State (Kentucky), Regions of the United States, and Regions of the World:
Historical, geographic, and economic aspects of Kentucky with emphasis on the relationship of the state to the region, the United States, and to the world; study of regions building on the following skills; critical thinking, communicating ideas and information, and interpreting graphic material; the role of state government; careers in state government; the contributions of individuals from all groups to the development of the state and nation; future prospects and proposals for change; environmental problems; comparative studies of how people live in tropical rainforests, deserts, grasslands, northern forests, and mountain regions; man's inventiveness; citizenship; area study of Indian, Japan; and, cross-comparative studies.

Grade 5. American People and Leaders and How the United States Became a Nation
Discovery and exploration of America; brief overview of the Western movement from the cradles of civilization to the opening of the new world; development of the colonies; group processes: early American groups (the Pilgrims; the Indians), American subcultures (the Amish; the Shakers); regulating groups; order through law; colonial life; Revolutionary Period, 1776; westward movement; relationships with Canada and Mexico - past and present; contributions and history of minority groups; instruction on rights and responsiblities; distribution of human and natural resources; environmental studies; democratic values inherited from early Americans; and, career awareness at the national level.

Grade 6. Our World:
Geographic and economic study of the major regions around the world; selected Eastern Europe, Middle East, Latin American, Africa south of the Sahara, Asia, India, China, and other regions of the world with comparative studies on the growth and development of nations of the world, influenced by geography, history, physical and cultural environment; and the roles and relationships which develop and exist among them; interdependence among nations, problems of developing nations, the work of international agencies, the impact of culture on ways of living, current problems and possible future developments; and, emphasis on study skills using multi-media materials.

Grade 7. World Civilization:
Development of civilizations, cradles of civilization; Old World backgrounds; Greece and Rome; the Middle Ages and Western European nations; area studies of Latin American, Middle East, or Africa; continued development of study skills, and, valuing processes; and, career awareness of jobs in the social sciences.

Grade 8. American Studies (Interrelating state and national history): The New World (1492-1775); permanent settlements (1607-1775); the thirteen colonies (1660-1789); Kentucky, the 15th state (1792); political climates (1783-1890); the Civil War and Reconstruction; response to twentieth century needs (1890-present). NOTE: The study of American history up to the Reconstruction era will be emphasized in grade 8. Twentieth century U.S. History including problems of democracy may be taught in grade 11 or 12.

Minorities in the history of the United States; the interrelationships of federal, state and local government; historical trends to current problems and future developments; the legal rights and responsibilities of all citizens; early, colonial, and contemporary Kentucky in relation to national and international development; ethnic studies; and global issues.

MULTIDISCIPLINARY AREA STUDIES 2203

Suggested Grade Level: 4-8

Teacher Certification for Multidisciplinary Area Studies 2203:

Grades 4-8: Any certification for elementary school classroom teaching;

Grades 5-8: Certification for middle grades (junior high) with J20 junior high major: social studies

Grades 7-8: Any certification with either:

A20 area:	social studies
R21 area:	social studies limited to anthropology
R22 area:	social studies limited to geography
R24 area:	social studies limited to history
R26 area:	social studies limited to sociology
R27 area:	social studies limited to political science
R28 area:	social studies limited to economics
B19 major:	humanities
B20 major:	social studies
B22 major:	geography
B23 major:	geography-geology
B24 major:	history
B25 major:	economics-sociology
B26 major:	sociology
B27 major:	political science
B28 major:	econmics

B29 major: history-political science
C22 minor: geography
C23 minor: geography-geology
C24 minor: history
C25 minor: economics-sociology
C26 minor: sociology
C27 minor: political science
C28 minor: sociology
C29 minor: history-political science

Description: Area Studies: A survey of the regions of the world may be abandoned in favor of an in-depth study of one, two, or three areas. Emphasis is placed on the application and utilization of basic concepts of geography, sociology, history, anthropology, political science, economics, and the humanities. The pupil is provided the opportunity to deal with these fundamental concepts in an in-depth study of one or two cultures and can arrive at a more sophisticated understanding of these concepts within the context of a particular setting. It is intended that the study be multi- or interdisciplinary in scope, rather than restricted to the historical or geographic aspects of an area.

I. Asian Studies: Far East Asia, or Southeast Asia (China, India, Japan)
II. African Studies: North Africa or Subsahara
III. Easter European Studies
IV. Soviet Studies
V. Latin American Studies: Central or South American
VI. Middle Eastern Studies: Near East Asia or Northern African
VII. Western European Studies

CITIZENSHIP 2205

Suggested Grade Level: 7-10 Credit: 1 (High School Level)

Teacher Certification for Citizenship 2205:

Grades 7-8: Any certification for elementary school classroom teaching

Grades 7-9: Any certification with J20 junior high major: social studies

Grades 7-10: Any certification with either:
A20 area: social studies
R24 area: social studies limited to history
R27 area: social studies limited to political science
R28 area: social studies limited to economics
R26 area: social studies limited to sociology

R22 area: social studies limited to geography
R21 area: social studies limited to anthropology
B20 major: social studies
B24 major: history
B28 major: economics
B29 major: history-political science
B27 major: political science
B25 major: economics-sociology
B26 major: sociology
C24 minor: history
C25 minor: economics-sociology
C27 minor: political science
C28 minor: economics
C29 minor: history-political science

Description: The course includes respect for self, family, others, work and the environment; the meaning of democracy; the need for rules and regulations; interpretation of the constitution, both state and federal; Supreme Court decisions; the Bill of Rights and individual rights law; criminal law; family law; consumer law; structure, functions, and actual processes of governments - local, state, and national; government services; ethical and moral commitments; law making; due process; law enforcement; juvenile court; the justice system; the free enterprise system; civic action; voter education; social, political, and economic conflicts; rational processes; resolution of conflict; public education - rationale, governance, and funding; understanding of and concern for world, national, state, and local civic issues; values and beliefs; participation; decision-making; and, selection among alternatives. Emphasis is on learning skills using a variety of materials and an experience-based approach.

U. S. HISTORY 2243

Suggested Grade Level: 11-12 Credit: 1

Teacher Certification for U. S. History 2243:

Any certification with either:
A20 area: social studies
R24 area: social studies limited to history
B20 major: social studies
B24 major: history
B29 major: history-political science
C24 minor: history
C29 minor: history-political science

Description: The required high school course in U. S. History continues to expand the basic concepts developed in 8th grade American History which emphasized pre-20th century America. However, the primary emphasis at the high school level is 20th century U. S. History. Problems of democracy can be integrated with 20th century U. S. History.

There are four different approaches to the study of U. S. History: (1) chronological development (1890 to the present); (2) a topical approach - industrialism, urbanization, etc., (3) an issue-centered or problem-centered approach such as aggression, technical change, freedom vs. control, etc.; or, (4) an integrated or core approach in which History is grouped with English or Science. Regardless of the approach used, pupils are encouraged to develop inquiry skills by using a variety of sources such as expository accounts, primary sources, listening and observing. Allowances for diversity and flexibility are made in developing essential themes.

PSYCHOLOGY 2207

Suggested Grade Level 9-12 Credit ½ or 1

Teacher Certification for Psychology 2207:

Any high school certification

Description: Psychology is the scientific study of behavior. This course emphasizes the relationship of psychology to other sciences; general principles of learning; understanding of behavior and the way behavior develops; the subject personality; the physical bases of personality - heredity and environment, biological influences on behavior; a study of sensation and perception; adjustment of one's social environment, which would deal with problems of frustration and conflict; and desirable and undesirable ways of dealing with problems.

HUMANITIES 2219

Suggested Grade Level: 10-12 Credit: ½ or 1

Teacher Certification for Humanities 2219:

Any certification with either:

A20 area:	social studies
R21 area:	social studies limited to anthropology
R22 area:	social studies limited to geography
R24 area:	social studies limited to history
R26 area:	social studies limited to sociology
R27 area:	social studies limited to political science
R28 area:	social studies limited to economics
A30 area:	English

A80 area: art
A81 area: instrumental music
A82 area: vocal music
A83 area: music
B19 major: humanities
B20 major: social studies
B30 major: English
B80 major: art
B83 major: music

Description: The humanities emphasize the importance and uniqueness of humankind - their nature and their place in the universe. The humanities try to interpret the meaning of a human's life, rather than just describe the physical world or society. Humanism teaches that all humankind have dignity and worth. Humanists view life both ideally and realistically and are concerned about improving the human condition. This course surveys the beliefs, thoughts, values, traditions, customs and motivations of humankind for the attainment of the idea life as reflected in the history, arts, music, literature, languages and folklore of the people. The humanities include (but are not be limited to) the following disciplines: modern and classical languages, linguistics, literature, history of religion and those branches of the social sciences which share ideas and methods with traditional humanities just named. Such branches of the social sciences include cultural anthropology, sociology, political theory, international relations, and other disciplines employing historical or philosophical approaches. The division of the social sciences which stresses statistical, clinical or technological methods are not appropriate to this study.

HUMAN GEOGRAPHY 2221

Suggested Grade Level: 9-10 Credit: ½ or 1

Teacher Certification for Human Geography 2221:

Grade 9: Any certification with J20 junior high major: social studies

Grades 9-12: Any certification with either:
A20 area: social studies
R22 area: social studies limited to geography
B20 major: social studies
B22 major: geography
B23 major: geography-geology
C22 minor: geography
C23 minor: geography-geology

Description: Human geography is concerned with describing and explaining the arrangement of human phenomena on the surface of the earth. Human geographers are concerned with the problems of over population, exhaustion of natural resources, damage to the environment, erosion of agricultural land, famine and chronic urban crises. Problems arising out of man-land relationships are becoming increasingly critical, not only in our country, but throughout the world. Future citizens need ideas and information by which they can make intelligent choices.Basic geographical themes are man-environmental relationships, location theory, spatial interaction, spatial diffusion, and regionalism.

WORLD CIVILIZATION 2246

Suggested Grade Level 10-12 Credit: 1

Teacher Certification for World Civilation 2246:

Any certification with either:

A20 area:	social studies
R24 area:	social studies limited to history
B20 major:	social studies
B24 major:	history
B29 major:	history-political science
C24 minor:	history
C29 minor:	history-political science

Description: The traditional European history and geography course no longer prepares informed citizens to deal with events throughout the world. Our very survival depends upon the ability to handle the complexities of population growth, scarce resource allocation, organized aggression and land distribution.

This course is an extension of the 7th grade world civilization course. The difference is quantitative: older pupils can explore the curriculum in greater depth, in more detail, and at a higher level of abstraction. This course may be organized along interdisciplinary or multidisciplinary lines, drawing from economics, political science, sociology, geography and anthropology. Or, it may be organized along humanistic lines, with a heavy focus on the arts, music, and literature. This latter approach is flexible and deals with matters of interest to the pupils. The emphasis is on modern history - from 1500's to the present.

Four important themes in the course include:

1. CULTURAL CHANGE - the nature of pre-industrial societies and the transition from an agricultural to an industrial society;

2. THE GROWTH OF SCIENCE AND TECHNOLOGY - the importance of science and the growth of technology, especially as it relates to changes in the basic nature of human relationships;

3. TRADITION AND REVOLUTION - the balance between the weight of tradition and the important revolutions which have shaped the modern world; and,

4. INTERDEPENDENCE - the increasing interdependence of virtually all peoples and all countries.

SOCIOLOGY 2261

Suggested Grade Level: 9-11 Credit: ½ or 1

Teacher Certification for Sociology 2261:

Grade 9: Any certification with J20 junior high major: social studies

Grades 9-11: Any certification with either:
A20 area: social studies
R26 area: social studies limited to sociology
B20 major: social studies
B26 major: sociology
B25 major: economics-sociology
B27 major: political science
C26 minor: sociology
C25 minor: economics-sociology

Description: Sociology is the study of group behavior. Sociologists examine those factors that exert an influence on the formation of attitudes, beliefs, expectations, aspirations, hopes and dislikes. As such, sociologists share some of their concerns with psychologists, anthropologists, and other scientists. The importance of sociology lies both in its method and its concerns. Through the use of structured interview, surveys, questionnaires, and the employment of statistical/mathematical analysis of data, sociologists can shed light on a variety of concerns.

This course stresses the importance of social relationships in human behavior; develops the ability to look at social phenomena objectively; introduces basic principles and concepts of sociology; provides an opportunity to carry out simple social research; and encourages the pupil to seek solutions to social problems.

ANTHROPOLOGY 2262

Suggested Grade Level: 10-12 Credit: ½ or 1

Teacher Certification for Anthropology 2262:

Any certification with either:
- A20 area: social studies
- R21 area: social studies limited to anthropology
- B20 major: social studies

Description: As with psychology and sociology, anthropology is the study of human behavior. Anthropologists study the interrelationships of all human activities within a culture. The course may be developed as physical anthropology (study of skeletal remains and human artifacts); or cultural anthropology (behaviors found in virtually all cultures). The content promotes an understanding of human behavior which rests upon the joint consideration of man's biological nature and his cultural origins and development.

POLITICAL SCIENCE 2271

Suggested Grade Level: 12 Credit: ½ or 1

Teacher Certification for Political Science 2271:

Any certication with either:
- A20 area: social studies
- R27 area: social studies limited to political science
- B20 major: social studies
- B24 major: history
- B29 major: history-political science
- B27 major: political science
- C29 minor: history-political science
- C27 minor: political science

Decription: This is a senior level course designed to provide pupils with accurate, up-to-date, and relatively unbiased information about politics and government. Pupils learn to cope with values issues, dilemmas and problems that underlie all political decisions. Pupils should perceive that no political decision is easy or obvious and that any choice carries with it certain trade-offs. The ultimate aim of study is social participation. Internships in government service are encouraged if community resources permit.

BASIC ECONOMICS 2281

Suggested Grade Level: 9-12 Credit: ½ or 1

Teacher Certification for Basic Economics 2281:

Grade 9: Any certification with J20 junior high major: social studies

Grades 9-12: Any certification with either:
A20 area: social studies
R28 area: social studies limited to economics
B20 major: social studies
B28 major: economics
B25 major: economics-sociology
C28 minor: economics
C25 minor: economics-sociology

Description: Basic economics is a study of how we attempt to satisfy our unlimited wants with the limited resources available. Every human society must solve four related economic problems: What should be produced? How should it be produced? How much ought to be produced? and Who gets what is produced? In order to avoid economic decisions based upon unexamined beliefs and unsubstantiated prejudices, pupils must examine economic reasoning. They must gain an understanding of the full economic costs and benefits of any decision. Command, traditional, and market economic systems may be compared to see how each answers these questions. Consumer economics will be an integral part of the course. Teachers should provide pupils with the knowledge and skills necessary, within the framework of their own values, to manage their own affairs more wisely and to play a more effective role in the management of our society.

GLOBAL ISSUES 2273

Suggested Grade Level: 9-12 Credit: ½ or 1

Teacher Certification for Global Issues 2273:

Grade 9: Certification for middle grades (junior high) with the following specialization - J20 major: social studies.

Grades 9-12: High school certification
A20 area: social studies
R26 area: social studies limited to sociology
R27 area: social studies limited to political science
R28 area: social studies limited to economics

B20 major: social studies
B25 major: economics-sociology
B26 major: sociology
B27 major: political science
B28 major: economics
C25 minor: economics-sociology
C26 minor: sociology
C27 minor: political science
C28 minor: economics

Description: The intent and purpose of this elective course is to involve pupils in the reflective examination of persistent issues related to the social, political, and economic facets of human behavior. This is an opportunity for the mature pupil to apply the concepts, skills, and tools of the social scientist and the humanist in some decision-making and problem-solving situations related to issues of a local, state, national and international concern.

This should be more than a survey course in current events. Independently, pupils might pursue a new issue in considerable depth through comprehensive research and analysis. It would also be possible for the teacher to utilize this course to involve the pupils in some direct manner with community issues and problems. The pupil could identify with a practitioner who shares the concern or problem. This course has potential for career education internships.

The following topics are only suggested themes which generate issues:

1. Reception to change
2. The environment
3. Religious freedom
4. Business & labor
5. World hunger
6. Energy resources
7. Welfare
8. Conflict and violence
9. Population
10. World trade
11. Educational systems
12. Political boundaries
13. Tax systems
14. Birth/Death rates
15. International agencies
16. Multi-national corporations
17. Urban decay
18. Cultural diversity
19. Water systems
20. Housing
21. Human rights
22. Social class
23. Media
24. Censorship

KENTUCKY STUDIES 2242

Suggested Grade Level: 10-12 Credit: 1

Teacher Certification for Kentucky Studies 2242:

Any certification with either:
A20 area: social studies
R24 area: social studies limited to history
B20 major: social studies
B24 major: history

B29 major: history-political science
C24 minor: history
C29 minor: history-political science

Description: Kentucky Studies will be an integral part of the social studies program at all levels as we relate our present status in Kentucky to our heritage from the past and our potential for the future. The widening horizons approach focuses on Kentucky families, schools, communities, and cities at the primary level. At the intermediate level the focus is on the historical, geographic, social, and economic development of Kentucky. The study of our state becomes the vehicle for developing social studies concepts and learning skills using a variety of resource materials.

FUNCTIONAL SOCIAL STUDIES I
CITIZENSHIP

Suggested Grade Level: 9-10 Credit: 1

Teacher Certification for Functional Social Studies I:

Certification in some category of special education for the secondary school grades.

Description: This course emphasizes the economics of paycheck management, consumerism and tax forms. It includes instruction in governmental procedures, utilization of community resources, individual responsibility related to the law, freedom, property, participation in community affairs, rights of others, and voting. It also stresses the importance of the development of appropriate behaviors, values and interpersonal relationships.

FUNCTIONAL SOCIAL STUDIES II
INTRODUCTION TO SOCIAL STUDIES

Suggested Grade Level: 10-11 Credit: 1

Teacher Certification for Functional Social Studies II:

Certification in some category of special education for the secondary school grades.

Description: This course is a continuation of Functional Social Studies I.

FUNCTIONAL SOCIAL STUDIES III
U.S. HISTORY

Suggested Grade Level: 11-12 Credit: 1

Teacher Certification for Functional Social Studies III:

Certification in some category of special education for the secondary school grades.

Description: This course includes a study of the constitution, immigration, industrialization, communism versus democracy, urban and rural life, violence and change and the application of this study to decision-making in the modern world.

VOCATIONAL COURSE OFFERINGS

AGRIBUSINESS EDUCATION

COURSES	CODE	7	8	9	10	11	12	MAXIMUM HIGH SCHOOL UNITS
Agribusiness/Natural Resources Exploration	5390	X	X					
Environmental Exploration	5391	X	X					
Agribusiness I	5901			X				1
Agribusiness II	5902				X			1
Agricultural Production	5903					X	X	6
Horticulture	5906					X	X	6
Agricultural Supplies & Services	5907					X	X	6
Agricultural Mechanics	5908					X	X	6
Forestry	5909					X	X	6
Diversified Agricultural Occupations (DAO)	5910					X	X	6
Agricultural Resources	5911					X	X	6

Pupils attending vocational-technical schools or area vocational education centers may earn up to a maximum of six units of credit while enrolled in a preparatory program for 11th and 12th grade pupils in addition to any credits earned in Agribusiness I and Agribusiness II.

Pupils enrolled in agribusiness education programs in a local school district may earn a maximum of six units of credit by completing Agribusiness I and Agribusiness II plus a two-year preparatory instructional program meeting for two hours per day each year. Pupils may earn a maximum of seven units of credit when involved in the cooperative method of instruction. Schools implementing cooperative education as a method of instruction may provide a maximum of three units of credit in one year for a pupil receiving 15 hours per week of work experience in a job related to the pupil's occupational objective and one hour per day in a preparatory instructional program.

Course Descriptions and Program Requirements

Agribusiness education provides training for persons preparing for employment, for those employed, and for those continuing their education for agricultural occupations. However, pupils may enroll for orientation, exploration, and avocational purposes. The knowledge and performance skills required for successful achievement and/or advancement in agricultural occupations constitute the central focus of the program. Each pupil enrolled in a preparatory program shall have a record of an occupational objective on file.

Agribusiness I and Agribusiness II courses are sequenced so that the pupil completes them in the appropriate order prior to enrollment in preparatory

instructional programs for 11th and 12th grade pupils. Sequential courses are desirable but are not a required prerequisite to enrollment in preparatory programs. Preparatory programs for 11th and 12th grade pupils, that provide 50% or more of the instructional time in a laboratory setting, should be two-year programs that meet for two hours each day.

All preparatory instructional programs consist of related classroom instruction, laboratory experiences, and supervised occupational experience programs (entrepreneur or cooperative on-the-job placement experiences) for employment in the agricultural occupation. Each pupil enrolled in agribusiness education programs must have a planned occupational experience program that complements classroom instruction. The experience program is carried out in addition to classroom instruction. Time shall be provided in the daily schedule for both classroom instruction and supervision of experience programs.

Provisions are made to meet the needs of disadvantaged and handicapped pupils to prepare them for occupations in agriculture. If the nature and severity of the disadvantage or handicap is such that the pupil cannot benefit from participation in a regular program, a separate or modified program may be developed. The program provided to handicapped students shall be consistent with and specified on each student's Individualized Education Program (IEP).

Future Farmers of America (FFA) is the vocational student organization available to pupils enrolled in agribusiness education programs. The activities of the organization are an integral part of the instructional programs. All pupils enrolled in the agribusiness education program are encouraged to become members of the FFA and take advantage of the leadership, citizenship, and personal development training and experience offered through participation in the FFA program.

Each approved program of agribusiness education shall have an active FFA chapter that provides leadership development opportunities for all its members as evidenced by meeting the requirements for a standard chapter.

Agribusiness education teachers shall serve as FFA chapter advisors. In multiple teacher departments, each teacher shall share the FFA chapter responsibilities.

AGRIBUSINESS/NATURAL RESOURCES EXPLORATION 5390

Suggested Grade Level: 7-8

Teacher Certification for Agribusiness/Natural Resources Exploration 5390:

Any high school certification with either:

A50 area:	science	B54 major:	biology-health
R51 area:	science limited to biology	B56 major:	earth science
R56 area:	science limited to earth science	B51 major:	biology
A90 area:	agriculture vocational	C51 minor:	biology
B50 major:	science	C56 minor:	earth science

Note: Any certification for high school, middle grades (junior high), or elementary classroom teaching, and 2,000 hours of paid or unpaid work experience, as approved by the Bureau of Vocational Education, may also direct the exploration of this cluster.

Description: Pupils explore job families in agricultural production, agricultural supplies and services, agricultural mechanics, agricultural products, horticulture, and natural resources. This course is offered for 6-12 weeks as a part of a total exploration program. (This course is cross-referenced with Practical Arts Career Exploration.)

ENVIRONMENTAL EXPLORATION 5391

Suggested Grade Level: 7-8

Teacher Certification for Environmental Exploration 5391:

Any certification with either:

A50 area:	science	B52 major:	chemistry
R51 area:	science limited to biology	B54 major:	biology-health
R52 area:	science limited to chemistry	B56 major:	earth science
		C23 minor:	geography-geology
R56 area:	science limited to earth science	C51 minor:	biology
		C52 minor:	chemistry
A90 area:	agriculture vocational	C56 minor:	earth science
B23 major:	geography-geology	C57 minor:	geology
B50 major:	science		
B51 major:	biology		

Note: Any certification for high school, middle grades (junior high), or elementary classroom teaching, and 2,000 hours of paid or unpaid work experience, as approved by the Bureau of Vocational Education, may also direct the exploration of this cluster.

Description: Pupils in this cluster explore the job families of land, water, air, and disposal. This course is offered for 6-12 weeks as a part of a total exploration program. (This course is cross-referenced with Practical Arts Career Exploration.)

AGRIBUSINESS I 5901

Suggested Grade Level: 9 Credit: 1

Teacher Certification for Agribusiness I 5901:

Any certification with A90 area: agriculture vocational

Description: The purpose of this course is to provide orientation and exploration of various agricultural occupations. The curriculum provides the pupil opportunities to develop skills in the following areas: career opportunities, selecting and planning occupational experience programs, recordkeeping, leadership development, basic skills in agricultural mechanics, basic animal science, basic soil science, basic crop production, and tractor operation.

AGRIBUSINESS II 5902

Suggested Grade Level: 10 Credit: 1

Teacher Certification for Agribusiness II 5902:

Any certification with A90 area: agriculture vocational

Description: This course is a continuation of the occupational exploration provided in Agribusiness I. The curriculum provides the pupil opportunities to develop skills in the following areas: summarizing records, summarizing and revising plans for occupational experience programs, leadership development, basic skills in agricultural mechanics, basic animal science, basic crop production, basic soil science, and tractor maintenance. Pupils receive personal guidance and counseling which will help them select the preparatory instructional program leading to entry-level employment in an agricultural occupation.

AGRICULTURAL PRODUCTION 5903

Suggested Grade Level: 11-12 Credit: 1-3 each year

Teacher Certification for Agricultural Production 5903:

Any certification with A90 area: agriculture vocational

Description: The program is designed to prepare pupils for occupations in farming such as general farmer, specialized farmer, and farm worker. The curriculum includes subject matter and learning activities concerned with the application of principles, concepts, and skills dealing with livestock production, crop production, soil science, farm management, agricultural marketing, and agricultural mechanics.

HORTICULTURE 5906

Suggested Grade Level: 11-12 Credit: 1-3 each year

Teacher Certification for Horticulture 5906:

Any certification with S906: Approval for teaching horticulture*

*The approval for teaching horticulture will require certification in vocational agriculture and either 15 semester hours credit in the area of horticulture or 2,000 hours of work experience in horticulture. Request for approval should be submitted to the Bureau of Vocational Education. When approval is granted the Division of Teacher Education and Certification will enter the approval code of S906 into the teacher's record.

Description: The program is designed to prepare pupils for occupations in horticulture such as: horticultural and nursery products salesperson, landscape gardener, parks and groundskeeper, nursery worker, greenhouse worker, floral arranger, fruit farm worker, and vegetable farm worker. The program consists of subject matter and learning activities concerned with the application of principles, concepts, and skills dealing with soils, plant propogation, cultural and environmental practices, plant pests and diseases, harvesting and marketing crops, landscape design, and floral design. Classes offered within the Distributive Education program such as floral design and retailing may include instruction which relates to horticulture.

AGRICULTURAL SUPPLIES AND SERVICES 5907

Suggested Grade Level: 11-12 Credit: 1-3 each year

Teacher Certification for Agricultural Supplies and Services 5907:

Any certification with A90 area: agriculture vocational

Description: This program is designed to prepare pupils for occupations in agricultural supplies and services such as sales representative, sales clerk, meat processor, and service worker. The curriculum includes instruction in the development of skills in agricultural business, agricultural mathematics, salesmanship, feed processing, fertilizer use, chemical use, and related agricultural mechanics. Classes offered within the Distributive Education program such as retailing and food marketing may include instruction which relates to agricultural supplies and services.

AGRICULTURAL MECHANICS 5908

Suggested Grade Level: 11-12 Credit: 1-3 each year

Teacher Certification for Agricultural Mechanics 5908:

Any certification with S908: Approval for teaching agricultural mechanics*

*The approval for teaching agricultural mechanics will require certification in vocational agriculture and either 15 semester hours credit in the area of agricultural mechanics or 2,000 hours of work experience in agricultural mechanics. Request for approval should be submitted to the Bureau of Vocational Education. When approval is granted, the Division of Teacher Education and Certification will enter the approval code of S908 into the teacher's record.

Description: This program is designed to prepare pupils for occupations in agricultural mechanics such as farm equipment mechanics, farm machine operator, and farm machinery set-up mechanic. The curriculum includes instruction in the development of skills in welding, electricity, small engine repair, carpentry, plumbing, masonry, and equipment repair maintenance and operation. Classes offered within the Industrial Education program such as carpentry, diesel mechanics, electricity, masonry, plumbing, small engine repair, and welding may include instruction which relates to agricultural mechanics.

FORESTRY 5909

Suggested Grade Level: 11-12 Credit: 1-3 each year

Teacher Certification for Forestry 5909:

Any certification with S909: Approval for teaching forestry*

*The approval for teaching forestry will require certification in vocational agriculture and either 15 semester hours credit in the area of forestry or 2,000 hours of work experience in forestry. Request for approval should be submitted to the Bureau of Vocational Education. When approval is granted, the Division of Teacher Education and Certification will enter the approval code of S909 into the teacher's record.

Description: This program is designed to prepare pupils for occupations in forestry such as: forestry aide, forest worker, tree planter, and logger. The curriculum includes instruction in the development of skills in tree production, forest management, timber harvesting, wood utilization, maintenance and operation of related power equipment, and ecological aspects of forestry.

DIVERSIFIED AGRICULTURAL OCCUPATIONS (DAO) 5910

Suggested Grade Level: 11-12 Credit: 1-3 each year

Teacher Certification for Diversified Agricultural Occupations (DAO) 5910:

Any certification with A90 area: agriculture vocational

Description: This program is designed to prepare pupils for occupations in agriculture who are enrolled in programs that do not have the facilities, equipment, and personnel to offer a specific preparatory instructional program. For example, some pupils may be preparing for an occupation in agricultural production while others are preparing for an occupation in agricultural mechanics or horticulture. The curriculum includes basic instruction of those skills common to the different occupations. Individual or small group instruction is used to teach those skills that relate to a specific occupation. The teacher works with each pupil individually to select those tasks needed to prepare for job entry level in a specific occupation.

AGRICULTURAL RESOURCES 5911

Suggested Grade Level: 11-12 Credit: 1-3 each year

Teacher Certification for Agricultural Resources 5911:

Any certification with S901: Approval for teaching agricultural resources*

*The approval for teaching agricultural resources will require certification in vocational agriculture and either 15 semester hours credit in the area of agricultural resources or 2,000 hours of work experience in agricultural resources. Request for approval should be submitted to the Bureau of Vocational Education. When approval is granted, the Division of Teacher Education and Certification will enter the approval code of S901 into the teacher's record.

Description: The program prepares pupils for occupations in agricultural resources such as soil conservation aide, game farm helper, and chain and rod survey helper. The curriculum includes instruction in the development of skills in wildlife and fish management, soil conservation practices, land stabilization and reclamation practices, soil and water conservation management, and outdoor recreation development.

BUSINESS AND OFFICE EDUCATION

COURSES	CODE	7	8	9	10	11	12	MAXIMUM HIGH SCHOOL UNITS
Business Exploration	2621/5360	X	X					
Consumer Education	2642/5642			X	X	X	X	1
Introduction to Business	2641/5641			X	X			1
Introduction to Computers	2614/5614			X	X	X		1
Business Mathematics	2647/5647				X	X	X	1
Typewriting I	2626/5626			X	X	X	X	1
Typewriting II	2627/5627				X	X	X	1
Shorthand I	2624/5624					X	X	1
Shorthand II**	5625						X	1
Business Recordkeeping	2632/5632				X	X	X	1
Accounting I	2610/5610				X	X	X	1
Accounting II**	5611					X	X	1
Data Processing I**	5663					X	X	1
Data Processing II**	5664						X	2
Business Economics	2643/5643				X	X	X	1
Business Law	2646/5646					X	X	1
Business Management**	5648					X	X	1
Word Processing I**	5650					X	X	1
Word Processing II**	5651						X	2
Business Communications**	5645					X	X	1
*Office Procedures**	5662						X	2
*Model Office**	5629						X	2
*Cooperative Office Education**	5665						X	3
Business Specialization**	5631						X	1

*Pupils are only permitted to take one of these courses.
**This class requires a vocationally approved teacher in business and office.

Course Descriptions and Program Requirements

The following minimum requirements shall apply for schools offering a secondary vocational business and office education program:

> The school shall offer a comprehensive business and office program to include career exploration, personal use skills, and occupational preparation components. The occupational preparation component shall have a minimum of two (2) business and office curriculum clusters selected from the "Business and Office Education Model." Each cluster shall include Level 3 and 4 courses.

Each pupil, counselor, and business teacher is encouraged to work carefully to ensure selection of a class or a combination of classes that will meet the specific needs of the pupil. Courses shall be available to allow pupils the opportunity to pursue one of the following goals:

a pupil may select one or two classes such as typewriting, introduction to business, or consumer education to provide basic typing skills and/or business fundamentals for personal use; or

a pupil may choose a specific course(s) that would be useful preparation for an occupation outside the field of business; or

a pupil who desires to prepare for specific jobs in the occupational clusters of business such as clerical, secretarial, accounting/management, data processing, or word processing should carefully outline a planned sequence of classes to include Levels 3 and 4 that will best meet their needs in attaining that objective. A card shall be on file that identifies the student's occupational objective and the planned sequence of instruction as determined by the competencies required to complete the objective. Preparation for some occupations can be completed at the end of the 12th grade. Other occupations in business, however, require that the pupil receive additional educational experience beyond the high school level.

Level 1 - Business Exploration, Introduction to Business, Typewriting I

Level 2 - Accounting I, Business Mathematics, Business Recordkeeping, Consumer Education, Typewriting II, Introduction to Computers

Level 3 - Accounting II, Data Processing I, Business Economics, Word Processing I, Business Law, Business Communications, Office Procedures

Level 4 - Shorthand II, Data Processing II, Business Management, Word Processing II, Model Office, Cooperative Office Education, Business Specialization

In addition to the standards identified, the Model Office course shall meet the following minimum requirements:

1) The program shall use a software simulation package approved by the Superintendent of Public Instruction.
2) The program shall provide model office equipment and furniture arranged to simulate a realistic office environment.
3) The students enrolled in the Model Office course shall have completed two (2) business courses and shall be completing the requirements for a vocational business and office occupational cluster.

Future Business Leaders of America (FBLA) is the organization for Business and Office Education pupils. The co-curricular activities of FBLA are an integral part of a good business education program and pupils are encouraged to become involved in these activities. The activities are designed to enhance and enrich the business and office offerings and are appropriate for inclusion in the classroom.

Provisions are made to meet the needs of disadvantaged and handicapped pupils to prepare them for occupations in business and office. If the nature and severity of the disadvantage or handicap is such that the pupil cannot benefit from participation in a regular program, a separate or modified program may be developed. The program provided to handicapped students shall be consistent with and specified on each student's Individualized Education Program (IEP).

CRITERIA FOR VOCATIONAL APPROVAL OF BUSINESS AND OFFICE TEACHERS

The program shall have a minimum of three (3) business teachers, two (2) of whom are approved as vocational teachers.

In order to qualify for vocational approval as a business and office education teacher, all of the following prerequisites must be met:

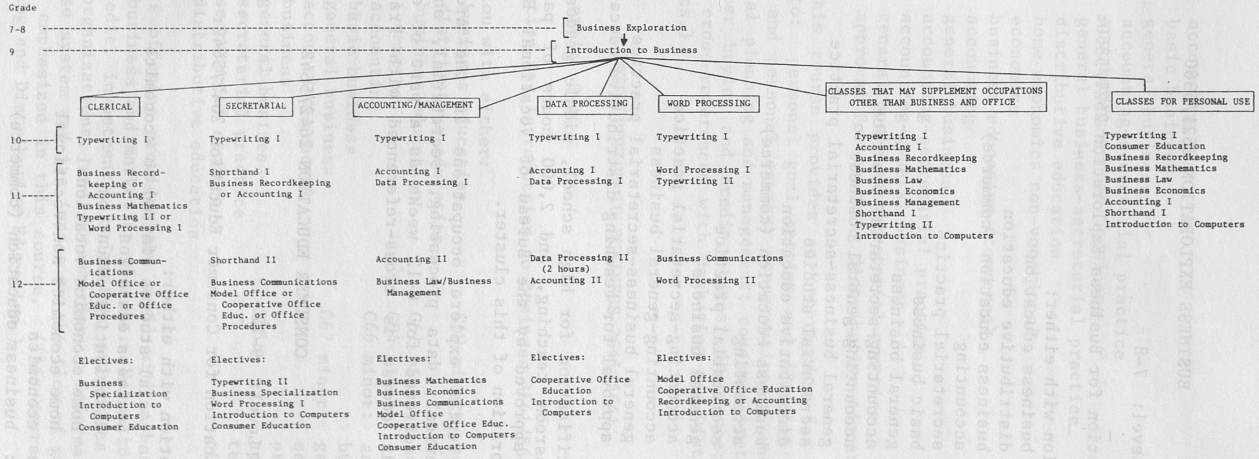
A. A baccalaureate degree--with a major or area of concentration in Business Education

B. A valid Kentucky teaching certificate (Standard or Provisional)

C. One year or 2,000 hours of approvable office work experience. Work experience must be approved by the Business and Office Education Unit after certification requirements have been met.

Request for approval should be submitted to the Bureau of Vocational Education.

BUSINESS AND OFFICE EDUCATION MODEL



BUSINESS EXPLORATION 2621/5360

Suggested Grade Level: 7-8

Teacher Certification for Business Exploration 2621/5360:

Any certification with either:

A60 area:	business education
A75 area:	distributive education
B60 major:	business education (commerce)
B61 major:	accounting
B62 major:	secretarial practice
B63 major:	basic business
B64 major:	general business
B65 major:	accounting-secretarial practice
B66 major:	accounting-general business
B67 major:	general business-secretarial practice
B69 major:	secretarial studies
B75 major:	distributive education
C60 minor:	business education (commerce)
C61 minor:	accounting
C62 minor:	secretarial practice
C64 minor:	general business
C65 minor:	accounting-secretarial practice
C66 minor:	accounting-general business
C67 minor:	general business-secretarial practice
S75:	approval for teaching distributive education

Note: Any certification for high school, middle grades (junior high), or elementary classroom teaching, and 2,000 hours of paid or unpaid work experience, as approved by the Bureau of Vocational Education, may also direct the exploration of this cluster.

Description: Pupils explore occupations in the areas of accounting, management, clerical, data processing, secretarial, and word processing. This course is offered for 6-12 weeks as a part of a total exploration program. (This course is cross-referenced with Practical Arts Career Exploration.)

CONSUMER EDUCATION 2642/5642

Suggested Grade Level: 9-12 Credit: ½ or 1

Teacher Certification for Consumer Education 2642/5642:

Any certification with either:

R28 area:	social studies limited to economics
A60 area:	business education
A75 area:	distributive education
A92 area:	home economics vocational
A93 area:	home economics non-vocational
B28 major:	economics
B60 major:	business education (commerce)

B61 major: accounting
B63 major: basic business
B64 major: general business
B65 major: accounting-secretarial practice
B66 major: accounting-general business
B67 major: general business-secretarial practice
B75 major: distributive education
B93 major: home economics non-vocational
C28 minor: economics
C60 minor: business education (commerce)
C61 minor: accounting
C64 minor: general business
C65 minor: accounting-secretarial practice
C66 minor: accounting-general business
C67 minor: general business-secretarial practice
S75: approval for teaching distributive education

Description: This course provides an opportunity for pupils to develop skills related to: personal goal setting and decision making; management of time, money, and personal energy; conservation of energy and other resources; financial planning and management; consumer protection and responsibility; consumer buying and credit; taxes; insurance; and investments. (This course is cross-referenced with Marketing and Distributive Education and Home Economics.)

INTRODUCTION TO BUSINESS 2641/5641

Suggested Grade Level: 9-10 Credit: 1

Teacher Certification for Introduction to Business 2641/5641:

Any certification with either:

A60 area: business education
A75 area: distributive education
B60 major: business education (commerce)
B61 major: accounting
B63 major: basic business
B64 major: general business
B66 major: accounting-general business
B67 major: general business-secretarial practice
B69 major: secretarial studies
B75 major: distributive education
C60 minor: business education (commerce)
C61 minor: accounting
C64 minor: general business
C66 minor: accounting-general business
C67 minor: general business-secretarial practice
S75: approval for teaching distributive education

Description: This offering provides the pupil with a basic foundation to further study in business and marketing classes. Major topics of study include banking, credit, investments, budgeting, principles of insurance and taxes, business organizations, and consumerism. Information relating to the free enterprise system and its impact on the flow of goods and services in our economy is emphasized in this course. (This course is cross-referenced with Marketing and Distributive Education.)

INTRODUCTION TO COMPUTERS 2614/5614

Suggested Grade Level: 9-11 Credit: ½ or 1

Teacher Certification for Introduction to Computers 2614/5614:

Any certification with either:

A60 area:	business education	B67 major:	general business-secretarial practice
A70 area:	mathematics-physical science	B71 major:	mathematics
B60 major:	business education (commerce)	C71 minor:	mathematics
B61 major:	accounting	C72 minor:	computer science
B63 major:	basic business		
B64 major:	general business		
B66 major:	accounting-general business		

Description: Introduction to Computers provides "hands-on" experiences in computer operations. The content includes writing and running a short computer program. The pupil becomes familiar with the main uses of the computer as a tool for both work and personal purposes. The pupil also learns of computer-related jobs in data processing, word processing, and other fields. (This is cross-referenced with Introduction to Computers in the section on academic course offerings.)

BUSINESS MATHEMATICS 2647/5647

Suggested Grade Level: 10-12 Credit: ½ or 1

Teacher Certification for Business Mathematics 2647/5647:

Any certification with either:

A60 area:	business education	B66 major:	accounting-general business
A70 area:	mathematics-physical science	B67 major:	general business-secretarial practice
B60 major:	business education (commerce)	B69 major:	secretarial studies
B61 major:	accounting	B71 major:	mathematics
B62 major:	secretarial practice	C71 minor:	mathematics
B63 major:	basic business		
B64 major:	general business		
B65 major:	accounting-secretarial practice		

Description: Business mathematical skills are taught in calculating fractions, percentages, and decimals for areas such as: buying, selling, pricing, investing, taxes, payroll, insurance, transportation, depreciation, interest, and business management. An introduction to the metric system is included as a unit of study. This offering enables the pupil to develop skill in the "touch method" of using the electronic calculator for basic math calculations. (This course is cross-referenced with Business Mathematics in the section on academic course offerings.)

TYPEWRITING I 2626/5626

Suggested Grade Level: 9-12 Credit: ½ or 1

Teacher Certification for Typewriting I 2626/5626:

Any certification with either:

A60 area:	business education
B60 major:	business education (commerce)
B62 major:	secretarial practice
B63 major:	basic business
B64 major:	general business plus S63: endorsement for teaching typewriting
B65 major:	accounting-secretarial practice
B66 major:	accounting-general business plus S63: endorsement for teaching typewriting
B67 major:	general business-secretarial practice
B69 major:	secretarial studies
C60 minor:	business education (commerce)
C62 minor:	secretarial practice
C65 minor:	accounting-secretarial practice
C67 minor:	general business-secretarial practice

Description: This course includes machine operations and care of the typewriter. The pupil develops touch keyboarding skills, proper techniques, speed and accuracy in keyboarding for business, professional, and personal typewriting. The pupil applies techniques for proofreading, editing, word division, capitalization, and punctuation for producing mailable copy of letters, simple business forms, tabulated information and manuscripts.

TYPEWRITING II 2627/5627

Suggested Grade Level: 10-12 Credit: 1

Teacher Certification for Typewriting II 2627/5627:

Any certification with either:

A60 area:	business education
B60 major:	business education (commerce)
B62 major:	secretarial practice
B63 major:	basic business
B64 major:	general business plus S63: endorsement for teaching typewriting
B65 major:	accounting-secretarial practice
B66 major:	accounting-general business plus S63: endorsement for teaching typewriting
B67 major:	general business-secretarial practice
B69 major:	secretarial studies

Description: This typewriting course develops and refines further the competencies learned in Typewriting I and provides for the development of advanced competencies with emphasis on production. The pupil learns to

type from rough-draft copy using proofreading and editing skills. Speed and production in typing business letters, forms, invoices, and tabulated material are emphasized.

Prerequisite: Typewriting I - 1 full credit

SHORTHAND I 2624/5624

Suggested Grade Level: 11-12 Credit: 1

Teacher Certification for Shorthand I 2624/5624:

Any certification with either:

A60 area:	business education	B67 major:	general business-secretarial practice
B60 major:	business education (commerce)	B69 major:	secretarial studies
B62 major:	secretarial practice		
B65 major:	accounting-secretarial practice		

Description: This course of shorthand enables the pupil to gain a knowledge of and skill in writing and reading shorthand outlines, brief forms, and phrases. Dictation is given at speeds of 50 to 80 (and above) words per minute. Notes are transcribed on the typewriter applying rules of grammar and punctuation. Shorthand machines may be an alternative to the symbol method of taking dictation. One typewriter per pupil is required.

Prerequisite or concurrent with: Typewriting I - 1 full credit

SHORTHAND II 5625

Suggested Grade Level: 12 Credit: 1

Teacher Certification** for Shorthand II 5625:

Any certification with either:

A60 area:	business education	B67 major:	general business-secretarial practice
B60 major:	business education (commerce)	B69 major:	secretarial studies
B62 major:	secretarial practice		
B65 major:	accounting-secretarial practice		

**Vocational approval is also required.

Description: This advanced shorthand course reviews the basic skills learned in Shorthand I and emphasizes a higher level of dictation and transcription. Dictation speeds range from approximately 80 to 120 (and above) words per minute. Transcription of new-matter dictation is in mailable form (error-free) with continued emphasis on punctuation, typing, and grammar. One typewriter is required for each pupil.

Prerequisite: Typewriting I and Shorthand I - 1 full credit each

BUSINESS RECORDKEEPING 2632/5632

Suggested Grade Level: 10-12 Credit: ½ or 1

Teacher Certification for Business Recordkeeping 2632/5632:

Any certification with either:

A60 area:	business education	B66 major:	accounting-general business
B60 major:	business education (commerce)	B67 major:	general business-secretarial practice
B61 major:	accounting	B69 major:	secretarial studies
B63 major:	basic business		
B64 major:	general business		
B65 major:	accounting-secretarial practice		

Description: Business Recordkeeping develops skills in single-entry recordkeeping and provides a basic insight into the organization, operation, and control of business through the use of fundamental recordkeeping activities. Recordkeeping skills apply to personal recordkeeping, personal income, taxes, cashier records, petty cash, budgeting, banking, sales, purchases, payroll, filing, automation, and an introduction to the theory of accounting. Electronic calculating machines are available and the "touch method" of operation is stressed.

ACCOUNTING I 2610/5610

Suggested Grade Level: 10-12 Credit: 1

Teacher Certification for Accounting I 2610/5610:

Any certification with either:

A60 area:	business education	B65 major:	accounting-secretarial practice
B60 major:	business education (commerce)	B66 major:	accounting-general business
B61 major:	accounting	B67 major:	general business-secretarial practice plus S61: endorsement for teaching accounting
B63 major:	basic business		
B64 major:	general business plus S61: endorsement for teaching accounting		

Description: The accounting principles taught in this course are based on a double-entry system. Activities include: preparing worksheets; journalizing; posting; preparing payroll and taxes; preparing financial statements; and introducing electronic recordkeeping. Electronic calculators are available and the "touch method" of operation is essential.

ACCOUNTING II 5611

Suggested Grade Level: 12 Credit: 1

Teacher Certification** for Accounting II 5611:

Any certification with either:

A60 area:	business education
B60 major:	business education (commerce)
B61 major:	accounting
B63 major:	basic business
B64 major:	general business plus S61: endorsement for teaching accounting
B65 major:	accounting-secretarial practice
B66 major:	accounting-general business
B67 major:	general business-secretarial practice plus S61: endorsement for teaching accounting

**Vocational approval is also required.

Description: This advanced course of accounting includes an in-depth study of accounting principles, procedures, and techniques used in keeping financial records for sole proprietorship, partnership, and corporate organizations. Skills are developed in analyzing and interpreting information; preparing formal statements and supporting schedules; using vouchers and coding; using inventory control and budgeting systems; analyzing and interpreting accounting information for use in managerial problem-solving situations; and electronic recordkeeping. Electronic calculators are available and the "touch method" of operation is essential.

Prerequisite: Accounting I - 1 full credit

DATA PROCESSING I 5663

Suggested Grade Level: 11-12 Credit: 1

Teacher Certification** for Data Processing I 5663:

Any certification with either:

A60 area:	business education
B60 major:	business education (commerce)
B63 major:	basic business
B64 major:	general business
B66 major:	accounting-general business
B67 major:	general business-secretarial practice
B69 major:	secretarial studies

**Vocational approval is also required.

Description: Data Processing I provides the pupil with a knowledge of and skills in business data processing procedures. Pupils study input/output devices, central processing units, storage devices, flowcharting, computer terminology, and career opportunities available in data processing. Pupils are introduced to computer programming with "hands-on" equipment use. Data entry skills are developed.

Prerequisite or concurrent with: Typewriting I and Accounting I - 1 full credit each

DATA PROCESSING II 5664

Suggested Grade Level: 12 Credit: 1 or 2

Teacher Certification** for Data Processing II 5664:

Any certification with either:

A60 area:	business education
B60 major:	business education (commerce)
B63 major:	basic business plus S68: endorsement for teaching data processing
B64 major:	general business
B66 major:	accounting-general business

**Vocational approval is also required.

Description: In this advanced course, the pupil develops skills in writing programs and in computer operation by actual "hands-on" equipment use. Pupils study detailed flowcharting and advanced problem solving through computer programming. Appropriate business programming languages are utilized. (When offered for two credits, a work experience or project component is provided.)

BUSINESS ECONOMICS 2643/5643

Suggested Grade Level: 11-12 Credit: ½ or 1

Teacher Certification for Business Economics 2643/5648:

Any certification with either:

A60 area:	business education	B67 major:	general business-secretarial practice
A75 area:	distributive education	B75 major:	distributive education
B28 major:	economics	S75:	approval for teaching distributive education
B60 major:	business education (commerce)		
B61 major:	accounting		
B63 major:	basic business		
B64 major:	general business		
B66 major:	accounting-general business		

Description: The pupil develops an understanding of the concepts and principles of economics and the economic laws that govern our free enterprise system and their impact upon society. Major units of study include: comparison of various economic systems, production and distribution of wealth, personal economic goals, supply/demand, organized labor, competition, profit, and taxation. (This course is cross-referenced with Marketing and Distributive Education.)

BUSINESS LAW 2646/5646

Suggested Grade Level: 11-12 Credit: ½ or 1

Teacher Certification for Business Law 2646/5646:

Any certification with either:

A60 area:	business education	B64 major:	general business
B60 major:	business education (commerce)	B66 major:	accounting-general business
B61 major:	accounting	B67 major:	general business-secretarial practice
B63 major:	basic business		

Description: This course includes a study of individual and business legal rights and responsibilities in today's society; the origin of law; the court system; criminal and civil law; basic elements of contracts; consumer protection; insurance; bailments; negotiable instruments; employer-employee relations; legal affairs affecting property owners; wills and estates; and community property. Legal terminology is emphasized.

BUSINESS MANAGEMENT 5648

Suggested Grade Level: 11-12 Credit: ½ or 1

Teacher Certification** for Business Management 5648:

Any certification with either:

A60 area:	business education	B66 major:	accounting-general business
A75 area:	distributive education	B67 major:	general business-secretarial practice
B60 major:	business education (commerce)	B75 major:	distributive education
B61 major:	accounting	S75:	approval for teaching distributive education
B63 major:	basic business		
B64 major:	general business		

**Vocational approval is required for business and office teachers.

Description: Business Management emphasizes management skills for developing the most efficient use of time, people, machines, and money to achieve objectives through the use of planning, organizing, leading, and controlling. Areas of study include: management functions and characteristics; business ownership; corporate operations; information processing; personnel and government regulations; and marketing aspects of business operations including business opportunities, site selection, financing business, records, insurance and taxes. (This course is cross-referenced with Marketing and Distributive Education.)

WORD PROCESSING I 5650

Suggested Grade Level: 11-12 Credit: 1

Teacher Certification** for Word Processing I 5650:

Any certification with either:

A60 area:	business education	B65 major:	accounting-secretarial practice
B60 major:	business education (commerce)	B67 major:	general business-secretarial practice
B62 major:	secretarial practice	B69 major:	secretarial studies
B63 major:	basic business		

**Vocational approval is also required.

Description: This course provides the pupil with a background in concepts, communication skills, and career opportunities in word processing. Activities include formatting, inputting, editing, and printing at a microcomputer and/or text-editing processor. Emphasis is placed on organization of work; keystroke skills; command functions; grammar, spelling, and proofreading for mailable copy; and problem solving using simulated or real projects from rough draft copy and transcription machine media.

Prerequisite: Typewriting I - 1 full credit

WORD PROCESSING II 5651

Suggested Grade Level: 12 Credit: 1 or 2

Teacher Certification** for Word Processing II 5651:

Any certification with either:

A60 area:	business education	B67 major:	general business-secretarial practice
B60 major:	business education (commerce)	B69 major:	secretarial studies
B62 major:	secretarial practice		
B65 major:	accounting-secretarial practice		

**Vocational approval is also required.

Description: Word Processing II offers the pupil opportunities to develop technical skills and production-level competencies in a classroom/laboratory equipped with business production-level word processing machines. Emphasis is on document preparation, text editing, file merging, and numerical entry. Production is done from rough draft copy and transcription machine media. Work is done to meet production speed and mailability standards set by business. (When offered for two credits, a work experience or project component is provided.)

BUSINESS COMMUNICATIONS 5645

Suggested Grade Level: 11-12 Credit: 1

Teacher Certification** for Business Communications 5645:

Any certification with either:

A60 area:	business education	B65 major:	accounting-secretarial practice
B60 major:	business education (commerce)	B67 major:	general business-secretarial practice
B62 major:	secretarial practice	B69 major:	secretarial studies
B63 major:	basic business		
B64 major:	general business		

**Vocational approval is also required.

Description: Business Communications is the study of written and oral communication in a business environment. Pupils review the basic principles of spelling, grammar, punctuation, proofreading, vocabulary development, and word and number usage. Emphasis is on: writing business letters, preparing and orally presenting business reports, using the telephone in business, electronic transfer of information and money, using business information resources, listening and interpreting, and scheduling and organizing business information. The class is taught in a classroom/laboratory equipped with a typewriter for each pupil.

Prerequisite: Typewriting I - 1 full credit

OFFICE PROCEDURES 5662

Suggested Grade Level: 12 Credit: 1 or 2

Teacher Certification** for Office Procedures 5662:

Any certification with either:

A60 area:	business education	B67 major:	general business-secretarial practice
B60 major:	business education (commerce)	B69 major:	secretarial studies
B62 major:	secretarial practice		
B65 major:	accounting-secretarial practice		

**Vocational approval is also required.

Description: Office Procedures is a capstone course designed to provide business pupils with an understanding of the variety of tasks in an office situation. The pupil is instructed in: correct telephone usage; machine dictation and transcription; records management; calculator usage; reprographics; human relation skills; mailing processes; employment skills and a continual review of grammar, punctuation, and spelling. Office Procedures is taught in a classroom/laboratory with typewriting and business machine skills applied to office tasks. (When offered for two hours of credit, an office-simulated component is included.)

MODEL OFFICE 5629

Suggested Grade Level: 12 Credit: 2

Teacher Certification** for Model Office 5629:

Any certification with either:

A60 area:	business education	B67 major:	general business-secretarial practice
B60 major:	business education (commerce)	B69 major:	secretarial studies
B62 major:	secretarial practice		
B65 major:	accounting-secretarial practice		

**Vocational approval is also required.

Description: Model Office is a capstone course designed, equipped, and furnished to simulate an actual office. It must contain a realistic, continuous workflow in which pupils rotate through several types of office positions. The class must meet for two consecutive periods and must meet specific facility, equipment, and course content requirements. Content includes correct telephone usage, machine dictation and transcription, records management, calculator usage, reprographics, human relation skills, mailing processes, employment skills, and a continual review of punctuation, grammar, and spelling. Typewriting and business machine skills are applied to office tasks.

COOPERATIVE OFFICE EDUCATION 5665

Suggested Grade Level: 12 Credit: 3

Teacher Certification** for Cooperative Office Education 5665:

Any certification with either:

A60 area:	business education	B66 major:	accounting-general business
B60 major:	business education (commerce)	B67 major:	general business-secretarial practice
B62 major:	secretarial practice	B69 major:	secretarial studies
B63 major:	basic business		
B64 major:	general business		
B65 major:	accounting-secretarial practice		

**Vocational approval is also required.

Description: Cooperative Office Education is a one-year capstone course in which the pupil works in a paid office position that relates to the pupil's vocational objective. The pupil works an average of at least 15 hours per week. In addition to the employment component, cooperative office education includes a one-period related class in which the pupil receives instruction in correct telephone usage, records management, calculator usage, reprographics, human relation skills, mailing processes, employment skills, and a continual review of punctuation, grammar, and spelling. The related class is individualized and related to the pupil's training plan and training agreement, which is specific to the pupil's vocational objective. Typewriting and business machine skills are applied to office tasks.

BUSINESS SPECIALIZATION 5631

Suggested Grade Level: 12 Credit: ½ or 1

Teacher Certification** for Business Specialization 5631:

Any certification with either:

A60 area:	business education	B66 major:	accounting-general business
B60 major:	business education (commerce)	B67 major:	general business-secretarial practice
B62 major:	secretarial practice	B69 major:	secretarial studies
B63 major:	basic business		
B64 major:	general business		
B65 major:	accounting-secretarial practice		

**Vocational approval is also required.

Description: This course is designed as a category for any Competency-Based Vocational Education (CBVE) class which does not easily apply to a class title listed in this Program of Studies. Competency-based modules are applied to this category to provide individualized specialization. Examples of specialized areas of study for seniors are Bank Teller, Court Reporter, and Legal and Medical Secretary.

HEALTH AND PERSONAL SERVICES

COURSES	CODE	7	8	9	10	11	12	MAXIMUM HIGH SCHOOL UNITS
Health Exploration	5320	X	X					
Personal Services Exploration	5321	X	X					
Health Services I	5201			X	X	X		1
Health Services II	5202					X	X	2
Health Services III	5203						X	3
Practical Nursing	5204						X	3
Medical Assisting	5205						X	3
Dental Assisting	5206						X	3
Medical Secretary	5207					X	X	3
Cosmetology	5208					X	X	6

Each of the Health and Personal Services Occupations classes at the 9th-12th grade levels shall consist of classroom and laboratory instruction and supervised practical experiences.

Course Descriptions and Program Requirements

The Health and Personal Services Occupations programs provide the pupil with orientation, avocational experiences, exploration, and preparation at the secondary level. Programs are sequenced to provide continuous pupil progress toward achievement of expected terminal objectives.

The maximum pupil/teacher ratio for health occupations programs with clinical affiliations shall be fifteen (15) to one (1) per session and twenty (20) to one (1) for cosmetology. In the event a licensure, certification, registration board, or clinical facility mandates a lower pupil/teacher ratio, the requirements of that agency shall apply.

The program shall meet the criteria established by state and national approval/accrediting agencies that license, certify, and register the graduates of the program. In a health services program, at least one (1) instructor shall be a registered nurse licensed to practice in the Commonwealth of Kentucky.

The school shall use the approved standardized agreement with each cooperating agency specifying responsibilities and authority of each party to the agreement.

A "Statement of Understanding" defining pupil responsibilities shall be signed by all pupils prior to assignment in a clinical area.

Health Occupations Students of America (HOSA) is a vocational student organization available to pupils enrolled in any Health Occupations program. Cosmetology pupils are encouraged to join Vocational Industrial Clubs of America (VICA). The activities of both pupil organizations are an integral part of the respective instructional programs and are designed to develop leadership and citizenship skills. Pupils are encouraged to be members and become involved in these activities.

Provisions are made to meet the needs of disadvantaged and handicapped pupils to prepare them for occupations in health. If the nature and severity of the disadvantage or handicap is such that the pupil cannot benefit from participation in a regular program, a separate or modified program may be developed. The program provided to handicapped students shall be consistent with and specified on each student's Individualized Education Program (IEP).

HEALTH EXPLORATION 5320

Suggested Grade Level: 7-8

Teacher Certification for Health Exploration 5320:

Any certification with either:

A50 area:	science	B54 major:	biology-health
A70 area:	mathematics-physical science	B85 major:	health-safety
A78 area:	health occupations	B87 major:	health-physical education
A86 area:	health-physical education-recreation	B89 major:	health
A92 area:	home economics vocational	B93 major:	home economics non-vocational
A93 area:	home economics non-vocational	C51 minor:	biology
R51 area:	science limited to biology	C52 minor:	chemistry
R52 area:	science limited to chemistry	C89 minor:	health
B51 major:	biology		
B52 major:	chemistry		

Note: Any certification for high school, middle grades (junior high), or elementary classroom teaching, and 2,000 hours of paid or unpaid work experience, as approved by the Bureau of Vocational Education, may also direct the exploration of this cluster.

Description: This cluster includes the job families of administration, prevention, treatment and care, and health education and communication. This course is offered for 6-12 weeks as a part of a total exploration program. (This course is cross-referenced with Practical Arts Career Exploration and Home Economics.)

PERSONAL SERVICES EXPLORATION 5321

Suggested Grade Level: 7-8

Teacher Certification for Personal Services Exploration 5321:

Any certification with either:

A50 area:	science	B85 major:	health-safety
A78 area:	health occupations	B87 major:	health-physical education
A86 area:	health-physical education-recreation	B89 major:	health
A92 area:	home economics vocational	B93 major:	home economics non-vocational
A93 area:	home economics non-vocational	C28 minor:	economics

R51 area: science limited to biology
B25 major: economics-sociology
B28 major: economics
B51 major: biology
B54 major: biology-health
C51 minor: biology
C89 minor: health

Note: Any certification for high school, middle grades (junior high), or elementary classroom teaching, and 2,000 hours of paid or unpaid work experience, as approved by the Bureau of Vocational Education, may also direct the exploration of this cluster.

Description: This cluster covers the job families of individual services, home and property, personal-financial, and pet services. This course is offered for 6-12 weeks as a part of a total exploration program. (This course is cross-referenced with Practical Arts Career Exploration and Home Economics.)

HEALTH SERVICES I 5201

Suggested Grade Level: 9-10 Credit: 1

Teacher Certification for Health Services I 5201:

Any high school certificate with A78 area: health occupations

Any vocational education--industrial education certification with either:
NEF--health services (careers) 210
NEN--health services (careers) 210
NTM--health services (careers) 210
T--health services (careers) 210
VET--health services (careers) 210

Description: This course introduces pupils to the many occupational areas in the health field. The course assists pupils in determining career opportunities in health occupations and professions. The related instruction assists the pupil in developing essential cognitive, affective, and psychomotor skills. One semester includes basic skills instruction in first aid and CPR. Pupils in other vocational areas may enroll in one semester to gain skills useful in other occupational areas. This course may be taught as a prerequisite, concurrently, or integrated with Health Services II.

HEALTH SERVICES II 5202

Suggested Grade Level: 11-12 Credit: 2

Teacher Certification for Health Services II 5202:

Any high school certificate with A78 area: health occupations

Any vocational education--industrial education certification with either:

NEF--health services (careers) 210
NEN--health services (careers) 210
NTM--health services (careers) 210
T--health services (careers) 210
VET--health services (careers) 210

Description: The course is designed for pupils who desire entry level training in one of the many occupational areas in the health field. After obtaining a satisfactory performance level in the core competencies, the pupils obtain work experience in the occupational areas of their choice in a clinical or health-related facility. The work experience component is in accordance with a previously designed educational plan and will be supervised cooperatively by the classroom instructor and the work supervisor. Pupils who desire post-secondary education in the health professions may find it beneficial to enroll in higher level math and science courses. Health Services II pupils may also find it beneficial to enroll in a typing course. This course may be taught as a prerequisite, concurrently, or integrated with Health Services III.

HEALTH SERVICES III 5203

Suggested Grade Level: 12 Credit: 3

Teacher Certification for Health Services III 5203:

Any high school certificate with A78 area: health occupations

Any vocational education--industrial education certification with either:
NEF--health services (careers) 210
NEN--health services (careers) 210
NTM--health services (careers) 210
T--health services (careers) 210
VET--health services (careers) 210

Description: This course includes the cognitive, affective, and psychomotor skills essential to prepare the pupil for gainful employment at the entry level and for additional training at the post-secondary level. The Health Services III pupils may find it beneficial to enroll in upper level science and math courses as well as a typing course. The Health Services II is core content which includes instruction and skills common to the majority of health occupations. The Health Services III is sequenced to build upon those skills obtained by Health Services II as well as introducing those tasks characteristic to a specific occupation. The pupil has the option of selecting one or more occupational areas to obtain entry-level job preparation. These areas are:

Nursing Assistant
Physical Therapy Aide
Pharmacy Aide
Medical-Laboratory Aide
Optometric Aide
Dental Office Aide
Radiographic Aide
Blood Donor Unit Assistant
Dietary Aide
Central Supply Worker
Veterinary Aide
Electrocardiograph Technician
Respiratory Therapy Aide
Medical Office Aide

PRACTICAL NURSING 5204

Suggested Grade Level: 12 Credit: 3

Teacher Certification for Practical Nursing 5204:

Any high school certification with either:
A78 area: health occupations for practical nursing 250
T76: endorsement for trade and industrial education for practical nursing 250

Any vocational education--industrial education certification with either:
NEF--practical nursing 250
NEN--practical nursing 250
NTM--practical nursing 250
T--practical nursing 250
VET--practical nursing 250

Description: The course enables a pupil to complete the first level of the practical nursing program during the senior year in high school. After high school graduation, the pupil may complete the remaining two levels of the practical nursing program and become eligible to complete the practical nursing licensure examination. Subjects at the high school level include anatomy, physiology, nutrition, mental health concepts, and nursing fundamentals. Laboratory practice and limited experience in a clinical facility are included. The program must be approved by the Kentucky Board of Nursing.

MEDICAL ASSISTING 5205

Suggested Grade Level: 12 Credit: 3

Teacher Certification for Medical Assisting 5205:

Any high school certification with either:
A78 area: health occupations for medical assisting 230
T76: endorsement for trade and industrial education for medical assisting 230

Any vocational education--industrial education certification with either:
NEF--medical assisting 230
NEN--medical assisting 230
NTM--medical asisting 230
T--medical assisting 230
VET--medical assisting 230

Description: The course is open to seniors who wish to receive part of their professional training at the secondary level. After high school graduation, the pupil may complete the remainder of the course as a post-secondary pupil. The medical assisting pupil participates in regularly scheduled classroom activities and also receives limited work experience in a variety of clinical facilities selected to emphasize competency in the occupational area. Pupils are introduced to a wide range of office skills which include office management, medical records maintenance, medical

transcription, bookkeeping, and insurance processing. Clinical skills included in the course content encompass training in performing routine laboratory tests. Training in selected patient care skills and procedures under supervision is also emphasized.

DENTAL ASSISTING 5206

Suggested Grade Level: 12 Credit: 3

Teacher Certification for Dental Assisting 5206:

Any high school certification with either:
- A78 area: health occupations for dental assisting 240
- T76: endorsement for trade and industrial education for dental assisting 240

Any vocational education--industrial education certification with either:
- NEF--dental assisting 240
- NEN--dental assisting 240
- NTM--dental assisting 240
- T--dental assisting 240
- VET--dental assisting 240

Description: The course is open to seniors who wish to partially fulfill the requirements of the dental assisting program. Course content includes laboratory and classroom instruction in bookkeeping, dental office management, patient treatment record maintenance, patient instruction and preparation, tray setups and other limited clinical supportive functions. Upon graduation, the pupil may complete the dental assisting program as a post-secondary student.

MEDICAL SECRETARY 5207

Suggested Grade Level: 11-12 Credit: 3

Teacher Certification for Medical Secretary 5207:

Any high school certification with either:
- A78 area: health occupations for medical secretary 207
- T76: endorsement for trade and industrial education for medical secretary 207

Any vocational education--industrial education certification with either:
- NEF--medical secretary 207
- NEN--medical secretary 207
- VET--medical secretary 207
- NTM--medical secretary 207

Description: The program is open to juniors or seniors who wish to gain entry level skills as a medical secretary. Upon graduation, the pupil may obtain entry level employment or obtain advanced training in a post-secondary program. The curriculum emphasizes secretarial duties, bookkeeping, medical terminology, and hospital and clinical procedures. Dictation and machine transcribing/shorthand are emphasized.

COSMETOLOGY 5208

Suggested Grade Level: 11-12 Credit: 6

Teacher Certification for Cosmetology 5208:

Any high school certificate with T76: endorsement for trade and industrial education for cosmetology 260

Any vocational education--industrial education certification with either:

NEF--cosmetology 260
NEN--cosmetology 260
NTM--cosmetology 260
T--cosmetology 260
VET--cosmetology 260

Description: The course enables the pupil to partially fulfill the licensure requirements of the Kentucky Board of Hairdressers and Cosmetologists during the high school period of the training program. After high school graduation, the pupil may complete the cosmetology course as a post-secondary pupil and become eligible to take the licensure examination. Scheduled laboratory practice in hairdressing, haircutting, permanent waving, and related skills reinforces the classroom lectures and demonstrations.

HOME ECONOMICS

COURSES	CODE	7	8	9	10	11	12	MAXIMUM HIGH SCHOOL UNITS
Vocational Exploration Clusters:								
Health Exploration	5320	X	X					
Home Economics Exploration	5392	X	X					
Hospitality and Recreation Exploration	5393	X	X					
Personal Service Exploration	5321	X	X					
Introductory Home Economics	2920	X	X					
Broad-Based Courses:								
Comprehensive Home Economics	5930			X	X			1
Adult Living	5931				X	X	X	1
Special Interest Courses:								
Child Care and Guidance	5921				X	X	X	½
Clothing Construction	5922				X	X	X	½
Consumer Education	5923				X	X	X	1
Food Preparation and Management	5924				X	X	X	½
Foods for Special Occasions	5925				X	X	X	½
Housing and Home Furnishings	5926				X	X	X	½
Parenthood Education	5927				X	X	X	½
Personal, Marriage, and Family Relations	5928				X	X	X	½
Gainful Home Economics Courses:								
Child Care Services I	5932					X	X	3
Child Care Services II	5933						X	3
Clothing Services	5934						X	3
Commercial Foods I	5935					X	X	3
Commercial Foods II	5936						X	3
Home and Community Services	5937					X	X	3
Home Furnishings	5938						X	3

Course Descriptions and Program Requirements

In addition to clusters of career exploration in related home economics areas in the 7th and 8th grades, home economics units of instruction in basic experiences in personal/family living may be offered. Each school district shall be responsible for selecting appropriate curriculum content which is planned and articulated with programs at the secondary level.

Vocational home economics training at the secondary level provides education for persons preparing for:

the occupation of homemaking;
the dual role of homemaker/wage earner;
a wage earning occupation in the home economics area (i.e., gainful); or
a career outside the field of home economics for which home economics training would be beneficial.

The Future Homemakers of America/Home Economics Related Occupations (FHA/HERO) is the official student organization for home economics education and is an integral part of the instructional program. Although not mandatory, individual pupil membership is encouraged in order for the pupil to fully benefit from the leadership and citizenship training in home economics education.

Each secondary school qualifying for a vocational program shall offer a minimum of a two-year program which must include a comprehensive consumer and homemaking course and courses representing two additional levels selected from the approved course offerings. Those schools containing only junior high programs may offer only comprehensive home economics and still receive state vocational funding.

Supervised extended learning experiences which make use of consumer and homemaking instruction and teacher visits to homes of students are strongly encouraged to further enhance the program.

Secondary schools offering a gainful preparation program do so in addition to the two-year consumer/homemaking program when employment opportunities exist in the community. Gainful programs may be offered in area vocational education centers and state vocational technical schools without regard to the consumer/homemaking requirements.

The following minimum standards shall apply for schools offering gainful home economics courses:

1) The curriculum shall be based on a job analysis of the occupation. It shall be specific and limited in scope to the knowledge and skills related to the occupation or a cluster of closely related occupations.
2) The class shall meet for a minimum of two (2) consecutive class periods daily or a total of 120 minutes daily.
3) Supervised, practical experience shall be a part of the preparatory training program.
4) Students should be enrolled on the basis of their interest and aptitude for the specific occupational area.
5) Facilities shall be available to enable trainees to acquire marketable skills in the occupation.
6) No program shall be established until all criteria can be met and approved by the Superintendent of Public Instruction.

Schools wishing to offer home economics but not desiring and/or qualifying for vocational funds may offer any of the consumer and homemaking classes as non-vocational.

Each course is designed to be competency-based, including a wide range of skills from the simple to complex in order to provide pupils with a variety of learning opportunities. Although there are generally no pre-requisites, courses may be offered within the home economics continuum to permit pupils to select a variety of courses within a sequence or to enter at any point courses of their choice.

Provisions are made to meet the needs of disadvantaged and handicapped pupils to prepare them for occupations in home economics. If the nature and severity of the disadvantage or handicap is such that the pupil cannot benefit from participation in a regular program, a separate or modified program may be developed. The program provided to handicapped students shall be consistent with and specified on each student's Individualized Education Program (IEP).

To complete a consumer/homemaking program, the pupil must earn a minimum of two credits. To complete a gainful program, the pupil must have developed the competencies required for one or more of the pre-determined occupational titles of that program.

HOME ECONOMICS CONTINUUM FOR SECONDARY VOCATIONAL PROGRAMS

7th-8th Grade	9th Grade	10th Grade	11th Grade	12th Grade
Clusters in Practical Arts: Health Exploration Home Economics Exploration Hospitality and Recreation Exploration Personal Service Exploration Cluster: Introductory Home Economics	Comprehensive Home Economics[1]	Adult Living[2] Special Interest Courses:[3] Personal, Marriage, & Family Relations Parenthood Education Child Care and Guidance Food Preparation & Management Foods for Special Occasions Housing & Home Furnishings Consumer Education Clothing Construction	Adult Living[2] Special Interest Courses:[3] Personal, Marriage, & Family Relations Parenthood Education Child Care and Guidance Food Preparation & Management Foods for Special Occasions Housing & Home Furnishings Consumer Education Clothing Construction Gainful Preparation:[4] Child Care Services I Commercial Foods I	Adult Living[2] Special Interest Courses:[3] Personal, Marriage, & Family Relations Parenthood Education Child Care and Guidance Food Preparation & Management Foods for Special Occasions Housing & Home Furnishings Consumer Education Clothing Construction Gainful Preparation:[4] Child Care Services II Commercial Foods II Home Furnishings Clothing Services Home & Community Services

[1]Comprehensive Home Economics may be offered at the 10th grade as well, depending on the school situation. Skill exploration is offered in five content areas of home economics and is suitable for those who are interested in pursuing more than one home economics class.

[2]Adult Living covers five content areas of home economics. It is considered to be the most appropriate course for those who probably will not take any other home economics courses.

[3]Special interest courses have no prerequisite courses although some prerequisite skills exist within each course. Competency-based materials provide opportunities for teacher(s) to individualize competencies.

[4]Gainful programs begin at 11th grade with no prior prerequisites required.

Commentary: State accreditation secondary standards require three (3) levels of home economics. These have been identified based upon curriculum concepts and developmental stages of students. A given school may offer selected courses from the continuum representing any three levels of the following:

Level 1 - Comprehensive Home Economics
Level 2 - Adult Living; Parenthood Education; Personal, Marriage, and Family Relations; Food Preparation and Management
Level 3 - Child Care & Guidance; Housing and Home Furnishings; Consumer Education; Child Care Services I; Commercial Foods I
Level 4 - Clothing Construction; Foods for Special Occasions; Child Care Services II; Commercial Foods II; Clothing Services; Home and Community Services; Home Furnishings

SELECTED COURSE CHOICES FOR SPECIFIC CAREER AREAS IN HOME ECONOMICS

CAREER PREPARATION GOAL	COMMENTS	7th-8th GRADE	9th GRADE	10th GRADE	11th GRADE	12th GRADE	RELATED ELECTIVE COURSES
Professional home economist, occupation of full-time homemaker, or dual role of homemaker/wage earner	There are no prerequisites. Pupils may choose as many or as few as desired in any sequence.	Home Economics Exploration Introductory Home Economics	Comprehensive Home Economics	Parenthood Ed. Child Care & Guidance Food Preparation & Management	Clothing Construction Housing & Home Furnishings Consumer Education	Personal, Marriage, & Family Relations Food Preparation & Management Foods for Special Occasions	Recordkeeping
Child Care Occupations	Child Care Services I is a prerequisite for Child Care Services II. Other courses are optional.	Home Economics Exploration Introductory Home Economics	Comprehensive Home Economics	Parenthood Ed. Child Care & Guidance	Child Care Services I	Child Care Services II	Art Music Recordkeeping Accounting
Commercial Foods Occupations	Commercial Foods I is a prerequisite for Commercial Foods II. Other coures are optional.	Home Economics Exploration Hospitality & Recreation Exploration Intro. H. Ec.	Comprehensive Home Economics	Food Preparation & Management Foods for Special Occasions	Commercial Foods I	Commercial Foods II	Food Marketing Recordkeeping Accounting Business Management
Home Furnishings Occupations	No prerequisites. Pupils may choose as many or as few courses as desired prior to gainful class in 12th grade.	Home Economics Exploration	Comprehensive Home Economics	Housing & Home Furnishings	Consumer Education	Housing & Home Furnishings (Gainful)	Drafting Art Recordkeeping Accounting
Clothing Services Occupations	No prerequisites. Pupils may choose as many or as few courses as desired prior to gainful class in 12th grade.	Home Economics Exploration Introductory Home Economics	Comprehensive Home Economics	Clothing Construction	Consumer Education	Clothing Services	Fashion Merchandising Retailing I Retailing II (Sales) Business Management
Home and Community Services Occupations	No prerequisites. Pupils may choose as many or as few courses as desired prior to gainful class in 12th grade.	Home Economics Exploration Personal Services Exploration	Comprehensive Home Economics	Personal, Marriage & Family Relations Child Care & Guidance	Food Preparation & Management Consumer Education	Home & Community Services	Hotel/Motel

HEALTH EXPLORATION 5320

Suggested Grade Level: 7-8

Teacher Certification for Health Exploration 5320:

Any certification with either:

A50 area:	science
A70 area:	mathematics-physical science
A78 area:	health occupations
A86 area:	health-physical education-recreation
A92 area:	home economics vocational
A93 area:	home economics non-vocational
R51 area:	science limited to biology
R52 area:	science limited to chemistry
B51 major:	biology
B52 major:	chemistry
B54 major:	biology-health
B85 major:	health-safety
B87 major:	health-physical education
B89 major:	health
B93 major:	home economics non-vocational
C51 minor:	biology
C52 minor:	chemistry
C89 minor:	health

Note: Any certification for high school, middle grades (junior high), or elementary classroom teaching, and 2,000 hours of paid or unpaid work experience, as approved by the Bureau of Vocational Education, may also direct the exploration of this cluster.

Description: This cluster covers the job families of administration, prevention and control, treatment and care, and, health education and communication. This course is offered for 6-12 weeks as a part of a total exploration program. (This course is cross-referenced with Practical Arts Career Exploration and Health and Personal Services.)

HOME ECONOMICS EXPLORATION 5392

Suggested Grade Level: 7-8

Teacher Certification for Home Economics Exploration 5392:

Any certification with either:

A92 area:	home economics vocational
A93 area:	home economics non-vocational
B93 major:	home economics non-vocational

Note: Any certification for high school, middle grades (junior high), or elementary classroom teaching, and 2,000 hours of paid or unpaid work experience, as approved by the Bureau of Vocational Education, may also direct the exploration of this cluster.

Description: This cluster covers the job families in consumer and home-making, child care, clothing and textiles, food and nutrition, home and community services, and housing and home furnishings. This course shall be offered for 6-12 weeks as a part of a total exploration program. (This course is cross-referenced with Practical Arts Career Exploration.)

HOSPITALITY AND RECREATION EXPLORATION 5393

Suggested Grade Level: 7-8

Teacher Certification for Hospitality and Recreation Exploration 5393:

Any certification with either:

A86 area:	health-physical education-recreation	B88 major:	physical education
A92 area:	home economics vocational	B93 major:	home economics non-vocational
A93 area:	home economics non-vocational	C88 minor:	physical education
B87 major:	health-physical education		

Note: Any certification for high school, middle grades (junior high), or elementary classroom teaching, and 2,000 hours of paid or unpaid work experience, as approved by the Bureau of Vocational Education, may also direct the exploration of this cluster.

Description: This cluster covers jobs in the areas related to lodging, entertainment, travel, and recreation. This course shall be offered for 6-12 weeks as a part of a total exploration program. (This is cross-referenced with Practical Arts Career Exploration.)

PERSONAL SERVICE EXPLORATION 5321

Suggested Grade Level: 7-8

Teacher Certification for Personal Services Exploration 5321:

Any certification with either:

A50 area:	science	B54 major:	biology-health
A78 area:	health occupations	B85 major:	health-safety
A86 area:	health-physical education-recreation	B87 major:	health-physical education
A92 area:	home economics vocational	B89 major:	health
A93 area:	home economics non-vocational	B93 major:	home economics non-vocational
R51 area:	science limited to biology	C28 minor:	economics
B25 major:	economics-sociology	C51 minor:	biology
B28 major:	economics	C89 minor:	health
B51 major:	biology		

Note: Any certification for high school, middle grades (junior high), or elementary classroom teaching, and 2,000 hours of paid or unpaid work experience, as approved by the Bureau of Vocational Education, may also direct the exploration of this cluster.

Description: This cluster covers the job families of individual services, home and property, personal-financial, and pet services. This course shall be offered for 6-12 weeks as a part of a total exploration program. (This course is cross-referenced with Practical Arts Career Exploration and Health and Personal Services.)

INTRODUCTORY HOME ECONOMICS 2920

Suggested Grade Level: 7-8

Teacher Certification for Introductory Home Economics 2920:

Any certification with either:
A92 area: home economics vocational
A93 area: home economics non-vocational
B93 major: home economics non-vocational

Description: Activities from the five content areas of human development, foods, clothing and textiles, housing and home furnishings, and management/family economics are selected to help pupils explore and gain personal/family skills. These may be arranged in a variety of time tables of 6-18 weeks based on local needs. Classes should be coordinated with exploration programs as well as the secondary consumer and homemaking and gainful programs.

COMPREHENSIVE HOME ECONOMICS 5930

Suggested Grade Level: 9-10 Credit: 1

Teacher Certification for Comprehensive Home Economics 5930:

Any certification with A92 area: home economics vocational

Description: This course includes core competencies in all five areas of homemaking, including: foods, human development, housing and home furnishings, management and family economics, and clothing and textiles. It provides opportunity for learning basic living skills. It also provides the opportunity for pupils to decide future areas for concentrated study, including special interest courses and gainful home economics training.

ADULT LIVING 5931

Suggested Grade Level: 10-12 Credit: 1

Teacher Certification for Adult Living 5931:

Any certification with A92 area: home economics vocational

Description: This course includes core competencies in all five areas of homemaking including: foods, human development, housing and home furnishings, management and family economics, and clothing and textiles. It is especially designed to focus on the needs of pupils who may never take any other courses in consumer and homemaking. Emphasis is on management and consumer economic skills to meet basic needs of food, shelter, and clothing. Clothing construction is not a part of this class. Pupils who have had Comprehensive Home Economics should not take this course because several of the competencies are the same. This course is applicable to all pupils regardless of occupational preparation programs.

CHILD CARE AND GUIDANCE 5921

Suggested Grade Level: 10-12 Credit: ½

Teacher Certification for Child Care and Guidance 5921:

Any certification with A92 area: home economics vocational

Description: This course develops competencies in caring for infants, preschool, and school-age children. The developmental characteristics of children are explored in the course, with opportunity to observe and guide children in a variety of activities in a child-care laboratory within the community and/or simulated within the classroom. This course is a good elective for pupils interested in pursuing additional training in education, particularly early childhood or elementary.

CLOTHING CONSTRUCTION 5922

Suggested Grade Level: 10-12 Credit: ½

Teacher Certification for Clothing Construction 5922:

Any certification with A92 area: home economics vocational

Description: This course provides an opportunity for pupils to develop clothing construction skills. Pupils develop an understanding of textile fabrics, principles of clothing design, and clothing labeling as well as construct a minimum of two projects. The competencies pursued by each pupil are based on existing skills and interests. Some basic alteration skills are also included. This course may serve as a supplemental course to students pursuing a marketing and distributive education career in Fashion Merchandising.

CONSUMER EDUCATION 5923

Suggested Grade Level: 10-12 Credit: ½ or 1

Teacher Certification for Consumer Education 5923:

Any certification with either:

R28 area:	social studies limited to economics
A60 area:	business education
A75 area:	distributive education
A92 area:	home economics vocational
A93 area:	home economics non-vocational
B28 major:	economics
B60 major:	business education (commerce)
B61 major:	accounting
B63 major:	basic business
B64 major:	general business
B65 major:	accounting-secretarial practice
B66 major:	accounting-general business
B67 major:	general business-secretarial practice
B75 major:	distributive education
B93 major:	home economics non-vocational
C28 minor:	economics
C60 minor:	business education (commerce)
C61 minor:	accounting
C64 minor:	general business
C65 minor:	accounting-secretarial practice
C66 minor:	accounting-general business
C67 minor:	general business-secretarial practice
S75:	approval for teaching distributive education

Description: This course provides an opportunity for pupils to develop skills related to: personal goal setting and decision making; management of time, money, and personal energy; conservation of energy and other resources; financial planning and management; consumer protection and responsibility; consumer buying and credit; taxes; insurance; and investments. (This course is cross-referenced with Business and Office Education and Marketing and Distributive Education.)

FOOD PREPARATION AND MANAGEMENT 5924

Suggested Grade Level: 10-12 Credit: ½

Teacher Certification for Food Preparation and Management 5924:

Any certification with A92 area: home economics vocational

Description: This course focuses on core competencies required in selecting, planning, and preparing a variety of food products. Various preparation techniques for preserving foods, and a variety of methods of cooking such as steaming, microwaving, poaching, and broiling are learned. Nutrition and meal planning are an integral part of the course.

FOODS FOR SPECIAL OCCASIONS 5925

Suggested Grade Level: 10-12 Credit: ½

Teacher Certification for Foods for Special Occasions 5925:

Any certification with A92 area: home economics vocational

Description: This course includes the study of planning, preparing, and serving foods (regional and foreign) for special occasions such as receptions and company meals. However, it may also include planning and preparing foods for special needs (e.g., diets).

HOUSING AND HOME FURNISHINGS 5926

Suggested Grade Level: 10-12 Credit: ½

Teacher Certification for Housing and Home Furnishings 5926:

Any certification with A92 area: home economics vocational

Description: This course includes: selection of homes and home furnishings, making a variety of home repairs, arranging furniture, planning and arranging storage, making decisions, saving energy in the home, and refinishing furniture. This course is a good elective for pupils interested in careers in art, design, and/or construction.

PARENTHOOD EDUCATION 5927

Suggested Grade Level: 10-12 Credit: ½

Teacher Certification for Parenthood Education 5927:

Any certification with A92 area: home economics vocational

Description: This course addresses competencies needed in preparation for parenthood. It involves the study of human reproduction, prenatal development, postpartum care, care of the baby and infant, and managing the responsibilities of parenting as well as changes in the family's lifestyle. This course is a good elective for pupils interested in careers in health and social services occupations.

PERSONAL, MARRIAGE, AND FAMILY RELATIONS 5928

Suggested Grade Level: 10-12 Credit: ½

Teacher Certification for Personal, Marriage, and Family Relations 5928:

Any certification with A92 area: home economics vocational

Description: This course focuses on the competencies relating to relationships among individuals and/or family units. Family lifestyles are studied including single adulthood; dating patterns, marriage laws, marriage expectations, marriage adjustments and conflicts; and planning for children or extended family units, including the elderly. Major family crises such as separation, divorce, illness, and death are explored. This course is a good elective for pupils interested in social services occupations.

CHILD CARE SERVICES I (GAINFUL) 5932

Suggested Grade Level: 11-12 Credit: 2-3

Teacher Certification for Child Care Services I (Gainful) 5932:

Any certification with S926: Approval for teaching child care services*

*The approval for teaching child care services will require certification in vocational home economics plus 2,000 hours of work experience in child care services. Request for approval should be submitted to the Bureau of Vocational Education. When approval is granted, the Division of Teacher Education and Certification will enter the approval code of S926 into the teacher's record.

Description: This course provides training for entry-level child care workers for day care centers, nurseries, kindergartens, and private homes. Orientation and subject matter information is reinforced with simulated experiences during the first semester and on-the-job training experiences second semester. This course is a good elective for pupils who may be interested in pursuing additional education in early childhood or kindergarten education. Pupils enrolled in child care services may find it helpful to take classes in art, music, recordkeeping, and typing.

CHILD CARE SERVICES II (GAINFUL) 5933

Suggested Grade Level: 12 Credit: 2-3

Teacher Certification for Child Care Services II (Gainful) 5933:

Any certification with S926: approval for teaching child care services*

*The approval for teaching child care services will require certification in vocational home economics plus 2,000 hours of work experience in child care services. Request for approval should be submitted to the Bureau of Vocational Education. When approval is granted, the Division of Teacher Education and Certification will enter the approval code of S926 into the teacher's record.

Description: This course is a continuation of Child Care Services I. Pupils resume progress in pursuing competencies with simulated and on-the-job experiences. Pupils enrolled in this program are encouraged to participate in cooperative work experience, if possible.

CLOTHING SERVICES (GAINFUL) 5934

Suggested Grade Level: 12 Credit: 2-3

Teacher Certification for Clothing Services (Gainful) 5934:

Any certification with S927: approval for teaching clothing services (gainful)*

*The approval for teaching clothing services (gainful) will require certification in vocational home economics plus 2,000 hours of work experience in clothing services. Request for approval should be submitted to the Bureau of Vocational Education. When approval is granted, the Division of Teacher Education and Certification will enter the approval code of S927 into the teacher's record.

Description: This course trains pupils for jobs in simple clothing construction and basic alterations. Pupils learn to use and care for commercial and non-commercial sewing machines and equipment. They learn construction techniques that might be applied to clothing articles in a factory operation, in a private dressmaker shop, or in an alterations department. Orientation and subject matter information is reinforced with simulated experiences during the first semester and on-the-job training experiences during the second semester. Pupils interested in clothing occupations may find it helpful to take art and selected marketing and distributive education courses.

COMMERCIAL FOODS I (GAINFUL) 5935

Suggested Grade Level: 11-12 Credit: 2-3

Teacher Certification for Commerical Foods I (Gainful) 5935:

Any high school certification with either:
- T76: endorsement for trade and industrial education for commercial foods 923
- S923: approval for teaching commercial foods (gainful)*

Any vocational education--industrial education certification with either:
- NEF--commercial foods 935
- NEN--commercial foods 935
- NTM--commercial foods 935
- T--commercial foods 935
- VET--commercial foods 935

*The approval for teaching commercial foods (gainful) will require certification in vocational home economics plus 2,000 hours of work experience in commercial foods. Request for approval should be submitted to the Bureau of Vocational Education. When approval is granted, the Division of Teacher Education and Certification will enter the approval code of S923 into the teacher's record.

Description: This course trains pupils for jobs in commercial foods departments of schools, hospitals, nursing homes, restaurants, and other commercial foods facilities. Orientation and subject matter information is reinforced with simulated experiences during the latter part of first semester and on-the-job training experiences during the second semester. This course is a good elective for pupils interested in seeking additional education in hotel/motel management, culinary arts, or dietetics science courses. Accounting or recordkeeping may also be good electives for these pupils.

COMMERCIAL FOODS II (GAINFUL) 5936

Suggested Grade Level: 12 Credit: 2-3

Teacher Certification for Commercial Foods II (Gainful) 5936:

Any high school certification with either:
- T76: endorsement for trade and industrial education for commerical foods 923
- S923: approval for teaching commercial foods (gainful)*

Any vocational education--industrial education certification with either:

NEF--commercial foods 936	T--commercial foods 936
NEN--commercial foods 936	VET--commercial foods 936
NTM--commercial foods 936	

*The approval for teaching commercial foods (gainful) will require certification in vocational home economics plus 2,000 hours of work experience in commercial foods. Request for approval should be submitted to the Bureau of Vocational Education. When approval is granted, the Division of Teacher Education and Certification will enter the approval code of S923 into the teacher's record.

Description: This course is a continuation of Commercial Foods I. Pupils resume progress in pursuing competencies with simulated and on-the-job experiences. This course covers more in-depth information and trains pupils for higher level skills. Pupils enrolled in this program are encouraged to participate in cooperative work experience, if possible.

HOME AND COMMUNITY SERVICES (GAINFUL) 5937

Suggested Grade Level: 11-12 Credit: 2-3

Teacher Certification for Home and Community Services (Gainful) 5937:

Any certification with S929: approval for teaching home and community services (gainful)*

*The approval for teaching home and community services (gainful) will require certification in vocational home economics plus 2,000 hours of work experience in home and community services. Request for approval should be submitted to the Bureau of Vocational Education. When approval is granted, the Division of Teacher Education and Certification will enter the approval code of S937 into the teacher's record.

Description: This course trains pupils to become housekeepers for private homes, hospitals, nursing homes, hotels, motels, or other institutions. It also trains pupils to give non-medical assistance to elderly, convalescent, or handicapped persons in private homes, or to be assistants in private homes performing a variety of tasks including helping care for the home and children. Orientation and subject matter information is reinforced with simulated experiences during the first semester and on-the-job training experiences during the second semester. Pupils may find it useful to enroll in recordkeeping, accounting, and/or marketing and distributive education courses.

HOME FURNISHINGS (GAINFUL) 5938

Suggested Grade Level: 12 Credit: 2-3

Teacher Certification for Home Furnishings (Gainful) 5938:

Any certification with S928: approval for teaching home furnishings (gainful)*

*The approval for teaching home furnishings (gainful) will require certification in vocational home economics plus 2,000 hours of work experience in home furnishings. Request for approval should be submitted to the Bureau of Vocational Education. When approval is granted, the Division of Teacher Education and Certification will enter the approval code of S928 into the teacher's record.

Description: This course trains pupils to make a variety of home furnishings items such as curtains, unlined drapes, bedspreads, tablecloths, placemats, napkins, etc. Orientation and subject matter information is reinforced with simulated experiences during the latter part of the first semester and on-the-job training experiences during the second semester. Pupils in this preparation program may benefit from selecting courses in drafting, art, and recordkeeping.

INDUSTRIAL EDUCATION LEVEL I, II AND III

COURSES	CODE	7	8	9	10	11	12	MAXIMUM HIGH SCHOOL UNITS
LEVEL I								
Industrial Communications Exploration	2951/5951	X	X	X				½*
Construction Exploration	2952/5952	X	X	X				½*
Manufacturing Exploration	2953/5953	X	X	X				½*
Transportation Exploration	2954/5954	X	X	X				½*
LEVEL II								
General Crafts	5949			X	X	X	X	1
General Drafting	5942			X	X	X	X	1
General Electricity/ Electronics	5943			X	X	X	X	1
General Graphic Arts	5945			X	X	X	X	1
General Metals	5948			X	X	X	X	1
General Power Mechanics	5944			X	X	X	X	1
General Woods	5946			X	X	X	X	1
Industrial Materials and Processes	5941			X	X	X	X	1
LEVEL III								
Aircraft Mechanics	5791				X	X	X	6
Air Conditioning	5760				X	X	X	6
Appliance Repair	5761				X	X	X	6
Auto Body Repair	5762				X	X	X	6
Auto Mechanics	5763				X	X	X	6
Auto Parts	5793				X	X	X	6
Building Maintenance	5764				X	X	X	6
Cabinet Making	5765				X	X	X	6
Carpentry	5766				X	X	X	6
Commercial Art	5767				X	X	X	6
Commercial Sewing	5774				X	X	X	6
Diesel Mechanics	5768				X	X	X	6
Drafting	5769				X	X	X	6
Dry Cleaning	5770				X	X	X	6
Electricity	5773				X	X	X	6
Electronics	5771				X	X	X	6
Fork Lift Mechanics	5794				X	X	X	6
Graphic Arts	5772				X	X	X	6
Industrial Machinery Maintenance	5792				X	X	X	6
Interior Finishing	5775				X	X	X	6
Machine Shop	5776				X	X	X	6
Masonry	5777				X	X	X	6
Mine Maintenance	5778				X	X	X	6
Mine Equipment Operator	5790				X	X	X	6
General Miner	5795				X	X	X	6

Office Machine Repair	5779	X	X	X	6
Plumbing	5780	X	X	X	6
Radio and TV Repair	5781	X	X	X	6
Radio and TV Production	5796	X	X	X	6
Sheet Metal	5783	X	X	X	6
Small Engine Repair	5784	X	X	X	6
Tailoring	5785	X	X	X	6
Truck Mechanics	5786	X	X	X	6
Upholstery	5787	X	X	X	6
Welding	5788	X	X	X	6

*Credit is granted only when offered at the 9th grade level.

Course Descriptions and Program Requirements

Industrial Education is an integrated, articulated educational continuum. It provides for an awareness and understanding of industry and the development of skills that will enable pupils to contribute and profit from our industrial society. A comprehensive industrial education program provides pupils a continuum of career development opportunities. These include career awareness, career exploration, occupational preparation, and the maintenance of essential competencies for success in paid or unpaid occupations. A comprehensive program of industrial education shall consist of all three levels. Permission must be obtained from the Superintendent of Public Instruction if less than a comprehensive program is to be offered. Levels I, II and III of Industrial Education are designed to provide a sequential offering of orientation, exploration, and preparation to best meet the career needs of pupils.

Levels I and II (the new Industrial Arts program for Kentucky) are now being implemented as an alternative and, ultimately, a replacement for Kentucky's traditional Industrial Arts program serving grades 7-12. The emphasis of Level I and II programs is to provide exploratory experiences in occupational areas related to industry and technology.

In both Level I and II programs, a minimum of two different course offerings must be offered. There are four course offerings in Level I and eight course offerings in Level II.

If any of the course offerings identified in Level I are offered as a part of a practical arts program at the 7th and 8th grade level, they then become eligible for vocational education funding. All Level I programs offered at the 9th grade are eligible for vocational funding. The courses can serve to meet the requirements of both a practical arts program and Level I of an industrial education program.

Level I

Level I courses are designed to offer pupils orientation and broad exploratory experiences in general industrial areas. The courses provide occupational information and guidance, laboratory activities that develop basic skills, and related experiences that assist pupils in understanding different industrial areas in our economy. A student organization (e.g. Vocational Industrial Clubs of America [VICA], American Industrial Arts

Student Association [AIASA]) will be utilized to enrich the educational program, to motivate pupils, and to recognize pupil achievement.

A Level I subject is offered for a minimum of nine weeks to a maximum of 18 weeks for one period each day. Class size shall be determined by student safety and available work stations. No more than twenty-seven (27) students shall be the responsibility of one (1) teacher at any given time.

Level II

Level II courses are designed to provide pupils with a more in-depth study of industrial-technical areas. Courses are organized in terms of industrial materials, processes, and technical occupational areas. Each course represents an area particular to industry. The courses at Level II are designed to provide experience at a level that will enable pupils to articulate with Level III industrial programs and/or secondary academic programs to serve the pupils' general education needs and to contribute to the initial job skills of the occupation and/or leisure time. A student organization (e.g. VICA, AIASA) will be utilized to enrich the educational program, to motivate pupils, and to recognize pupil achievement.

Level III teachers certified in a specialty area under each course description are eligible to teach Level II subtopics for limited periods each day when these are a part of the total program. A total Level II program includes a minimum of two course offerings with a minimum of three subtopics each. Level III teacher certification major requirements are based upon occupational experiences and specialized educational preparation.

A Level II subject is offered for a minimum of 18 weeks to a maximum of 36 weeks for one period per day. A subtopic in each subject is offered for a minimum of six weeks to a maximum of 12 weeks for one period per day. Class size shall be determined by student safety and available work stations.

Level III

Programs at the 11th and 12th grades are designed to provide specialized skill development which makes an individual more employable in one group of occupations than any other. The occupational preparation programs are organized around specific occupations or related occupations. A task analysis of these occupations is the basis for the curriculum. The programs are relevant to actual and anticipated employment and/or future educational opportunities. The Vocational Industrial Clubs of America (VICA) student organization is utilized to enrich the educational program, to motivate pupils, and to recognize pupil achievement. All vocational preparation programs include work attitudes, employability skills, work productivity, and health and safety practices. Preparation programs are flexible in design by utilizing the knowledge and skills from various curriculum areas to meet pupil needs.

The Level III Industrial Education objective is to provide pupils with basic skills and knowledge needed for entry level employment in specific

occupations by titles. Programs, facilities, equipment, and teacher qualifications are based upon occupational requirements. Each program is carefully selected on the basis of community, industrial, and pupil needs.

Level III programs are conducted on a three hour, five day week basis. Pupils entering Level III programs should have interests and capabilities for successfully completing the training objectives for the occupation selected. Although beneficial, Level I and/or Level II completions are not prerequisites for entering Level III programs. Deviations in the Level III programs are permitted at the high school level where a pupil could identify at least one exit occupation for one to two periods a day. If attending a vocational school, a pupil may identify any one or two hours of the three-hour offering having at least one exit occupation for one semester or up to two years. Maximum high school credit received would be four credits for programs deviating from the three-hour program. Level II certified teachers with 15 hours college credit and 2,000 hours supervised work experience in specialty area are eligible to teach in Level III programs in the deviations described above.

The suggested grade levels for pupils entering regular Level III Industrial Education Programs are grades 11-12. These pupils can earn three high school credits each year for a maximum of six credits per program. Competencies achieved in Level III secondary programs are applicable to the post-secondary vocational school occupational certificate.

An occupational program may use several ways to bridge the gap between school and work. Actual cooperative work experience in the community may be most effective; however, simulated activities and actual live work in the school have proven to be effective education techniques.

While the secondary industrial education program should be structured as a continuum of cluster exploration (7th and 8th), in-depth exploration, and core competencies (9th and 10th), and job preparation (11th and 12th), programs may be designed with enough flexibility to permit some pupils to be involved in exploration at any level while other pupils may pursue preparation objectives at any secondary level. Other pupils may enroll for avocational purposes. Pupils within the same classes may have different career objectives.

The Vocational Industrial Clubs of America (VICA) is the student organization for Industrial Education pupils. VICA prepares pupils for leadership and citizenship through workshops, conferences, leadership training, and competitive activities. Pupils learn to work effectively with others and use their special talents and vocational skills to serve their communities.

Class size shall be determined by pupil safety and available work stations.

All Levels

Provisions are made to meet the needs of disadvantaged and handicapped pupils to prepare them for occupations in industrial education. If the nature and severity of the disadvantage or handicap is such that the pupil cannot benefit from participation in a regular program, a separate or modified program may be developed. The program provided to handicapped students shall be consistent with and specified on each student's Individualized Education Program (IEP).

LEVEL I - INDUSTRIAL EDUCATION

INDUSTRIAL COMMUNICATIONS EXPLORATION 2951/5951

Suggested Grade Level: 7-9 Credit: ½

Teacher Certification for Industrial Communications Exploration 2951/5951:

Any certification with either:
- A94 area: industrial arts
- A95 area: industrial education--orientation and exploration levels
- B94 major: industrial arts
- B95 major: industrial education--orientation and exploration levels
- C94 minor: industrial arts

Description: This course is an exploratory study of the areas of drafting, graphic arts, basic electricity/electronics, and related occupations. Basic drafting, printing concepts, and electricity/electronic communication principles are components of this course. This course is offered for 9-12 weeks at the 7th and 8th grade level as a part of a total exploration program. At the 9th grade level the course may be for one semester. (This course is cross-referenced with Industrial Communications Exploration in the Practical Arts.)

CONSTRUCTION EXPLORATION 2952/5952

Suggested Grade Level: 7-9 Credit: ½

Teacher Certification for Construction Exploration 2952/5952:

Any certification with either:
- A94 area: industrial arts
- A95 area: industrial education--orientation and exploration levels
- B94 major: industrial arts
- B95 major: industrial education--orientation and exploration levels
- C94 minor: industrial arts

Description: This course is an exploratory survey of the field of construction and related occupations with instruction and activities in the areas of basic carpentry, electrical wiring, plumbing, masonry, and structural building techniques. Important to the course content is the study of how the construction industry functions in today's economy. This course is offered for 9-12 weeks at the 7th and 8th grade level as a part of a total exploration program. At the 9th grade level the course may be for one semester. (This course is cross-referenced with Construction Exploration in the Practical Arts.)

MANUFACTURING EXPLORATION 2953/5953

Suggested Grade Level: 7-9 Credit: ½

Teacher Certification for Manufacturing Exploration 2953/5953:

Any certification with either:
- A94 area: industrial arts
- A95 area: industrial education--orientation and exploration levels
- B94 major: industrial arts
- B95 major: industrial education--orientation and exploration levels
- C94 minor: industrial arts

Description: This course in manufacturing is an exploratory study of occupations, materials, processes, and tools relating to production industries. This course includes: how materials can be processed to form products and the study of basic concepts, such as mass production, designing, and management in industry. The course is organized around the content areas of woods, metals, plastics, and industrial crafts and offers activities and instruction in these areas. This course is offered for 9-12 weeks at the 7th and 8th grade level as a part of a total exploration program. At the 9th grade level the course may be for one semester. (This course is cross-referenced with Manufacturing Exploration in the Practical Arts.)

TRANSPORTATION EXPLORATION 2954/5954

Suggested Grade Level: 7-9 Credit: ½

Teacher Certification for Transportation Exploration 2954/5954:

Any certification with either:
- A94 area: industrial arts
- A95 area: industrial education--orientation and exploration levels
- B94 major: industrial arts
- B95 major: industrial education--orientation and exploration levels
- C94 minor: industrial arts

Description: This course is an exploratory study of power mechanics, electrical theory and power, and fluid power. Occupational information and guidance are a part of the course offering. This course is offered for 9-12 weeks at the 7th and 8th grade level as a part of a total exploration program. At the 9th grade level the course may be for one semester. (This course is cross-referenced with Transportation Exploration in the Practical Arts.)

LEVEL II - INDUSTRIAL EDUCATION

GENERAL CRAFTS 5949

Suggested Grade Level: 9-10 Credit: ½ or 1

Teacher Certification for General Crafts 5949:

Any high school certification with either:
- A94 area: industrial arts
- A95 area: industrial education--orientation and exploration levels
- B94 major: industrial arts
- B95 major: industrial education--orientation and exploration levels
- C94 minor: industrial arts

Description: This course deals with many broad aspects of specialized industry. The content includes activities and instruction in at least three of the following areas: (1) leather, (2) textiles, (3) wood crafts, (4) art metal, (5) ceramics, and (6) jewelry and lapidary.

GENERAL DRAFTING 5942

Suggested Grade Level: 9-10 Credit: ½ or 1

Teacher Certification for General Drafting 5942 (at a high school or vocational school):

Any high school certification with either:
- A77 area: vocational industrial and technical education for drafting 769
- A94 area: industrial arts
- A95 area: industrial education--orientation and exploration levels
- A96 area: industrial education--preparation level for drafting 769
- B94 major: industrial arts
- B95 major: industrial education--orientation and exploration levels
- C94 minor: industrial arts

Description: This course deals with many broad areas of visual communications. The content includes basic activities and instruction in all of the following areas: (1) technical illustration, (2) architectural drawing, and (3) machine drawing.

GENERAL ELECTRICITY/ELECTRONICS 5943

Suggested Grade Level: 9-10 Credit: ½ or 1

Teacher Certification for General Electricity/Electronics 5943 (at a high school or vocational school):

Any high school certificiation with either:
- A77 area: vocational industrial and technical education for electronics 771 or radio and TV repair 781
- A94 area: industrial arts

A95 area: industrial education--orientation and exploration levels
A96 area: industrial education--preparation level for electronics 771 or radio and TV repair 781
B94 major: industrial arts
B95 major: industrial education--orientation and exploration levels
C94 minor: industrial arts

Additional certification options for teaching only the electrical power portion of this course:

Any high school certification with either:
A77 area: vocational industrial and technical education for electricity 773

Description: This course is a comprehensive study of electrical theories and equipment that leads to a general study of the field of electronics. The content includes activities and instruction in all of the following areas: (1) communications electronics, (2) electrical power, and (3) industrial and computer electronics.

GENERAL GRAPHIC ARTS 5945

Suggested Grade Level: 9-10 Credit: ½ or 1

Teacher Certification for General Graphic Arts 5945 (at a high school or vocational school):

Any high school certification with either:
A94 area: industrial arts
A95 area: industrial education--orientation and exploration levels
A96 area: industrial education--preparation level for graphic arts 772
B94 major: industrial arts
B95 major: industrial education--orientation and exploration levels
C94 minor: industrial arts

Additional certification options for teaching only the graphic layout and design portion of this course:

Any high school certification with either:
A77 area: vocational industrial and technical education for commercial art 767
A96 area: industrial education--preparation level for commercial art 767

Description: This course provides the pupil with some basic experiences in the areas of printing. The content includes activities and instruction in at least three of the following areas: (1) photo-offset lithography, (2) letterpress printing, (3) screen process printing, (4) graphic layout and design, and (5) photography.

GENERAL METALS 5948

Suggested Grade Level: 9-10 Credit: ½ or 1

Teacher Certification for General Metals 5948 (at a high school or vocational school):

Any high school certification with either:
- A94 area: industrial arts
- A95 area: industrial education--orientation and exploration levels
- B94 major: industrial arts
- B95 major: industrial education--orientation and exploration levels
- C94 minor: industrial arts

Additional certification options for teaching only the machine shop portion of this course:

Any high school certification with either:
- A77 area: vocational industrial and technical education for machine shop 776
- A96 area: industrial education--preparation level for machine shop 776

Additional certification options for teaching only the welding portion of this course:

Any high school certification with either:
- A77 area: vocational industrial and technical education for welding 788
- A96 area: industrial education--preparation level for welding 788

Additional certification options for teaching only the sheet metal portion of this course:

Any high school certification with either:
- A77 area: vocational industrial and technical education for sheet metal 783
- A96 area: industrial education--preparation level for sheet metal 783

Description: This course is a broad-based laboratory course providing a comprehensive introduction to the technology of different metals and metal working processes both its theory and practice. The content includes activities and instruction in at least three of the following areas: (1) sheet metal, (2) foundry, (3) welding, and (4) machine shop.

GENERAL POWER MECHANICS 5944

Suggested Grade Level: 9-10 Credit: ½ or 1

Teacher Certification for General Power Mechanics 5944 (at a high school or vocational school):

Any high school certification with either:
- A94 area: industrial arts
- A95 area: industrial education--orientation and exploration levels
- B94 major: industrial arts
- B95 major: industrial education--orientation and exploration levels
- C94 minor: industrial arts

Additional certification options for teaching only the auto mechanics portion of this course:

Any high school certification with either:
- A77 area: vocational industrial and technical education for auto mechanics 763 or diesel mechanics 768 or small engine repair 784
- A96 area: industrial education--preparation level for auto mechanics 763 or diesel mechanics 768 or small engine repair 763

Description: This course is a broad survey of different power systems. The content includes activities and instruction in at least three of the following areas: (1) auto mechanics, (2) fluid power, (3) transportation, (4) power generation, and (5) power transmission.

GENERAL WOODS 5946

Suggested Grade Level: 9-10 Credit: ½ or 1

Teacher Certification for General Woods 5946 (at a high school or vocational school):

Any high school certification with either:
- A94 area: industrial arts
- A95 area: industrial education--orientation and exploration levels
- B94 major: industrial arts
- B95 major: industrial education--orientation and exploration levels
- C94 minor: industrial arts

Additional certification options for teaching only the cabinet making portion of this course:

Any high school certification with either:
- A77 area: vocational industrial and technical education for cabinet making 765
- A96 area: industrial education--preparation level for cabinet making 765

Additional certification options for teaching only the carpentry portion of this course:

Any high school certification with either:
- A77 area: vocational industrial and technical education for carpentry 766
- A96 area: industrial education--preparation level for carpentry 766

Description: This course is a comprehensive laboratory course providing the pupil with meaningful experiences in working with wood-related tools and machines. The content includes activities and instruction in all of the following areas: (1) wood technology, (2) cabinet making, and (3) carpentry.

INDUSTRIAL MATERIALS AND PROCESSES 5941

Suggested Grade Level: 9-10 Credit: ½ or 1

Teacher Certification for Industrial Materials and Processes 5941 (at a high school or vocational school):

Any high school certification with either:
- A94 area: industrial arts
- A95 area: industrial education--orientation and exploration levels
- B94 major: industrial arts
- B95 major: industrial education--orientation and exploration levels
- C94 minor: industrial arts

Additional certification options for teaching only the masonry portion of this course:

Any high school certification with either:
- A77 area: vocational industrial and technical education for masonry 777
- A96 area: industrial education--preparation level for masonry 777

Description: This course is designed to study a variety of materials such as ceramics and plastics, and how the materials are converted into different products. The content includes activities and instruction in all of the following areas: (1) plastics, (2) masonry, and (3) structural ceramics.

LEVEL III - INDUSTRIAL EDUCATION

CERTIFICATION INFORMATION

Persons holding the following specialization for teaching at Level II may be approved for teaching at Level III provided they have 15 semester hours college credit directly related to the subject area to be taught and 2,000 hours of supervised work experience directly related to the subject to be taught:

Any high school certification with either:
- A94 area: industrial arts
- A95 area: industrial education--orientation and exploration levels
- B94 major: industrial arts
- B95 major: industrial education--orientation and exploration levels
- C94 minor: industrial arts

For clarification, it should be noted, for example, that a person might have the additional course work and appropriate experience to qualify for aircraft mechanics, but this approval would not be satisfactory for teaching auto mechanics. Both the preparation and the experience must correspond to the specific course.

Request for approval should be submitted to the Bureau of Vocational Education. When approval is given, the Division of Teacher Education and Certification will enter the appropriate code into the teacher's record as indicated below:

- S791 aircraft mechanics
- S763 auto mechanics
- S765 cabinetmaking
- S766 carpentry
- S767 commercial art
- S768 diesel mechanics
- S769 drafting
- S773 electricity
- S771 electronics
- S794 fork lift mechanics
- S772 graphic arts
- S776 machine shop
- S777 masonry
- S778 mine maintenance
- S781 radio and TV repair
- S783 sheet metal
- S784 small engine repair
- S786 truck mechanics
- S788 welding

AIRCRAFT MECHANICS 5791

Suggested Grade Level: 11-12 Credit: 3 each year

Teacher Certification for Aircraft Mechanics 5791 (at a high school or vocational school):

Any high school certification with either:
- A77 area: vocational industrial and technical education for aircraft mechanics 791
- A96 area: industrial education--preparation level for aircraft mechanics 791
- T76: endorsement for trade and industrial education for aircraft mechanics 791
- S791: approval for teaching preparation level aircraft mechanics

Any vocational education--industrial education certification with either:
- NEN--aircraft mechanics 791
- NEF--aircraft mechanics 791
- NTM--aircraft mechanics 791
- T--aircraft mechanics 791
- VET--aircraft mechanics 791

Description: This program provides classroom and specialized shop experiences involving the inspection, repair, servicing, and overhauling of airplane engines. It includes related experiences that develop competencies in the use of testing equipment. Pupils learn how to interpret specifications from service and technical manuals, diagnose, and make repairs.

AIR CONDITIONING 5760

Suggested Grade Level: 11-12 Credit: 3 each year

Teacher Certification for Air Conditioning 5760:

Any high school certification with either:
- A77 area: vocational industrial and technical education for air conditioning 760
- A96 area: industrial education--preparation level for air conditioning 760
- T76: endorsement for trade and industrial education for air conditioning 760

Any vocational education--industrial education certification with either:
- NEN--air conditioning 760
- NEF--air conditioning 760
- NTM--air conditioning 760
- T--air conditioning 760
- VET--air conditioning 760

Description: This program develops pupil competencies in the installation, repair, and maintenance of commercial and domestic air conditioning systems. Included is instruction in the operating characteristics of various units and parts; blueprint reading; the use of technical reference manuals; the diagnosis of malfunctions; the overhaul, repair, and adjustment of units and parts such as pumps, compressors, valves, springs, and connections; and the repair of electric and pneumatic control systems.

APPLIANCE REPAIR 5761

Suggested Grade Level: 11-12 Credit: 3 each year

Teacher Certification for Appliance Repair 5761:

Any high school certification with either:

- A77 area: vocational industrial and technical education for appliance repair 761
- A96 area: industrial education--preparation level for appliance repair 761
- T76: endorsement for trade and industrial education for appliance repair 761

Any vocational education--industrial education certification with either:

- NEN--appliance repair 761
- NEF--appliance repair 761
- NTM--appliance repair 761
- T--appliance repair 761
- VET--appliance repair 761

Description: This program develops pupil competencies in the theory of electrical circuitry; simple gearing; linkages; maintenance; and repair of components including relays, time switches, pumps, and agitators used in appliances such as washers, dryers, vacuum cleaners, water heaters, stoves, etc. Related training is provided in the use of tools, test equipment, and service manuals. Instruction is also given in estimating repair costs.

AUTO BODY REPAIR 5762

Suggested Grade Level: 11-12 Credit: 3 each year

Teacher Certification for Auto Body Repair 5762:

Any high school certification with either:

- A77 area: vocational industrial and technical education for auto body repair 762
- A96 area: industrial education--preparation level for auto body repair 762
- T76: endorsement for trade and industrial education for auto body repair 762

Any vocational education--industrial education certification with either:

- NEN--auto body repair 762
- NEF--auto body repair 762
- NTM--auto body repair 762
- T--auto body repair 762
- VET--auto body repair 762

Description: This program provides specialized learning experiences in all phases of the repair of damaged bodies and fenders including metal straightening by hammering; smoothing areas by filing; grinding or sanding; repairing of imperfections; painting; and replacement of body components, including trim.

AUTO MECHANICS 5763

Suggested Grade Level: 11-12 Credit: 3 each year

Teacher Certification for Auto Mechanics 5763 (at a high school or vocational school):

Any high school certification with either:

A77 area: vocational industrial and technical education for auto mechanics 763

A96 area: industrial education--preparation level for auto mechanics 763

T76: endorsement for trade and industrial education for auto mechanics 763

S763: approval for teaching preparation level auto mechanics

Any vocational education--industrial education certification with either:

NEN--auto mechanics 763
NEF--auto mechanics 763
NTM--auto mechanics 763
T--auto mechanics 763
VET--auto mechanics 763

Description: This program develops pupil competencies in diagnosing and repairing damaged or malfunctioning components and/or systems of automobiles including hydraulics, carburetion, pollution controls, tune-ups, engine, power transmission, steering, brakes, and electrical systems. Included is training in the use of service and technical specification manuals, diagnostic and testing equipment, and tools used in the repair process.

AUTO PARTS 5793

Suggested Grade Level: 11-12 Credit: 3 each year

Teacher Certification for Auto Parts 5793:

Any high school certification with either:

A77 area: vocational industrial and technical education for auto parts 793

A96 area: industrial education--preparation level for auto parts 793

T76: endorsement for trade and industrial education for auto parts 793

Any vocational education--industrial education certification with either:

NEN--auto parts 793
NEF--auto parts 793
NTM--auto parts 793
T--auto parts 793
VET--auto parts 793

Description: This program provides classroom and specialized clerical parts training involving receiving, storing, and issuing spare and replacement parts, equipment, and expendable items in repair or maintenance shop.

BUILDING MAINTENANCE 5764

Suggested Grade Level: 11-12 Credit: 3 each year

Teacher Certification for Building Maintenance 5764:

Any high school certification with either:
- A77 area: vocational industrial and technical education for building maintenance 764
- A96 area: industrial education--preparation level for building maintenance 764
- T76: endorsement for trade and industrial education for building maintenance 764

Any vocational education--industrial education certification with either:
- NEN--building maintenance 764
- NEF--building maintenance 764
- NTM--building maintenance 764
- T--building maintenance 764
- VET--building maintenance 764

Description: This program provides the pupil with competencies in repairing and maintaining physical structures of commercial and industrial establishments, such as factories, office buildings, apartment houses, and logging and mining constructions, by using hand and power tools.

CABINET MAKING 5765

Suggested Grade Level: 11-12 Credit: 3 each year

Teacher Certification for Cabinet Making 5765 (at a high school or vocational school):

Any high school certification with either:
- A77 area: vocational industrial and technical education for cabinet making 765
- A96 area: industrial education--preparation level for cabinet making 765
- T76: endorsement for trade and industrial education for cabinet making 765
- S765: approval for teaching preparation level cabinet making

Any vocational education--industrial education certification with either:
- NEN--cabinet making 765
- NEF--cabinet making 765
- NTM--cabinet making 755
- T--cabinet making 765
- VET--cabinet making 765

Description: This program provides specialized class and practical work experiences in the production of products such as window frames, built-in furniture, fixtures, kitchen cabinets, shelving, etc. Instruction includes training in cutting, shaping, and assembling parts by means of hand tools and woodworking machines; installing hardware (e.g. hinges, catches, and drawer pulls); planning layouts; blueprint reading; and drafting.

CARPENTRY 5766

Suggested Grade Level: 11-12 Credit: 3 each year

Teacher Certification for Carpentry 5766 (at a high school or vocational school):

Any high school certification with either:

A77 area: vocational industrial and technical education for carpentry 766

A96 area: industrial education--preparation level for carpentry 766

T76: endorsement for trade and industrial education for carpentry 766

S766: approval for teaching preparation level carpentry

Any vocational education--industrial education certification with either:

NEN--carpentry 766
NEF--carpentry 766
NTM--carpentry 766
T--carpentry 766
VET--carpentry 766

Description: This program develops pupil competencies in construction carpentry involving the layout, fabrication, assembly, installation, and repair of structural units. Emphasized in instruction are the care and use of hand and power tools, equipment, and materials; common systems of frame construction and the principles involved; cutting, shaping, and fastening a variety of building materials to exact specifications; drafting; blueprint reading; applied mathematics; and materials estimating.

COMMERCIAL ART 5767

Suggested Grade Level: 11-12 Credit: 3 each year

Teacher Certification for Commercial Art 5767 (at a high school or vocational school):

Any high school certification with either:

A77 area: vocational industrial and technical education for commercial art 767

A96 area: industrial education--preparation level for commercial art 767

T76: endorsement for trade and industrial education for commercial art 767

S767: approval for teaching preparation level commercial art

Any vocational education--industrial education certification with either:

NEN--commercial art 767
NEF--commercial art 767
NTM--commercial art 767
T--commercial art 767
VET--commercial art 767

Description: This program provides specialized learning experiences which include laboratory and shop work as they relate to the design and execution of layouts and making illustrations for advertising, display, and instructional manuals. Instruction includes advertising theory and preparation of copy, lettering, poster design, fashion illustration, silk screen, air brush and touch-up, inks and color dynamics, package and product design, drawings for line and halftone reproduction, and other display devices and exhibiting techniques.

COMMERCIAL SEWING 5774

Suggested Grade Level: 11-12 Credit: 3 each year

Teacher Certification for Commercial Sewing 5774:

Any high school certification with either:
- A77 area: vocational industrial and technical education for commercial sewing 774
- A96 area: industrial education--preparation level for commercial sewing 774
- T76: endorsement for trade and industrial education for commercial sewing 774

Any vocational education--industrial education certification with either:
- NEN--commercial sewing 774
- NEF--commercial sewing 774
- NTM--commercial sewing 774
- T--commercial sewing 774
- VET--commercial sewing 774

Description: This program provides classroom and shop experiences in commercial sewing operations to join parts of fabricated textile products together, hem, reinforce, or decorate articles.

DIESEL MECHANICS 5768

Suggested Grade Level: 11-12 Credit: 3 each year

Teacher Certification for Diesel Mechanics 5768 (at a high school or vocational school):

Any high school certification with either:
- A77 area: vocational industrial and technical education for diesel mechanics 768
- A96 area: industrial education--preparation level for diesel mechanics 768
- T76: endorsement for trade and industrial education for diesel mechanics 768
- S768: approval for teaching preparation level diesel mechanics

Any vocational education--industrial education certification with either:
- NEN--diesel mechanics 768
- NEF--diesel mechanics 768
- NTM--diesel mechanics 768
- T--diesel mechanics 768
- VET--diesel mechanics 768

Description: This program provides classroom and shop experiences in servicing and repairing diesel engines used to power buses, ships, trucks, railroad trains, electrical generators, construction machinery, and similar equipment. Instruction and practice are provided in diagnosis of malfunction; disassembly of engines and examination of parts; and adjustment of fuel injection systems, oil and water pumps, generators, governors, auxiliary and accompanying power units, controls, and transmissions. The uses of technical manuals for a variety of hand and power tools and for testing and diagnostic equipment also are studied.

DRAFTING 5769

Suggested Grade Level: 11-12 Credit: 3 each year

Teacher Certification for Drafting 5769 (at a high school or vocational school):

Any high school certification with either:
- A77 area: vocational industrial and technical education for drafting 769
- A96 area: industrial education--preparation level for drafting 769
- T76: endorsement for trade and industrial education for drafting 769
- S769: approval for teaching preparation level drafting

Any vocational education--industrial education certification with either:
- NEN--drafting 769
- NEF--drafting 769
- NTM--drafting 769
- T--drafting 769
- VET--drafting 769

Description: This program provides specialized learning experiences designed to develop pupil competencies in multi-phase drafting. Major emphasis is on mechanical drafting. Additional experiences in planning and preparing of architectural, structural, electrical, welding, topographical, and other types of drawings are provided. Instruction also provides experiences in the use of reproduction materials, equipment and processes; the preparation of reports and data sheets for writing specifications; the development of plan and process charts and drawings; and the development of models.

DRY CLEANING 5770

Suggested Grade Level: 11-12 Credit: 3 each year

Teacher Certification for Dry Cleaning 5770:

Any high school certification with either:
- A77 area: vocational industrial and technical education for dry cleaning 770
- A96 area: industrial education--preparation level for dry cleaning 770
- T76: endorsement for trade and industrial education for dry cleaning 770

Any vocational education--industrial education certification with either:

NEN--dry cleaning 770	T--dry cleaning 770
NEF--dry cleaning 770	VET--dry cleaning 770
NTM--dry cleaning 770	

Description: This program provides specialized learning experiences in garment cleaning processes that involve chemicals and steam. Pupils learn to operate specialized machines and acquire knowledge of cleaning processes applicable to various fabrics and colors. Related technical knowledge of the processes involved also is studied.

ELECTRICITY 5773

Suggested Grade Level: 11-12 Credit: 3 each year

Teacher Certification for Electricity 5773 (at a high school or vocational school):

Any high school certification with either:

- A77 area: vocational industrial and technical education for electricity 773
- A96 area: industrial education--preparation level for electricity 773
- T76: endorsement for trade and industrial education for electricity 773
- S773: approval for teaching preparation level electricity

Any vocational education--industrial education certification with either:

NEN--electricity 773	T--electricity 773
NEF--electricity 773	VET--electricity 773
NTM--electricity 773	

Description: This program provides classroom and shop experiences in the layout assembly, installation, testing, and maintenance of electrical circuits, apparatus, and wiring used in electrical systems. Instruction is provided in the reading, interpretation, and use of controlling electrical codes. Training is emphasized in the use of test equipment and safety.

ELECTRONICS 5771

Suggested Grade Level: 11-12 Credit: 3 each year

Teacher Certification for Electronics 5771 (at a high school or vocational school):

Any high school certification with either:

- A77 area: vocational industrial and technical education for electronics 771
- A96 area: industrial education--preparation level for electronics 771
- T76: endorsement for trade and industrial education for electronics 771
- S771: approval for teaching preparation level electronics

Any vocational education--industrial education certification with either:

NEN--electronics 771	T--electronics 771
NEF--electronics 771	VET--electronics 771
NTM--electronics 771	

Description: This program includes specialized classroom, laboratory, and practical experiences. Study includes: the basic elements of vacuum tubes and circuitry; using and servicing testing equipment; and troubleshooting circuits. In addition instruction includes the study of and experience in repairing photoelectric controls, timers, selector switches, counters, recorders, and transducers; and the study of the characteristics and intricacies of equipment and components used in industry. Advanced instruction includes study, analysis, and repair of magnetic amplifiers, motors, motor controls, electronic heating, saturable reactors, servo-mechanisms, pulse circuits, computers, and test instruments. Basic principles and servicing procedures are also covered.

FORK LIFT MECHANICS 5794

Suggested Grade Level: 11-12 Credit: 3 each year

Teacher Certification for Fork Lift Mechanics 5794 (at a high school or vocational school):

Any high school certification with either:

A96 area: industrial education--preparation level for fork lift mechanics 794

T76: endorsement for trade and industrial education for fork lift mechanics 794

S794: approval for teaching preparation level fork lift mechanics

Any vocational education--industrial education certification with either:

NEN--fork lift mechanics 794	T--fork lift mechanics 794
NEF--fork lift mechanics 794	VET--fork lift mechanics 794
NTM--fork lift mechanics 794	

Description: This program provides specialized classroom and shop experiences in repair and maintenance of electric, diesel, propane, and gasoline industrial fork lift trucks; following manuals; and using hand tools and power tools. Knowledge of electrical, power transmission, brake, and other automotive systems are also emphasized.

GRAPHIC ARTS 5772

Suggested Grade Level: 11-12 Credit: 3 each year

Teacher Certification for Graphic Arts 5772 (at a high school or vocational school):

Any high school certification with either:

- A77 area: vocational industrial and technical education for graphic arts 772
- A96 area: industrial education--preparation level for graphic arts 772
- T76: endorsement for trade and industrial education for graphic arts 772
- S772: approval for teaching preparation level graphic arts

Any vocational education--industrial education certification with either:

- NEN--graphic arts 772
- NEF--graphic arts 772
- NTM--graphic arts 772
- T--graphic arts 772
- VET--graphic arts 772

Description: This program involves specialized learning experiences which include theory and laboratory/shop work as they relate to all phases of hot and cold typesetting, layout, composition, presswork, binding (including flexography, lithography, photoengraving), and other graphic arts of the printing industry. Emphasis is on typographical layouts and design, hand and machine typesetting, camera and platework, imposition, typecasting, offset and platen press makeup and operation, papercutting, ink and color preparation, binding, and production by silk screen process.

INDUSTRIAL MACHINERY MAINTENANCE 5792

Suggested Grade Level: 11-12 Credit: 3 each year

Teacher Certification for Industrial Machinery Maintenance 5792:

Any high school certification with either:

- A77 area: vocational industrial and technical education for industrial machinery maintenance 792
- A96 area: industrial education--preparation level for industrial machinery maintenance 792
- T76: endorsement for trade and industrial education for industrial machinery maintenance 792

Any vocational education--industrial education certification with either:

- NEN--industrial machinery maintenance 792
- NEF--industrial machinery maintenance 792
- NTM--industrial machinery maintenance 792
- T--industrial machinery maintenance 792
- VET--industrial machinery maintenance 792

Description: This program provides specialized classroom and shop experiences in installation, maintenance, and repair of machinery and other mechanical equipment used in manufacturing and/or industry. Competencies are developed in diagnosing industrial machinery failure or breakdown to determine the cause of the trouble and to make the necessary repairs for returning the equipment to proper working order. The program includes training in the use of testing equipment; precision-measuring instruments; and electrical, mechanical, hydraulic, and pneumatics applicable to industrial machinery.

INTERIOR FINISHING 5775

Suggested Grade Level: 11-12 Credit: 3 each year

Teacher Certification for Interior Finishing 5775:

Any high school certification with either:

- A77 area: vocational industrial and technical education for interior finishing 775
- A96 area: industrial education--preparation level for interior finishing 775
- T76: endorsement for trade and industrial education for interior finishing 775

Any vocational education--industrial education certification with either:

- NEN--interior finishing 775
- NEF--interior finishing 775
- NTM--interior finishing 775
- T--interior finishing 775
- VET--interior finishing 775

Description: This program provides learning experiences in the installation of gypsum dry wall installations such as wallboard, plasterboard, or other interior surfaces of residential and commercial structures. The pupil learns how to apply various types of wall finishes and studies color harmony.

MACHINE SHOP 5776

Suggested Grade Level: 11-12 Credit: 3 each year

Teacher Certification for Machine Shop 5776 (at a high school or vocational school):

Any high school certification with either:

- A77 area: vocational industrial and technical education for machine shop 776
- A96 area: industrial education--preparation level for machine shop 776
- T76: endorsement for trade and industrial education for machine shop 776
- S776: approval for teaching preparation level machine shop

Any vocational education--industrial education certification with either:

NEN--machine shop 776	T--machine shop 776
NEF--machine shop 776	VET--machine shop 776
NTM--machine shop 776	

Description: This program includes specialized classroom and shop experiences in shaping metal parts. Instruction involves making computations related to work dimensions of tooling and feeds and speeds of machining. Emphasis is upon developing precision competencies in hand and bench work and the machining processes applicable to basic machine tools such as latches, shapers, milling machines, grinders, and drills; uses of precision measuring and gauges; methods of machining and heat treatment of various metals; blueprint reading; and the layout of machine parts.

MASONRY 5777

Suggested Grade Level: 11-12 Credit: 3 each year

Teacher Certification for Masonry 5777 (at a high school or vocational school):

Any high school certification with either:

- A77 area: vocational industrial and technical education for masonry 777
- A96 area: industrial education--preparation level for masonry 777
- T76: endorsement for trade and industrial education for masonry 777
- S777: approval for teaching preparation level masonry

Any vocational education--industrial education certification with either:

NEN--masonry 777	T--masonry 777
NEF--masonry 777	VET--masonry 777
NTM--masonry 777	

Description: This program provides specialized classroom and shop experiences in the cutting, chipping, and fixing in position of concrete blocks, brick, and other masonry products, and using bonding materials and hand tools. Included is training in reading architectural plans, planning, and estimating.

MINE MAINTENANCE 5778

Suggested Grade Level: 11-12 Credit: 3 each year

Teacher Certification for Mine Maintenance 5778 (at a high school or vocational school):

Any high school certification with either:

- A77 area: vocational industrial and technical education for mine maintenance 778
- A96 area: industrial education--preparation level for mine maintenance 778

T76: endorsement for trade and industrial education for mine maintenance 778
S778: approval for teaching preparation level mine maintenance

Any vocational education--industrial education certification with either:
NEN--mine maintenance 778
NEF--mine maintenance 778
NTM--mine maintenance 778
T--mine maintenance 778
VET--mine maintenance 778

Description: This program provides pupil experiences in repairing, adjusting, and maintaining mining machinery and/or equipment such as stripping and loading shovels, drilling and cutting machines, and continuous mining machines. Pupils learn how to analyze malfunctions and make repairs.

MINE EQUIPMENT OPERATOR 5790

Suggested Grade Level: 11-12 Credit: 3 each year

Teacher Certification for Mine Equipment Operator 5790:

Any high school certification with either:
A77 area: vocational industrial and technical education for mine equipment operator 790
A96 area: industrial education--preparation level for mine equipment operator 790
T76: endorsement for trade and industrial education for mine equipment operator 790

Any vocational education--industrial education certification with either:
NEN--mine equipment operator 790
NEF--mine equipment operator 790
NTM--mine equipment operator 790
T--mine equipment operator 790
VET--mine equipment operator 790

Description: This program provides specialized learning experiences in underground mining. Knowledge and skills are developed in mine rescue techniques, dangers and recognition of mine gases, first aid applicable to mining injuries, and general mine safety. Underground mining techniques are developed in shoring and installing roof and wall supports, air vents, auxiliary tunnels, and rooms and shafts to facilitate mining in areas where high production equipment is limited by economic or natural formation factors.

GENERAL MINER 5795

Suggested Grade Level: 11-12 Credit: 3 each year

Teacher Certification for General Miner 5795:

Any high school certification with either:
A96 area: industrial education--preparation level for general miner

Any vocational education--industrial education certification with either:
NEN--general miner 795
NEF--general miner 795
NTM--general miner 795

Description: This program provides classroom and specialized safety training in underground or surface mine, pit, or quarry, or at a tipple mill or preparation plant in performing any combination of several tasks of a company laborer.

OFFICE MACHINE REPAIR 5779

Suggested Grade Level: 11-12 Credit: 3 each year

Teacher Certification for Office Machine Repair 5779:

Any high school certification with either:
A77 area: vocational industrial and technical education for office machine repair 779
A96 area: industrial education--preparation level for office machine repair 779
T76: endorsement for trade and industrial education for office machine repair 779

Any vocational education--industrial education certification with either:
NEN--office machine repair 779
NEF--office machine repair 779
NTM--office machine repair 779
T--office machine repair 779
VET--office machine repair 779

Description: This program provides classroom and shop experiences concerned with maintaining and repairing a variety of equipment used for recording and processing data such as typewriters, dictation machines, calculators, and data processing equipment. Repair of duplicating and mailing machines is also included. Instruction includes diagnostic techniques; understanding mechanical principles such as those involved in gears, cams, levers, and eccentrics; nomenclature; uses and care of special hand and power tools; soldering; mechanical drawing; principles of electricity and electronics; and uses of testing devices.

PLUMBING 5780

Suggested Grade Level: 11-12 Credit: 3 each year

Teacher Certification for Plumbing 5780:

Any high school certification with either:
A77 area: vocational industrial and technical education for plumbing 780
A96 area: industrial education--preparation level for plumbing 780
T76: endorsement for trade and industrial education for plumbing 780

Any vocational education--industrial education certification with either:

NEN--plumbing 780	T--plumbing 780
NEF--plumbing 780	VET--plumbing 780
NTM--plumbing 780	

Description: This program provides specialized classroom and shop experiences in layout, assembling, installing, altering, and repairing piping systems, including related fixtures and fittings in structures. Use of pipecutting, bending and threading tools, welding, soldering, brazing equipment, and other hand and power tools/equipment are included.

RADIO AND TV REPAIR 5781

Suggested Grade Level: 11-12 Credit: 3 each year

Teacher Certification for Radio and TV Repair 5781 (at a high school or vocational school):

Any high school certification with either:

- A77 area: vocational industrial and technical education for radio and TV repair 781
- A96 area: industrial education--preparation level for radio and TV repair 781
- T76: endorsement for trade and industrial education for radio and TV repair 781
- S781: approval for teaching preparation level radio and TV repair

Any vocational education--industrial education certification with either:

NEN--radio and TV repair 781	T--radio and TV repair 781
NEF--radio and TV repair 781	VET--radio and TV repair 781
NTM--radio and TV repair 781	

Description: This program provides specialized theory and practice in the maintenance and repair of radios and television sets. Training prepares pupils to use equipment to diagnose troubles and make repairs. Other experiences involve service and repair of electronic products such as high-fidelity sound equipment, phonographs, and tape recorders.

RADIO AND TV PRODUCTION 5796

Suggested Grade Level: 11-12 Credit: 3 each year

Teacher Certification for Radio and TV Production 5796:

Any high school certification with either:

- A96 area: industrial education--preparation level for radio and TV production 796
- *S796: approval for teaching preparation level radio and TV production

Any vocational education--industrial education certification with either:

- NEN--radio and TV production 796
- NEF--radio and TV production 796
- NTM--radio and TV production 796

*The approval for teaching radio and TV productions will require an area of concentration in English, or a major in journalism, or a minor in journalism and 2,000 hours of work experience in the specialty area of radio or TV productions. Request for approval should be submitted to the Bureau of Vocational Education. When approval is granted, the Division of Teacher Education and Certification will enter the approval code of S796 into the teacher's record.

Description: This program provides classroom and specialized training in program assistance and production of rehearsals and broadcasts for radio and television.

SHEET METAL 5783

Suggested Grade Level: 11-12 Credit: 3 each year

Teacher Certification for Sheet Metal 5783 (at a high school or vocational school):

Any high school certification with either:

- A77 area: vocational industrial and technical education for sheet metal 783
- A96 area: industrial education--preparation level for sheet metal 783
- T76: endorsement for trade and industrial education for sheet metal 783
- S783: approval for teaching preparation level sheet metal

Any vocational education--industrial education certification with either:

- NEN--sheet metal 783
- NEF--sheet metal 783
- NTM--sheet metal 783
- T--sheet metal 783
- VET--sheet metal 783

Description: This program provides specialized classroom and shop experiences in the layout; fabrication; erection or installation; and maintenance of items made of steel, copper, stainless steel, and aluminum, such as ventilating, air-conditioning and heating ducts, kitchen equipment, signs, furniture, and skylights. Instruction includes the study of hand tools and machines such as the cornice brake, forming rolls, squaring shears and drafting and blueprint reading.

SMALL ENGINE REPAIR 5784

Suggested Grade Level: 11-12 Credit: 3 each year

Teacher Certification for Small Engine Repair 5784 (at a high school or vocational school):

Any high school certification with either:
- A77 area: vocational industrial and technical education for small engine repair 784
- A96 area: industrial education--preparation level for small engine repair 784
- T76: endorsement for trade and industrial education for small engine repair 784
- S784: approval for teaching preparation level small engine repair

Any vocational education--industrial education certification with either:
- NEN--small engine repair 784
- NEF--small engine repair 784
- NTM--small engine repair 784
- T--small engine repair 784
- VET--small engine repair 784

Description: This program provides specialized classroom and shop experiences in maintaining and repairing a variety of small engines used on portable equipment (e.g. motorcycles, lawnmowers, outboard motors, chain saws, and rotary tillers). Instruction includes the principles of internal combustion engine operation, reading technical manuals, diagnosing and making repairs to specification, and customer relations.

TAILORING 5785

Suggested Grade Level: 11-12 Credit: 3 each year

Teacher Certification for Tailoring 5785:

Any high school certification with either:
- A77 area: vocational industrial and technical education for tailoring 785
- A96 area: industrial education--preparation level for tailoring 785
- T76: endorsement for trade and industrial education for tailoring 785

Any vocational education--industrial education certification with either:
- NEN--tailoring 785
- NEF--tailoring 785
- NTM--tailoring 785
- T--tailoring 785
- VET--tailoring 785

Description: This program provides specialized learning experiences in the fabrication and alteration by hand and machine of all types of men's, women's, and children's outer garments. Instruction includes taking measurements; preparing patterns; cutting, sewing, and fitting; hand and powered machine sewing; hand and machine pressing; and making repairs and alterations according to patterns and designer's specifications.

TRUCK MECHANICS 5786

Suggested Grade Level: 11-12 Credit: 3 each year

Teacher Certification for Truck Mechanics 5786 (at a high school or vocational school):

Any high school certification with either:
- A77 area: vocational industrial and technical education for truck mechanics 786
- A96 area: industrial education--preparation level for truck mechanics 786
- T76: endorsement for trade and industrial education for truck mechanics 786
- S786: approval for teaching preparation level truck mechanics

Any vocational education--industrial education certification with either:
- NEN--truck mechanics 786
- NEF--truck mechanics 786
- NTM--truck mechanics 786
- T--truck mechanics 786
- VET--truck mechanics 786

Description: This program provides specialized learning experiences in the servicing, maintaining, and repairing of heavy-duty trucks and buses. Included is training in the use of service and technical specification manuals, diagnostic and testing equipment, and tools used in the process of repairing heavy duty trucks and buses. Instruction deals with components and/or systems such as electrical, fuel, fuel injection, hydraulics, pneumatics, and power mechanics.

UPHOLSTERY 5787

Suggested Grade Level: 11-12 Credit: 3 each year

Teacher Certification for Upholstery 5787:

Any high school certification with either:
- A77 area: vocational industrial and technical education for upholstery 787
- A96 area: industrial education--preparation level for upholstery 787
- T76: endorsement for trade and industrial education for upholstery 787

Any vocational education--industrial education certification with either:
- NEN--upholstery 787
- NEF--upholstery 787
- NTM--upholstery 787
- T--upholstery 787
- VET--upholstery 787

Description: This program provides specialized classroom and shop experiences in all aspects of upholstering furniture, automobile seats, mattresses and cushions, and the repair of wooden frames. Instruction includes history and styles of furniture; installing, repairing, arranging, and securing springs, filler, padding, and covering material; pattern-making, cutting, sewing, and trimming; outside coverings; cushion filling; styling and designing; tufting and buttoning; and wood refinishing.

WELDING 5788

Suggested Grade Level: 11-12 Credit: 3 each year

Teacher Certification for Welding 5788 (at a high school or vocational school):

Any high school certification with either:
- A77 area: vocational industrial and technical education for welding 788
- A96 area: industrial education--preparation level for welding 788
- T76: endorsement for trade and industrial education for welding 788
- S788: approval for teaching preparation level welding

Any vocational education--industrial education certification with either:
- NEN--welding 788
- NEF--welding 788
- NTM--welding 788
- T--welding 788
- VET--welding 788

Description: This program provides pupils with competencies in welding metal parts together according to layouts, blueprints, or work orders, and in using both gas welding or brazing and any combination of arc welding processes such as inert-gas and shielded arc, both manual and semi-automatic. Pupils perform related tasks such as flame cutting and grinding, repairing broken or cracked parts, filling holes, and increasing the size of metal parts.

INDUSTRIAL ARTS

COURSES	CODE	7	8	9	10	11	12	MAXIMUM HIGH SCHOOL UNITS
General Industrial Art	2941	X	X					
Industrial Arts Drafting	2942			X	X	X	X	1
Industrial Arts Wood	2946			X	X	X	X	1
Industrial Arts Metal	2948			X	X	X	X	1
Industrial Arts Electricity/ Electronics	2943			X	X	X	X	1
Industrial Arts Power Mechanics	2944			X	X	X	X	1
Industrial Arts Graphic Arts	2945			X	X	X	X	1
Industrial Arts Crafts	2949			X	X	X	X	1
Industrial Arts Plastic	2947			X	X	X	X	1

Course Descriptions and Program Requirements

Industrial arts is an essential part of the education of all youth. It can be planned on the elementary school level, junior or middle school level, and for programs serving special purposes. This "traditional" industrial arts program is not eligible for vocational education funding.

Provisions are made to meet the needs of disadvantaged and handicapped pupils to prepare them for occupations in industrial arts. If the nature and severity of the disadvantage or handicap is such that the pupil cannot benefit from participation in a regular program, a separate or modified program may be developed. The program provided to handicapped students shall be consistent with and specified on each student's Individualized Education Program (IEP).

GENERAL INDUSTRIAL ARTS 2941

Suggested Grade Level: 7-8

Teacher Certification for General Industrial Arts 2941:

Certification for elementary classroom teaching

Certification for middle grades (junior high school)

Any certification with either:
- A94 area: industrial arts
- A95 area: industrial education--orientation and exploration levels
- B94 major: industrial arts
- B95 major: industrial education--orientation and exploration levels
- C94 minor: industrial arts

Description: The course is intended to introduce exploratory experiences in a wide variety of industries and careers. It should serve as a foundation for other industrial education courses in the high school curriculum. A specially designed facility is required to provide the activity requirements of the course.

INDUSTRIAL ARTS DRAFTING 2942

Suggested Grade Level: 9-12 Credit: 1

Teacher Certification for Industrial Arts Drafting 2942:

Any certification with either:
- A94 area: industrial arts
- A95 area: industrial education--orientation and exploration levels
- B94 major: industrial arts
- B95 major: industrial education--orientation and exploration levels
- C94 minor: industrial arts

Description: Introduction to drafting is provided through a variety of experiences and activities including: sketching, the use of drawing instruments, and the reading of drawings. The correct use of tools is emphasized. Certain skills and processes are introduced by teacher demonstration including: pencil and instrument skills in technical sketching, machine design, pictorial representation, architectural drawing, furniture design, sheet metal layout, electrical/electronic planning, tool design, and topography. Attention is given to the development of accuracy, skill, judgment, and technique. Technical ability and interests are discovered, and occupational information is provided. Mathematics, science, and language arts are applied through drafting activities correlated with class discussions, demonstrations, and study. Pupils have an opportunity to select, design, plan, and reproduce appropriate drawings.

INDUSTRIAL ARTS WOODS 2946

Suggested Grade Level: 9-12 Credit: 1

Teacher Certification for Industrial Arts Woods 2946:

Any certification with either:
- A94 area: industrial arts
- A95 area: industrial education--orientation and exploration levels
- B94 major: industrial arts
- B95 major: industrial education--orientation and exploration levels
- C94 minor: industrial arts

Description: An introduction to woodworking is provided through a variety of experiences and activities in cabinetmaking, wood finishing, wood turning, and upholstery. The correct and safe use of tools and machines is emphasized. Pupils are oriented in the relationship of the course content of woodworking to the other subjects in the school curriculum. Attention is given to the selection, use, care, and manufacture of materials and

tools used in the instructional program. Pupils are introduced to the importance of the woodworking industry and its products as related to the home and community. Technical abilities and interests are discovered, and occupational information is provided. Opportunities are provided to participate in activities involving production methods and processes. Occupational guidance is an integral part of the instruction offered.

INDUSTRIAL ARTS METAL 2948

Suggested Grade Level: 9-12 Credit: 1

Teacher Certification for Industrial Arts Metal 2948:

Any certification with either:
- A94 area: industrial arts
- A95 area: industrial education--orientation and exploration levels
- B94 major: industrial arts
- B95 major: industrial education--orientation and exploration levels
- C94 minor: industrial arts

Description: An introduction to metalworking is provided through a variety of experiences and activities in sheet metal, art metal, welding, forging, casting, metal machining, heat treating, metal spinning, enameling, etching, and finishings. The correct and safe use of hand tools and machines is emphasized. Safe work habits are stressed. Pupils are oriented in the relationship of the course content of metalworking to the other subjects in the school curriculum. Technical, general, and occupational information is provided. Accuracy and neatness are stressed. Each sub-area is specifically identified and pupils are encouraged to select certain sub-areas for emphasis. Opportunities to participate in activities involving production methods and processes are provided. Emphasis is placed on related technical information and the practical application of mathematics, science, and language arts. Occupational guidance is an integral part of the instruction offered.

INDUSTRIAL ARTS ELECTRICITY/ELECTRONICS 2943

Suggested Grade Level: 9-12 Credit: 1

Teacher Certification for Industrial Arts Electricity/Electronics 2943:

Any certification with either:
- A94 area: industrial arts
- A95 area: industrial education--orientation and exploration levels
- B94 major: industrial arts
- B95 major: industrial education--orientation and exploration levels
- C94 minor: industrial arts

Description: An introduction to electricity/electronics is provided through a variety of experiences and activities in the sub-areas of magnetism, light, heat, elementary electronics, simple appliance repair, power

sources, power transmission, and basic circuits. The correct and safe use of tools, instruments, and machines is emphasized. Certain machine and operations are introduced by teacher demonstrations. Pupils are introduced to the importance of the electricity/electronics industry and its products, and services are related to the home and community through student activities, discussion, and teacher demonstrations. Technical, general, and occupational information is provided. Shop activities correlated with class discussions, demonstrations, and study provide for the practical application of mathematics, science, and language arts. Occupational guidance is an integral part of the instruction offered.

INDUSTRIAL ARTS POWER MECHANICS 2944

Suggested Grade Level: 9-12 Credit: 1

Teacher Certification for Industrial Arts Power/Transportation 2944:

Any certification with either:
- A94 area: industrial arts
- A95 area: industrial education--orientation and exploration levels
- B94 major: industrial arts
- B95 major: industrial education--orientation and exploration levels
- C94 minor: industrial arts

Description: An introduction to power/transportation is provided through a variety of experiences and activities in small gas engines. Areas of study include: construction and principles, two and four cycle engines, fuel systems, carburetion, ignition systems, engine lubrication, engine cooling, troubleshooting, service and maintenance. The correct use of tools is emphasized. Pupils are oriented in the relationship of the course content of power/transportation to the other subjects in the school curriculum. Pupils are introduced to the importance of the power and transportation industry and its impact on the home and community through student activities. Technical abilities and interests are discovered, and occupational information is provided. Occupational guidance is an integral part of the instruction offered.

INDUSTRIAL ARTS GRAPHIC ARTS 2945

Suggested Grade Level: 9-12 Credit: 1

Teacher Certification for Industrial Arts Graphic Arts 2945:

Any certification with either:
- A94 area: industrial arts
- A95 area: industrial education--orientation and exploration levels
- B94 major: industrial arts
- B95 major: industrial education--orientation and exploration levels
- C94 minor: industrial arts

Description: An introduction to graphic arts is provided through a variety of experiences and activities in photography, silk screen, block printing,

composition, offset lithography, letter press printing, binding, intaglio, thermographic printing, and rubber stamp making. The correct and safe use of tools and machines is emphasized. Certain machines and operations are introduced by teacher demonstration. Pupils are oriented in the relationship of the course content of graphic arts to the other subjects in the school curriculum. They are introduced to the importance of the graphic arts industry and its products as related to the home and community through student activities, discussions and teacher demonstrations. Technical, general, and occupational information is provided. Occupational guidance is an integral part of the instruction offered.

INDUSTRIAL ARTS CRAFTS 2949

Suggested Grade Level: 9-12 Credit: 1

Teacher Certification for Industrial Arts Crafts 2949:

Any certification with either:
- A94 area: industrial arts
- A95 area: industrial education--orientation and exploration levels
- B94 major: industrial arts
- B95 major: industrial education--orientation and exploration levels
- C94 minor: industrial arts

Description: An introduction to crafts (industrial) is provided through a variety of experiences and activities involving plastics, enameling, ceramics, metal, lapidary, jewelry, leather, carving, models, glass, fiber glass, and textiles. Emphasis is placed on related technical information and the practical application of mathematics, science, and language arts. Occupational guidance is an integral part of the instruction offered.

INDUSTRIAL ARTS PLASTICS 2947

Suggested Grade Level: 9-12 Credit: 1

Teacher Certification for Industrial Arts Plastics 2947:

Any certification with either:
- A94 area: industrial arts
- A95 area: industrial education--orientation and exploration levels
- B94 major: industrial arts
- B95 major: industrial education--orientation and exploration levels
- C94 minor: industrial arts

Description: Pupils are introduced to the plastics industry through a variety of experiences and activities. Studying plastics by testing, identification, and chemistry make up the early part of the course. Later in the program, molding, forming and lamination processes are studied through "hands-on" projects. Pupils are introduced to the importance of the plastics industry and its impact on the home and community through student activities. Occupational guidance is an integral part of the instruction offered.

MARKETING AND DISTRIBUTIVE EDUCATION

COURSES	CODE	7	8	9	10	11	12	MAXIMUM HIGH SCHOOL UNITS
Marketing and Distribution Exploration	5374	X	X					
Introduction to Business	5741			X	X			1
Consumer Education	5742				X	X		1
Business Economics	5743				X	X		1
Retailing I	5751				X	X	X	½
Retailing II (Sales)	5752				X	X	X	1½
Retailing III	5753					X	X	3
Fashion Merchandising I	5755				X	X	X	3
Fashion Merchandising II	5756					X	X	3
Food Marketing I	5757					X	X	3
Food Marketing II	5758						X	3
Warehouse and Transportation I	5744					X	X	3
Warehouse and Transportation II	5745						X	3
Hotel/Motel I	5746					X	X	3
Hotel/Motel II	5747						X	3
Business Management	5748						X	1

Course Descriptions and Program Requirements

Marketing and Distributive Education preparation programs are sequenced to provide continuous pupil progress toward achieving completion of expected outcomes including exploration, job preparation, and preparation for advanced training. Any school which has a Marketing and Distributive Education program must offer a minimum of two years occupational preparation.

Simulated programs shall be one hour for related class and two hours for laboratory per school day.

Distributive Education Clubs of America (DECA) is a vocational student organization available to pupils enrolled in any Marketing and Distributive Education program. It is an integral part of instruction, and activities are provided to enhance leadership and citizenship development. The competency-based events are designed around the pupils' career objective and the instructional program that prepares them for their occupation. Pupils are encouraged to be members and become involved in these activities.

School stores under the supervision of the Marketing and Distributive Education teachers and operated by the Marketing and Distributive Education pupils are encouraged. Introduction to Computers, taught by Business and Office Education, is supportive to all Marketing and Distributive Education programs.

Pupils enrolled in a vocational school for a three-hour block of time may receive three credits.

Provisions are made to meet the needs of disadvantaged and handicapped pupils to prepare them for occupations in marketing and distribution. If the nature and severity of the disadvantage or handicap is such that the pupil cannot benefit from participation in a regular program, a separate or modified program may be developed. The program provided to handicapped students shall be consistent with and specified on each student's Individualized Education Program (IEP).

Whenever qualified teachers are not available for teaching retailing or fashion merchandising, the Superintendent of Public Instruction may approve the employment of secondary teachers with an area of concentration or major specialization in business education, basic business, general business, or accounting-general business provided that an additional nine semester hours credit in distributive education be completed within a two-year period at an institution approved for the preparation of distributive education teachers. The nine semester hours credit shall include preparation in Coordination Techniques in Distributive Education, Methods of Teaching and Curriculum Development in Distributive Education, and one of the following: Survey of Distribution, Principles of Marketing, Consumer Behavior.

MARKETING AND DISTRIBUTION EXPLORATION 5374

Suggested Grade Level: 7-8

Teacher Certification for Marketing and Distribution Exploration 5374:

Any certification with either:

- A60 area: business education
- A70 area: mathematics-physical science
- A75 area: distributive education
- B25 major: economics-sociology
- B28 major: economics
- B60 major: business education (commerce)
- B62 major: secretarial practice
- B63 major: basic business
- B64 major: general business
- B65 major: accounting-secretarial practice
- B66 major: accounting-general business
- B67 major: general business-secretarial practice
- B69 major: secretarial studies
- B71 major: mathematics
- B75 major: distributive education
- C28 minor: economics
- C60 minor: business education (commerce)
- C62 minor: secretarial practice
- C64 minor: general business
- C65 minor: accounting-secretarial practice
- C66 minor: accounting-general business
- C67 minor: general business-secretarial practice
- C71 minor: mathematics
- S75: approval for teaching distributive education

Note: Any certification for high school, middle grades (junior high), or elementary classroom teaching, and 2,000 hours of paid or unpaid work experience, as approved by the Bureau of Vocational Education, may also direct the exploration of this cluster.

Description: Pupils study the job families of marketing management and research, buying and distribution, and sales and promotion. This course is offered for 6-12 weeks as a part of a total exploration program. (This course is cross-referenced with Practical Arts Career Exploration.)

INTRODUCTION TO BUSINESS 5741

Suggested Grade Level: 9-10 Credit: 1

Teacher Certification for Introduction to Business 5741:

Any certification with either:

A60 area:	business education
A75 area:	distributive education
B60 major:	business education (commerce)
B61 major:	accounting
B63 major:	basic business
B64 major:	general business
B66 major:	accounting-general business
B67 major:	general business-secretarial practice
B69 major:	secretarial studies
B75 major:	distributive education
C60 minor:	business education (commerce)
C61 minor:	accounting
C64 minor:	general business
C66 minor:	accounting-general business
C67 minor:	general business-secretarial practice
S75:	approval for teaching distributive education

Description: This offering provides the pupil with a basic foundation to further study in business and marketing classes. Major topics of study include: banking, credit, investment, budgeting, principles of insurance and taxes, business organizations, and consumerism. Information relating to the free enterprise system and its impact on the flow of goods and services in our economy is emphasized. (This course is cross-referenced with Business and Office Education.)

CONSUMER EDUCATION 5742

Suggested Grade Level: 10-12 Credit: ½-1

Teacher Certification for Consumer Education 5742:

Any certification with either:

R28 area:	social studies limited to economics
A60 area:	business education
A75 area:	distributive education

A92 area: home economics vocational
A93 area: home economics non-vocational
B28 area: economics
B60 major: business education (commerce)
B61 major: accounting
B63 major: basic business
B64 major: general business
B65 major: accounting-secretarial practice
B66 major: accounting-general business
B67 major: general business-secretarial practice
B75 major: distributive education
B93 major: home economics non-vocational
C28 major: economics
C60 minor: business education (commerce)
C61 minor: accounting
C64 minor: general business
C65 minor: accounting-secretarial practice
C66 minor: accounting-general business
C67 minor: general business-secretarial practice
S75: approval for teaching distributive education

Description: This course provides an opportunity for pupils to develop skills related to: personal goal setting and decision making; management of time, money, and personal energy; conservation of energy and other resources; financial planning and management; consumer protection and responsibility; consumer buying and credit; taxes; insurance; and investments. (This course is cross-referenced with Business and Office Education and Home Economics.)

BUSINESS ECONOMICS 5743

Suggested Grade Level: 10-12 Credit: ½-1

Teacher Certification for Business Economics 5743:

Any certification with either:
A60 area: business education
A75 area: distributive education
B28 major: economics
B60 major: business education (commerce)
B61 major: accounting
B63 major: basic business
B64 major: general business
B66 major: accounting-general business
B67 major: general business-secretarial practice
B75 major: distributive education
S75: approval for teaching distributive education

Description: The pupil develops an understanding of the concepts and principles of economics and economic laws that govern our free enterprise system and their impact upon society. Major units of study include comparison of various economic systems, production and distribution of wealth, economic goals, supply and demand, organized labor, competition, profit, and taxation. (This course is cross-referenced with Business and Office Education.)

RETAILING I 5751

Suggested Grade Level: 10-12 Credit: ½

Teacher Certification for Retailing I 5751:

Any certification with either:
A75 area: distributive education
B75 major: distributive education
S75: approval for teaching distributive education

Description: This course is designed for pupils to develop skills in ordering, receiving, stocking, and inventory of merchandise. It provides an overview and psychology of visual merchandising. This is the first of three courses sequenced to develop pupil knowledge, attitudes, and skills from simple to complex job title preparation. Employability skills are an integral part of the instruction.

RETAILING II (Sales) 5752

Suggested Grade Level: 10-12 Credit: ½-1½

Teacher Certification for Retailing II (Sales) 5752:

Any certification with either:
A75 area: distributive education
B75 major: distributive education
S75: approval for teaching distributive education

Description: This course is designed to provide instruction in the area of sales and marketing. Pupils study in depth the types of selling, psychology of selling, and the skills and techniques of sales promotion. This is the second course in a sequence of three for those pupils pursuing the retailing occupational preparation program.

Pupils who have completed Retailing I and have a written statement professing a career objective in Retailing are eligible to participate in cooperative occupational experiences at the teacher's discretion. To receive one and one-half credits, the pupil must be enrolled in Retailing II and work in an approved training station a minimum of 270 hours, which is an average of three school hours per school day.

RETAILING III 5753

Suggested Grade Level: 11-12 Credit: 2-3

Teacher Certification for Retailing III 5753:

Any certification with either:
A75 area: distributive education
B75 major: distributive education
S75: approval for teaching distributive education

Description: This course allows pupils to pursue in greater depth the knowledge and skills of marketing, sales promotion, buying, and store operation. It is designed to provide training for entry-level management positions. This is the third in a sequence of three courses for those pupils enrolled in the retailing occupational preparation program. Pupils who have completed Retailing I and II are eligible to participate in either a cooperative occupational experience or a simulated experience at the discretion of the teacher. To receive any credit (maximum three), the pupil must work in an approved training station at least three hours per school day or must work in simulated situations under the teacher's direction two hours per school day.

FASHION MERCHANDISING I 5755

Suggested Grade Level: 11-12 Credit: 1-3

Teacher Certification for Fashion Merchandising I 5755:

Any certification with either:
A75 area: distributive education
B75 major: distributive education
S75: approval for teaching distributive education

Description: This is the first course in a technical program that enables pupils to investigate and prepare for careers in the fashion industry. The instructional areas include fashion trends, sales, merchandising techniques, stocking, inventory control, textiles, and employability skills.

Pupils, at the teacher's discretion, are eligible to participate in cooperative occupational experiences in the second semester. To receive two credits, the pupil must work in an approved training station a minimum of 270 hours, which is an average of three school hours per school day.

FASHION MERCHANDISING II 5756

Suggested Grade Level: 11-12 Credit: 3

Teacher Certification for Fashion Merchandising II 5756:

Any certification with either:
A75 area: distributive education
B75 major: distributive education
S75: approval for teaching distributive education

Description: This course provides in-depth study of the skills and knowledge needed for entry and management positions in the fashion industry. The instruction includes marketing, sales, promotions, buying, and store operation. Clothing Construction taught by Home Economics is a supportive course. This is the second course in a sequence of two.

Pupils who have completed Fashion Merchandising I are eligible to participate in either a cooperative occupational experience or a simulated

experience at the discretion of the teacher. To receive any credit (maximum three), the pupil must work in an approved training station at least three hours per school day, or must work in simulated situations under the teacher's direction two hours per school day.

FOOD MARKETING I 5757

Suggested Grade Level: 11-12 Credit: 1-3

Teacher Certification for Food Marketing I 5757:

Any certification with A96 area: industrial education--preparation level for food marketing 757

Any vocational education--industrial education certification with either:
NEF--food marketing 757
NEN--food marketing 757
NTM--food marketing 757

Description: This is the first of two sequenced courses in a technical program that provides an overview of the retail food marketing industry and the career opportunities available. Instruction is provided in cashiering; stocking; receiving; displaying; selling, product and service technology; and employability skills.

Pupils, at the teacher's discretion, are eligible to participate in cooperative occupational experiences in the second semester. To receive two credits, the pupil must work in an approved training station a minimum of 270 hours, which is an average of three school hours per school day.

FOOD MARKETING II 5758

Suggested Grade Level: 12 Credit: 3

Teacher Certification for Food Marketing II 5758:

Any certification with A96 area: industrial education--preparation level for food marketing 757

Any vocational education--industrial education certification with either:
NEF--food marketing 757
NEN--food marketing 757
NTM--food marketing 757

Description: This is the second of two sequenced courses. This course is designed to train for jobs at the mid-management, specialist, or supervisory level. Instruction includes marketing skills, store and department operation, buying, pricing, sales promotion, and management responsibilities.

Pupils who have completed Food Marketing I are eligible to participate in either a cooperative occupational experience or a simulated experience at the discretion of the teacher. To receive any credit (maximum three), the pupil must work in an approved training station at least three hours per school day, or must work in simulated situations under the teacher's direction two hours per school day.

WAREHOUSE AND TRANSPORTATION I 5744

Suggested Grade Level: 11-12 Credit: 1-3

Teacher Certification for Warehouse and Transportation I 5744:

Any certification with A96 area: industrial education--preparation level for warehouse and transportation 744

Any vocational education--industrial education certification with either:
NEF--warehouse and transportation 744
NEN--warehouse and transportation 744
NTM--warehouse and transportation 744

Description: This is the first of two sequenced courses in a technical program that prepares pupils in the physical movement of goods from the producer to the ultimate consumer and provides them with knowledge of enterprises engaged in freight transportation. Instruction includes shipping, receiving, storage, records, inventory, forms, equipment operation, safety, and employability skills.

Pupils, at the teacher's discretion, are eligible to particpate in cooperative occupational experiences in the second semester. To receive two credits, the pupil must work in an approved training station a minimum of 270 hours, which is an average of three school hours per school day.

WAREHOUSE AND TRANSPORTATION II 5745

Suggested Grade Level: 12 Credit: 3

Teacher Certification for Warehouse and Transportation II 5745:

Any certification with A96 area: industrial education--preparation level for warehouse and transportation 744

Any vocational education--industrial education certification with either:
NEF--warehouse and transportation 744
NEN--warehouse and transportation 744
NTM--warehouse and transportation 744

Description: This is the second of two sequenced courses. This course allows pupils to pursue in greater depth the occupations beyond entry level. Instruction includes routing, billing, work schedules, rates, ordering, tariffs, consignments, regulations, and management skills.

Pupils who have completed Warehouse and Transportation I are eligible to participate in either a cooperative occupational experience or a simulated experience at the discretion of the teacher. To receive any credit (maximum three), the pupil must work in an approved training station at least three hours per school day, or must work in simulated situations under the teacher's direction two hours per school day.

HOTEL/MOTEL I 5746

Suggested Grade Level: 11-12 Credit: 1-3

Teacher Certification for Hotel/Motel I 5746:

Any certification with A96 area: industrial education--preparation level for hotel/motel 746

Any vocational education--industrial education certification with either:
NEF--hotel/motel 746
NEN--hotel/motel 746
NTM--hotel/motel 746

Description: This is the first of two sequenced courses in a technical program. This course introduces pupils to the hotel/motel industry. Instruction includes PBX operations, front desk procedures, housekeeping, reservations, food operations, and employability skills.

Pupils, at the teacher's discretion, are eligible to participate in cooperative occupational experiences in the second semester. To receive two credits, the pupils must work in an approved training station a minimum of 270 hours, which is an average of three school hours per school day.

HOTEL/MOTEL II 5747

Suggested Grade Level: 12 Credit: 3

Teacher Certification for Hotel/Motel II 5747:

Any certification with A96 area: industrial education--preparation level for hotel/motel 746

Any vocational education--industrial education certification with either:
NEF--hotel/motel 746
NEN--hotel/motel 746
NTM--hotel/motel 746

Description: This is the second of two sequenced courses. This course is designed to give instruction in hotel/motel operations, sales, planning, promotion, buying, convention bookings, and catering services. This technical course trains pupils for entry level management positions. Food preparation and management courses taught by Home Economics are supportive courses.

Pupils who have completed Hotel/Motel I are eligible to participate in either a cooperative occupational experience or a simulated experience at at the discretion of the teacher. To receive any credit (maximum three), the pupil must work in an approved training station at least three hours per school day, or must work in simulated situations under the teacher's direction two hours per school day.

BUSINESS MANAGEMENT 5748

Suggested Grade Level: 11-12 Credit: ½-1

Teacher Certification* for Business Management 5748:

Any certification with either:

A60 area:	business education	B66 major:	accounting-general business
A75 area:	distributive education	B67 major:	general business-secretarial practice
B60 major:	business education (commerce)	B75 major:	distributive education
B61 major:	accounting		
B63 major:	basic business		
B64 major:	general business		
S75:	approval for teaching distributive education		

*Vocational approval is required for business and office teachers (2,000 hours of work experience).

Description: Business management emphasizes management skills for developing the most efficient use of time, people, machines, and money to achieve objectives through the use of planning, organizing, leading, and controlling. Areas of study include: management functions and characteristics; business ownership; corporate operations; information processing; personnel and government regulations; and marketing aspects of business operations including business opportunities, site selection, business financing, records, insurance, and taxes. (This course is cross-referenced with Business and Office Education.)

PRACTICAL ARTS CAREER EXPLORATION

COURSES	CODE	7	8	9	10	11	12	MAXIMUM HIGH SCHOOL UNITS
Agribusiness/Natural Resources Exploration	5390	X	X	X				
Business Exploration	5360	X	X	X				
Industrial Communications Exploration	5396	X	X	X				
Communications and Media Exploration	5399	X	X	X				
Construction Exploration	5397	X	X	X				
Environmental Exploration	5391	X	X	X				
Health Exploration	5320	X	X	X				
Home Economics Exploration	5392	X	X	X				
Hospitality and Recreation Exploration	5393	X	X	X				
Manufacturing Exploration	5395	X	X	X				
Marine Science Exploration	5301	X	X	X				
Marketing and Distribution Exploration	5374	X	X	X				
Orientation	5300	X	X					
Personal Service Exploration	5321	X	X	X				
Public Service Exploration	5340	X	X	X				
Transportation Exploration	5398	X	X	X				
				TOTAL PROGRAM				1

Course Descriptions and Program Requirements

Practical Arts Career Exploration is a two- or three-year program consisting of classes that are one period a day for 6-12 weeks except for industrial clusters which are 9-12 weeks in length. Pupils explore six different occupational clusters from a minimum school offering of nine clusters. These clusters are designed to broaden the experiences of all middle school pupils by providing them with an opportunity to look at many occupational areas, thereby better preparing pupils to make decisions about their personal needs and future career goals.

A Practical Arts Career Exploration program includes instruction in the exploration of the 15 occupational clusters and orientation as outlined above. Pupils survey the content of the occupational cluster, including the scope, working conditions, entry requirements, duties performed, opportunities, and related jobs of occupations in the cluster.

Pupils have the opportunity in each cluster to experience true-to-life work situations. Activities include role playing, interviewing, shadowing, job observation, field trips, work simulations, and pupil projects. Pupils receive guidance and the opportunity to systematically apply these experiences in such a way that they provide direction for future study and occupational decisions.

The ninth grade program shall be permitted only as the third year of a program in a seventh, eighth and ninth grade school. Pupils at the ninth grade shall explore three additional clusters from three additional school offerings.

Provisions are made to meet the needs of disadvantaged and handicapped pupils to prepare them for exploration in practical arts. If the nature and severity of the disadvantage or handicap is such that the pupil cannot benefit from participation in a regular program, a separate or modified program may be developed. The program provided to handicapped students shall be consistent with and specified on each student's Individualized Education Program (IEP).

AGRIBUSINESS/NATURAL RESOURCES EXPLORATION 5390

Suggested Grade Level: 7-8-9

Teacher Certification for Agribusiness/Natural Resources 5390:

Any high school certification with either:

A50 area:	science	B54 major:	biology-health
R51 area:	science limited to biology	B56 major:	earth science
R56 area:	science limited to earth science	B51 major:	biology
A90 area:	agriculture vocational	C51 minor:	biology
B50 major:	science	C56 minor:	earth science

Note: Teachers with certification for high school, middle grades (junior high), or elementary classroom teaching, and 2,000 hours of work experience, in this specific cluster, as approved by the Bureau of Vocational Education, may also direct the exploration of this cluster.

Description: Pupils explore job families in agricultural production, agricultural supplies and services, agricultural mechanics, agricultural products, horticulture, and natural resources. This course is offered for 6-12 weeks as a part of a total exploration program. (This course is cross-referenced with Agribusiness Education.)

BUSINESS EXPLORATION 5360

Suggested Grade Level: 7-8-9

Teacher Certification for Business Exploration 5360:

Any certification with either:

A60 area:	business education
A75 area:	distributive education
B60 major:	business education (commerce)
B61 major:	accounting
B62 major:	secretarial practice
B63 major:	basic business
B64 major:	general business

B65 major: accounting-secretarial practice
B66 major: accounting-general business
B67 major: general business-secretarial practice
B69 major: secretarial studies
B75 major: distributive education
C60 minor: business education (commerce)
C61 minor: accounting
C62 minor: secretarial practice
C64 minor: general business
C65 minor: accounting-secretarial practice
C66 minor: accounting-general business
C67 minor: general business-secretarial practice
S75: approval for teaching distributive education

Note: Teachers with certification for high school, middle grades (junior high), or elementary classroom teaching, and 2,000 hours of work experience, in this specific cluster, as approved by the Bureau of Vocational Education, may also direct the exploration of this cluster.

Description: Pupils explore occupations in the areas of accounting, management, clerical, data processing, secretarial, and word processing. This course is offered for 6-12 weeks as a part of a total exploration program. (This course is cross-referenced with Business and Office Education.)

INDUSTRIAL COMMUNICATIONS EXPLORATION 5396

Suggested Grade Level: 7-8-9

Teacher Certification for Industrial Communications Exploration 5396:

Any certification with either:
A94 area: industrial arts
A95 area: industrial education--orientation and exploration levels
B94 major: industrial arts
B95 major: industrial education--orientation and exploration levels
C94 minor: industrial arts

In schools with an industrial arts/industrial education facility, this cluster shall be taught by a certified industrial arts/industrial education teacher.

In those schools where a certified industrial arts/industrial education teacher teaches this cluster at the ninth grade, the seventh and eighth grade cluster shall also be taught by a certified industrial arts/industrial education teacher.

Note: Teachers with certification for high school, middle grades (junior high), or elementary classroom teaching, and 2,000 hours of work experience, in this specific cluster, as approved by the Bureau of Vocational Education, may direct the exploration of this cluster only at the seventh and eighth grade.

Description: This course is an exploratory study of drafting, graphic arts, basic electricity/electronics, and related occupations. Basic drafting, printing concepts, and electricity/electronic communication principles are components of this course. This course is offered for 9-12 weeks as a part of a total exploration program. (This course is cross-referenced with Industrial Education.)

COMMUNICATIONS AND MEDIA EXPLORATION 5399

Suggested Grade Level: 7-8-9

Teacher Certification for Communications and Media Exploration 5399:

Any certification with either:

A30 area:	English	B80 major:	art
A80 area:	art	C30 minor:	English
B30 major:	English	C32 minor:	journalism
B32 major:	journalism	C33 minor:	speech
B33 major:	speech	C34 minor:	dramatics-speech
B34 major:	dramatics-speech	C80 minor:	art

Note: Teachers with certification for high school, middle grades (junior high), or elementary classroom teaching, and 2,000 hours of work experience, in this specific cluster, as approved by the Bureau of Vocational Education, may also direct the exploration of this cluster.

Description: This cluster covers the job families of audiovisuals, language, publishing, broadcasting, and line communications. This course is offered for 6-12 weeks as a part of a total exploration program.

CONSTRUCTION EXPLORATION 5397

Suggested Grade Level: 7-8-9

Teacher Certification for Construction Exploration 5397:

Any certification with either:

A94 area:	industrial arts
A95 area:	industrial education--orientation and exploration levels
B94 major:	industrial arts
B95 major:	industrial education--orientation and exploration levels
C94 minor:	industrial arts

In schools with an industrial arts/industrial education facility, this cluster shall be taught by a certified industrial arts/industrial education teacher.

In those schools where a certified industrial arts/industrial education teacher teaches this cluster at the ninth grade, the seventh and eighth grade cluster shall also be taught by a certified industrial arts/industrial education teacher.

Note: Teachers with certification for high school, middle grades (junior high), or elementary classroom teaching, and 2,000 hours of work experience, in this specific cluster, as approved by the Bureau of Vocational Education, may also direct the exploration of this cluster only at the seventh and eighth grade.

Description: This course is an exploratory survey of construction and related occupations, with instruction and activities in the areas of basic carpentry, electrical wiring, plumbing, masonry, and structural building techniques. Important to the course content is the study of how the construction industry functions in today's economy. This course is offered for 9-12 weeks as a part of a total exploration program. (This course is cross-referenced with Industrial Education.)

ENVIRONMENTAL EXPLORATION 5391

Suggested Grade Level: 7-8-9

Teacher Certification for Environmental Exploration 5391:

Any certification with either:

A50 area:	science	B52 major:	chemistry
R51 area:	science limited to biology	B54 major:	biology-health
R52 area:	science limited to chemistry	B56 major:	earth science
R56 area:	science limited to earth science	C23 minor:	geography-geology
A90 area:	agriculture vocational	C51 minor:	biology
B23 major:	geography-geology	C52 minor:	chemistry
B50 major:	science	C56 minor:	earth science
B51 major:	biology	C57 minor:	geology

Note: Teachers with certification for high school, middle grades (junior high), or elementary classroom teaching, and 2,000 hours of work experience, in this specific cluster, as approved by the Bureau of Vocational Education, may also direct the exploration of this cluster.

Description: Pupils in this cluster explore the job families of land, water, air, and disposal. This course is offered for 6-12 weeks as a part of a total exploration program. (This course is cross-referenced with Agribusiness Education.)

HEALTH EXPLORATION 5320

Suggested Grade Level: 7-8-9

Teacher Certification for Health Exploration 5320:

Any certification with either:

A50 area:	science	B54 major:	biology-health
A70 area:	mathematics-physical science	B85 major:	health-safety
		B87 major:	health-physical

A78 area:	health occupations education		
A86 area:	health-physical education-recreation	B89 major:	health
		B93 major:	home economics non-vocational
A92 area:	home economics vocational		
A93 area:	home economics non-vocational	C51 minor:	biology
		C52 minor:	chemistry
R51 area:	science limited to biology	C89 minor:	health
R52 area:	science limited to chemistry		
B51 major:	biology		
B52 major:	chemistry		

Note: Teachers with certification for high school, middle grades (junior high), or elementary classroom teaching, and 2,000 hours of work experience, in this specific cluster, as approved by the Bureau of Vocational Education, may also direct the exploration of this cluster.

Description: This cluster includes the job families of administration, prevention, treatment and care, and health education and communication. This course is offered for 6-12 weeks as a part of a total exploration program. (This course is cross-referenced with Health and Personal Services Occupations and Home Economics Education.)

HOME ECONOMICS EXPLORATION 5392

Suggested Grade Level: 7-8-9

Teacher Certification for Home Economics Exploration 5392:

Any certification with either:

A92 area:	home economics vocational
A93 area:	home economics non-vocational
B93 major:	home economics non-vocational

Note: Teachers with certification for high school, middle grades (junior high), or elementary classroom teaching, and 2,000 hours of work experience, in this specific cluster, as approved by the Bureau of Vocational Education, may also direct the exploration of this cluster.

Description: This cluster covers the job families in consumer and homemaking, child care, clothing and textiles, food and nutrition, home and community services, and housing and home furnishings. This course is offered for 6-12 weeks as a part of a total exploration program. (This course is cross-referenced with Home Economics Education.)

HOSPITALITY AND RECREATION EXPLORATION 5393

Suggested Grade Level: 7-8-9

Teacher Certification for Hospitality and Recreation Exploration 5393:

Any certification with either:

A86 area:	health-physical education-recreation	B88 major:	physical education
		B93 major:	home economics

A92 area: home economics vocational non-vocational
A93 area: home economics non-vocational C88 minor: physical education
B87 major: health-physical education

Note: Teachers with certification for high school, middle grades (junior high), or elementary classroom teaching, and 2,000 hours of work experience, in this specific cluster, as approved by the Bureau of Vocational Education, may also direct the exploration of this cluster.

Description: This cluster covers jobs in the areas related to lodging, entertainment, travel, and recreation. This course is offered for 6-12 weeks as a part of a total exploration program. (This course is cross-referenced with Home Economics Education.)

MANUFACTURING EXPLORATION 5395

Suggested Grade Level: 7-8-9

Teacher Certification for Manufacturing Exploration 5395:

Any certification with either:
A94 area: industrial arts
A95 area: industrial education--orientation and exploration levels
B94 major: industrial arts
B95 major: industrial education--orientation and exploration levels
C94 minor: industrial arts

In schools with an industrial arts/industrial education facility, this cluster shall be taught by a certified industrial arts/industrial education teacher.

In those schools where a certified industrial arts/industrial education teacher teaches this cluster at the ninth grade, the seventh and eighth grade cluster shall also be taught by a certified industrial arts/industrial education teacher.

Note: Teachers with certification for high school, middle grades (junior high), or elementary classroom teaching, and 2,000 hours of work experience, in this specific cluster, as approved by the Bureau of Vocational Education, may also direct the exploration of this cluster only at the seventh and eighth grade.

Description: This course in manufacturing is an exploratory study of occupations, materials, processes, and tools relating to production industries. This course includes: how materials can be processed to form products and the study of basic concepts, such as mass production, designing, and management in industry. The course is organized around the content areas of woods, metals, plastics, and industrial crafts and offers activities and instruction in these areas. This course is offered for 9-12 weeks as a part of a total exploration program. (This course is cross-referenced with Industrial Education.)

MARINE SCIENCE EXPLORATION 5301

Suggested Grade Level: 7-8-9

Teacher Certification for Marine Science Exploration 5301:

Any certification with either:

A50 area:	science	B52 major:	chemistry
R51 area:	science limited to biology	B54 major:	biology-health
		B56 major:	earth science
R52 area:	science limited to chemistry	C51 minor:	biology
		C52 minor:	chemistry
R56 area:	science limited to earth science	C56 minor:	earth science
		C57 minor:	geology
A70 area:	mathematics-physical science		
B50 major:	science		
B51 major:	biology		

Note: Teachers with certification for high school, middle grades (junior high), or elementary classroom teaching, and 2,000 hours of work experience, in this specific cluster, as approved by the Bureau of Vocational Education, may also direct the exploration of this cluster.

Description: Pupils in this cluster study the job families of oceanography and limnology.

MARKETING AND DISTRIBUTION EXPLORATION 5374

Suggested Grade Level: 7-8-9

Teacher Certification for Marketing and Distribution Exploration 5374:

Any certification with either:

A60 area:	business education
A70 area:	mathematics-physical science
A75 area:	distributive education
B25 major:	economics-sociology
B28 major:	economics
B60 major:	business education (commerce)
B62 major:	secretarial practice
B63 major:	basic business
B64 major:	general business
B65 major:	accounting-secretarial practice
B66 major:	accounting-general business
B67 major:	general business-secretarial practice
B69 major:	secretarial studies
B71 major:	mathematics
B75 major:	distributive education
C28 minor:	economics
C60 minor:	business education (commerce)
C62 minor:	secretarial practice
C64 minor:	general business

C65 minor: accounting-secretarial practice
C66 minor: accounting-general business
C67 minor: general business-secretarial practice
C71 minor: mathematics
S75: approval for teaching distributive education

Note: Teachers with certification for high school, middle grades (junior high), or elementary classroom teaching, and 2,000 hours of work experience, in this specific cluster, as approved by the Bureau of Vocational Education, may also direct the exploration of this cluster.

Description: Pupils study the job families of marketing management and research, buying and distribution, and sales and promotion. This course is offered for 6-12 weeks as a part of a total exploration program. (This course is cross-referenced with Marketing and Distribution Education.)

ORIENTATION 5300

Suggested Grade Level: 7-8

Teacher Certification for Orientation 5300:

Any certification for elementary classroom teaching

Certification for middle grades (junior high)

Any certification for secondary classroom teaching

Description: Pupils study an introduction to the world of work, trends and outlooks, and preparing, entering, and succeeding in the world of work.

PERSONAL SERVICE EXPLORATION 5321

Suggested Grade Level: 7-8-9

Teacher Certification for Personal Services Exploration 5321:

Any certification with either:

A50 area: science
A78 area: health occupations
A86 area: health-physical education-recreation
A92 area: home economics vocational
A93 area: home economics non-vocational
R51 area: science limited to biology
B25 major: economics-sociology
B28 major: economics
B51 major: biology
B54 major: biology-health
B85 major: health-safety
B87 major: health-physical education
B89 major: health
B93 major: home economics non-vocational
C28 minor: economics
C51 minor: biology
C89 minor: health

Note: Teachers with certification for high school, middle grades (junior high), or elementary classroom teaching, and 2,000 hours of work experience, in this specific cluster, as approved by the Bureau of Vocational Education, may also direct the exploration of this cluster.

Description: This cluster covers the job families of individual services, home and property, personal-financial, and pet services. This course is offered for 6-12 weeks as a part of a total exploration program. (This course is cross-referenced with Health and Personal Services Education and Home Economics Education.)

PUBLIC SERVICE EXPLORATION 5340

Suggested Grade Level: 7-8-9

Teacher Certification for Public Service Exploration 5340:

Any certification for elementary classroom teaching

Certification for middle grades (junior high)

Any certification for secondary classroom teaching

Description: Pupils cover the job families of public safety, corrections and judicial services, government agencies (local, state, national), social and economic services, and education services. This course is offered for 6-12 weeks as a part of a total exploration program. (This course is cross-referenced with Public Service Education.)

TRANSPORTATION EXPLORATION 5398

Suggested Grade Level: 7-8-9

Teacher Certification for Transportation Exploration 5398:

Any certification with either:

A94 area:	industrial arts
A95 area:	industrial education--orientation and exploration levels
B94 major:	industrial arts
B95 major:	industrial education--orientation and exploration levels
C94 minor:	industrial arts

In schools with an industrial arts/industrial education facility, this cluster shall be taught by a certified industrial arts/industrial education teacher.

In those schools where a certified industrial arts/industrial education teacher teaches this cluster at the ninth grade, the seventh and eighth grade cluster shall also be taught by a certified industrial arts/industrial education teacher.

Note: Teachers with certification for high school, middle grades (junior high), or elementary classroom teaching, and 2,000 hours of work experience, in this specific cluster, as approved by the Bureau of Vocational Education, may also direct the exploration of this cluster only at the seventh and eighth grade.

Description: This course is an exploratory study of power mechanics, electricial theory and power, and fluid power. Occupational information and guidance are a part of the course offering. This course is offered for 9-12 weeks as a part of a total exploration program. (This course is cross-referenced with Industrial Education.)

PUBLIC SERVICE OCCUPATIONS

COURSES	CODE	7	8	9	10	11	12	MAXIMUM HIGH SCHOOL UNITS
Public Service Exploration	5340	X	X					
Criminal Justice	5401					X	X	1

Course Descriptions and Program Requirements

There are no public safety and corrections preparation programs at the 9th and 10th grade levels because of entry-level age restrictions. Exploration and/or preparation in other program areas (e.g., Business and Office Education) will cover many public service occupations and government agency entry-level jobs.

Most public service occupations jobs in the social and economic service area and educational service area require post-secondary training at the associate or baccalaureate degree level.

PUBLIC SERVICE EXPLORATION 5340

Suggested Grade Level: 7-8

Teacher Certification for Public Service Exploration 5340:

Any certification for elementary classroom teaching

Certification for middle grades (junior high)

Any certification for secondary classroom teaching

Note: Any certification for high school, middle grades (junior high), or elementary classroom teaching, and 2,000 hours of paid or unpaid work experience, as approved by the Bureau of Vocational Education, may also direct the exploration of this cluster.

Description: Pupils cover the job families of public safety, corrections and judicial services, government agencies (local, state, national), social and economic services, and education services. This course is offered for 6-12 weeks as a part of a total exploration program. (This course is cross-referenced with Practical Arts Career Exploration.)

CRIMINAL JUSTICE 5401

Suggested Grade Level: 11-12 Credit: 1

Teacher Certification for Criminal Justice 5401:

Any certification with either:
- A20 area: social studies
- R24 area: social studies limited to history
- R26 area: social studies limited to sociology
- B26 major: sociology
- B29 major: history-political science

Description: This course is designed to provide the pupil with an in-depth study of and orientation to careers in the criminal justice field. The pupil studies the three occupational areas of the criminal justice system: law enforcement, corrections, and judicial services. In addition to classroom work, the pupil participates in selected field experiences in each of the occupational areas. Subject matter is reinforced with simulated experiences in the classroom.

SPECIAL VOCATIONAL PROGRAMS

COURSES	CODE	7	8	9	10	11	12	MAXIMUM HIGH SCHOOL UNITS
Vocational Improvement Program: Supportive Services (Disadvantaged)	5501	X	X	X	X	X	X	0
Developmental Occupational Program: Level I (Disadvantaged)	5502			X	X			1
Developmental Occupational Program: Level II* (Disadvantaged)	5503				X	X	X	1
Vocational Improvement Program: Supportive Services (Handicapped)	5504	X	X	X	X	X	X	0
Developmental Occupational Program: Level I and II* (Handicapped)	5505			X	X			2
Specialization in an Occupational Area* (Handicapped)	5506					X	X	2

*Cooperative Work Experience may be included for an additional 2 credits.

Course Descriptions and Program Requirements

Programs for Disadvantaged Pupils

Special vocational programs and services are designed to meet the needs of disadvantaged secondary pupils. Disadvantaged persons are those individuals who have academic or economic needs and require special services in order for them to succeed in vocational education programs. The identification of this population is made through a cooperative effort of guidance counselors and vocational teachers. Records of identification shall be on file for pupils enrolled in special vocational programs.

Special programs for disadvantaged pupils are based on a continuum of career education experiences which enable students to achieve success in a vocational education program. The continuum may include a one or two-year Developmental Occupational Program at the 9th or 10th grade level and/or a Vocational Improvement Program for pupils mainstreamed into regular vocational programs.

A Developmental Occupational Program is a two-year program designed for 9th and 10th grade pupils who need special help in meeting the requirements for entrance into a vocational program and have not had an opportunity to participate in a career exploration program.

The purpose of the Vocational Improvement Program: Supportive Services is to provide supportive services for pupils enrolled in vocational programs. The instructor works cooperatively with other professionals including vocational teacher(s), guidance counselors, academic teachers, and paraprofessionals. Primary responsibility is to provide in-class assistance to disadvantaged pupils who require supportive services to continue and complete a program.

In addition to providing services to the pupils, support services will be provided to vocational teachers. These services will include assistance in developing instructional strategies and curriculum for disadvantaged pupils.

Each instructor in a Vocational Improvement Program for Supportive Services must have a minimum of 40 disadvantaged pupils on a daily basis.

Disadvantaged pupils in special vocational education programs shall be permitted to participate in student organizations within respective vocational program areas if they meet the membership qualifications as set forth by each organization.

Programs for Handicapped Pupils

Special vocational education programs, services, and activities are provided to handicapped persons for whom there is a reasonable expectation of success and who, by reason of their handicapping condition, cannot succeed in a regular vocational education program. The identification of this population will be made through the identification, location, evaluation, and placement procedures for identifying special education pupils. Records of identification shall be on file at the school for pupils in special vocational programs.

Special programs for handicapped pupils are based on a continuum of career education experiences to enable the pupil to learn about and prepare for the world of work.

A supportive program involving Vocational Improvement instructors is designed to support handicapped learners enrolled in a regular vocational education program. Program of instruction for the Vocational Improvement Program instructor is determined through the development of the Individualized Education Program (IEP) according to state regulations and requirements of P.L. 94-142.

If a pupil's Individualized Education Program (IEP) identifies need for a special type program, Vocational Education may provide a Developmental Occupational Program Levels I and II for 9th and 10th grade pupils. These programs are designed to prepare pupils for enrollment in a regular vocational program at the 11th and 12th grades. The curriculum includes specific remedial and developmental experiences in human relations, life skills, and basic employability skills. Work experience may be an integral component of Level II program.

If it is determined that pupils at the 11th and 12th grades need additional special type programs, Specialization in an Occupational Area may be included in the continuum. This program provides instruction in one or more occupational areas. Instruction would be individualized and based on a task analysis for the occupation.

Handicapped pupils in special vocational education programs shall be permitted to participate in student organizations within respective vocational program areas if they meet the membership qualifications as set forth by each organization.

Criteria for Approval of Teachers for
Special Vocational Programs

In order to qualify for approval as a teacher of a Special Vocational Program, the following requirements must be met:

A. A valid Kentucky teaching certificate and a baccalaureate degree with the appropriate specialization as stated under each course listing

B. For the Vocational Improvement Program, a minimum of one year of teaching experience

C. For the Developmental Occupational Program, 2,000 hours of paid work experience

D. For the Specialization in an Occupational Area, no prior teaching or work experience required beyond the possession of the appropriate teaching certificate.

Request for approval shall be submitted to the Bureau of Vocational Education.

VOCATIONAL IMPROVEMENT PROGRAM SUPPORTIVE SERVICES
(DISADVANTAGED) 5501

Suggested Grade Level: 7-12

Teacher Certification for Instructor for Vocational Improvement Program: Supportive Services 5501:

Teacher certification as described in either a, b, c, or d below:

a. Any certification for elementary classroom teaching

b. Certification for middle grades (junior high) with either:
J30 junior high major: English
J71 junior high major: mathematics
J39: endorsement for reading specialist grades 5-9

c. Any certification with either:
   A30 area: English
   A60 area: business education
   A70 area: mathematics-physical science
   A75 area: distributive education
   A78 area: health occupations
   A90 area: agriculture vocational
   A92 area: home economics vocational
   A94 area: industrial arts
   A95 area: industrial education--orientation and exploration levels
   A96 area: industrial education--preparation level
   B30 major: English
   B33 major: speech
   B71 major: mathematics
   C30 minor: English
   C71 minor: mathematics
   S39: endorsement for reading specialist grades 7-12

d. Any certification for teachers of exceptional children (special education)

Description: This broad-based support program is designed to provide comprehensive services to disadvantaged pupils enrolled in regular vocational education programs. Services provided by a Vocational Improvement Program instructor include modification of instructional strategies, curriculum and scheduling, assessment and development of a prescriptive vocational education plan for pupils identified as disadvantaged and having profile sheets on file in the school. On a daily basis, the Vocational Improvement Program instructor works with a minimum of 40 pupils and each pupil has on file a Vocational Improvement Plan.

In addition to in-class assistance, pupils may be referred to a resource room; therefore, classroom space of approximately 620 square feet is provided for the Vocational Improvement Program instructor. The space is located within the vocational wing.

Instruction is provided in remediation of basic skills necessary to function in the vocational programs and the world of work including employability skills and job placement. Supervision for disadvantaged pupils in Cooperative Work Experience program may be incorporated into programs when deemed necessary for job success.

DEVELOPMENTAL OCCUPATIONAL PROGRAM (DISADVANTAGED)
LEVEL I 5502

Suggested Grade Level: 9-10 Credit: 1

Teacher Certification for Developmental Occupational Program: (Disadvantaged) Level I 5502:

Grade 9: Certification for middle grades (junior high) with either:
J30 junior high major: English
J71 junior high major: mathematics
J39: endorsement for reading specialist grades 5-9

Grades 9-12: Any certification with either:

A30 area:	English	B67 major:	general business-secretarial practice
A60 area:	business education	B71 major:	mathematics
A70 area:	mathematics-physical science	B85 major:	health & safety
A75 area:	distributive education	B89 major:	health
A78 area:	health occupations	B94 major:	industrial arts
A90 area:	agriculture vocational	B95 major:	industrial education--orientation and exploration levels
A92 area:	home economics vocational	C30 minor:	English
A94 area:	industrial arts	C60 minor:	business education (commerce)
A95 area:	industrial education--orientation and exploration levels	C64 minor:	general business
A96 area:	industrial education--preparation level	C71 minor:	mathematics
B30 major:	English	C94 minor:	industrial arts
B33 major:	speech		
B60 major:	business education (commerce)		
B64 major:	general business		
B66 major:	accounting-general business		

S39: endorsement for reading specialist grades 7-12
S58 or SGS: Certification for guidance counselor grades 7-12
T58 or SG: Certification for guidance counselor grades 1-12
T76: endorsement for trade and industrial education for teaching horticulture

Description: This instructional program is designed for pupils who need special help in meeting requirements for entrance into regular vocational programs. The curriculum includes basic skills instruction, understanding of career opportunities in the world of work, human relations, life skills, and employability skills. Pupils receive personal counseling and guidance to assist them in making a meaningful occupational choice for continuing in the second level of Developmental Occupational Program or selecting a preparatory program.

The course includes action-oriented activities, field trips, laboratory and simulated experience which enhance the development of self-awareness and attitudes toward the world of work and strengthen academic preparation.

DEVELOPMENTAL OCCUPATIONAL PROGRAM (DISADVANTAGED) LEVEL II 5503

Suggested Grade Level: 10-12 Credit: 1*

Teacher Certification for Developmental Occupational Program: (Disadvantaged) Level II 5503:

Any certification with either:

A30 area:	English	B67 major:	general business-secretarial practice
A60 area:	business education	B71 major:	mathematics
A70 area:	mathematics-physical science	B85 major:	health & safety
A75 area:	distributive education	B89 major:	health
A78 area:	health occupations	B94 major:	industrial arts
A90 area:	agriculture vocational	B95 major:	industrial education--orientation and exploration levels
A92 area:	home economics vocational	C30 minor:	English
A94 area:	industrial arts	C60 minor:	business education (commerce)
A95 area:	industrial education--orientation and exploration levels	C64 minor:	general business
A96 area:	industrial education--preparation level	C71 minor:	mathematics
B30 major:	English	C94 minor:	industrial arts
B33 major:	speech		
B60 major:	business education (commerce)		
B64 major:	general business		
B66 major:	accounting-general business		

S39: endorsement for reading specialist grades 7-12
S58 or SGS: Certification for guidance counselor grades 7-12
T58 or SG: Certification for guidance counselor grades 1-12
T76: endorsement for trade and industrial education for teaching horticulture

Description: The instructional program is a continuation of the developmental program and the curriculum provides opportunities for pupils to develop knowledge and skills pertinent to the occupational clusters.

This course offers specific remedial and developmental experiences within the occupational clusters of agribusiness, natural resources, and environment, business and office, construction, health, hospitality and recreation, manufacturing, marketing and distribution, public services, transportation, consumer and homemaking, and related occupations. Realistic understanding of the occupations and competencies needed within the various clusters are gained through a variety of experiences including job simulations, individualized instruction, and field trips. Cooperative work experience may be an integral component of this program.

*Cooperative Work Experience may add an additional two (2) credits.

VOCATIONAL IMPROVEMENT PROGRAM SUPPORTIVE SERVICES
(HANDICAPPED) 5504

Suggested Grade Level: 7-12

Teacher Certification for Vocational Improvement Program: Supportive Services (Handicapped) 5504:

Teacher certification as described in either a, b, c, or d below:

a. Any certification for elementary classroom teaching

b. Certification for middle grades (junior high) with either:
   J30 junior high major: English
   J71 junior high major: mathematics
   J39: endorsement for reading specialist grades 5-9

c. Any certification with either:
   A30 area: English
   A60 area: business education
   A70 area: mathematics-physical science
   A75 area: distributive education
   A78 area: health occupations
   A90 area: agriculture vocational
   A92 area: home economics vocational
   A94 area: industrial arts
   A95 area: industrial education--orientation and exploration levels
   A96 area: industrial education--preparation level
   B30 major: English
   B33 major: speech
   B71 major: mathematics
   C30 minor: English
   C71 minor: mathematics
   S39: endorsement for reading specialist grades 7-12

d. Any certification for teachers of exceptional children (special education)

Description: This broad-based support program is designed to provide comprehensive services to handicapped pupils enrolled in regular vocational programs. The resource teacher is assigned 25-30 pupils on a full-time basis. These are pupils who have been identified through identification, location, evaluation, and placement procedures as required by state regulations. Related instruction necessary for support in the Vocational Education Program is to be identified on each pupil's Individualized Education Program (IEP). Services may include the development of instructional strategies focusing on affective, cognitive and psychomotor factors which lead to skill development; curriculum modification; and assessment and informal counseling.

Related instruction is provided in remediation of basic skills necessary to function in the vocational programs and the world of work, including employability skills and job placement. Supervision in Cooperative Work Experience programs in the vocational program may be incorporated when deemed necessary for job success.

A supportive services instructor works cooperatively with other professionals including vocational teacher(s), guidance counselors, academic teachers and para-professionals. Primary responsiblity is to provide in-class assistance to handicapped pupils who require supportive services to enable them to meet the requirements for entrance into a vocational program or to continue and complete a program. In addition to in-class assistance, pupils may be referred to a resource room; therefore, classroom space of approximately 620 square feet should be provided for the Vocational Improvement teacher. The space should be located within the vocational wing.

DEVELOPMENTAL OCCUPATIONAL PROGRAM (HANDICAPPED) LEVEL I AND II 5505

Suggested Grade Level: 9-10 Credit: 2*

Teacher Certification for Developmental Occupational Program (Handicapped) 5505:

Grade 9: Certification for middle grades (junior high) with either:
- J30 junior high major: English
- J71 junior high major: mathematics
- J39: endorsement for reading specialist grades 5-9

Grades 9-12: Any certification with either:
- A30 area: English
- A60 area: business education
- A70 area: mathematics-physical science
- A75 area: distributive education
- A78 area: health occupations
- A90 area: agriculture vocational
- A92 area: home economics vocational
- A94 area: industrial arts
- A95 area: industrial education--orientation and exploration levels
- A96 area: industrial education--preparation level
- B30 major: English
- B33 major: speech
- B60 major: business education (commerce)
- B64 major: general business
- B66 major: accounting-general business
- B67 major: general business-secretarial practice
- B71 major: mathematics
- B85 major: health & safety
- B89 major: health
- B94 major: industrial arts
- B95 major: industrial education--orientation and exploration levels
- C30 minor: English
- C60 minor: business education (commerce)
- C64 minor: general business
- C71 minor: mathematics
- C94 minor: industrial arts
- S39: endorsement for reading specialist grades 7-12

S58 or SGS: Certification for guidance counselor grades 7-12
T58 or SG: Certification for guidance counselor grades 1-12
S75: approval for teaching distributive education
T76: endorsement for trade and industrial education for teaching horticulture

Any certification for teachers of exceptional children (special education)

*Cooperative Work Experience may add an additional two (2) credits.

Description: Level I: This instructional program provides remediation and experiences designed to prepare 9th, 10th, and 11th grade pupils for enrollment in regular vocational programs. The curriculum includes basic skills instruction, employability skills, human relations and life skills. Pupils receive personal guidance and counseling which will help them select preparatory instructional programs leading to entry-level employment. These experiences include action-oriented activities, field trips and laboratory or simulated experiences which enhance the development of self-awareness, proper attitudes, and academics.

Description: Level II: This instructional program is a continuation of Level I and provides opportunities to develop knowledge and skills pertaining to three of ten occupational clusters (i.e., agribusiness, natural resources and environment; business and office; marketing and distributive education; health; hospitality and recreation, public service; transportation; construction; consumer and homemaking; and manufacturing). Realistic understanding of the occupations and competencies needed within the various clusters are gained through a variety of experiences including job simulations, field trips, individualized instruction and group guidance activities. The course provides opportunities for students to become familiar with preparatory programs and to make meaningful occupational choices. Cooperative Work Experience may be included in Level II programming when deemed necessary for job success.

SPECIALIZATION IN AN OCCUPATIONAL AREA (HANDICAPPED)
5506

Suggested Grade Level: 11-12 Credit: 2*

Teacher Certification for Specialization in an Occupational Area 5506:

Any certification with either:

A60 area:	business education	B75 major:	distributive education
A75 area:	distributive education	B85 major:	health & safety
A78 area:	health occupations	B89 major:	health
A90 area:	agriculture vocational	B94 major:	industrial arts
A92 area:	home economics vocational	B95 major:	industrial education--orientation and exploration levels
A94 area:	industrial arts	C60 minor:	business education (commerce)
A95 area:	industrial education--orientation and exploration levels	C62 minor:	secretarial practice
A96 area:	industrial education--preparation level	C64 minor:	general business
B60 major:	business education (commerce)	C65 minor:	accounting-secretarial practice
B61 major:	accounting	C66 minor:	accounting-general business
B62 major:	secretarial practice		
B63 major:	basic business		
B64 major:	general business		
B65 major:	accounting-secretarial practice		

B66 major:	accounting-general business	C67 minor:	general business-secretarial practice
B67 major:	general business-secretarial practice	C89 minor:	health
B69 major:	secretarial studies	C94 minor:	industrial arts

Description: This course is planned to provide pupils with some basic experiences in one or more occupational areas. The area may include Agribusiness, Business and Office, Marketing and Distributive Education, Home Economics, Health/Personal Services Occupations, Public Service or Industrial Education. The program includes competencies which provide skills for entry-level employment in one or more occupational areas.

Instruction focuses on realistic understanding of the occupational areas, including job simulations, "hands-on" experiences, individualized instruction, field trips, and cooperative work experience.

Specialization in an Occupational Area may be a two-year program and classes are scheduled for a minimum of one hour per day. However, when necessary, classes may be extended to permit achievement of identified competencies. Pupils participating in Cooperative Work Experience may receive additional credits for work experience.

*Cooperative Work Experience may add an additional two (2) credits.

APPENDIX

PROCEDURE: EXPERIMENTAL PROGRAMS

Experimentation designed to meet community needs and to provide more meaningful educational experiences for pupils is encouraged. An experimental program is regarded as a systematic and controlled teaching activity designed to develop new and improved organizational procedures. Experimental programs refer to deviations from regular practice which schools may wish to carry out in quest of improvements in education. Since the programs are of an experimental nature, it is expected that there will be an evaluation conducted.

704 KAR 10:050 courses not in program of studies; procedure for offering.

Section 1. Any school desiring to offer a program not listed in the "Program of Studies for Kentucky Schools, K-12" shall secure the approval of the State Board of Education upon recommendation of the Superintendent of Public Instruction before such a program is offered. Annual approval of the offering of the program shall be secured not later than July 1. Failure to secure State Board approval before the program is initiated shall result in the program not being recognized for graduation credit. No program shall be considered for approval that is inconsistent with Kentucky Administrative Regulations, Kentucky Revised Statutes, or the Constitution of the Commonwealth of Kentucky.

Section 2. The procedure for seeking approval of an experimental program shall be as follows: The Superintendent of a county or independent school district or the administrative head of a nonpublic school seeking permission to offer an unlisted program shall notify the head of the Bureau of Instruction in writing no later than May 31 of such intent and shall subsequently submit information concerning the program as follows:

1. The name or title of the program
2. A statement indicating need of the program
3. A statement of the objectives of the program
4. A brief statement of the scope and content of the program
5. A statement describing adequacy of staff, facilities, equipment, and materials for implementing the program
6. A description of deviation from the "Program of Studies for Kentucky Schools";
7. The amount of credit to be allowed for the program or the extent of grade levels involved in the proposed offering;
8. Proposed method of evaluation;
9. Anticipated length of experiment in terms of school years.
10. A written evaluation shall be submitted to the head of the Bureau of Instruction at the close of the school year.

Section 3. The Superintendent of Public Instruction shall submit the request to the State Board of Education, accompanied by his recommendation. Following action of the State Board of Education, local school districts or nonpublic schools will be notified of the Board's decision.

APPLICATION FOR AN EXPERIMENTAL PROGRAM

This application shall be sent by the Superintendent of a county or independent school district or the administrative head of a nonpublic school to the head of the Bureau of Instruction, Kentucky Department of Education, Frankfort, Kentucky 40601, by May 31. Experimental programs shall be approved annually.

Additional information may be attached to this application.

1. Title of program_____

   _____

2. Evidence of need._____

   _____

3. Specific objectives._____

   _____

   _____

4. Scope and content of program_____

   _____

5. Pupils involved (number, grade, skill, and/or ability level.)_____

   _____

6. Describe adequacy of staff, facilities, equipment, and materials to implement program_____

   _____

7. Describe how this program deviates from the "Program of Studies for Ky. Schools, K-12."_____

   _____

8. Amount of units to be allowed._____

9. Method of evaluation (a written evaluation shall be submitted at the close of the school year)._____

   _____

10. Anticipated length of experiment: Semester_____Year_____

    _____
    Superintendent/Head of Nonpublic School School District

    _____
    Address Date

PROCEDURE: ENRICHMENT COURSES

Enrichment courses may be designed to meet pupil's specific interest needs and to provide more meaningful educational experience for high school pupils. An enrichment course is defined as a course which is designed to meet one or more of the educational goals presented in the course of study.

In designing an enrichment course, school systems start with the educational goals (as defined in the course of study) to be achieved, then define the specific objectives of the goal(s). Next, the activities are described which will allow the pupil to achieve these objectives, and an evaluation system is designed which will measure whether or not a pupil has achieved the specified objectives. It is expected that at least 80 percent of the pupils enrolled in enrichment courses will achieve the educational objectives.

A pupil may use no more than one enrichment unit to satisfy the minimum 18 units required by the State Board of Education for graduation.

The procedure for seeking approval of an enrichment course is as follows:

The local superintendent of schools shall apply to the Superintendent of Public Instruction no later than May 31 preceding the academic year which the course is to be offered for permission to grant credit for such a course. The application shall contain the following information:

(1) name or title of the course;

(2) the educational goal from the course of study which the course is designed to achieve

(3) the objective of the course;

(4) the description of the instructional activities (including textbooks and other learning materials) designed to achieve the objectives;

(5) a description of the method or techniques to be used to evaluate participants;

(6) a description of the certification and qualification of the teacher;

(7) the length of the course and the amount of credit; and

(8) a commitment to furnish an end-of-the-year report containing the number of pupils achieving the educational objectives and a statement as to the overall success of the course.

The Superintendent of Public Instruction submits the request to the State Board of Education accompanied by his recommendation. Following the action of the State Board, local school districts are notified of the Board's decisions.

MANDATED INSTRUCTIONAL PROGRAMS

I. Career, consumer, drug and environmental education shall be integral parts of instruction at all levels and in all appropriate areas of study. A written plan setting forth methods by which the programs will be integrated into the program of studies and activities shall be developed.

A. Alcohol and Drug Education
KRS 158.405 - 158.430
Accreditation Standards

B. Career Education
KRS 158.505 - 158.990
Accreditation Standards

C. Consumer Education
KRS 158.450 - 158.470
Accreditation Standards

D. Environmental Education
KRS 158.280
Accreditation Standards

II. Children in the public schools have the right to acquire the basic knowledge and learning skills essential for completing high school, pursuing a course of study in post-secondary education or entering the work force in society. In addition each child shall have access to those programs and services appropriate to his/her needs in the areas of basic academic and learning skills development.

Educational Improvement Act
KRS 158.650 - 158.740
Accreditation Standards

WORK EXPERIENCE

Work experience is a term used to designate pupil work activities that have been planned by a local board of education, under the supervision of a teacher, and meets specific educational objectives. These activities are to supplement classroom instruction in developing employability skills, acquiring specific occupational skills, and/or providing application for learnings acquired in the school. The community is, therefore, utilized as an extension of the classroom. Work experience may be a component of a wide variety of educational activities and may be paid or unpaid. However, any plan for work experience must be in compliance with the Kentucky Child Labor Laws.

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As required by federal laws and regulations the Department of Education does not discriminate on the basis of sex, race, color, religion, handicapping conditions, or national origin in employment or in its educational programs and activities.

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