

KY Valid Course List

Kentucky Uniform Academic Course Codes

[704 KAR 3:540](#) states the following:

Section 1. (1) Local districts and schools shall use uniform academic course codes, listed and described in the Academic Course Code List, to classify all courses offered in each school when reporting to the Kentucky Department of Education.

(2) Reporting to the Kentucky Department of Education shall include the listing and linking of uniform academic courses if the listing of academic courses is required.

Section 2. The linking of local district and school codes to the uniform academic course codes shall be performed by district and school staff using the student information system.

Section 3. The Kentucky Department of Education shall annually audit the use of uniform academic course codes by districts and schools.

Section 4. Incorporation by Reference. (1) "Academic Course Code List", April 2010, is incorporated by reference. (2) This material may be inspected, copied, or obtained, subject to applicable copyright law, at the Office of Teaching and Learning, 18th Floor, Capital Plaza Tower, 500 Mero Street, Frankfort, Kentucky 40601, Monday through Friday, 8 a.m. through 4:30 p.m. (36 Ky.R. 2260; Am. 37 Ky.R. 60; eff. 7-12-2010.)

The Kentucky Uniform Academic Course Code List contains a listing of course descriptions and parameters along with certifications that fit the parameters for a given course. Please note that the table of contents and the bookmarks in each PDF document are clickable for ease of navigation. The content listed for a course cannot be changed; however, the grade range and population information listed for each course are not absolute and can vary slightly depending on the needs of the school. District should choose the course that most closely represents the students in a given course. ***The description and content of a course are the determining factors in what should be selected.***

Contact Information:

- Districts may contact Kiley Whitaker at (502) 564- 4286 or Caryn Davidson at (502) 564-2106, or email at kiley.whitaker@education.ky.gov or caryn.davidson@education.ky.gov with questions pertaining to course content.
- Districts may contact Kiley Whitaker at (502) 564- 4286 or kiley.whitaker@education.ky.gov with questions pertaining to technical issues.
- Districts may contact the EPSB Division of Certification at (502) 564-4606 or dcert@ky.gov with question pertaining to certification.
- Districts may contact Megan Cummins at (502) 696-7397 or mcummins@kheaa.com with questions pertaining to KEES eligibility.

Detailed information about course code considerations for specific programs and areas can be found on the Kentucky Uniform Academic Course Codes website at

<http://education.ky.gov/curriculum/modcurrframe/Pages/Kentucky-Uniform-Academic-Course-Codes.aspx>

HOW TO USE THIS DOCUMENT

This document contains a listing of course descriptions and parameters along with certifications that fit the parameters for a given course. The grade range and population information listed for each course are not absolute. Please choose the course that most closely represents the students in a given course.

EXAMPLE

John Q Middle School had 5th, 6th, and 7th grade students taking a Creative Art course. This course would be linked to course number **500711: Creative Art – Comprehensive**, which shows with a recommended grade range of 6th – 12th.

The courses listed in this document are not meant to replace the course titles and course numbers already in use at the school level. Schools will link their courses on the Infinite Campus “Course Master” tab OR in the “Course” tab to courses listed in this document.

Schools may have created courses that are very unique in order to meet students’ needs. If a course does not meet the definition or content of one contained in this document, please use course number **909999: School Defined Course**, and code the correct content through the LEAD report.

CERTIFICATIONS

It is important to note that the certificates listed are the ones that fit **ALL** of the parameters for a specific course – there may be other certificates that can teach it with slightly more restrictive parameters.

It is very important to note that not all of the certificates listed under a specific course will meet the Highly Qualified Teacher standards as defined by The No Child Left Behind Act of 2001. Please refer to the Highly Qualified guidance documents located on the Education Professional Standards Board (EPSB) website at <http://www.epsb.ky.gov/nclb.asp>.

In addition to Highly Qualified considerations, please take note of the following information from **The Kentucky Core Academic Standards** with regard to middle school courses that are offered for high school credit.

High School Credit Earned in Middle School

It is expected that most students will earn these credits during their high school years. However, local school districts may offer these courses to middle level students if the following criteria are met:

- the content and the rigor of the course is the same as established in the *Kentucky Core Academic Standards*
- the students demonstrate mastery of the middle level content as specified in the *Kentucky Core Academic Standards*
- the district has criteria in place to make reasonable determination that the middle level student is capable of success in the high school course
- **the middle level course is taught by teachers with either secondary or middle level certification with appropriate content specialization**

Although middle level courses list the Provisional and Standard Elementary Certificates, Grades 1-8 as allowable under the parameters of these courses, they will not meet the above requirements for courses that are offered for high school credit.

This document is a guide; therefore the EPSB disclaims any warranties as to the validity of the information in this document. Users of this document are responsible for verifying information received through cross-referencing the official record in the EPSB’s Division of Certification. The EPSB shall not be liable to the recipient, or to any third party using this document or information obtained therefrom, for any damages whatsoever arising out of the use of this document.

Table of Contents

Table of Contents	4
Engineering and Technology Program Area (210000)	5
Engineering and Technology - Technology (210100)	6
Engineering and Technology - Engineering (210200).....	29
Engineering and Technology - Career Major Electives (210300)	58
Engineering and Technology - Engineering (Project Lead the Way) (219900) ...	63

Engineering and Technology Program Area (210000)

The Engineering and Technology program is a study of technology, innovation, design, and engineering, which provides an opportunity for students to learn about the processes and knowledge related to technology that are needed to solve problems and extended human capabilities.

Engineering and Technology - Technology (210100)

Career Major: Technology courses derive content from the study of technology, innovation, design, and engineering, which provides an opportunity for students to learn about the processes and knowledge related to technology that are needed to solve problems and extend human capabilities. Any course not found under this career major/sub code may be found in another career major/sub code within this program area.

210101 - Invention and Innovation, Grades 6-8

Grade Level: 6 - 8

Credits:

Description: This course provides students with opportunities to apply the design process in the invention or innovation of a new product, process, or system. In this course, students will learn all about invention and innovation. They will have opportunities to study the history of invention and innovations, including their impact on society. They will learn about the core concepts of technology, and about the various approaches to solving problems, including engineering design and experimentation. Students will apply their creativity in the invention and innovation of new products, processes, or systems. Finally students learn about how various invention and innovations impact their lives. Students participate in engineering-design activities to understand how criteria, constraints, and processes affect design. Students are involved in activities where they learn about brainstorming, visualizing, modeling, constructing, testing, experimenting, and refining design. Students also develop skills in researching for information, communicating design information, and reporting results. This Course may be 6 to 18 weeks in duration.

Content: Engineering and Technology

Population: General

729	Engineering Technology
A94	Area Specialization: Industrial Arts
A95	Area Specialization: Industrial Education-- Orientation And Exploration Levels
A99	Area Specialization: Technology Education
AJKT	Adjunct Instructor For Teaching Engineering and Technology, Grades 5-12
B94	Teaching Major: Industrial Arts
B95	Teaching Major: Industrial Education -- Orientation And Exploration Levels
C94	Teaching Minor: Industrial Arts
COTE	Conditional One-Year Certificate For Engineering and Technology, Grades 5-12
ELE	Endorsement For Elementary School Classroom Teaching, Grades 1-8
KIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITR	Probationary Certificate For Teaching Industrial Technology, Grades 5 Through 12
KTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
KTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
KTER	Probationary Certificate For Teaching Engineering and Technology, Grades 5 Through 12
M95	Endorsement For Teaching Industrial Education Orientation And Exploration Levels, Grades 5-8
PEA	Provisional Elementary Certificate, Grades 1-8
PEB	Provisional Elementary Certificate, Grades 1-8
PEBF	Provisional Elementary Certificate, Grades 1-8
SEA	Standard Elementary Certificate, Grades 1-8
SEB	Standard Elementary Certificate, Grades 1-8
SEM	Standard Elementary Certificate, Grades 1-8
SEMF	Standard Elementary Certificate, Grades 1-8
TES	Endorsement For Elementary And Secondary Classroom Teaching

TETE	Temporary Certificate For Engineering and Technology, Grades 5-12
TPTE	Temporary Provisional Certificate For Engineering and Technology, Grades 5-12
WIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
WITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
WTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
WTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
X98	Emergency Certificate For Teaching Engineering and Technology

210102 - Invention and Innovation, Grades 9

Grade Level: 9 - 9

Credits: 1

Description: This course provides students with opportunities to apply the design process in the invention or innovation of a new product, process, or system. In this course, students will learn all about invention and innovation. They will have opportunities to study the history of invention and innovations, including their impact on society. They will learn about the core concepts of technology, and about the various approaches to solving problems, including engineering design and experimentation. Students will apply their creativity in the invention and innovation of new products, processes, or systems. Finally students learn about how various invention and innovations impact their lives. Students participate in engineering-design activities to understand how criteria, constraints, and processes affect design. Students are involved in activities where they learn about brainstorming, visualizing, modeling, constructing, testing, experimenting, and refining design. Students also develop skills in researching for information, communicating design information, and reporting results. This Course may be 6 to 18 weeks in duration.

Content: Engineering and Technology

Population: General

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A94	Area Specialization: Industrial Arts
A95	Area Specialization: Industrial Education-- Orientation And Exploration Levels
A99	Area Specialization: Technology Education
AJKT	Adjunct Instructor For Teaching Engineering and Technology, Grades 5-12
B94	Teaching Major: Industrial Arts
B95	Teaching Major: Industrial Education -- Orientation And Exploration Levels
C94	Teaching Minor: Industrial Arts
COTE	Conditional One-Year Certificate For Engineering and Technology, Grades 5-12
KIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITR	Probationary Certificate For Teaching Industrial Technology, Grades 5 Through 12
KTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
KTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
KTER	Probationary Certificate For Teaching Engineering and Technology, Grades 5 Through 12
M95	Endorsement For Teaching Industrial Education Orientation And Exploration Levels, Grades 5-8
TETE	Temporary Certificate For Engineering and Technology, Grades 5-12
TPTE	Temporary Provisional Certificate For Engineering and Technology, Grades 5-12
WIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
WITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
WTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
WTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
X98	Emergency Certificate For Teaching Engineering and Technology

210103 - Technological Systems, Grades 6-8

Grade Level: 6 - 8

Credits:

Description: This course is intended to inform students how technological systems work together to solve problems and capture opportunities. A system can be as small as two components working together (technical system/device level) or can contain millions of interacting devices (use system/network level). We often break down the macro-systems into less complicated micro-systems in order to understand the entire

system better. However, technology is becoming more integrated and systems are becoming more and more dependent upon each other than ever before. Electronic systems are interacting with natural (i.e. biological) systems as humans use more and more monitoring devices for medical reasons. Electrical systems are interacting with mechanical and fluid-power systems as manufacturing establishments become more and more automated. This course will give students general background on the different types of systems but will concentrate more on the connections between these systems. This course may be 6 to 18 weeks in duration.

Content: Engineering and Technology

Population: General

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A94	Area Specialization: Industrial Arts
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AJKT	Adjunct Instructor For Teaching Engineering and Technology, Grades 5-12
B94	Teaching Major: Industrial Arts
B95	Teaching Major: Industrial Education -- Orientation And Exploration Levels
C94	Teaching Minor: Industrial Arts
COTE	Conditional One-Year Certificate For Engineering and Technology, Grades 5-12
ELE	Endorsement For Elementary School Classroom Teaching, Grades 1-8
KIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITR	Probationary Certificate For Teaching Industrial Technology, Grades 5 Through 12
KTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
KTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
KTER	Probationary Certificate For Teaching Engineering and Technology, Grades 5 Through 12
M95	Endorsement For Teaching Industrial Education Orientation And Exploration Levels, Grades 5-8
PEA	Provisional Elementary Certificate, Grades 1-8
PEB	Provisional Elementary Certificate, Grades 1-8
PEBF	Provisional Elementary Certificate, Grades 1-8
SEA	Standard Elementary Certificate, Grades 1-8
SEB	Standard Elementary Certificate, Grades 1-8
SEM	Standard Elementary Certificate, Grades 1-8
SEMF	Standard Elementary Certificate, Grades 1-8
TES	Endorsement For Elementary And Secondary Classroom Teaching
TETE	Temporary Certificate For Engineering and Technology, Grades 5-12
TPTE	Temporary Provisional Certificate For Engineering and Technology, Grades 5-12
WIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
WITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
WTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
WTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
X98	Emergency Certificate For Teaching Engineering and Technology

210104 - Technological Systems, Grade 9

Grade Level: 9 - 9

Credits: 1/2

Description: This course is intended to inform students how technological systems work together to solve problems and capture opportunities. A system can be as small as two components working together (technical system/device level) or can contain millions of interacting devices (use system/network level). We often break down the macro-systems into less complicated micro-systems in order to understand the entire system better. However, technology is becoming more integrated and systems are becoming more and more dependent upon each other than ever before. Electronic systems are interacting with natural (i.e. biological) systems as humans use more and more monitoring devices for medical reasons. Electrical systems are interacting with mechanical and fluid-power systems as manufacturing establishments become more and more automated. This course will give students general background on the different types of systems but will concentrate more on the connections between these systems. This course may be 6 to 18 weeks in duration.

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B94	Teaching Major: Industrial Arts
B95	Teaching Major: Industrial Education -- Orientation And Exploration Levels
C94	Teaching Minor: Industrial Arts
COTE	Conditional One-Year Certificate For Engineering and Technology, Grades 5-12
KIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITR	Probationary Certificate For Teaching Industrial Technology, Grades 5 Through 12
KTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
KTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
KTER	Probationary Certificate For Teaching Engineering and Technology, Grades 5 Through 12
M95	Endorsement For Teaching Industrial Education Orientation And Exploration Levels, Grades 5-8
TETE	Temporary Certificate For Engineering and Technology, Grades 5-12
TPTE	Temporary Provisional Certificate For Engineering and Technology, Grades 5-12
WIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
WITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
WTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
WTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
X98	Emergency Certificate For Teaching Engineering and Technology

210105 - Special Technology Topics, Grades 6-8

Grade Level: 6 - 8

Credits: 0

Description: Special Technology Topics allows the teacher to develop a course for in-depth exploration of technological topics. This course will allow students to gain a more comprehensive knowledge of a particular technological topic or explore specialized technology careers. This can be accomplished in a laboratory environment through a variety of instructional strategies. Instruction can be enriched through participation in Kentucky Technology Student Association challenges and/or Project Lead the Way-Gateway to Technology program materials. This optional/additional course may be 6 to 18 weeks in duration and may be taught at any grade level as appropriate.

Content: Engineering and Technology

Population: General

729	Engineering Technology
A94	Area Specialization: Industrial Arts
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A99	Area Specialization: Technology Education
AJKT	Adjunct Instructor For Teaching Engineering and Technology, Grades 5-12
B94	Teaching Major: Industrial Arts
B95	Teaching Major: Industrial Education -- Orientation And Exploration Levels
C94	Teaching Minor: Industrial Arts
COTE	Conditional One-Year Certificate For Engineering and Technology, Grades 5-12
ELE	Endorsement For Elementary School Classroom Teaching, Grades 1-8
KIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITR	Probationary Certificate For Teaching Industrial Technology, Grades 5 Through 12
KTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
KTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
KTER	Probationary Certificate For Teaching Engineering and Technology, Grades 5 Through 12
M95	Endorsement For Teaching Industrial Education Orientation And Exploration Levels, Grades 5-8
PEA	Provisional Elementary Certificate, Grades 1-8

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SEMF	Standard Elementary Certificate, Grades 1-8
TES	Endorsement For Elementary And Secondary Classroom Teaching
TETE	Temporary Certificate For Engineering and Technology, Grades 5-12
TPTE	Temporary Provisional Certificate For Engineering and Technology, Grades 5-12
WIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
WITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
WTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
WTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
X98	Emergency Certificate For Teaching Engineering and Technology

210106 - Special Technology Topics

Grade Level: 9 - 9

Credits: 1/2

Description: Special Technology Topics allows the teacher to develop a course for in-depth exploration of technological topics. This course will allow students to gain a more comprehensive knowledge of a particular technology topic or explore specialized technology careers. This can be accomplished in a laboratory environment through a variety of instructional strategies. Instruction can be enriched through participation in Kentucky Technology Student Association challenges and/or Project Lead the Way-Gateway to Technology program materials. This optional/additional course may be 6 to 18 weeks in duration and may be taught at any grade level as appropriate.

Content: Engineering and Technology

Population: General

729	Engineering Technology
A94	Area Specialization: Industrial Arts
A95	Area Specialization: Industrial Education-- Orientation And Exploration Levels
A99	Area Specialization: Technology Education
AJKT	Adjunct Instructor For Teaching Engineering and Technology, Grades 5-12
B94	Teaching Major: Industrial Arts
B95	Teaching Major: Industrial Education -- Orientation And Exploration Levels
C94	Teaching Minor: Industrial Arts
COTE	Conditional One-Year Certificate For Engineering and Technology, Grades 5-12
KIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITR	Probationary Certificate For Teaching Industrial Technology, Grades 5 Through 12
KTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
KTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
KTER	Probationary Certificate For Teaching Engineering and Technology, Grades 5 Through 12
M95	Endorsement For Teaching Industrial Education Orientation And Exploration Levels, Grades 5-8
TETE	Temporary Certificate For Engineering and Technology, Grades 5-12
TPTE	Temporary Provisional Certificate For Engineering and Technology, Grades 5-12
WIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
WITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
WTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
WTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
X98	Emergency Certificate For Teaching Engineering and Technology

210107 - Foundations of Technology

Grade Level: 9 - 12

Credits: 1

Description: This course provides the "foundation" for students to understand and apply technological concepts and processes that are the cornerstone for the high school technology program. Group and individual activities engage students in creating ideas, developing innovations, and engineering practical solutions. Technology content, resources, and laboratory activities encourage student applications of Kentucky Core Content. This course will focus on the three dimensions of technological literacy: 1) knowledge, 2) ways of thinking and acting, and 3) technological capabilities. The goal being that students develop the characteristics of a technologically literate citizen. The course will employ teaching/learning strategies that enable students to build their understanding of new ideas. It is designed to engage students in exploring and deepening their understanding of "big ideas" regarding technology. This can be accomplished through modular or other instructional strategies. Instruction should be enriched through participation in Kentucky Technology Student Association challenges. This course may be 18 or 36 weeks in duration.

Content: Engineering and Technology

Population: General

729	Engineering Technology
A94	Area Specialization: Industrial Arts
A95	Area Specialization: Industrial Education-- Orientation And Exploration Levels
A99	Area Specialization: Technology Education
AJKT	Adjunct Instructor For Teaching Engineering and Technology, Grades 5-12
B94	Teaching Major: Industrial Arts
B95	Teaching Major: Industrial Education -- Orientation And Exploration Levels
C94	Teaching Minor: Industrial Arts
COTE	Conditional One-Year Certificate For Engineering and Technology, Grades 5-12
KIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITR	Probationary Certificate For Teaching Industrial Technology, Grades 5 Through 12
KTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
KTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
KTER	Probationary Certificate For Teaching Engineering and Technology, Grades 5 Through 12
M95	Endorsement For Teaching Industrial Education Orientation And Exploration Levels, Grades 5-8
TETE	Temporary Certificate For Engineering and Technology, Grades 5-12
TPTE	Temporary Provisional Certificate For Engineering and Technology, Grades 5-12
WIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
WITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
WTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
WTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
X98	Emergency Certificate For Teaching Engineering and Technology

210108 - Technological Design

Grade Level: 9 - 12

Credits: 1

Description: This course contributes to the development of each high school student's capability to understand how technology's development, control and use are based on design constraints and human wants and needs. The structure of the course challenges students to use technological design processes so that they can think, plan, design and create solutions to engineering and technological problems. Students are actively involved in the organized and integrated application of technological resources, engineering concepts, and scientific procedures. Students address the complexities of technology that stem from designing, developing, using and assessing technological systems. The goals of this course can be accomplished through various laboratory instructional strategies utilizing the seven contexts of technological literacy. Instruction should be enriched through the participation in Kentucky Technology Student Association challenges. This course may be 18 or 36 weeks in duration.

Content: Engineering and Technology

Population: General

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A94	Area Specialization: Industrial Arts
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A99	Area Specialization: Technology Education
AJKT	Adjunct Instructor For Teaching Engineering and Technology, Grades 5-12
B94	Teaching Major: Industrial Arts
B95	Teaching Major: Industrial Education -- Orientation And Exploration Levels
C94	Teaching Minor: Industrial Arts
COTE	Conditional One-Year Certificate For Engineering and Technology, Grades 5-12
KIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITR	Probationary Certificate For Teaching Industrial Technology, Grades 5 Through 12
KTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
KTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
KTER	Probationary Certificate For Teaching Engineering and Technology, Grades 5 Through 12
M95	Endorsement For Teaching Industrial Education Orientation And Exploration Levels, Grades 5-8
TETE	Temporary Certificate For Engineering and Technology, Grades 5-12
TPTE	Temporary Provisional Certificate For Engineering and Technology, Grades 5-12
WIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
WITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
WTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
WTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
X98	Emergency Certificate For Teaching Engineering and Technology

210109 - Technological Issues and Impacts

Grade Level: 9 - 12

Credits: 1

Description: This course addresses the positive and negative impacts of technology and the intended and unintended results of its implementation. Students investigate and analyze critical historical and emerging issues affecting the creation, development, use and control of contemporary and future technology.

Laboratory activities will allow students to propose and implement alternative solutions. Students will measure, quantify, assess, and communicate the impacts of these proposals and the issues that accompany them. The goals of this course can be accomplished through various classroom and laboratory instructional strategies. Instruction should be enriched through participation in Kentucky Technology Student Association challenges. This course may be 18 or 36 weeks in duration.

Content: Engineering and Technology

Population: General

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A99	Area Specialization: Technology Education
AJKT	Adjunct Instructor For Teaching Engineering and Technology, Grades 5-12
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KTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
KTER	Probationary Certificate For Teaching Engineering and Technology, Grades 5 Through 12
M95	Endorsement For Teaching Industrial Education Orientation And Exploration Levels, Grades 5-8
TETE	Temporary Certificate For Engineering and Technology, Grades 5-12

TPTE	Temporary Provisional Certificate For Engineering and Technology, Grades 5-12
WIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
WITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
WTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
WTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
X98	Emergency Certificate For Teaching Engineering and Technology

210110 - Engineering Design (Capstone)

Grade Level: 9 - 12

Credits: 1

Description: Engineering scope, content, and professional practices are presented through practical applications in this capstone course. Students in engineering teams apply technology and Kentucky Core Content and skills to solve engineering design problems and create innovative designs. Students research, develop, test and analyze engineering designs using criteria such as design effectiveness, public safety, human factors and ethics. Instruction should be enriched through participation Kentucky technology Student Association challenges. This course may be 18-36 weeks in duration.

Content: Engineering and Technology

Population: General

729	Engineering Technology
A94	Area Specialization: Industrial Arts
A95	Area Specialization: Industrial Education-- Orientation And Exploration Levels
A99	Area Specialization: Technology Education
AJKT	Adjunct Instructor For Teaching Engineering and Technology, Grades 5-12
B94	Teaching Major: Industrial Arts
B95	Teaching Major: Industrial Education -- Orientation And Exploration Levels
C94	Teaching Minor: Industrial Arts
COTE	Conditional One-Year Certificate For Engineering and Technology, Grades 5-12
KIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITR	Probationary Certificate For Teaching Industrial Technology, Grades 5 Through 12
KTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
KTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
KTER	Probationary Certificate For Teaching Engineering and Technology, Grades 5 Through 12
M95	Endorsement For Teaching Industrial Education Orientation And Exploration Levels, Grades 5-8
TETE	Temporary Certificate For Engineering and Technology, Grades 5-12
TPTE	Temporary Provisional Certificate For Engineering and Technology, Grades 5-12
WIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
WITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
WTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
WTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
X98	Emergency Certificate For Teaching Engineering and Technology

210111 - Special Problems in Technology

Grade Level: 9 - 12

Credits: 1-4

Description: This independent-study course is designed to allow a high school student to study in-depth a technology topic or issue. The experience will enable the student to gain a more comprehensive knowledge of a particular technological context. A variety of instructional strategies using multiple resources, specialized laboratories, and collaboration with mentoring experts should be encouraged. Independent studies and/or internships could be utilized. Instruction should be enhanced through participation in Kentucky Technology Student Association challenges. This course may be 18 to 36 weeks in duration.

Content: Engineering and Technology

Population: General

729	Engineering Technology
A94	Area Specialization: Industrial Arts
A95	Area Specialization: Industrial Education-- Orientation And Exploration Levels
A99	Area Specialization: Technology Education
AJKT	Adjunct Instructor For Teaching Engineering and Technology, Grades 5-12
B94	Teaching Major: Industrial Arts
B95	Teaching Major: Industrial Education -- Orientation And Exploration Levels
C94	Teaching Minor: Industrial Arts
COTE	Conditional One-Year Certificate For Engineering and Technology, Grades 5-12
KIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITR	Probationary Certificate For Teaching Industrial Technology, Grades 5 Through 12
KTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
KTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
KTER	Probationary Certificate For Teaching Engineering and Technology, Grades 5 Through 12
M95	Endorsement For Teaching Industrial Education Orientation And Exploration Levels, Grades 5-8
TETE	Temporary Certificate For Engineering and Technology, Grades 5-12
TPTE	Temporary Provisional Certificate For Engineering and Technology, Grades 5-12
WIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
WITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
WTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
WTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
X98	Emergency Certificate For Teaching Engineering and Technology

210112 - Special Topics, Technology Education

Grade Level: 9 - 12

Credits: 1-4

Description: Special Technology Topics allows the teacher to develop a course for in-depth exploration of technological topics. This is a laboratory-based course designed to study a technological system or topic, and/or a recent technological advancement. This study should include how this advancement affects society and/or the environment. A culminating project integrating one or more of the seven contexts of technological literacy and the Kentucky Core Content is encouraged. It should include research, design, construction, analysis, writing, and presenting. Instruction should be enriched through participation in Kentucky Technology Student Association. This course may be 18 to 36 weeks in duration.

Content: Engineering and Technology

Population: General

729	Engineering Technology
A94	Area Specialization: Industrial Arts
A95	Area Specialization: Industrial Education-- Orientation And Exploration Levels
A99	Area Specialization: Technology Education
AJKT	Adjunct Instructor For Teaching Engineering and Technology, Grades 5-12
B94	Teaching Major: Industrial Arts
B95	Teaching Major: Industrial Education -- Orientation And Exploration Levels
C94	Teaching Minor: Industrial Arts
COTE	Conditional One-Year Certificate For Engineering and Technology, Grades 5-12
KIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITR	Probationary Certificate For Teaching Industrial Technology, Grades 5 Through 12
KTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
KTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
KTER	Probationary Certificate For Teaching Engineering and Technology, Grades 5 Through 12
M95	Endorsement For Teaching Industrial Education Orientation And Exploration Levels, Grades 5-8
TETE	Temporary Certificate For Engineering and Technology, Grades 5-12
TPTE	Temporary Provisional Certificate For Engineering and Technology, Grades 5-12
WIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
WITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
WTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12

WTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
X98	Emergency Certificate For Teaching Engineering and Technology

210117 - Advanced Design Applications

Grade Level: 11 - 12

Credits: 1

Description: This course consists of the first four units of the ProBase curriculum. These units are Manufacturing, Energy and Power, Construction and Transportation. The Manufacturing unit examines the advance that maintain manufacturing efficiency, how human consumption affects manufacturing, how manufacturing affects the standard of living of various peoples, and how processing and changing raw materials can produce more desirable products. The Construction unit examines a number of the factors influencing the design and construction of permanent and semi-permanent structures. The practice related to construction maintenance, alterations, and renovation, and the functions of the primary systems installed in those structures. The Energy and Power unit explores the relationship between energy and power system impact cultures, societies and the environment. It also offers an examination of how energy and power systems can be made more efficient and how they may be utilized in problem solving. The Transportation unit examines the complex networks of interconnected subsystems that each transportation system comprises and the roles of these components in the overall functional process of the system. It also analyzes the improvements and the impacts of transportation technologies on the environment, society, and culture. Each of the four units is approximately 9 weeks in length. If the course is scheduled for 18 weeks, only 2 units can be completed. Completion of all four units requires a 36 week course.

Content: Engineering and Technology

Population: General

729	Engineering Technology
A94	Area Specialization: Industrial Arts
A95	Area Specialization: Industrial Education-- Orientation And Exploration Levels
A99	Area Specialization: Technology Education
AJKT	Adjunct Instructor For Teaching Engineering and Technology, Grades 5-12
B94	Teaching Major: Industrial Arts
B95	Teaching Major: Industrial Education -- Orientation And Exploration Levels
C94	Teaching Minor: Industrial Arts
COTE	Conditional One-Year Certificate For Engineering and Technology, Grades 5-12
KIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITR	Probationary Certificate For Teaching Industrial Technology, Grades 5 Through 12
KTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
KTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
KTER	Probationary Certificate For Teaching Engineering and Technology, Grades 5 Through 12
M95	Endorsement For Teaching Industrial Education Orientation And Exploration Levels, Grades 5-8
TETE	Temporary Certificate For Engineering and Technology, Grades 5-12
TPTE	Temporary Provisional Certificate For Engineering and Technology, Grades 5-12
WIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
WITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
WTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
WTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
X98	Emergency Certificate For Teaching Engineering and Technology

210118 - Advanced Technological Applications

Grade Level: 11 - 12

Credits: 1

Description: This course consists of the first four units of the ProBase curriculum. These units are: Information Technology, Agriculture and Bio-Related Technologies, Medical and Entertainment/Recreation Technology. The Information Technologies unit examines how technology facilitates the gathering, manipulation, storage and transmission of data and how this data can be used to create useful products. It also provides students with opportunities for developing communication systems that can solve technological

problems. The Agriculture and Biorelated Technologies unit explores how agriculture technologies provide increased crop yields and allow adaptation to changing and harsh environments, enabling the growth of plant and animals for various uses. It also offers an analysis of the various uses of biotechnology and the ethical considerations of those uses. The Medical Technologies unit provides an analysis of how medical technologies are used to increase the quality and length of human life, and require public debate. Students will also examine tools and devices used to repair and replace organs, prevent disease and rehabilitate the human body. The Entertainment/Recreation unit provides a study of technological entertainment and recreation systems, with an examination of the differences between these technologies, of how their use enhances human leisure-time performance and of the social, cultural and environmental implications of their usage. Each of the four units is approximately 9 weeks in length. If the course is scheduled for 18 weeks, only 2 units can be completed. Completion of all four units requires a 36 week course.

Content: Engineering and Technology

Population: General

729	Engineering Technology
A94	Area Specialization: Industrial Arts
A95	Area Specialization: Industrial Education-- Orientation And Exploration Levels
A99	Area Specialization: Technology Education
AJKT	Adjunct Instructor For Teaching Engineering and Technology, Grades 5-12
B94	Teaching Major: Industrial Arts
B95	Teaching Major: Industrial Education -- Orientation And Exploration Levels
C94	Teaching Minor: Industrial Arts
COTE	Conditional One-Year Certificate For Engineering and Technology, Grades 5-12
KIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITR	Probationary Certificate For Teaching Industrial Technology, Grades 5 Through 12
KTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
KTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
KTER	Probationary Certificate For Teaching Engineering and Technology, Grades 5 Through 12
M95	Endorsement For Teaching Industrial Education Orientation And Exploration Levels, Grades 5-8
TETE	Temporary Certificate For Engineering and Technology, Grades 5-12
TPTE	Temporary Provisional Certificate For Engineering and Technology, Grades 5-12
WIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
WITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
WTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
WTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
X98	Emergency Certificate For Teaching Engineering and Technology

210119 - Exploration of Power Energy and Transportation Technology

Grade Level: 6 - 8

Credits:

Description: This course and/or modules allows for exploration in the many phases of Power Energy and Transportation through hands-on activities and/or modules. This program of study facilitates STEM principles to be applied in real world situations. These units or modules make up areas of the basic core technology such as but not limited to, Aviation and Aerospace, Transportation Systems, Robotics Pneumatic/Hydraulic, Power and Energy, Mechanical, Electrical/Electronics and Research.

Content: Engineering and Technology

Population: General

729	Engineering Technology
A94	Area Specialization: Industrial Arts
A95	Area Specialization: Industrial Education-- Orientation And Exploration Levels
A99	Area Specialization: Technology Education
AJKT	Adjunct Instructor For Teaching Engineering and Technology, Grades 5-12
B94	Teaching Major: Industrial Arts
B95	Teaching Major: Industrial Education -- Orientation And Exploration Levels
C94	Teaching Minor: Industrial Arts

COTE	Conditional One-Year Certificate For Engineering and Technology, Grades 5-12
ELE	Endorsement For Elementary School Classroom Teaching, Grades 1-8
KIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITR	Probationary Certificate For Teaching Industrial Technology, Grades 5 Through 12
KTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
KTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
KTER	Probationary Certificate For Teaching Engineering and Technology, Grades 5 Through 12
M95	Endorsement For Teaching Industrial Education Orientation And Exploration Levels, Grades 5-8
PEA	Provisional Elementary Certificate, Grades 1-8
PEB	Provisional Elementary Certificate, Grades 1-8
PEBF	Provisional Elementary Certificate, Grades 1-8
SEA	Standard Elementary Certificate, Grades 1-8
SEB	Standard Elementary Certificate, Grades 1-8
SEM	Standard Elementary Certificate, Grades 1-8
SEMF	Standard Elementary Certificate, Grades 1-8
TES	Endorsement For Elementary And Secondary Classroom Teaching
TETE	Temporary Certificate For Engineering and Technology, Grades 5-12
TPTE	Temporary Provisional Certificate For Engineering and Technology, Grades 5-12
WIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
WITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
WTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
WTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
X98	Emergency Certificate For Teaching Engineering and Technology

210120 - Exploration of Manufacturing Technology

Grade Level: 6 - 8

Credits:

Description: An exploratory course and/or modules designed to investigate the types of activities performed in the manufacturing industry and through laboratory experiences students explore the skills and technologies of these industries. Content includes the application of technology; the design of products and services; emerging and innovative technologies; safety and maintenance of technology; marketing; technology-related; and career explorations. Activities may include computer aided design mechanical drafting, manufacturing parts, CNC programming, computer control, and robotics while tools and machines, and planning manufacturing projects.

Content: Engineering and Technology

Population: General

729	Engineering Technology
A94	Area Specialization: Industrial Arts
A95	Area Specialization: Industrial Education-- Orientation And Exploration Levels
A99	Area Specialization: Technology Education
AJKT	Adjunct Instructor For Teaching Engineering and Technology, Grades 5-12
B94	Teaching Major: Industrial Arts
B95	Teaching Major: Industrial Education -- Orientation And Exploration Levels
C94	Teaching Minor: Industrial Arts
COTE	Conditional One-Year Certificate For Engineering and Technology, Grades 5-12
ELE	Endorsement For Elementary School Classroom Teaching, Grades 1-8
KIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITR	Probationary Certificate For Teaching Industrial Technology, Grades 5 Through 12
KTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
KTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
KTER	Probationary Certificate For Teaching Engineering and Technology, Grades 5 Through 12
M95	Endorsement For Teaching Industrial Education Orientation And Exploration Levels, Grades 5-8
PEA	Provisional Elementary Certificate, Grades 1-8
PEB	Provisional Elementary Certificate, Grades 1-8
PEBF	Provisional Elementary Certificate, Grades 1-8

SEA	Standard Elementary Certificate, Grades 1-8
SEB	Standard Elementary Certificate, Grades 1-8
SEM	Standard Elementary Certificate, Grades 1-8
SEMF	Standard Elementary Certificate, Grades 1-8
TES	Endorsement For Elementary And Secondary Classroom Teaching
TETE	Temporary Certificate For Engineering and Technology, Grades 5-12
TPTE	Temporary Provisional Certificate For Engineering and Technology, Grades 5-12
WIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
WITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
WTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
WTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
X98	Emergency Certificate For Teaching Engineering and Technology

210121 - Exploration of Construction Technology

Grade Level: 6 - 8

Credits:

Description: An exploratory course and/or modules designed to investigate the types of activities performed in the construction industry and through laboratory experiences students explore the skills and technologies of this industry. Content includes the application of technology; the design of products and services; emerging and innovative technologies; safety and maintenance of technology; marketing; and technology-related career explorations. Activities may include computer aided design, mechanical drafting, building models of buildings, specific projects, using construction tools and machines, and designing and building simple structures.

Content: Engineering and Technology

Population: General

729	Engineering Technology
A94	Area Specialization: Industrial Arts
A95	Area Specialization: Industrial Education-- Orientation And Exploration Levels
A99	Area Specialization: Technology Education
AJKT	Adjunct Instructor For Teaching Engineering and Technology, Grades 5-12
B94	Teaching Major: Industrial Arts
B95	Teaching Major: Industrial Education -- Orientation And Exploration Levels
C94	Teaching Minor: Industrial Arts
COTE	Conditional One-Year Certificate For Engineering and Technology, Grades 5-12
ELE	Endorsement For Elementary School Classroom Teaching, Grades 1-8
KIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITR	Probationary Certificate For Teaching Industrial Technology, Grades 5 Through 12
KTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
KTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
KTER	Probationary Certificate For Teaching Engineering and Technology, Grades 5 Through 12
M95	Endorsement For Teaching Industrial Education Orientation And Exploration Levels, Grades 5-8
PEA	Provisional Elementary Certificate, Grades 1-8
PEB	Provisional Elementary Certificate, Grades 1-8
PEBF	Provisional Elementary Certificate, Grades 1-8
SEA	Standard Elementary Certificate, Grades 1-8
SEB	Standard Elementary Certificate, Grades 1-8
SEM	Standard Elementary Certificate, Grades 1-8
SEMF	Standard Elementary Certificate, Grades 1-8
TES	Endorsement For Elementary And Secondary Classroom Teaching
TETE	Temporary Certificate For Engineering and Technology, Grades 5-12
TPTE	Temporary Provisional Certificate For Engineering and Technology, Grades 5-12
WIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
WITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
WTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
WTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
X98	Emergency Certificate For Teaching Engineering and Technology

210122 - Exploration of Computer and Graphic Communication Technology

Grade Level: 6 - 8

Credits:

Description: An exploratory course and/or modules designed to provide students the skills and knowledge that are performed in the computer and communication industries. The types of activities may include but not limited to developing images, photography, desktop publishing, computer aided design, mechanical drafting, and printing, computer animation, sublimation, screen printing, bindery, audio/video production, and file management through laboratory experiences

Content: Engineering and Technology

Population: General

729	Engineering Technology
A94	Area Specialization: Industrial Arts
A95	Area Specialization: Industrial Education-- Orientation And Exploration Levels
A99	Area Specialization: Technology Education
AJKT	Adjunct Instructor For Teaching Engineering and Technology, Grades 5-12
B94	Teaching Major: Industrial Arts
B95	Teaching Major: Industrial Education -- Orientation And Exploration Levels
C94	Teaching Minor: Industrial Arts
COTE	Conditional One-Year Certificate For Engineering and Technology, Grades 5-12
ELE	Endorsement For Elementary School Classroom Teaching, Grades 1-8
KIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITR	Probationary Certificate For Teaching Industrial Technology, Grades 5 Through 12
KTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
KTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
KTER	Probationary Certificate For Teaching Engineering and Technology, Grades 5 Through 12
M95	Endorsement For Teaching Industrial Education Orientation And Exploration Levels, Grades 5-8
PEA	Provisional Elementary Certificate, Grades 1-8
PEB	Provisional Elementary Certificate, Grades 1-8
PEBF	Provisional Elementary Certificate, Grades 1-8
SEA	Standard Elementary Certificate, Grades 1-8
SEB	Standard Elementary Certificate, Grades 1-8
SEM	Standard Elementary Certificate, Grades 1-8
SEMF	Standard Elementary Certificate, Grades 1-8
TES	Endorsement For Elementary And Secondary Classroom Teaching
TETE	Temporary Certificate For Engineering and Technology, Grades 5-12
TPTE	Temporary Provisional Certificate For Engineering and Technology, Grades 5-12
WIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
WITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
WTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
WTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
X98	Emergency Certificate For Teaching Engineering and Technology

210127 - Exploring Technology, Grades 6-8

Grade Level: 6 - 8

Credits:

Description: Students develop and understanding of the progression and scope of technology through exploratory experiences. In group and individual activates, student experience ways in which technological knowledge and processes contribute to effective design and solutions criteria, constraints, and processes affect designs. Brainstorming, visualizing, modeling, constructing, testing, and refining designs provide first hand opportunities for students to understand the uses and impacts of innovations. Students develop skills in communications design information and reporting results. Instructional design may utilize modular or other instructional strategies. Participation in Kentucky Technology Student Association will greatly enhance

instruction. This course may be 6 to 18 weeks in duration.

Content: Engineering and Technology

Population: General

729	Engineering Technology
A94	Area Specialization: Industrial Arts
A95	Area Specialization: Industrial Education-- Orientation And Exploration Levels
A99	Area Specialization: Technology Education
AJKT	Adjunct Instructor For Teaching Engineering and Technology, Grades 5-12
B94	Teaching Major: Industrial Arts
B95	Teaching Major: Industrial Education -- Orientation And Exploration Levels
C94	Teaching Minor: Industrial Arts
COTE	Conditional One-Year Certificate For Engineering and Technology, Grades 5-12
ELE	Endorsement For Elementary School Classroom Teaching, Grades 1-8
KIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITR	Probationary Certificate For Teaching Industrial Technology, Grades 5 Through 12
KTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
KTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
KTER	Probationary Certificate For Teaching Engineering and Technology, Grades 5 Through 12
M95	Endorsement For Teaching Industrial Education Orientation And Exploration Levels, Grades 5-8
PEA	Provisional Elementary Certificate, Grades 1-8
PEB	Provisional Elementary Certificate, Grades 1-8
PEBF	Provisional Elementary Certificate, Grades 1-8
SEA	Standard Elementary Certificate, Grades 1-8
SEB	Standard Elementary Certificate, Grades 1-8
SEM	Standard Elementary Certificate, Grades 1-8
SEMF	Standard Elementary Certificate, Grades 1-8
TES	Endorsement For Elementary And Secondary Classroom Teaching
TETE	Temporary Certificate For Engineering and Technology, Grades 5-12
TPTE	Temporary Provisional Certificate For Engineering and Technology, Grades 5-12
WIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
WITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
WTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
WTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
X98	Emergency Certificate For Teaching Engineering and Technology

210128 - Exploring Technology, Grade 9

Grade Level: 9 - 9

Credits: 1/2

Description: Students develop an understanding of the progression and scope of technology through exploratory experiences. In group and individual activities, student experience ways in which technological knowledge and processes contribute to effective design and solutions to technological problems. Students participate in design activities to understand how criteria, constraints, and processes affect designs. Brainstorming, visualizing, modeling, constructing, testing, and refining designs provide first hand opportunities for students to understand the uses and impacts of innovations. Students develop skills in communications design information and reporting results. Instructional design may utilize modular or other instructional strategies. Participation in Kentucky Technology Student Association will greatly enhance instruction. This course may be 6 to 18 weeks in duration.

Content: Engineering and Technology

Population: General

729	Engineering Technology
A94	Area Specialization: Industrial Arts
A95	Area Specialization: Industrial Education-- Orientation And Exploration Levels
A99	Area Specialization: Technology Education
AJKT	Adjunct Instructor For Teaching Engineering and Technology, Grades 5-12
B94	Teaching Major: Industrial Arts

B95	Teaching Major: Industrial Education -- Orientation And Exploration Levels
C94	Teaching Minor: Industrial Arts
COTE	Conditional One-Year Certificate For Engineering and Technology, Grades 5-12
KIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITR	Probationary Certificate For Teaching Industrial Technology, Grades 5 Through 12
KTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
KTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
KTER	Probationary Certificate For Teaching Engineering and Technology, Grades 5 Through 12
M95	Endorsement For Teaching Industrial Education Orientation And Exploration Levels, Grades 5-8
TETE	Temporary Certificate For Engineering and Technology, Grades 5-12
TPTE	Temporary Provisional Certificate For Engineering and Technology, Grades 5-12
WIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
WITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
WTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
WTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
X98	Emergency Certificate For Teaching Engineering and Technology

210133 - Graphic Communication Technology

Grade Level: 9 - 12

Credits: 1

Description: This is a fundamental course that offers a cross-disciplinary program designed for students interested in gaining knowledge and skills in various phases of graphic communication technology. This is a project based program with activities in, but not limited to, computer design, digital imaging, document layout, multimedia, web site development, digital printing, offset printing, screen and sublimation printing processes, bindery, packaging technology. Students apply creative problem solving while learning about technology and management practices related to the production and distribution of graphic media in its many forms.

Content: Engineering and Technology

Population: General

729	Engineering Technology
A94	Area Specialization: Industrial Arts
A95	Area Specialization: Industrial Education-- Orientation And Exploration Levels
A99	Area Specialization: Technology Education
AJKT	Adjunct Instructor For Teaching Engineering and Technology, Grades 5-12
B94	Teaching Major: Industrial Arts
B95	Teaching Major: Industrial Education -- Orientation And Exploration Levels
C94	Teaching Minor: Industrial Arts
COTE	Conditional One-Year Certificate For Engineering and Technology, Grades 5-12
KIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITR	Probationary Certificate For Teaching Industrial Technology, Grades 5 Through 12
KTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
KTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
KTER	Probationary Certificate For Teaching Engineering and Technology, Grades 5 Through 12
M95	Endorsement For Teaching Industrial Education Orientation And Exploration Levels, Grades 5-8
TETE	Temporary Certificate For Engineering and Technology, Grades 5-12
TPTE	Temporary Provisional Certificate For Engineering and Technology, Grades 5-12
WIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
WITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
WTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
WTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
X98	Emergency Certificate For Teaching Engineering and Technology

210134 - Material and Process Technology

Grade Level: 9 - 12

Credits: 1

Description: The purpose of this program is to provide students with a foundation of knowledge and technically oriented experiences in the study of the technology of materials and processes. This program focuses on transferable skills and stresses understanding and demonstration of the technological tools, machines, instruments, materials, processes and systems in business and industry. The content includes, but not limited to, a study of the pre-processing, processing and post processing of wood, metal, plastics, composites, and other materials. The content and activities will also include the study of entrepreneurship, safety, and leadership skills through the participation in Kentucky Technology Student Association.

Content: Engineering and Technology

Population: General

729	Engineering Technology
A94	Area Specialization: Industrial Arts
A95	Area Specialization: Industrial Education-- Orientation And Exploration Levels
A99	Area Specialization: Technology Education
AJKT	Adjunct Instructor For Teaching Engineering and Technology, Grades 5-12
B94	Teaching Major: Industrial Arts
B95	Teaching Major: Industrial Education -- Orientation And Exploration Levels
C94	Teaching Minor: Industrial Arts
COTE	Conditional One-Year Certificate For Engineering and Technology, Grades 5-12
KIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITR	Probationary Certificate For Teaching Industrial Technology, Grades 5 Through 12
KTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
KTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
KTER	Probationary Certificate For Teaching Engineering and Technology, Grades 5 Through 12
M95	Endorsement For Teaching Industrial Education Orientation And Exploration Levels, Grades 5-8
TETE	Temporary Certificate For Engineering and Technology, Grades 5-12
TPTE	Temporary Provisional Certificate For Engineering and Technology, Grades 5-12
WIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
WITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
WTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
WTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
X98	Emergency Certificate For Teaching Engineering and Technology

210135 - Production Technology

Grade Level: 11 - 12

Credits: 1-3

Description: Prerequisite: (Material & Process Technology) This course is to allow students the opportunity to develop a project from "vision to reality by working with teams to design, engineer, manufacture, construct, test, redesign, and produce a finished project. This course can serve as capstone course working with business and industry as part of their design, development, fabrication, and marketing using skills and knowledge from previous manufacturing courses.

Content: Engineering and Technology

Population: General

729	Engineering Technology
A94	Area Specialization: Industrial Arts
A95	Area Specialization: Industrial Education-- Orientation And Exploration Levels
A99	Area Specialization: Technology Education
AJKT	Adjunct Instructor For Teaching Engineering and Technology, Grades 5-12
B94	Teaching Major: Industrial Arts
B95	Teaching Major: Industrial Education -- Orientation And Exploration Levels

C94	Teaching Minor: Industrial Arts
COTE	Conditional One-Year Certificate For Engineering and Technology, Grades 5-12
KIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITR	Probationary Certificate For Teaching Industrial Technology, Grades 5 Through 12
KTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
KTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
KTER	Probationary Certificate For Teaching Engineering and Technology, Grades 5 Through 12
M95	Endorsement For Teaching Industrial Education Orientation And Exploration Levels, Grades 5-8
TETE	Temporary Certificate For Engineering and Technology, Grades 5-12
TPTE	Temporary Provisional Certificate For Engineering and Technology, Grades 5-12
WIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
WITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
WTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
WTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
X98	Emergency Certificate For Teaching Engineering and Technology

210136 - Advanced Technology for Design & Productions

Grade Level: 9 - 10

Credits: 1

Description: A project based course that introduces students to manufacturing's role in our society. In addition to concentrating on design and problem solving the course introduces students to several other concepts as well including an introduction to control system technology, automated manufacturing systems and robotics. This is a project based program of study that includes reverse engineering activities, manufacturing basics, manufacturing roles, DC motors and electricity, thermoforming and temperature control, tank volume control, and production monitoring systems. (Requires Agreement Between District & SREB)

Content: Advanced Manufacturing Technology

Population: General

729	Engineering Technology
773	Electricity
776	Machine Tool Technology
792	Industrial Machine Maintenance
A94	Area Specialization: Industrial Arts
A95	Area Specialization: Industrial Education-- Orientation And Exploration Levels
A99	Area Specialization: Technology Education
AJELC	Adjunct Instructor for Electricity
AJKT	Adjunct Instructor For Teaching Engineering and Technology, Grades 5-12
B94	Teaching Major: Industrial Arts
B95	Teaching Major: Industrial Education -- Orientation And Exploration Levels
C94	Teaching Minor: Industrial Arts
COTE	Conditional One-Year Certificate For Engineering and Technology, Grades 5-12
KIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITR	Probationary Certificate For Teaching Industrial Technology, Grades 5 Through 12
KTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
KTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
KTER	Probationary Certificate For Teaching Engineering and Technology, Grades 5 Through 12
M95	Endorsement For Teaching Industrial Education Orientation And Exploration Levels, Grades 5-8
TETE	Temporary Certificate For Engineering and Technology, Grades 5-12
TPTE	Temporary Provisional Certificate For Engineering and Technology, Grades 5-12
WIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
WITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
WTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
WTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
X98	Emergency Certificate For Teaching Engineering and Technology

210137 - Systems of Advanced Technology

Grade Level: 10 - 11

Credits: 1

Description: Prerequisite: (210136 Advanced Technology for Design & Productions) This course applies the learning from Intro to Advanced Manufacturing. This course involves projects related to the systems that are found in factories. Students learn about effective and energy efficient use of motors, drive systems, pumping systems, conveyors, piping and control systems. Students focus on properties of materials and materials testing creating documentation examining the properties and justifying selections based on the properties. Students learn that some products manufactured become the raw materials for more complex products. Students will explore projects such as automated tank control, design automated inspection systems, design software controlled mechatronic systems, material separation, and lean manufacturing. (Requires Agreement Between District & SREB)

Content: Advanced Manufacturing Technology

Population: General

729	Engineering Technology
773	Electricity
776	Machine Tool Technology
792	Industrial Machine Maintenance
A94	Area Specialization: Industrial Arts
A95	Area Specialization: Industrial Education-- Orientation And Exploration Levels
A99	Area Specialization: Technology Education
AJELC	Adjunct Instructor for Electricity
AJKT	Adjunct Instructor For Teaching Engineering and Technology, Grades 5-12
B94	Teaching Major: Industrial Arts
B95	Teaching Major: Industrial Education -- Orientation And Exploration Levels
C94	Teaching Minor: Industrial Arts
COTE	Conditional One-Year Certificate For Engineering and Technology, Grades 5-12
KIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITR	Probationary Certificate For Teaching Industrial Technology, Grades 5 Through 12
KTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
KTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
KTER	Probationary Certificate For Teaching Engineering and Technology, Grades 5 Through 12
M95	Endorsement For Teaching Industrial Education Orientation And Exploration Levels, Grades 5-8
TETE	Temporary Certificate For Engineering and Technology, Grades 5-12
TPTE	Temporary Provisional Certificate For Engineering and Technology, Grades 5-12
WIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
WITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
WTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
WTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
X98	Emergency Certificate For Teaching Engineering and Technology

210138 - Mechanical and Technical Design

Grade Level: 9 - 10

Credits: 1

Description: This is considered a basic course that will provide students with instructions in the characteristics and evolution of drafting technology, underlying principles of design and fundamental knowledge and skills in the use mechanical drawing, illustrations, various forms of mechanical drawings, geometry and applied mathematics that apply to architectural and/or engineering design. Introduction to various forms of computer aided software to gain basic skills and knowledge.

Content: Engineering and Technology

Population: General

729	Engineering Technology
A94	Area Specialization: Industrial Arts
A95	Area Specialization: Industrial Education-- Orientation And Exploration Levels
A99	Area Specialization: Technology Education
AJKT	Adjunct Instructor For Teaching Engineering and Technology, Grades 5-12
B94	Teaching Major: Industrial Arts
B95	Teaching Major: Industrial Education -- Orientation And Exploration Levels
C94	Teaching Minor: Industrial Arts
COTE	Conditional One-Year Certificate For Engineering and Technology, Grades 5-12
KIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITR	Probationary Certificate For Teaching Industrial Technology, Grades 5 Through 12
KTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
KTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
KTER	Probationary Certificate For Teaching Engineering and Technology, Grades 5 Through 12
M95	Endorsement For Teaching Industrial Education Orientation And Exploration Levels, Grades 5-8
TETE	Temporary Certificate For Engineering and Technology, Grades 5-12
TPTE	Temporary Provisional Certificate For Engineering and Technology, Grades 5-12
WIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
WITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
WTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
WTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
X98	Emergency Certificate For Teaching Engineering and Technology

210139 - Introduction to Aircraft Maintenance Technology I

Grade Level: 10 - 12

Credits: 1-3

Description: Prerequisite: (210226 & 210233)The purpose of this curriculum is to for students to develop basic knowledge and personal skills that can be applied to a broad range of career opportunities with emphases to aviation maintenance technology. Students will gain experience in electricity and electronics, metalworking, woodworking, plastics and composite materials through the use of tools, machines and materials that are basic to aviation industry. It will cover both hand and machine-tool operations, and supplies background knowledge on equipment and processes utilized in aviation industry and manufacturing. The program allows students to learn basic problem solving skills, instruction in mechanical drawing, blue print reading, engineering CAD, and the application of the engineering concepts and mathematics.

Content: Aerospace Engineering

Population: General

729	Engineering Technology
791	Air Craft Mechanic
806	Aviation Technology
A50	Area Specialization: Science
A70	Area Specialization: Mathematics-Physical Science
A94	Area Specialization: Industrial Arts
A95	Area Specialization: Industrial Education-- Orientation And Exploration Levels
A99	Area Specialization: Technology Education
AJKT	Adjunct Instructor For Teaching Engineering and Technology, Grades 5-12
AJMA	Adjunct Instructor For Math, Grades 8-12
AJPH	Adjunct Instructor For Physics, Grades 8-12
B50	Teaching Major: Science
B53	Teaching Major: Physics
B71	Teaching Major: Mathematics
B74	Teaching Major: Computer Science And Mathematics
B94	Teaching Major: Industrial Arts
B95	Teaching Major: Industrial Education -- Orientation And Exploration Levels
C50	Teaching Minor: Science
C53	Teaching Minor: Physics
C71	Teaching Minor: Mathematics

C94	Teaching Minor: Industrial Arts
CMA	Professional Certificate For College Faculty, Mathematics, Grades 8-12
CMAI	Provisional Internship Certificate For College Faculty, Mathematics, Grades 8-12
COMA	Conditional One-Year Certificate For Math, Grades 8-12
COTE	Conditional One-Year Certificate For Engineering and Technology, Grades 5-12
CPH	Professional Certificate For College Faculty, Physics, Grades 8-12
CPHI	Provisional Internship Certificate For College Faculty, Physics, Grades 8-12
KIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITR	Probationary Certificate For Teaching Industrial Technology, Grades 5 Through 12
KMA	Professional Certificate For Teaching Mathematics, Grades 8 Through 12
KMAI	Provisional Internship Certificate For Teaching Mathematics, Grades 8 Through 12
KMAL	Certificate For Teaching Kentucky Math Limited, Grades 8-12
KPH	Professional Certificate For Teaching Physics, Grades 8-12
KPHI	Provisional Internship Certificate For Teaching Physics, Grades 8 Through 12
KPHL	Certificate for Teaching Kentucky Physics Limited, Grades 8-12
KPS	Professional Certificate For Teaching Physical Science, Grades 8 Through 12
KPSI	Provisional Internship Certificate For Teaching Physical Science, Grades 8 Through 12
KTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
KTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
KTER	Probationary Certificate For Teaching Engineering and Technology, Grades 5 Through 12
M95	Endorsement For Teaching Industrial Education Orientation And Exploration Levels, Grades 5-8
QMA	Teaching Field: Mathematics
R53	Area Specialization: Science Limited To Physics
T8MA	Temporary Provisional Certificate For Teaching Mathematics, Grades 8-12 (Option 8)
T8PH	Temporary Provisional Certificate For Teaching Physics, Grades 8-12 (Option 8)
TEMA	Temporary Certificate For Mathematics, Grades 8-12
TEPH	Temporary Certificate For Physics, Grades 8-12
TETE	Temporary Certificate For Engineering and Technology, Grades 5-12
TPMA	Temporary Provisional Certificate For Math, Grades 8-12
TPPH	Temporary Provisional Certificate For Physics, Grades 8-12
TPTE	Temporary Provisional Certificate For Engineering and Technology, Grades 5-12
WIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
WITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
WMA	Professional Certificate For Teaching Mathematics, Grades 8 Through 12
WMAI	Provisional Internship Certificate For Teaching Mathematics, Grades 8 Through 12
WPH	Professional Certificate For Teaching Physics, Grades 8-12
WPHI	Provisional Certificate For Internship For Teaching Physics, Grades 8-12
WPS	Professional Certificate For Teaching Physical Science, Grades 8 Through 12
WPSI	Provisional Internship Certificate For Teaching Physical Science, Grades 8 Through 12
WTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
WTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
X98	Emergency Certificate For Teaching Engineering and Technology

210140 - Architectural Design & Civil Engineering II

Grade Level: 10 - 12

Credits: 1

Description: Prerequisite: (210223 Fund of Architectural and Civil Engineering) This course is for students who wish to broaden their basic skills in the field of residential architectural drafting and surveying. Covers procedures used in developing complete set of residential plans, history of surveying, mathematics, measurement and computations, and the proper use of basic drafting and surveying instruments, equipment and software. Students will develop projects in accordance to drafting and building code requirements. Projects will emphasize the importance of communication and organization as they participate in the roles of civil engineers, architects, land developers, surveyors, and/or general contractors in residential planning and construction.

Content: Engineering and Technology

Population: General

729	Engineering Technology
A94	Area Specialization: Industrial Arts
A95	Area Specialization: Industrial Education-- Orientation And Exploration Levels
A99	Area Specialization: Technology Education
AJKT	Adjunct Instructor For Teaching Engineering and Technology, Grades 5-12
B94	Teaching Major: Industrial Arts
B95	Teaching Major: Industrial Education -- Orientation And Exploration Levels
C94	Teaching Minor: Industrial Arts
COTE	Conditional One-Year Certificate For Engineering and Technology, Grades 5-12
KIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITR	Probationary Certificate For Teaching Industrial Technology, Grades 5 Through 12
KTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
KTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
KTER	Probationary Certificate For Teaching Engineering and Technology, Grades 5 Through 12
M95	Endorsement For Teaching Industrial Education Orientation And Exploration Levels, Grades 5-8
TETE	Temporary Certificate For Engineering and Technology, Grades 5-12
TPTE	Temporary Provisional Certificate For Engineering and Technology, Grades 5-12
WIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
WITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
WTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
WTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
X98	Emergency Certificate For Teaching Engineering and Technology

210141 - Fundamentals of Building Construction Technologies

Grade Level: 11 - 12

Credits: 1

Description: Prerequisite: (210223 and 210140) Students explore architectural design foundations and increase understanding of working drawings, construction techniques, and codes regulating building design. They learn the design process and apply the elements and principles of design to architectural projects. Through producing models and illustrations of all aspects of a building, students create architectural design solutions using CADD (computer aided drafting and design). Students design and build scale or full-size structures and work with projects that help them understand the jobs of architects, carpenters, electricians, plumbers, surveyors, contractors, masons, design engineers, and a variety of other construction careers. They also explore aspects of the construction industry.

Content: Engineering and Technology

Population: General

729	Engineering Technology
A94	Area Specialization: Industrial Arts
A95	Area Specialization: Industrial Education-- Orientation And Exploration Levels
A99	Area Specialization: Technology Education
AJKT	Adjunct Instructor For Teaching Engineering and Technology, Grades 5-12
B94	Teaching Major: Industrial Arts
B95	Teaching Major: Industrial Education -- Orientation And Exploration Levels
C94	Teaching Minor: Industrial Arts
COTE	Conditional One-Year Certificate For Engineering and Technology, Grades 5-12
KIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITR	Probationary Certificate For Teaching Industrial Technology, Grades 5 Through 12
KTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
KTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
KTER	Probationary Certificate For Teaching Engineering and Technology, Grades 5 Through 12
M95	Endorsement For Teaching Industrial Education Orientation And Exploration Levels, Grades 5-8
TETE	Temporary Certificate For Engineering and Technology, Grades 5-12
TPTE	Temporary Provisional Certificate For Engineering and Technology, Grades 5-12
WIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
WITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12

WTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
WTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
X98	Emergency Certificate For Teaching Engineering and Technology

210142 - Power & Energy Equipment Technology

Grade Level: 9 - 12

Credits: 1

Description: Power and Energy Equipment is used every day in many different ways. To become a more environmentally friendly society, students will have a basic understanding of the various types of energy equipment and how energy is obtained or generated. Everyone should know what energy sources are available that do not pollute the environment and how this energy can be converted into a useful power supply. This course provides students with the foundation in content and skills associated with various energy sources, and electrical power generation, working with AC/DC electrical circuits, and transfer of various energy forms to produce DC current. Laboratory-based activities is an integral part of the course that includes safe use and application of appropriate technology, scientific testing and observation equipment.

Content: Engineering and Technology

Population: General

729	Engineering Technology
A94	Area Specialization: Industrial Arts
A95	Area Specialization: Industrial Education-- Orientation And Exploration Levels
A99	Area Specialization: Technology Education
AJKT	Adjunct Instructor For Teaching Engineering and Technology, Grades 5-12
B94	Teaching Major: Industrial Arts
B95	Teaching Major: Industrial Education -- Orientation And Exploration Levels
C94	Teaching Minor: Industrial Arts
COTE	Conditional One-Year Certificate For Engineering and Technology, Grades 5-12
KIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITR	Probationary Certificate For Teaching Industrial Technology, Grades 5 Through 12
KTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
KTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
KTER	Probationary Certificate For Teaching Engineering and Technology, Grades 5 Through 12
M95	Endorsement For Teaching Industrial Education Orientation And Exploration Levels, Grades 5-8
TETE	Temporary Certificate For Engineering and Technology, Grades 5-12
TPTE	Temporary Provisional Certificate For Engineering and Technology, Grades 5-12
WIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
WITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
WTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
WTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
X98	Emergency Certificate For Teaching Engineering and Technology

Engineering and Technology - Engineering (210200)

Career Major: Engineering is a four year sequence of courses which, when combined with traditional mathematics and science courses in high school, introduces students to the scope, rigor and discipline of engineering. Any course not found under this career major/sub code may be found in another career major/sub code with in this program area.

210221 - Fundamentals of Engineering Design I

Grade Level: 9 - 10

Credits: 1

Description: Introduction to Computer Aided Drafting and Engineering Design Principles. This course continues to apply the skills, concepts, and principles of engineering. Students explore various technological systems and engineering processes in related career fields. Topics include investigating technological system, design optimization, and problem solving. Students utilize CAD and physical and virtual modeling concepts to construct, test, collect, and report data.

Content: Engineering

Population: General

729	Engineering Technology
A50	Area Specialization: Science
A70	Area Specialization: Mathematics-Physical Science
A94	Area Specialization: Industrial Arts
A95	Area Specialization: Industrial Education-- Orientation And Exploration Levels
A99	Area Specialization: Technology Education
AJKT	Adjunct Instructor For Teaching Engineering and Technology, Grades 5-12
AJMA	Adjunct Instructor For Math, Grades 8-12
AJPH	Adjunct Instructor For Physics, Grades 8-12
B50	Teaching Major: Science
B53	Teaching Major: Physics
B71	Teaching Major: Mathematics
B74	Teaching Major: Computer Science And Mathematics
B94	Teaching Major: Industrial Arts
B95	Teaching Major: Industrial Education -- Orientation And Exploration Levels
C50	Teaching Minor: Science
C53	Teaching Minor: Physics
C71	Teaching Minor: Mathematics
C94	Teaching Minor: Industrial Arts
CMA	Professional Certificate For College Faculty, Mathematics, Grades 8-12
CMAI	Provisional Internship Certificate For College Faculty, Mathematics, Grades 8-12
COMA	Conditional One-Year Certificate For Math, Grades 8-12
COTE	Conditional One-Year Certificate For Engineering and Technology, Grades 5-12
CPH	Professional Certificate For College Faculty, Physics, Grades 8-12
CPHI	Provisional Internship Certificate For College Faculty, Physics, Grades 8-12
KIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITR	Probationary Certificate For Teaching Industrial Technology, Grades 5 Through 12
KMA	Professional Certificate For Teaching Mathematics, Grades 8 Through 12
KMAI	Provisional Internship Certificate For Teaching Mathematics, Grades 8 Through 12
KMAL	Certificate For Teaching Kentucky Math Limited, Grades 8-12

KPH	Professional Certificate For Teaching Physics, Grades 8-12
KPHI	Provisional Internship Certificate For Teaching Physics, Grades 8 Through 12
KPHL	Certificate for Teaching Kentucky Physics Limited, Grades 8-12
KPS	Professional Certificate For Teaching Physical Science, Grades 8 Through 12
KPSI	Provisional Internship Certificate For Teaching Physical Science, Grades 8 Through 12
KTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
KTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
KTER	Probationary Certificate For Teaching Engineering and Technology, Grades 5 Through 12
M95	Endorsement For Teaching Industrial Education Orientation And Exploration Levels, Grades 5-8
QMA	Teaching Field: Mathematics
R53	Area Specialization: Science Limited To Physics
T8MA	Temporary Provisional Certificate For Teaching Mathematics, Grades 8-12 (Option 8)
T8PH	Temporary Provisional Certificate For Teaching Physics, Grades 8-12 (Option 8)
TEMA	Temporary Certificate For Mathematics, Grades 8-12
TEPH	Temporary Certificate For Physics, Grades 8-12
TETE	Temporary Certificate For Engineering and Technology, Grades 5-12
TPMA	Temporary Provisional Certificate For Math, Grades 8-12
TPPH	Temporary Provisional Certificate For Physics, Grades 8-12
TPPS	Temporary Provisional Certificate For Physical Science, Grades 8-12
TPTE	Temporary Provisional Certificate For Engineering and Technology, Grades 5-12
WIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
WITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
WMA	Professional Certificate For Teaching Mathematics, Grades 8 Through 12
WMAI	Provisional Internship Certificate For Teaching Mathematics, Grades 8 Through 12
WPH	Professional Certificate For Teaching Physics, Grades 8-12
WPHI	Provisional Certificate For Internship For Teaching Physics, Grades 8-12
WPS	Professional Certificate For Teaching Physical Science, Grades 8 Through 12
WPSI	Provisional Internship Certificate For Teaching Physical Science, Grades 8 Through 12
WTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
WTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
X98	Emergency Certificate For Teaching Engineering and Technology

210222 - Engineering Design II

Grade Level: 10 - 12

Credits: 1

Description: A project based course that extends the learning experiences where students focus on mechanical, electrical, fluid and thermal systems allowing in depth exploration in selected disciplines of engineering areas such as manufacturing, power/energy/transportation, robotics, hydraulics, electricity/electronics, communications, construction systems, alternative energy and computer aided design and problem solving.

Content: Engineering

Population: General

729	Engineering Technology
A50	Area Specialization: Science
A70	Area Specialization: Mathematics-Physical Science
A94	Area Specialization: Industrial Arts
A95	Area Specialization: Industrial Education-- Orientation And Exploration Levels
A99	Area Specialization: Technology Education
AJKT	Adjunct Instructor For Teaching Engineering and Technology, Grades 5-12
AJMA	Adjunct Instructor For Math, Grades 8-12
AJPH	Adjunct Instructor For Physics, Grades 8-12
B50	Teaching Major: Science
B53	Teaching Major: Physics
B71	Teaching Major: Mathematics
B74	Teaching Major: Computer Science And Mathematics
B94	Teaching Major: Industrial Arts
B95	Teaching Major: Industrial Education -- Orientation And Exploration Levels

C50	Teaching Minor: Science
C53	Teaching Minor: Physics
C71	Teaching Minor: Mathematics
C94	Teaching Minor: Industrial Arts
CMA	Professional Certificate For College Faculty, Mathematics, Grades 8-12
CMAI	Provisional Internship Certificate For College Faculty, Mathematics, Grades 8-12
COMA	Conditional One-Year Certificate For Math, Grades 8-12
COTE	Conditional One-Year Certificate For Engineering and Technology, Grades 5-12
CPH	Professional Certificate For College Faculty, Physics, Grades 8-12
CPHI	Provisional Internship Certificate For College Faculty, Physics, Grades 8-12
KIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITR	Probationary Certificate For Teaching Industrial Technology, Grades 5 Through 12
KMA	Professional Certificate For Teaching Mathematics, Grades 8 Through 12
KMAI	Provisional Internship Certificate For Teaching Mathematics, Grades 8 Through 12
KMAL	Certificate For Teaching Kentucky Math Limited, Grades 8-12
KPH	Professional Certificate For Teaching Physics, Grades 8-12
KPHI	Provisional Internship Certificate For Teaching Physics, Grades 8 Through 12
KPHL	Certificate for Teaching Kentucky Physics Limited, Grades 8-12
KPS	Professional Certificate For Teaching Physical Science, Grades 8 Through 12
KPSI	Provisional Internship Certificate For Teaching Physical Science, Grades 8 Through 12
KTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
KTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
KTER	Probationary Certificate For Teaching Engineering and Technology, Grades 5 Through 12
M95	Endorsement For Teaching Industrial Education Orientation And Exploration Levels, Grades 5-8
QMA	Teaching Field: Mathematics
R53	Area Specialization: Science Limited To Physics
T8MA	Temporary Provisional Certificate For Teaching Mathematics, Grades 8-12 (Option 8)
T8PH	Temporary Provisional Certificate For Teaching Physics, Grades 8-12 (Option 8)
TEMA	Temporary Certificate For Mathematics, Grades 8-12
TEPH	Temporary Certificate For Physics, Grades 8-12
TETE	Temporary Certificate For Engineering and Technology, Grades 5-12
TPMA	Temporary Provisional Certificate For Math, Grades 8-12
TPPH	Temporary Provisional Certificate For Physics, Grades 8-12
TPPS	Temporary Provisional Certificate For Physical Science, Grades 8-12
TPTTE	Temporary Provisional Certificate For Engineering and Technology, Grades 5-12
WIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
WITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
WMA	Professional Certificate For Teaching Mathematics, Grades 8 Through 12
WMAI	Provisional Internship Certificate For Teaching Mathematics, Grades 8 Through 12
WPH	Professional Certificate For Teaching Physics, Grades 8-12
WPHI	Provisional Certificate For Internship For Teaching Physics, Grades 8-12
WPS	Professional Certificate For Teaching Physical Science, Grades 8 Through 12
WPSI	Provisional Internship Certificate For Teaching Physical Science, Grades 8 Through 12
WTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
WTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
X98	Emergency Certificate For Teaching Engineering and Technology

210223 - Fundamentals of Architectural and Civil Engineering

Grade Level: 9 - 12

Credits: 1

Description: This is an introduction to residential and light commercial building construction and design. In this class, students will design a structure relevant to today's modern architecture and create models of their designs with various materials and tools. Students will experience and solve many problems in designing or building structures with regards to environment and community impact and limitations from town planning, urban design and landscape architecture to furniture and objects.

Content: Engineering

Population: General

729	Engineering Technology
A50	Area Specialization: Science
A70	Area Specialization: Mathematics-Physical Science
A94	Area Specialization: Industrial Arts
A95	Area Specialization: Industrial Education-- Orientation And Exploration Levels
A99	Area Specialization: Technology Education
AJKT	Adjunct Instructor For Teaching Engineering and Technology, Grades 5-12
AJMA	Adjunct Instructor For Math, Grades 8-12
AJPH	Adjunct Instructor For Physics, Grades 8-12
B50	Teaching Major: Science
B53	Teaching Major: Physics
B71	Teaching Major: Mathematics
B74	Teaching Major: Computer Science And Mathematics
B94	Teaching Major: Industrial Arts
B95	Teaching Major: Industrial Education -- Orientation And Exploration Levels
C50	Teaching Minor: Science
C53	Teaching Minor: Physics
C71	Teaching Minor: Mathematics
C94	Teaching Minor: Industrial Arts
CMA	Professional Certificate For College Faculty, Mathematics, Grades 8-12
CMAI	Provisional Internship Certificate For College Faculty, Mathematics, Grades 8-12
COMA	Conditional One-Year Certificate For Math, Grades 8-12
COTE	Conditional One-Year Certificate For Engineering and Technology, Grades 5-12
CPH	Professional Certificate For College Faculty, Physics, Grades 8-12
CPHI	Provisional Internship Certificate For College Faculty, Physics, Grades 8-12
KIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITR	Probationary Certificate For Teaching Industrial Technology, Grades 5 Through 12
KMA	Professional Certificate For Teaching Mathematics, Grades 8 Through 12
KMAI	Provisional Internship Certificate For Teaching Mathematics, Grades 8 Through 12
KMAL	Certificate For Teaching Kentucky Math Limited, Grades 8-12
KPH	Professional Certificate For Teaching Physics, Grades 8-12
KPHI	Provisional Internship Certificate For Teaching Physics, Grades 8 Through 12
KPHL	Certificate for Teaching Kentucky Physics Limited, Grades 8-12
KPS	Professional Certificate For Teaching Physical Science, Grades 8 Through 12
KPSI	Provisional Internship Certificate For Teaching Physical Science, Grades 8 Through 12
KTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
KTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
KTER	Probationary Certificate For Teaching Engineering and Technology, Grades 5 Through 12
M95	Endorsement For Teaching Industrial Education Orientation And Exploration Levels, Grades 5-8
QMA	Teaching Field: Mathematics
R53	Area Specialization: Science Limited To Physics
T8MA	Temporary Provisional Certificate For Teaching Mathematics, Grades 8-12 (Option 8)
T8PH	Temporary Provisional Certificate For Teaching Physics, Grades 8-12 (Option 8)
TEMA	Temporary Certificate For Mathematics, Grades 8-12
TEPH	Temporary Certificate For Physics, Grades 8-12
TETE	Temporary Certificate For Engineering and Technology, Grades 5-12
TPMA	Temporary Provisional Certificate For Math, Grades 8-12
TPPH	Temporary Provisional Certificate For Physics, Grades 8-12
TPPS	Temporary Provisional Certificate For Physical Science, Grades 8-12
TPTE	Temporary Provisional Certificate For Engineering and Technology, Grades 5-12
WIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
WITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
WMA	Professional Certificate For Teaching Mathematics, Grades 8 Through 12
WMAI	Provisional Internship Certificate For Teaching Mathematics, Grades 8 Through 12
WPH	Professional Certificate For Teaching Physics, Grades 8-12
WPHI	Provisional Certificate For Internship For Teaching Physics, Grades 8-12
WPS	Professional Certificate For Teaching Physical Science, Grades 8 Through 12
WPSI	Provisional Internship Certificate For Teaching Physical Science, Grades 8 Through 12
WTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
WTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12

X98	Emergency Certificate For Teaching Engineering and Technology
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210224 - Principles of Engineering and Technology

Grade Level: 9 - 10

Credits: 1

Description: The course provides a project based learning approach to understanding the fundamental principles and concepts of physics and associated mathematics. Students explore various careers and disciplines of engineering areas such as manufacturing, power/energy/transportation, robotics, hydraulics, electricity/electronics, communications, construction systems, alternative energy and computer aided design. Emphasis is placed on understanding mechanical, electrical, fluid, and thermal systems as they relate to work, force, rate, resistance, energy, and power.

Content: Engineering

Population: General

729	Engineering Technology
A50	Area Specialization: Science
A70	Area Specialization: Mathematics-Physical Science
A94	Area Specialization: Industrial Arts
A95	Area Specialization: Industrial Education-- Orientation And Exploration Levels
A99	Area Specialization: Technology Education
AJKT	Adjunct Instructor For Teaching Engineering and Technology, Grades 5-12
AJMA	Adjunct Instructor For Math, Grades 8-12
AJPH	Adjunct Instructor For Physics, Grades 8-12
B50	Teaching Major: Science
B53	Teaching Major: Physics
B71	Teaching Major: Mathematics
B74	Teaching Major: Computer Science And Mathematics
B94	Teaching Major: Industrial Arts
B95	Teaching Major: Industrial Education -- Orientation And Exploration Levels
C50	Teaching Minor: Science
C53	Teaching Minor: Physics
C71	Teaching Minor: Mathematics
C94	Teaching Minor: Industrial Arts
CMA	Professional Certificate For College Faculty, Mathematics, Grades 8-12
CMAI	Provisional Internship Certificate For College Faculty, Mathematics, Grades 8-12
COMA	Conditional One-Year Certificate For Math, Grades 8-12
COTE	Conditional One-Year Certificate For Engineering and Technology, Grades 5-12
CPH	Professional Certificate For College Faculty, Physics, Grades 8-12
CPHI	Provisional Internship Certificate For College Faculty, Physics, Grades 8-12
KIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITR	Probationary Certificate For Teaching Industrial Technology, Grades 5 Through 12
KMA	Professional Certificate For Teaching Mathematics, Grades 8 Through 12
KMAI	Provisional Internship Certificate For Teaching Mathematics, Grades 8 Through 12
KMAL	Certificate For Teaching Kentucky Math Limited, Grades 8-12
KPH	Professional Certificate For Teaching Physics, Grades 8-12
KPHI	Provisional Internship Certificate For Teaching Physics, Grades 8 Through 12
KPHL	Certificate for Teaching Kentucky Physics Limited, Grades 8-12
KPS	Professional Certificate For Teaching Physical Science, Grades 8 Through 12
KPSI	Provisional Internship Certificate For Teaching Physical Science, Grades 8 Through 12
KTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
KTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
KTER	Probationary Certificate For Teaching Engineering and Technology, Grades 5 Through 12
M95	Endorsement For Teaching Industrial Education Orientation And Exploration Levels, Grades 5-8
QMA	Teaching Field: Mathematics
R53	Area Specialization: Science Limited To Physics
T8MA	Temporary Provisional Certificate For Teaching Mathematics, Grades 8-12 (Option 8)
T8PH	Temporary Provisional Certificate For Teaching Physics, Grades 8-12 (Option 8)

TEMA	Temporary Certificate For Mathematics, Grades 8-12
TEPH	Temporary Certificate For Physics, Grades 8-12
TETE	Temporary Certificate For Engineering and Technology, Grades 5-12
TPMA	Temporary Provisional Certificate For Math, Grades 8-12
TPPH	Temporary Provisional Certificate For Physics, Grades 8-12
TPPS	Temporary Provisional Certificate For Physical Science, Grades 8-12
TPTE	Temporary Provisional Certificate For Engineering and Technology, Grades 5-12
WIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
WITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
WMA	Professional Certificate For Teaching Mathematics, Grades 8 Through 12
WMAI	Provisional Internship Certificate For Teaching Mathematics, Grades 8 Through 12
WPH	Professional Certificate For Teaching Physics, Grades 8-12
WPHI	Provisional Certificate For Internship For Teaching Physics, Grades 8-12
WPS	Professional Certificate For Teaching Physical Science, Grades 8 Through 12
WPSI	Provisional Internship Certificate For Teaching Physical Science, Grades 8 Through 12
WTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
WTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
X98	Emergency Certificate For Teaching Engineering and Technology

210225 - Introduction to Manufacturing and Manufacturing Systems

Grade Level: 9 - 12

Credits: 1

Description: This is a comprehensive course designed for the study of general concepts and principles of Manufacturing and Manufacturing systems. This course provides for hands-on learning experience which enhances the understanding of various metallic and nonmetallic materials, processes, and products. Materials studied may include polymers, ceramics, woods, composites, and metal materials associated with manufacturing. Students will use basic tools, equipment and operations of manufacturing industries. Students have the opportunity to engage in product design, prototyping, computer-assisted manufacturing applications, CNC machines, robotics and production management.

Content: Engineering

Population: General

729	Engineering Technology
A50	Area Specialization: Science
A70	Area Specialization: Mathematics-Physical Science
A94	Area Specialization: Industrial Arts
A95	Area Specialization: Industrial Education-- Orientation And Exploration Levels
A99	Area Specialization: Technology Education
AJKT	Adjunct Instructor For Teaching Engineering and Technology, Grades 5-12
AJMA	Adjunct Instructor For Math, Grades 8-12
AJPH	Adjunct Instructor For Physics, Grades 8-12
B50	Teaching Major: Science
B53	Teaching Major: Physics
B71	Teaching Major: Mathematics
B74	Teaching Major: Computer Science And Mathematics
B94	Teaching Major: Industrial Arts
B95	Teaching Major: Industrial Education -- Orientation And Exploration Levels
C50	Teaching Minor: Science
C53	Teaching Minor: Physics
C71	Teaching Minor: Mathematics
C94	Teaching Minor: Industrial Arts
CMA	Professional Certificate For College Faculty, Mathematics, Grades 8-12
CMAI	Provisional Internship Certificate For College Faculty, Mathematics, Grades 8-12
COMA	Conditional One-Year Certificate For Math, Grades 8-12
COTE	Conditional One-Year Certificate For Engineering and Technology, Grades 5-12
CPH	Professional Certificate For College Faculty, Physics, Grades 8-12
CPHI	Provisional Internship Certificate For College Faculty, Physics, Grades 8-12

KIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITR	Probationary Certificate For Teaching Industrial Technology, Grades 5 Through 12
KMA	Professional Certificate For Teaching Mathematics, Grades 8 Through 12
KMAI	Provisional Internship Certificate For Teaching Mathematics, Grades 8 Through 12
KMAL	Certificate For Teaching Kentucky Math Limited, Grades 8-12
KPH	Professional Certificate For Teaching Physics, Grades 8-12
KPHI	Provisional Internship Certificate For Teaching Physics, Grades 8 Through 12
KPHL	Certificate for Teaching Kentucky Physics Limited, Grades 8-12
KPS	Professional Certificate For Teaching Physical Science, Grades 8 Through 12
KPSI	Provisional Internship Certificate For Teaching Physical Science, Grades 8 Through 12
KTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
KTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
KTER	Probationary Certificate For Teaching Engineering and Technology, Grades 5 Through 12
M95	Endorsement For Teaching Industrial Education Orientation And Exploration Levels, Grades 5-8
QMA	Teaching Field: Mathematics
R53	Area Specialization: Science Limited To Physics
T8MA	Temporary Provisional Certificate For Teaching Mathematics, Grades 8-12 (Option 8)
T8PH	Temporary Provisional Certificate For Teaching Physics, Grades 8-12 (Option 8)
TEMA	Temporary Certificate For Mathematics, Grades 8-12
TEPH	Temporary Certificate For Physics, Grades 8-12
TETE	Temporary Certificate For Engineering and Technology, Grades 5-12
TPMA	Temporary Provisional Certificate For Math, Grades 8-12
TPPH	Temporary Provisional Certificate For Physics, Grades 8-12
TPPS	Temporary Provisional Certificate For Physical Science, Grades 8-12
TPTE	Temporary Provisional Certificate For Engineering and Technology, Grades 5-12
WIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
WITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
WMA	Professional Certificate For Teaching Mathematics, Grades 8 Through 12
WMAI	Provisional Internship Certificate For Teaching Mathematics, Grades 8 Through 12
WPH	Professional Certificate For Teaching Physics, Grades 8-12
WPHI	Provisional Certificate For Internship For Teaching Physics, Grades 8-12
WPS	Professional Certificate For Teaching Physical Science, Grades 8 Through 12
WPSI	Provisional Internship Certificate For Teaching Physical Science, Grades 8 Through 12
WTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
WTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
X98	Emergency Certificate For Teaching Engineering and Technology

210226 - Introduction to Aerospace

Grade Level: 9 - 10

Credits: 1

Description: The course covers the exploration of aerospace including, flight/aeronautics, aircraft maintenance, aeronautical engineering, and space. Students will learn about the forces that affect controlled flight, investigate properties of lift, and explore flight through a flight simulator. Students will also learn about aerospace standard materials, aviation safety, aircraft and wing design, and elements of a space mission resource system.

Content: Aerospace Engineering

Population: General

729	Engineering Technology
791	Air Craft Mechanic
806	Aviation Technology
A50	Area Specialization: Science
A70	Area Specialization: Mathematics-Physical Science
A94	Area Specialization: Industrial Arts
A95	Area Specialization: Industrial Education-- Orientation And Exploration Levels
A99	Area Specialization: Technology Education
AJKT	Adjunct Instructor For Teaching Engineering and Technology, Grades 5-12

AJMA	Adjunct Instructor For Math, Grades 8-12
AJPH	Adjunct Instructor For Physics, Grades 8-12
B50	Teaching Major: Science
B53	Teaching Major: Physics
B71	Teaching Major: Mathematics
B74	Teaching Major: Computer Science And Mathematics
B94	Teaching Major: Industrial Arts
B95	Teaching Major: Industrial Education -- Orientation And Exploration Levels
C50	Teaching Minor: Science
C53	Teaching Minor: Physics
C71	Teaching Minor: Mathematics
C94	Teaching Minor: Industrial Arts
CMA	Professional Certificate For College Faculty, Mathematics, Grades 8-12
CMAI	Provisional Internship Certificate For College Faculty, Mathematics, Grades 8-12
COMA	Conditional One-Year Certificate For Math, Grades 8-12
COTE	Conditional One-Year Certificate For Engineering and Technology, Grades 5-12
CPH	Professional Certificate For College Faculty, Physics, Grades 8-12
CPHI	Provisional Internship Certificate For College Faculty, Physics, Grades 8-12
KIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITR	Probationary Certificate For Teaching Industrial Technology, Grades 5 Through 12
KMA	Professional Certificate For Teaching Mathematics, Grades 8 Through 12
KMAI	Provisional Internship Certificate For Teaching Mathematics, Grades 8 Through 12
KMAL	Certificate For Teaching Kentucky Math Limited, Grades 8-12
KPH	Professional Certificate For Teaching Physics, Grades 8-12
KPHI	Provisional Internship Certificate For Teaching Physics, Grades 8 Through 12
KPHL	Certificate for Teaching Kentucky Physics Limited, Grades 8-12
KPS	Professional Certificate For Teaching Physical Science, Grades 8 Through 12
KPSI	Provisional Internship Certificate For Teaching Physical Science, Grades 8 Through 12
KTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
KTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
KTER	Probationary Certificate For Teaching Engineering and Technology, Grades 5 Through 12
M95	Endorsement For Teaching Industrial Education Orientation And Exploration Levels, Grades 5-8
QMA	Teaching Field: Mathematics
R53	Area Specialization: Science Limited To Physics
T8MA	Temporary Provisional Certificate For Teaching Mathematics, Grades 8-12 (Option 8)
T8PH	Temporary Provisional Certificate For Teaching Physics, Grades 8-12 (Option 8)
TEMA	Temporary Certificate For Mathematics, Grades 8-12
TEPH	Temporary Certificate For Physics, Grades 8-12
TETE	Temporary Certificate For Engineering and Technology, Grades 5-12
TPMA	Temporary Provisional Certificate For Math, Grades 8-12
TPPH	Temporary Provisional Certificate For Physics, Grades 8-12
TPTE	Temporary Provisional Certificate For Engineering and Technology, Grades 5-12
WIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
WITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
WMA	Professional Certificate For Teaching Mathematics, Grades 8 Through 12
WMAI	Provisional Internship Certificate For Teaching Mathematics, Grades 8 Through 12
WPH	Professional Certificate For Teaching Physics, Grades 8-12
WPHI	Provisional Certificate For Internship For Teaching Physics, Grades 8-12
WPS	Professional Certificate For Teaching Physical Science, Grades 8 Through 12
WPSI	Provisional Internship Certificate For Teaching Physical Science, Grades 8 Through 12
WTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
WTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
X98	Emergency Certificate For Teaching Engineering and Technology

210229 - Fundamentals of Aeronautical Engineering

Grade Level: 10 - 12

Credits: 1

Description: The fundamental concepts, and approaches of aeronautical engineering, are highlighted through lectures on aeronautics, astronautics, and design. Active learning aerospace modules make use of information technology. Project based program where students will design, build and test projects such as lighter-than-air (LTA) vehicle or various wing designs. The connections between theory and practice are realized in the design exercises. Required design reviews precede the LTA race competition. The performance, weight, and principal characteristics of the LTA vehicles or wing designs are estimated and illustrated using physics, mathematics, and chemistry. Emphasis being on the application of this knowledge to aeronautical engineering and design through the use of computer aided software.

Content: Aerospace Engineering

Population: General

729	Engineering Technology
791	Air Craft Mechanic
806	Aviation Technology
A50	Area Specialization: Science
A70	Area Specialization: Mathematics-Physical Science
A94	Area Specialization: Industrial Arts
A95	Area Specialization: Industrial Education-- Orientation And Exploration Levels
A99	Area Specialization: Technology Education
AJKT	Adjunct Instructor For Teaching Engineering and Technology, Grades 5-12
AJMA	Adjunct Instructor For Math, Grades 8-12
AJPH	Adjunct Instructor For Physics, Grades 8-12
B50	Teaching Major: Science
B53	Teaching Major: Physics
B71	Teaching Major: Mathematics
B74	Teaching Major: Computer Science And Mathematics
B94	Teaching Major: Industrial Arts
B95	Teaching Major: Industrial Education -- Orientation And Exploration Levels
C50	Teaching Minor: Science
C53	Teaching Minor: Physics
C71	Teaching Minor: Mathematics
C94	Teaching Minor: Industrial Arts
CMA	Professional Certificate For College Faculty, Mathematics, Grades 8-12
CMAI	Provisional Internship Certificate For College Faculty, Mathematics, Grades 8-12
COMA	Conditional One-Year Certificate For Math, Grades 8-12
COTE	Conditional One-Year Certificate For Engineering and Technology, Grades 5-12
CPH	Professional Certificate For College Faculty, Physics, Grades 8-12
CPHI	Provisional Internship Certificate For College Faculty, Physics, Grades 8-12
KIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITR	Probationary Certificate For Teaching Industrial Technology, Grades 5 Through 12
KMA	Professional Certificate For Teaching Mathematics, Grades 8 Through 12
KMAI	Provisional Internship Certificate For Teaching Mathematics, Grades 8 Through 12
KMAL	Certificate For Teaching Kentucky Math Limited, Grades 8-12
KPH	Professional Certificate For Teaching Physics, Grades 8-12
KPHI	Provisional Internship Certificate For Teaching Physics, Grades 8 Through 12
KPHL	Certificate for Teaching Kentucky Physics Limited, Grades 8-12
KPS	Professional Certificate For Teaching Physical Science, Grades 8 Through 12
KPSI	Provisional Internship Certificate For Teaching Physical Science, Grades 8 Through 12
KTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
KTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
KTER	Probationary Certificate For Teaching Engineering and Technology, Grades 5 Through 12
M95	Endorsement For Teaching Industrial Education Orientation And Exploration Levels, Grades 5-8
QMA	Teaching Field: Mathematics
R53	Area Specialization: Science Limited To Physics

T8MA	Temporary Provisional Certificate For Teaching Mathematics, Grades 8-12 (Option 8)
T8PH	Temporary Provisional Certificate For Teaching Physics, Grades 8-12 (Option 8)
TEMA	Temporary Certificate For Mathematics, Grades 8-12
TEPH	Temporary Certificate For Physics, Grades 8-12
TETE	Temporary Certificate For Engineering and Technology, Grades 5-12
TPMA	Temporary Provisional Certificate For Math, Grades 8-12
TPPH	Temporary Provisional Certificate For Physics, Grades 8-12
TPTE	Temporary Provisional Certificate For Engineering and Technology, Grades 5-12
WIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
WITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
WMA	Professional Certificate For Teaching Mathematics, Grades 8 Through 12
WMAI	Provisional Internship Certificate For Teaching Mathematics, Grades 8 Through 12
WPH	Professional Certificate For Teaching Physics, Grades 8-12
WPHI	Provisional Certificate For Internship For Teaching Physics, Grades 8-12
WPS	Professional Certificate For Teaching Physical Science, Grades 8 Through 12
WPSI	Provisional Internship Certificate For Teaching Physical Science, Grades 8 Through 12
WTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
WTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
X98	Emergency Certificate For Teaching Engineering and Technology

210230 - Fundamentals of Mechatronics

Grade Level: 11 - 12

Credits: 1

Description: Electro-Mechanical Systems courses provide students with instruction and experience with mechanical devices, actuators, sensors, electronics, intelligent controllers and computers. Students gain an understanding of the principles of electricity and mechanics and their application to gears, including hydraulic/pneumatic equipment, cams, levers, circuits, and other devices used in the manufacturing process or within manufactured goods.

Content: Engineering

Population: General

729	Engineering Technology
A50	Area Specialization: Science
A70	Area Specialization: Mathematics-Physical Science
A94	Area Specialization: Industrial Arts
A95	Area Specialization: Industrial Education-- Orientation And Exploration Levels
A99	Area Specialization: Technology Education
AJKT	Adjunct Instructor For Teaching Engineering and Technology, Grades 5-12
AJMA	Adjunct Instructor For Math, Grades 8-12
AJPH	Adjunct Instructor For Physics, Grades 8-12
B50	Teaching Major: Science
B53	Teaching Major: Physics
B71	Teaching Major: Mathematics
B74	Teaching Major: Computer Science And Mathematics
B94	Teaching Major: Industrial Arts
B95	Teaching Major: Industrial Education -- Orientation And Exploration Levels
C50	Teaching Minor: Science
C53	Teaching Minor: Physics
C71	Teaching Minor: Mathematics
C94	Teaching Minor: Industrial Arts
CMA	Professional Certificate For College Faculty, Mathematics, Grades 8-12
CMAI	Provisional Internship Certificate For College Faculty, Mathematics, Grades 8-12
COMA	Conditional One-Year Certificate For Math, Grades 8-12
COTE	Conditional One-Year Certificate For Engineering and Technology, Grades 5-12
CPH	Professional Certificate For College Faculty, Physics, Grades 8-12
CPHI	Provisional Internship Certificate For College Faculty, Physics, Grades 8-12
KIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12

KITR	Probationary Certificate For Teaching Industrial Technology, Grades 5 Through 12
KMA	Professional Certificate For Teaching Mathematics, Grades 8 Through 12
KMAI	Provisional Internship Certificate For Teaching Mathematics, Grades 8 Through 12
KMAL	Certificate For Teaching Kentucky Math Limited, Grades 8-12
KPH	Professional Certificate For Teaching Physics, Grades 8-12
KPHI	Provisional Internship Certificate For Teaching Physics, Grades 8 Through 12
KPHL	Certificate for Teaching Kentucky Physics Limited, Grades 8-12
KPS	Professional Certificate For Teaching Physical Science, Grades 8 Through 12
KPSI	Provisional Internship Certificate For Teaching Physical Science, Grades 8 Through 12
KTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
KTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
KTER	Probationary Certificate For Teaching Engineering and Technology, Grades 5 Through 12
M95	Endorsement For Teaching Industrial Education Orientation And Exploration Levels, Grades 5-8
QMA	Teaching Field: Mathematics
R53	Area Specialization: Science Limited To Physics
T8MA	Temporary Provisional Certificate For Teaching Mathematics, Grades 8-12 (Option 8)
T8PH	Temporary Provisional Certificate For Teaching Physics, Grades 8-12 (Option 8)
TEMA	Temporary Certificate For Mathematics, Grades 8-12
TEPH	Temporary Certificate For Physics, Grades 8-12
TETE	Temporary Certificate For Engineering and Technology, Grades 5-12
TPMA	Temporary Provisional Certificate For Math, Grades 8-12
TPPH	Temporary Provisional Certificate For Physics, Grades 8-12
TPPS	Temporary Provisional Certificate For Physical Science, Grades 8-12
TPTTE	Temporary Provisional Certificate For Engineering and Technology, Grades 5-12
WIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
WITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
WMA	Professional Certificate For Teaching Mathematics, Grades 8 Through 12
WMAI	Provisional Internship Certificate For Teaching Mathematics, Grades 8 Through 12
WPH	Professional Certificate For Teaching Physics, Grades 8-12
WPHI	Provisional Certificate For Internship For Teaching Physics, Grades 8-12
WPS	Professional Certificate For Teaching Physical Science, Grades 8 Through 12
WPSI	Provisional Internship Certificate For Teaching Physical Science, Grades 8 Through 12
WTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
WTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
X98	Emergency Certificate For Teaching Engineering and Technology

210231 - Introduction to Mining Engineering and Technology

Grade Level: 9 - 12

Credits: 1

Description: This course introduces students to the careers and basic engineering principles of various forms of mining and systems. Students will learn understand the challenges of future technologies as it relates to safety and environmental impact. Student will be able to apply engineering designing process as part of modern strategic mine planning. Students will be able to identify the importance for mine regulations, safety, proper management, required training, certifications and health risks.

Content: Engineering

Population: General

729	Engineering Technology
A50	Area Specialization: Science
A70	Area Specialization: Mathematics-Physical Science
A94	Area Specialization: Industrial Arts
A95	Area Specialization: Industrial Education-- Orientation And Exploration Levels
A99	Area Specialization: Technology Education
AJKT	Adjunct Instructor For Teaching Engineering and Technology, Grades 5-12
AJMA	Adjunct Instructor For Math, Grades 8-12
AJPH	Adjunct Instructor For Physics, Grades 8-12
B50	Teaching Major: Science
B53	Teaching Major: Physics

B71	Teaching Major: Mathematics
B74	Teaching Major: Computer Science And Mathematics
B94	Teaching Major: Industrial Arts
B95	Teaching Major: Industrial Education -- Orientation And Exploration Levels
C50	Teaching Minor: Science
C53	Teaching Minor: Physics
C71	Teaching Minor: Mathematics
C94	Teaching Minor: Industrial Arts
CMA	Professional Certificate For College Faculty, Mathematics, Grades 8-12
CMAI	Provisional Internship Certificate For College Faculty, Mathematics, Grades 8-12
COMA	Conditional One-Year Certificate For Math, Grades 8-12
COTE	Conditional One-Year Certificate For Engineering and Technology, Grades 5-12
CPH	Professional Certificate For College Faculty, Physics, Grades 8-12
CPHI	Provisional Internship Certificate For College Faculty, Physics, Grades 8-12
KIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITR	Probationary Certificate For Teaching Industrial Technology, Grades 5 Through 12
KMA	Professional Certificate For Teaching Mathematics, Grades 8 Through 12
KMAI	Provisional Internship Certificate For Teaching Mathematics, Grades 8 Through 12
KMAL	Certificate For Teaching Kentucky Math Limited, Grades 8-12
KPH	Professional Certificate For Teaching Physics, Grades 8-12
KPHI	Provisional Internship Certificate For Teaching Physics, Grades 8 Through 12
KPHL	Certificate for Teaching Kentucky Physics Limited, Grades 8-12
KPS	Professional Certificate For Teaching Physical Science, Grades 8 Through 12
KPSI	Provisional Internship Certificate For Teaching Physical Science, Grades 8 Through 12
KTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
KTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
KTER	Probationary Certificate For Teaching Engineering and Technology, Grades 5 Through 12
M95	Endorsement For Teaching Industrial Education Orientation And Exploration Levels, Grades 5-8
QMA	Teaching Field: Mathematics
R53	Area Specialization: Science Limited To Physics
T8MA	Temporary Provisional Certificate For Teaching Mathematics, Grades 8-12 (Option 8)
T8PH	Temporary Provisional Certificate For Teaching Physics, Grades 8-12 (Option 8)
TEMA	Temporary Certificate For Mathematics, Grades 8-12
TEPH	Temporary Certificate For Physics, Grades 8-12
TETE	Temporary Certificate For Engineering and Technology, Grades 5-12
TPMA	Temporary Provisional Certificate For Math, Grades 8-12
TPPH	Temporary Provisional Certificate For Physics, Grades 8-12
TPPS	Temporary Provisional Certificate For Physical Science, Grades 8-12
TPTE	Temporary Provisional Certificate For Engineering and Technology, Grades 5-12
WIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
WITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
WMA	Professional Certificate For Teaching Mathematics, Grades 8 Through 12
WMAI	Provisional Internship Certificate For Teaching Mathematics, Grades 8 Through 12
WPH	Professional Certificate For Teaching Physics, Grades 8-12
WPHI	Provisional Certificate For Internship For Teaching Physics, Grades 8-12
WPS	Professional Certificate For Teaching Physical Science, Grades 8 Through 12
WPSI	Provisional Internship Certificate For Teaching Physical Science, Grades 8 Through 12
WTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
WTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
X98	Emergency Certificate For Teaching Engineering and Technology

210232 - Basic Electricity & Energy Systems

Grade Level: 9 - 12

Credits: 1

Description: In this course students will gain skills and knowledge through classroom and lab activities in the areas of basic DC and AC circuits, circuit components, codes, testing, electromagnetism and inductance, capacitance, power supplies, power generation and distribution, amplification, digital circuits, and computer

fundamentals. Students will develop a basic understanding of the various types of energy and how energy is obtained. Everyone should know what energy sources are available that do not pollute the environment and how this energy can be converted into a useful power supply. Students will learn the safe use of the tools, test instruments, equipment and supplies used in this course plus information on career opportunities in this field. Hands-on and problem solving activities will expose students to areas of electron theory, Ohm's Law, insulators, conductors, electronic components, oscillators, and electronic fabrication. Instruction should be enhanced through participation in Kentucky Technology Student Association challenges.

Content: Engineering

Population: General

729	Engineering Technology
A50	Area Specialization: Science
A70	Area Specialization: Mathematics-Physical Science
A94	Area Specialization: Industrial Arts
A95	Area Specialization: Industrial Education-- Orientation And Exploration Levels
A99	Area Specialization: Technology Education
AJKT	Adjunct Instructor For Teaching Engineering and Technology, Grades 5-12
AJMA	Adjunct Instructor For Math, Grades 8-12
AJPH	Adjunct Instructor For Physics, Grades 8-12
B50	Teaching Major: Science
B53	Teaching Major: Physics
B71	Teaching Major: Mathematics
B74	Teaching Major: Computer Science And Mathematics
B94	Teaching Major: Industrial Arts
B95	Teaching Major: Industrial Education -- Orientation And Exploration Levels
C50	Teaching Minor: Science
C53	Teaching Minor: Physics
C71	Teaching Minor: Mathematics
C94	Teaching Minor: Industrial Arts
CMA	Professional Certificate For College Faculty, Mathematics, Grades 8-12
CMAI	Provisional Internship Certificate For College Faculty, Mathematics, Grades 8-12
COMA	Conditional One-Year Certificate For Math, Grades 8-12
COTE	Conditional One-Year Certificate For Engineering and Technology, Grades 5-12
CPH	Professional Certificate For College Faculty, Physics, Grades 8-12
CPHI	Provisional Internship Certificate For College Faculty, Physics, Grades 8-12
KIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITR	Probationary Certificate For Teaching Industrial Technology, Grades 5 Through 12
KMA	Professional Certificate For Teaching Mathematics, Grades 8 Through 12
KMAI	Provisional Internship Certificate For Teaching Mathematics, Grades 8 Through 12
KMAL	Certificate For Teaching Kentucky Math Limited, Grades 8-12
KPH	Professional Certificate For Teaching Physics, Grades 8-12
KPHI	Provisional Internship Certificate For Teaching Physics, Grades 8 Through 12
KPHL	Certificate for Teaching Kentucky Physics Limited, Grades 8-12
KPS	Professional Certificate For Teaching Physical Science, Grades 8 Through 12
KPSI	Provisional Internship Certificate For Teaching Physical Science, Grades 8 Through 12
KTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
KTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
KTER	Probationary Certificate For Teaching Engineering and Technology, Grades 5 Through 12
M95	Endorsement For Teaching Industrial Education Orientation And Exploration Levels, Grades 5-8
QMA	Teaching Field: Mathematics
R53	Area Specialization: Science Limited To Physics
T8MA	Temporary Provisional Certificate For Teaching Mathematics, Grades 8-12 (Option 8)
T8PH	Temporary Provisional Certificate For Teaching Physics, Grades 8-12 (Option 8)
TEMA	Temporary Certificate For Mathematics, Grades 8-12
TEPH	Temporary Certificate For Physics, Grades 8-12
TETE	Temporary Certificate For Engineering and Technology, Grades 5-12
TPMA	Temporary Provisional Certificate For Math, Grades 8-12
TPPH	Temporary Provisional Certificate For Physics, Grades 8-12
TPPS	Temporary Provisional Certificate For Physical Science, Grades 8-12
TPTE	Temporary Provisional Certificate For Engineering and Technology, Grades 5-12

WIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
WITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
WMA	Professional Certificate For Teaching Mathematics, Grades 8 Through 12
WMAI	Provisional Internship Certificate For Teaching Mathematics, Grades 8 Through 12
WPH	Professional Certificate For Teaching Physics, Grades 8-12
WPHI	Provisional Certificate For Internship For Teaching Physics, Grades 8-12
WPS	Professional Certificate For Teaching Physical Science, Grades 8 Through 12
WPSI	Provisional Internship Certificate For Teaching Physical Science, Grades 8 Through 12
WTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
WTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
X98	Emergency Certificate For Teaching Engineering and Technology

210233 - Fundamentals of Aviation Science I

Grade Level: 9 - 10

Credits: 1

Description: The course covers the history of fundamentals of aerospace including, the development of the balloon (lighter than air vehicles, gliders, rockets, and heavier than air flight vehicles). Introduces students to the basic science of aerodynamics: including the development of aircraft from the Wright Brothers to the present day while exposing students to the various career opportunities in aerospace.

Content: Aerospace Engineering

Population: General

729	Engineering Technology
791	Air Craft Mechanic
806	Aviation Technology
A50	Area Specialization: Science
A70	Area Specialization: Mathematics-Physical Science
A94	Area Specialization: Industrial Arts
A95	Area Specialization: Industrial Education-- Orientation And Exploration Levels
A99	Area Specialization: Technology Education
AJKT	Adjunct Instructor For Teaching Engineering and Technology, Grades 5-12
AJMA	Adjunct Instructor For Math, Grades 8-12
AJPH	Adjunct Instructor For Physics, Grades 8-12
B50	Teaching Major: Science
B53	Teaching Major: Physics
B71	Teaching Major: Mathematics
B74	Teaching Major: Computer Science And Mathematics
B94	Teaching Major: Industrial Arts
B95	Teaching Major: Industrial Education -- Orientation And Exploration Levels
C50	Teaching Minor: Science
C53	Teaching Minor: Physics
C71	Teaching Minor: Mathematics
C94	Teaching Minor: Industrial Arts
CMA	Professional Certificate For College Faculty, Mathematics, Grades 8-12
CMAI	Provisional Internship Certificate For College Faculty, Mathematics, Grades 8-12
COMA	Conditional One-Year Certificate For Math, Grades 8-12
COTE	Conditional One-Year Certificate For Engineering and Technology, Grades 5-12
CPH	Professional Certificate For College Faculty, Physics, Grades 8-12
CPHI	Provisional Internship Certificate For College Faculty, Physics, Grades 8-12
KIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITR	Probationary Certificate For Teaching Industrial Technology, Grades 5 Through 12
KMA	Professional Certificate For Teaching Mathematics, Grades 8 Through 12
KMAI	Provisional Internship Certificate For Teaching Mathematics, Grades 8 Through 12
KMAL	Certificate For Teaching Kentucky Math Limited, Grades 8-12
KPH	Professional Certificate For Teaching Physics, Grades 8-12
KPHI	Provisional Internship Certificate For Teaching Physics, Grades 8 Through 12
KPHL	Certificate for Teaching Kentucky Physics Limited, Grades 8-12

KPS	Professional Certificate For Teaching Physical Science, Grades 8 Through 12
KPSI	Provisional Internship Certificate For Teaching Physical Science, Grades 8 Through 12
KTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
KTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
KTER	Probationary Certificate For Teaching Engineering and Technology, Grades 5 Through 12
M95	Endorsement For Teaching Industrial Education Orientation And Exploration Levels, Grades 5-8
QMA	Teaching Field: Mathematics
R53	Area Specialization: Science Limited To Physics
T8MA	Temporary Provisional Certificate For Teaching Mathematics, Grades 8-12 (Option 8)
T8PH	Temporary Provisional Certificate For Teaching Physics, Grades 8-12 (Option 8)
TEMA	Temporary Certificate For Mathematics, Grades 8-12
TEPH	Temporary Certificate For Physics, Grades 8-12
TETE	Temporary Certificate For Engineering and Technology, Grades 5-12
TPMA	Temporary Provisional Certificate For Math, Grades 8-12
TPPH	Temporary Provisional Certificate For Physics, Grades 8-12
TPTE	Temporary Provisional Certificate For Engineering and Technology, Grades 5-12
WIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
WITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
WMA	Professional Certificate For Teaching Mathematics, Grades 8 Through 12
WMAI	Provisional Internship Certificate For Teaching Mathematics, Grades 8 Through 12
WPH	Professional Certificate For Teaching Physics, Grades 8-12
WPHI	Provisional Certificate For Internship For Teaching Physics, Grades 8-12
WPS	Professional Certificate For Teaching Physical Science, Grades 8 Through 12
WPSI	Provisional Internship Certificate For Teaching Physical Science, Grades 8 Through 12
WTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
WTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
X98	Emergency Certificate For Teaching Engineering and Technology

210234 - Aviation Science I I

Grade Level: 10 - 12

Credits: 1

Description: Prerequisite: (Fundamental of Aviation Science I) This course prepares students for flight training and aircraft operations. Students will gain knowledge and skills in airport systems, air traffic control procedures, aviation weather, air navigation, radio communication procedures, and Federal Aviation Regulations (FAR's). Learning activities may include, but not limited, to operation of flight simulators and/or aircraft that will prepare them for the FAA Private Pilot Written Examination. This course covers the history of aviation law, federal regulation of air transportation and the role of state and federal government in aviation law, including functions of the Federal Aviation Administration. Students will become familiar with aircraft power plants, principles of flight, aircraft systems/instruments, and science of weather.

Content: Aerospace Engineering

Population: General

729	Engineering Technology
791	Air Craft Mechanic
806	Aviation Technology
A50	Area Specialization: Science
A70	Area Specialization: Mathematics-Physical Science
A94	Area Specialization: Industrial Arts
A95	Area Specialization: Industrial Education-- Orientation And Exploration Levels
A99	Area Specialization: Technology Education
AJKT	Adjunct Instructor For Teaching Engineering and Technology, Grades 5-12
AJMA	Adjunct Instructor For Math, Grades 8-12
AJPH	Adjunct Instructor For Physics, Grades 8-12
B50	Teaching Major: Science
B53	Teaching Major: Physics
B71	Teaching Major: Mathematics
B74	Teaching Major: Computer Science And Mathematics
B94	Teaching Major: Industrial Arts

B95	Teaching Major: Industrial Education -- Orientation And Exploration Levels
C50	Teaching Minor: Science
C53	Teaching Minor: Physics
C71	Teaching Minor: Mathematics
C94	Teaching Minor: Industrial Arts
CMA	Professional Certificate For College Faculty, Mathematics, Grades 8-12
CMAI	Provisional Internship Certificate For College Faculty, Mathematics, Grades 8-12
COMA	Conditional One-Year Certificate For Math, Grades 8-12
COTE	Conditional One-Year Certificate For Engineering and Technology, Grades 5-12
CPH	Professional Certificate For College Faculty, Physics, Grades 8-12
CPHI	Provisional Internship Certificate For College Faculty, Physics, Grades 8-12
KIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITR	Probationary Certificate For Teaching Industrial Technology, Grades 5 Through 12
KMA	Professional Certificate For Teaching Mathematics, Grades 8 Through 12
KMAI	Provisional Internship Certificate For Teaching Mathematics, Grades 8 Through 12
KMAL	Certificate For Teaching Kentucky Math Limited, Grades 8-12
KPH	Professional Certificate For Teaching Physics, Grades 8-12
KPHI	Provisional Internship Certificate For Teaching Physics, Grades 8 Through 12
KPHL	Certificate for Teaching Kentucky Physics Limited, Grades 8-12
KPS	Professional Certificate For Teaching Physical Science, Grades 8 Through 12
KPSI	Provisional Internship Certificate For Teaching Physical Science, Grades 8 Through 12
KTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
KTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
KTER	Probationary Certificate For Teaching Engineering and Technology, Grades 5 Through 12
M95	Endorsement For Teaching Industrial Education Orientation And Exploration Levels, Grades 5-8
QMA	Teaching Field: Mathematics
R53	Area Specialization: Science Limited To Physics
T8MA	Temporary Provisional Certificate For Teaching Mathematics, Grades 8-12 (Option 8)
T8PH	Temporary Provisional Certificate For Teaching Physics, Grades 8-12 (Option 8)
TEMA	Temporary Certificate For Mathematics, Grades 8-12
TEPH	Temporary Certificate For Physics, Grades 8-12
TETE	Temporary Certificate For Engineering and Technology, Grades 5-12
TPMA	Temporary Provisional Certificate For Math, Grades 8-12
TPPH	Temporary Provisional Certificate For Physics, Grades 8-12
TPTE	Temporary Provisional Certificate For Engineering and Technology, Grades 5-12
WIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
WITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
WMA	Professional Certificate For Teaching Mathematics, Grades 8 Through 12
WMAI	Provisional Internship Certificate For Teaching Mathematics, Grades 8 Through 12
WPH	Professional Certificate For Teaching Physics, Grades 8-12
WPHI	Provisional Certificate For Internship For Teaching Physics, Grades 8-12
WPS	Professional Certificate For Teaching Physical Science, Grades 8 Through 12
WPSI	Provisional Internship Certificate For Teaching Physical Science, Grades 8 Through 12
WTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
WTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
X98	Emergency Certificate For Teaching Engineering and Technology

210235 - Introduction to Space System Engineering I

Grade Level: 11 - 12

Credits: 1-3

Description: The course introduces students to satellites and space systems: orbital mechanics; the space environment; satellite application; spacecraft design consideration; the roles universities, industry and government play in space exploration, and future technologies of spacecrafts and satellites.

Content: Aerospace Engineering

Population: General

729	Engineering Technology
791	Air Craft Mechanic
806	Aviation Technology
A50	Area Specialization: Science
A70	Area Specialization: Mathematics-Physical Science
A94	Area Specialization: Industrial Arts
A95	Area Specialization: Industrial Education-- Orientation And Exploration Levels
A99	Area Specialization: Technology Education
AJKT	Adjunct Instructor For Teaching Engineering and Technology, Grades 5-12
AJMA	Adjunct Instructor For Math, Grades 8-12
AJPH	Adjunct Instructor For Physics, Grades 8-12
B50	Teaching Major: Science
B53	Teaching Major: Physics
B71	Teaching Major: Mathematics
B74	Teaching Major: Computer Science And Mathematics
B94	Teaching Major: Industrial Arts
B95	Teaching Major: Industrial Education -- Orientation And Exploration Levels
C50	Teaching Minor: Science
C53	Teaching Minor: Physics
C71	Teaching Minor: Mathematics
C94	Teaching Minor: Industrial Arts
CMA	Professional Certificate For College Faculty, Mathematics, Grades 8-12
CMAI	Provisional Internship Certificate For College Faculty, Mathematics, Grades 8-12
COMA	Conditional One-Year Certificate For Math, Grades 8-12
COTE	Conditional One-Year Certificate For Engineering and Technology, Grades 5-12
CPH	Professional Certificate For College Faculty, Physics, Grades 8-12
CPHI	Provisional Internship Certificate For College Faculty, Physics, Grades 8-12
KIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITR	Probationary Certificate For Teaching Industrial Technology, Grades 5 Through 12
KMA	Professional Certificate For Teaching Mathematics, Grades 8 Through 12
KMAI	Provisional Internship Certificate For Teaching Mathematics, Grades 8 Through 12
KMAL	Certificate For Teaching Kentucky Math Limited, Grades 8-12
KPH	Professional Certificate For Teaching Physics, Grades 8-12
KPHI	Provisional Internship Certificate For Teaching Physics, Grades 8 Through 12
KPHL	Certificate for Teaching Kentucky Physics Limited, Grades 8-12
KPS	Professional Certificate For Teaching Physical Science, Grades 8 Through 12
KPSI	Provisional Internship Certificate For Teaching Physical Science, Grades 8 Through 12
KTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
KTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
KTER	Probationary Certificate For Teaching Engineering and Technology, Grades 5 Through 12
M95	Endorsement For Teaching Industrial Education Orientation And Exploration Levels, Grades 5-8
QMA	Teaching Field: Mathematics
R53	Area Specialization: Science Limited To Physics
T8MA	Temporary Provisional Certificate For Teaching Mathematics, Grades 8-12 (Option 8)
T8PH	Temporary Provisional Certificate For Teaching Physics, Grades 8-12 (Option 8)
TEMA	Temporary Certificate For Mathematics, Grades 8-12
TEPH	Temporary Certificate For Physics, Grades 8-12
TETE	Temporary Certificate For Engineering and Technology, Grades 5-12
TPMA	Temporary Provisional Certificate For Math, Grades 8-12
TPPH	Temporary Provisional Certificate For Physics, Grades 8-12
TPTE	Temporary Provisional Certificate For Engineering and Technology, Grades 5-12
WIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
WITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
WMA	Professional Certificate For Teaching Mathematics, Grades 8 Through 12
WMAI	Provisional Internship Certificate For Teaching Mathematics, Grades 8 Through 12
WPH	Professional Certificate For Teaching Physics, Grades 8-12
WPHI	Provisional Certificate For Internship For Teaching Physics, Grades 8-12
WPS	Professional Certificate For Teaching Physical Science, Grades 8 Through 12
WPSI	Provisional Internship Certificate For Teaching Physical Science, Grades 8 Through 12
WTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12

WTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
X98	Emergency Certificate For Teaching Engineering and Technology

210236 - Space System Engineering II

Grade Level: 11 - 12

Credits: 1-3

Description: Prerequisite: (Intro to Space Systems Engineering I) The course is a continuation to the study of Satellites and Space systems I, including satellite subsystems (telecommunication systems, power systems, attitude determination and control, and payloads), spacecraft structures, sensors, thermal considerations, manufacturing processes, pre-flight, launch integration, and ground segment.

Content: Aerospace Engineering

Population: General

729	Engineering Technology
791	Air Craft Mechanic
806	Aviation Technology
A50	Area Specialization: Science
A70	Area Specialization: Mathematics-Physical Science
A94	Area Specialization: Industrial Arts
A95	Area Specialization: Industrial Education-- Orientation And Exploration Levels
A99	Area Specialization: Technology Education
AJKT	Adjunct Instructor For Teaching Engineering and Technology, Grades 5-12
AJMA	Adjunct Instructor For Math, Grades 8-12
AJPH	Adjunct Instructor For Physics, Grades 8-12
B50	Teaching Major: Science
B53	Teaching Major: Physics
B71	Teaching Major: Mathematics
B74	Teaching Major: Computer Science And Mathematics
B94	Teaching Major: Industrial Arts
B95	Teaching Major: Industrial Education -- Orientation And Exploration Levels
C50	Teaching Minor: Science
C53	Teaching Minor: Physics
C71	Teaching Minor: Mathematics
C94	Teaching Minor: Industrial Arts
CMA	Professional Certificate For College Faculty, Mathematics, Grades 8-12
CMAI	Provisional Internship Certificate For College Faculty, Mathematics, Grades 8-12
COMA	Conditional One-Year Certificate For Math, Grades 8-12
COTE	Conditional One-Year Certificate For Engineering and Technology, Grades 5-12
CPH	Professional Certificate For College Faculty, Physics, Grades 8-12
CPHI	Provisional Internship Certificate For College Faculty, Physics, Grades 8-12
KIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITR	Probationary Certificate For Teaching Industrial Technology, Grades 5 Through 12
KMA	Professional Certificate For Teaching Mathematics, Grades 8 Through 12
KMAI	Provisional Internship Certificate For Teaching Mathematics, Grades 8 Through 12
KMAL	Certificate For Teaching Kentucky Math Limited, Grades 8-12
KPH	Professional Certificate For Teaching Physics, Grades 8-12
KPHI	Provisional Internship Certificate For Teaching Physics, Grades 8 Through 12
KPHL	Certificate for Teaching Kentucky Physics Limited, Grades 8-12
KPS	Professional Certificate For Teaching Physical Science, Grades 8 Through 12
KPSI	Provisional Internship Certificate For Teaching Physical Science, Grades 8 Through 12
KTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
KTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
KTER	Probationary Certificate For Teaching Engineering and Technology, Grades 5 Through 12
M95	Endorsement For Teaching Industrial Education Orientation And Exploration Levels, Grades 5-8
QMA	Teaching Field: Mathematics
R53	Area Specialization: Science Limited To Physics
T8MA	Temporary Provisional Certificate For Teaching Mathematics, Grades 8-12 (Option 8)

T8PH	Temporary Provisional Certificate For Teaching Physics, Grades 8-12 (Option 8)
TEMA	Temporary Certificate For Mathematics, Grades 8-12
TEPH	Temporary Certificate For Physics, Grades 8-12
TETE	Temporary Certificate For Engineering and Technology, Grades 5-12
TPMA	Temporary Provisional Certificate For Math, Grades 8-12
TPPH	Temporary Provisional Certificate For Physics, Grades 8-12
TPTE	Temporary Provisional Certificate For Engineering and Technology, Grades 5-12
WIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
WITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
WMA	Professional Certificate For Teaching Mathematics, Grades 8 Through 12
WMAI	Provisional Internship Certificate For Teaching Mathematics, Grades 8 Through 12
WPH	Professional Certificate For Teaching Physics, Grades 8-12
WPHI	Provisional Certificate For Internship For Teaching Physics, Grades 8-12
WPS	Professional Certificate For Teaching Physical Science, Grades 8 Through 12
WPSI	Provisional Internship Certificate For Teaching Physical Science, Grades 8 Through 12
WTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
WTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
X98	Emergency Certificate For Teaching Engineering and Technology

210237 - Commercial Aviation Science

Grade Level: 11 - 12

Credits: 1-3

Description: This course discusses the Federal Aviation Regulations covering the privileges, limitations, and operations of a commercial pilot, and the operations for which an air taxi/commercial operator, agricultural aircraft operator, and external load operator certificate, waiver, or exemption is required. The course also discusses the safe and efficient operation of airplanes, including inspection and certification requirements, operating limitations, high altitude operations and physiological considerations, loading computations, the significance of the use of airplane performance speeds, the computations involved in runway and obstacle clearance and cross wind component considerations, and cruise control.

Content: Aerospace Engineering

Population: General

729	Engineering Technology
791	Air Craft Mechanic
806	Aviation Technology
A50	Area Specialization: Science
A70	Area Specialization: Mathematics-Physical Science
A94	Area Specialization: Industrial Arts
A95	Area Specialization: Industrial Education-- Orientation And Exploration Levels
A99	Area Specialization: Technology Education
AJKT	Adjunct Instructor For Teaching Engineering and Technology, Grades 5-12
AJMA	Adjunct Instructor For Math, Grades 8-12
AJPH	Adjunct Instructor For Physics, Grades 8-12
B50	Teaching Major: Science
B53	Teaching Major: Physics
B71	Teaching Major: Mathematics
B74	Teaching Major: Computer Science And Mathematics
B94	Teaching Major: Industrial Arts
B95	Teaching Major: Industrial Education -- Orientation And Exploration Levels
C50	Teaching Minor: Science
C53	Teaching Minor: Physics
C71	Teaching Minor: Mathematics
C94	Teaching Minor: Industrial Arts
CMA	Professional Certificate For College Faculty, Mathematics, Grades 8-12
CMAI	Provisional Internship Certificate For College Faculty, Mathematics, Grades 8-12
COMA	Conditional One-Year Certificate For Math, Grades 8-12
COTE	Conditional One-Year Certificate For Engineering and Technology, Grades 5-12
CPH	Professional Certificate For College Faculty, Physics, Grades 8-12

CPI	Provisional Internship Certificate For College Faculty, Physics, Grades 8-12
KIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITR	Probationary Certificate For Teaching Industrial Technology, Grades 5 Through 12
KMA	Professional Certificate For Teaching Mathematics, Grades 8 Through 12
KMAI	Provisional Internship Certificate For Teaching Mathematics, Grades 8 Through 12
KMAL	Certificate For Teaching Kentucky Math Limited, Grades 8-12
KPH	Professional Certificate For Teaching Physics, Grades 8-12
KPHI	Provisional Internship Certificate For Teaching Physics, Grades 8 Through 12
KPHL	Certificate for Teaching Kentucky Physics Limited, Grades 8-12
KPS	Professional Certificate For Teaching Physical Science, Grades 8 Through 12
KPSI	Provisional Internship Certificate For Teaching Physical Science, Grades 8 Through 12
KTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
KTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
KTER	Probationary Certificate For Teaching Engineering and Technology, Grades 5 Through 12
M95	Endorsement For Teaching Industrial Education Orientation And Exploration Levels, Grades 5-8
QMA	Teaching Field: Mathematics
R53	Area Specialization: Science Limited To Physics
T8MA	Temporary Provisional Certificate For Teaching Mathematics, Grades 8-12 (Option 8)
T8PH	Temporary Provisional Certificate For Teaching Physics, Grades 8-12 (Option 8)
TEMA	Temporary Certificate For Mathematics, Grades 8-12
TEPH	Temporary Certificate For Physics, Grades 8-12
TETE	Temporary Certificate For Engineering and Technology, Grades 5-12
TPMA	Temporary Provisional Certificate For Math, Grades 8-12
TPPH	Temporary Provisional Certificate For Physics, Grades 8-12
TPTE	Temporary Provisional Certificate For Engineering and Technology, Grades 5-12
WIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
WITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
WMA	Professional Certificate For Teaching Mathematics, Grades 8 Through 12
WMAI	Provisional Internship Certificate For Teaching Mathematics, Grades 8 Through 12
WPH	Professional Certificate For Teaching Physics, Grades 8-12
WPHI	Provisional Certificate For Internship For Teaching Physics, Grades 8-12
WPS	Professional Certificate For Teaching Physical Science, Grades 8 Through 12
WPSI	Provisional Internship Certificate For Teaching Physical Science, Grades 8 Through 12
WTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
WTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
X98	Emergency Certificate For Teaching Engineering and Technology

210238 - Foundations of Robotics

Grade Level: 9 - 10

Credits: 1

Description: This course provides students with the foundation in content and skills associated with robotics and automation, including artificial intelligence, electronics, physics, and principles of engineering.

Content: Engineering

Population: General

729	Engineering Technology
A50	Area Specialization: Science
A70	Area Specialization: Mathematics-Physical Science
A94	Area Specialization: Industrial Arts
A95	Area Specialization: Industrial Education-- Orientation And Exploration Levels
A99	Area Specialization: Technology Education
AJKT	Adjunct Instructor For Teaching Engineering and Technology, Grades 5-12
AJMA	Adjunct Instructor For Math, Grades 8-12
AJPH	Adjunct Instructor For Physics, Grades 8-12
B50	Teaching Major: Science
B53	Teaching Major: Physics
B71	Teaching Major: Mathematics

B74	Teaching Major: Computer Science And Mathematics
B94	Teaching Major: Industrial Arts
B95	Teaching Major: Industrial Education -- Orientation And Exploration Levels
C50	Teaching Minor: Science
C53	Teaching Minor: Physics
C71	Teaching Minor: Mathematics
C94	Teaching Minor: Industrial Arts
CMA	Professional Certificate For College Faculty, Mathematics, Grades 8-12
CMAI	Provisional Internship Certificate For College Faculty, Mathematics, Grades 8-12
COMA	Conditional One-Year Certificate For Math, Grades 8-12
COTE	Conditional One-Year Certificate For Engineering and Technology, Grades 5-12
CPH	Professional Certificate For College Faculty, Physics, Grades 8-12
CPHI	Provisional Internship Certificate For College Faculty, Physics, Grades 8-12
KIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITR	Probationary Certificate For Teaching Industrial Technology, Grades 5 Through 12
KMA	Professional Certificate For Teaching Mathematics, Grades 8 Through 12
KMAI	Provisional Internship Certificate For Teaching Mathematics, Grades 8 Through 12
KMAL	Certificate For Teaching Kentucky Math Limited, Grades 8-12
KPH	Professional Certificate For Teaching Physics, Grades 8-12
KPHI	Provisional Internship Certificate For Teaching Physics, Grades 8 Through 12
KPHL	Certificate for Teaching Kentucky Physics Limited, Grades 8-12
KPS	Professional Certificate For Teaching Physical Science, Grades 8 Through 12
KPSI	Provisional Internship Certificate For Teaching Physical Science, Grades 8 Through 12
KTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
KTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
KTER	Probationary Certificate For Teaching Engineering and Technology, Grades 5 Through 12
M95	Endorsement For Teaching Industrial Education Orientation And Exploration Levels, Grades 5-8
QMA	Teaching Field: Mathematics
R53	Area Specialization: Science Limited To Physics
T8MA	Temporary Provisional Certificate For Teaching Mathematics, Grades 8-12 (Option 8)
T8PH	Temporary Provisional Certificate For Teaching Physics, Grades 8-12 (Option 8)
TEMA	Temporary Certificate For Mathematics, Grades 8-12
TEPH	Temporary Certificate For Physics, Grades 8-12
TETE	Temporary Certificate For Engineering and Technology, Grades 5-12
TPMA	Temporary Provisional Certificate For Math, Grades 8-12
TPPH	Temporary Provisional Certificate For Physics, Grades 8-12
TPPS	Temporary Provisional Certificate For Physical Science, Grades 8-12
TPTE	Temporary Provisional Certificate For Engineering and Technology, Grades 5-12
WIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
WITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
WMA	Professional Certificate For Teaching Mathematics, Grades 8 Through 12
WMAI	Provisional Internship Certificate For Teaching Mathematics, Grades 8 Through 12
WPH	Professional Certificate For Teaching Physics, Grades 8-12
WPHI	Provisional Certificate For Internship For Teaching Physics, Grades 8-12
WPS	Professional Certificate For Teaching Physical Science, Grades 8 Through 12
WPSI	Provisional Internship Certificate For Teaching Physical Science, Grades 8 Through 12
WTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
WTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
X98	Emergency Certificate For Teaching Engineering and Technology

210239 - Robotics Design Essentials and Systems

Grade Level: 9 - 12

Credits: 1

Description: Prerequisite: (Foundations of Robotics) This course provides students with content and skills essential to the design and operation of robotic systems. Students activities will include artificial intelligence specialized sensors, electronic applications, engineering technologies, environmental physics, manufacturing, topographical considerations, programming, motions physics, electric motors, communications, simulations,

simulation and modeling, and critical thinking skills.

Content: Engineering

Population: General

729	Engineering Technology
A50	Area Specialization: Science
A70	Area Specialization: Mathematics-Physical Science
A94	Area Specialization: Industrial Arts
A95	Area Specialization: Industrial Education-- Orientation And Exploration Levels
A99	Area Specialization: Technology Education
AJKT	Adjunct Instructor For Teaching Engineering and Technology, Grades 5-12
AJMA	Adjunct Instructor For Math, Grades 8-12
AJPH	Adjunct Instructor For Physics, Grades 8-12
B50	Teaching Major: Science
B53	Teaching Major: Physics
B71	Teaching Major: Mathematics
B74	Teaching Major: Computer Science And Mathematics
B94	Teaching Major: Industrial Arts
B95	Teaching Major: Industrial Education -- Orientation And Exploration Levels
C50	Teaching Minor: Science
C53	Teaching Minor: Physics
C71	Teaching Minor: Mathematics
C94	Teaching Minor: Industrial Arts
CMA	Professional Certificate For College Faculty, Mathematics, Grades 8-12
CMAI	Provisional Internship Certificate For College Faculty, Mathematics, Grades 8-12
COMA	Conditional One-Year Certificate For Math, Grades 8-12
COTE	Conditional One-Year Certificate For Engineering and Technology, Grades 5-12
CPH	Professional Certificate For College Faculty, Physics, Grades 8-12
CPHI	Provisional Internship Certificate For College Faculty, Physics, Grades 8-12
KIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITR	Probationary Certificate For Teaching Industrial Technology, Grades 5 Through 12
KMA	Professional Certificate For Teaching Mathematics, Grades 8 Through 12
KMAI	Provisional Internship Certificate For Teaching Mathematics, Grades 8 Through 12
KMAL	Certificate For Teaching Kentucky Math Limited, Grades 8-12
KPH	Professional Certificate For Teaching Physics, Grades 8-12
KPHI	Provisional Internship Certificate For Teaching Physics, Grades 8 Through 12
KPHL	Certificate for Teaching Kentucky Physics Limited, Grades 8-12
KPS	Professional Certificate For Teaching Physical Science, Grades 8 Through 12
KPSI	Provisional Internship Certificate For Teaching Physical Science, Grades 8 Through 12
KTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
KTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
KTER	Probationary Certificate For Teaching Engineering and Technology, Grades 5 Through 12
M95	Endorsement For Teaching Industrial Education Orientation And Exploration Levels, Grades 5-8
QMA	Teaching Field: Mathematics
R53	Area Specialization: Science Limited To Physics
T8MA	Temporary Provisional Certificate For Teaching Mathematics, Grades 8-12 (Option 8)
T8PH	Temporary Provisional Certificate For Teaching Physics, Grades 8-12 (Option 8)
TEMA	Temporary Certificate For Mathematics, Grades 8-12
TEPH	Temporary Certificate For Physics, Grades 8-12
TETE	Temporary Certificate For Engineering and Technology, Grades 5-12
TPMA	Temporary Provisional Certificate For Math, Grades 8-12
TPPH	Temporary Provisional Certificate For Physics, Grades 8-12
TPPS	Temporary Provisional Certificate For Physical Science, Grades 8-12
TPTE	Temporary Provisional Certificate For Engineering and Technology, Grades 5-12
WIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
WITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
WMA	Professional Certificate For Teaching Mathematics, Grades 8 Through 12
WMAI	Provisional Internship Certificate For Teaching Mathematics, Grades 8 Through 12
WPH	Professional Certificate For Teaching Physics, Grades 8-12
WPHI	Provisional Certificate For Internship For Teaching Physics, Grades 8-12

WPS	Professional Certificate For Teaching Physical Science, Grades 8 Through 12
WPSI	Provisional Internship Certificate For Teaching Physical Science, Grades 8 Through 12
WTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
WTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
X98	Emergency Certificate For Teaching Engineering and Technology

210240 - Robotic Application Capstone

Grade Level: 11 - 12

Credits: 1-3

Description: Prerequisite: (Foundations of Robotics and Robotic Design) This course provides students with extended and skills essential to the design and operation of autonomous robotic systems in the context of a capstone project. Students will design and build an autonomous robot to perform pre-designed tasks.

Content: Engineering

Population: General

729	Engineering Technology
A50	Area Specialization: Science
A70	Area Specialization: Mathematics-Physical Science
A94	Area Specialization: Industrial Arts
A95	Area Specialization: Industrial Education-- Orientation And Exploration Levels
A99	Area Specialization: Technology Education
AJKT	Adjunct Instructor For Teaching Engineering and Technology, Grades 5-12
AJMA	Adjunct Instructor For Math, Grades 8-12
AJPH	Adjunct Instructor For Physics, Grades 8-12
B50	Teaching Major: Science
B53	Teaching Major: Physics
B71	Teaching Major: Mathematics
B74	Teaching Major: Computer Science And Mathematics
B94	Teaching Major: Industrial Arts
B95	Teaching Major: Industrial Education -- Orientation And Exploration Levels
C50	Teaching Minor: Science
C53	Teaching Minor: Physics
C71	Teaching Minor: Mathematics
C94	Teaching Minor: Industrial Arts
CMA	Professional Certificate For College Faculty, Mathematics, Grades 8-12
CMAI	Provisional Internship Certificate For College Faculty, Mathematics, Grades 8-12
COMA	Conditional One-Year Certificate For Math, Grades 8-12
COTE	Conditional One-Year Certificate For Engineering and Technology, Grades 5-12
CPH	Professional Certificate For College Faculty, Physics, Grades 8-12
CPHI	Provisional Internship Certificate For College Faculty, Physics, Grades 8-12
KIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITR	Probationary Certificate For Teaching Industrial Technology, Grades 5 Through 12
KMA	Professional Certificate For Teaching Mathematics, Grades 8 Through 12
KMAI	Provisional Internship Certificate For Teaching Mathematics, Grades 8 Through 12
KMAL	Certificate For Teaching Kentucky Math Limited, Grades 8-12
KPH	Professional Certificate For Teaching Physics, Grades 8-12
KPHI	Provisional Internship Certificate For Teaching Physics, Grades 8 Through 12
KPHL	Certificate for Teaching Kentucky Physics Limited, Grades 8-12
KPS	Professional Certificate For Teaching Physical Science, Grades 8 Through 12
KPSI	Provisional Internship Certificate For Teaching Physical Science, Grades 8 Through 12
KTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
KTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
KTER	Probationary Certificate For Teaching Engineering and Technology, Grades 5 Through 12
M95	Endorsement For Teaching Industrial Education Orientation And Exploration Levels, Grades 5-8
QMA	Teaching Field: Mathematics
R53	Area Specialization: Science Limited To Physics
T8MA	Temporary Provisional Certificate For Teaching Mathematics, Grades 8-12 (Option 8)

T8PH	Temporary Provisional Certificate For Teaching Physics, Grades 8-12 (Option 8)
TEMA	Temporary Certificate For Mathematics, Grades 8-12
TEPH	Temporary Certificate For Physics, Grades 8-12
TETE	Temporary Certificate For Engineering and Technology, Grades 5-12
TPMA	Temporary Provisional Certificate For Math, Grades 8-12
TPPH	Temporary Provisional Certificate For Physics, Grades 8-12
TPPS	Temporary Provisional Certificate For Physical Science, Grades 8-12
TPTE	Temporary Provisional Certificate For Engineering and Technology, Grades 5-12
WIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
WITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
WMA	Professional Certificate For Teaching Mathematics, Grades 8 Through 12
WMAI	Provisional Internship Certificate For Teaching Mathematics, Grades 8 Through 12
WPH	Professional Certificate For Teaching Physics, Grades 8-12
WPHI	Provisional Certificate For Internship For Teaching Physics, Grades 8-12
WPS	Professional Certificate For Teaching Physical Science, Grades 8 Through 12
WPSI	Provisional Internship Certificate For Teaching Physical Science, Grades 8 Through 12
WTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
WTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
X98	Emergency Certificate For Teaching Engineering and Technology

210242 - Introduction to Alternative Energy I

Grade Level: 10 - 11

Credits: 1

Description: This course provides students with the foundation in content and skills associated with various energy sources, and electrical power generation, transmission, and distribution. Students will develop competencies in the area of energy history and the global impact of renewable and non-renewable resources; career opportunities; environmental principles, working with AC/DC electrical circuits, and transfer of various energy forms to produce DC current. Laboratory-based activities are an integral part of the course that includes safe use and application of appropriate technology, scientific testing and observation equipment.

Content: Engineering

Population: General

729	Engineering Technology
A50	Area Specialization: Science
A70	Area Specialization: Mathematics-Physical Science
A94	Area Specialization: Industrial Arts
A95	Area Specialization: Industrial Education-- Orientation And Exploration Levels
A99	Area Specialization: Technology Education
AJKT	Adjunct Instructor For Teaching Engineering and Technology, Grades 5-12
AJMA	Adjunct Instructor For Math, Grades 8-12
AJPH	Adjunct Instructor For Physics, Grades 8-12
B50	Teaching Major: Science
B53	Teaching Major: Physics
B71	Teaching Major: Mathematics
B74	Teaching Major: Computer Science And Mathematics
B94	Teaching Major: Industrial Arts
B95	Teaching Major: Industrial Education -- Orientation And Exploration Levels
C50	Teaching Minor: Science
C53	Teaching Minor: Physics
C71	Teaching Minor: Mathematics
C94	Teaching Minor: Industrial Arts
CMA	Professional Certificate For College Faculty, Mathematics, Grades 8-12
CMAI	Provisional Internship Certificate For College Faculty, Mathematics, Grades 8-12
COMA	Conditional One-Year Certificate For Math, Grades 8-12
COTE	Conditional One-Year Certificate For Engineering and Technology, Grades 5-12
CPH	Professional Certificate For College Faculty, Physics, Grades 8-12
CPHI	Provisional Internship Certificate For College Faculty, Physics, Grades 8-12

KIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITR	Probationary Certificate For Teaching Industrial Technology, Grades 5 Through 12
KMA	Professional Certificate For Teaching Mathematics, Grades 8 Through 12
KMAI	Provisional Internship Certificate For Teaching Mathematics, Grades 8 Through 12
KMAL	Certificate For Teaching Kentucky Math Limited, Grades 8-12
KPH	Professional Certificate For Teaching Physics, Grades 8-12
KPHI	Provisional Internship Certificate For Teaching Physics, Grades 8 Through 12
KPHL	Certificate for Teaching Kentucky Physics Limited, Grades 8-12
KPS	Professional Certificate For Teaching Physical Science, Grades 8 Through 12
KPSI	Provisional Internship Certificate For Teaching Physical Science, Grades 8 Through 12
KTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
KTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
KTER	Probationary Certificate For Teaching Engineering and Technology, Grades 5 Through 12
M95	Endorsement For Teaching Industrial Education Orientation And Exploration Levels, Grades 5-8
QMA	Teaching Field: Mathematics
R53	Area Specialization: Science Limited To Physics
T8MA	Temporary Provisional Certificate For Teaching Mathematics, Grades 8-12 (Option 8)
T8PH	Temporary Provisional Certificate For Teaching Physics, Grades 8-12 (Option 8)
TEMA	Temporary Certificate For Mathematics, Grades 8-12
TEPH	Temporary Certificate For Physics, Grades 8-12
TETE	Temporary Certificate For Engineering and Technology, Grades 5-12
TPMA	Temporary Provisional Certificate For Math, Grades 8-12
TPPH	Temporary Provisional Certificate For Physics, Grades 8-12
TPPS	Temporary Provisional Certificate For Physical Science, Grades 8-12
TPTE	Temporary Provisional Certificate For Engineering and Technology, Grades 5-12
WIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
WITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
WMA	Professional Certificate For Teaching Mathematics, Grades 8 Through 12
WMAI	Provisional Internship Certificate For Teaching Mathematics, Grades 8 Through 12
WPH	Professional Certificate For Teaching Physics, Grades 8-12
WPHI	Provisional Certificate For Internship For Teaching Physics, Grades 8-12
WPS	Professional Certificate For Teaching Physical Science, Grades 8 Through 12
WPSI	Provisional Internship Certificate For Teaching Physical Science, Grades 8 Through 12
WTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
WTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
X98	Emergency Certificate For Teaching Engineering and Technology

210243 - Alternative Energy II

Grade Level: 10 - 12

Credits: 1

Description: Prerequisite: (Intro to Alternative Energy I) This course is a continuation of Energy I concepts, skills and knowledge to study further in detail specific energy sources that may relate to renewable and non-renewable resources in our local and state. This course is designed to develop competencies in the areas of energy history and the global impact of renewable and non-renewable resources; career opportunities; scientific and research concepts; biological and physical science principles; environmental principles; and solar energy safety. Laboratory-based activities are an integral part of the course that includes safe use and application of appropriate technology, scientific testing and observation equipment.

Content: Engineering

Population: General

729	Engineering Technology
A50	Area Specialization: Science
A70	Area Specialization: Mathematics-Physical Science
A94	Area Specialization: Industrial Arts
A95	Area Specialization: Industrial Education-- Orientation And Exploration Levels
A99	Area Specialization: Technology Education
AJKT	Adjunct Instructor For Teaching Engineering and Technology, Grades 5-12

AJMA	Adjunct Instructor For Math, Grades 8-12
AJPH	Adjunct Instructor For Physics, Grades 8-12
B50	Teaching Major: Science
B53	Teaching Major: Physics
B71	Teaching Major: Mathematics
B74	Teaching Major: Computer Science And Mathematics
B94	Teaching Major: Industrial Arts
B95	Teaching Major: Industrial Education -- Orientation And Exploration Levels
C50	Teaching Minor: Science
C53	Teaching Minor: Physics
C71	Teaching Minor: Mathematics
C94	Teaching Minor: Industrial Arts
CMA	Professional Certificate For College Faculty, Mathematics, Grades 8-12
CMAI	Provisional Internship Certificate For College Faculty, Mathematics, Grades 8-12
COMA	Conditional One-Year Certificate For Math, Grades 8-12
COTE	Conditional One-Year Certificate For Engineering and Technology, Grades 5-12
CPH	Professional Certificate For College Faculty, Physics, Grades 8-12
CPHI	Provisional Internship Certificate For College Faculty, Physics, Grades 8-12
KIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITR	Probationary Certificate For Teaching Industrial Technology, Grades 5 Through 12
KMA	Professional Certificate For Teaching Mathematics, Grades 8 Through 12
KMAI	Provisional Internship Certificate For Teaching Mathematics, Grades 8 Through 12
KMAL	Certificate For Teaching Kentucky Math Limited, Grades 8-12
KPH	Professional Certificate For Teaching Physics, Grades 8-12
KPHI	Provisional Internship Certificate For Teaching Physics, Grades 8 Through 12
KPHL	Certificate for Teaching Kentucky Physics Limited, Grades 8-12
KPS	Professional Certificate For Teaching Physical Science, Grades 8 Through 12
KPSI	Provisional Internship Certificate For Teaching Physical Science, Grades 8 Through 12
KTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
KTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
KTER	Probationary Certificate For Teaching Engineering and Technology, Grades 5 Through 12
M95	Endorsement For Teaching Industrial Education Orientation And Exploration Levels, Grades 5-8
QMA	Teaching Field: Mathematics
R53	Area Specialization: Science Limited To Physics
T8MA	Temporary Provisional Certificate For Teaching Mathematics, Grades 8-12 (Option 8)
T8PH	Temporary Provisional Certificate For Teaching Physics, Grades 8-12 (Option 8)
TEMA	Temporary Certificate For Mathematics, Grades 8-12
TEPH	Temporary Certificate For Physics, Grades 8-12
TETE	Temporary Certificate For Engineering and Technology, Grades 5-12
TPMA	Temporary Provisional Certificate For Math, Grades 8-12
TPPH	Temporary Provisional Certificate For Physics, Grades 8-12
TPPS	Temporary Provisional Certificate For Physical Science, Grades 8-12
TPTE	Temporary Provisional Certificate For Engineering and Technology, Grades 5-12
WIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
WITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
WMA	Professional Certificate For Teaching Mathematics, Grades 8 Through 12
WMAI	Provisional Internship Certificate For Teaching Mathematics, Grades 8 Through 12
WPH	Professional Certificate For Teaching Physics, Grades 8-12
WPHI	Provisional Certificate For Internship For Teaching Physics, Grades 8-12
WPS	Professional Certificate For Teaching Physical Science, Grades 8 Through 12
WPSI	Provisional Internship Certificate For Teaching Physical Science, Grades 8 Through 12
WTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
WTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
X98	Emergency Certificate For Teaching Engineering and Technology

210244 - Global Energy Issues

Grade Level: 10 - 12

Credits: 1

Description: This course critically examines issues associated with the technical, economic, societal, environmental, and geopolitical aspects of energy and sustainability. Students will develop competencies in the area of energy history and the global impact of renewable and non-renewable resources; career opportunities; environmental principles. The course is taught through lectures, discussions, hands on activities, field trips and invited speakers.

Content: Engineering

Population: General

729	Engineering Technology
A50	Area Specialization: Science
A70	Area Specialization: Mathematics-Physical Science
A94	Area Specialization: Industrial Arts
A95	Area Specialization: Industrial Education-- Orientation And Exploration Levels
A99	Area Specialization: Technology Education
AJKT	Adjunct Instructor For Teaching Engineering and Technology, Grades 5-12
AJMA	Adjunct Instructor For Math, Grades 8-12
AJPH	Adjunct Instructor For Physics, Grades 8-12
B50	Teaching Major: Science
B53	Teaching Major: Physics
B71	Teaching Major: Mathematics
B74	Teaching Major: Computer Science And Mathematics
B94	Teaching Major: Industrial Arts
B95	Teaching Major: Industrial Education -- Orientation And Exploration Levels
C50	Teaching Minor: Science
C53	Teaching Minor: Physics
C71	Teaching Minor: Mathematics
C94	Teaching Minor: Industrial Arts
CMA	Professional Certificate For College Faculty, Mathematics, Grades 8-12
CMAI	Provisional Internship Certificate For College Faculty, Mathematics, Grades 8-12
COMA	Conditional One-Year Certificate For Math, Grades 8-12
COTE	Conditional One-Year Certificate For Engineering and Technology, Grades 5-12
CPH	Professional Certificate For College Faculty, Physics, Grades 8-12
CPHI	Provisional Internship Certificate For College Faculty, Physics, Grades 8-12
KIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITR	Probationary Certificate For Teaching Industrial Technology, Grades 5 Through 12
KMA	Professional Certificate For Teaching Mathematics, Grades 8 Through 12
KMAI	Provisional Internship Certificate For Teaching Mathematics, Grades 8 Through 12
KMAL	Certificate For Teaching Kentucky Math Limited, Grades 8-12
KPH	Professional Certificate For Teaching Physics, Grades 8-12
KPHI	Provisional Internship Certificate For Teaching Physics, Grades 8 Through 12
KPHL	Certificate for Teaching Kentucky Physics Limited, Grades 8-12
KPS	Professional Certificate For Teaching Physical Science, Grades 8 Through 12
KPSI	Provisional Internship Certificate For Teaching Physical Science, Grades 8 Through 12
KTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
KTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
KTER	Probationary Certificate For Teaching Engineering and Technology, Grades 5 Through 12
M95	Endorsement For Teaching Industrial Education Orientation And Exploration Levels, Grades 5-8
QMA	Teaching Field: Mathematics
R53	Area Specialization: Science Limited To Physics
T8MA	Temporary Provisional Certificate For Teaching Mathematics, Grades 8-12 (Option 8)
T8PH	Temporary Provisional Certificate For Teaching Physics, Grades 8-12 (Option 8)
TEMA	Temporary Certificate For Mathematics, Grades 8-12
TEPH	Temporary Certificate For Physics, Grades 8-12
TETE	Temporary Certificate For Engineering and Technology, Grades 5-12

TPMA	Temporary Provisional Certificate For Math, Grades 8-12
TPPH	Temporary Provisional Certificate For Physics, Grades 8-12
TPPS	Temporary Provisional Certificate For Physical Science, Grades 8-12
TPTE	Temporary Provisional Certificate For Engineering and Technology, Grades 5-12
WIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
WITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
WMA	Professional Certificate For Teaching Mathematics, Grades 8 Through 12
WMAI	Provisional Internship Certificate For Teaching Mathematics, Grades 8 Through 12
WPH	Professional Certificate For Teaching Physics, Grades 8-12
WPHI	Provisional Certificate For Internship For Teaching Physics, Grades 8-12
WPS	Professional Certificate For Teaching Physical Science, Grades 8 Through 12
WPSI	Provisional Internship Certificate For Teaching Physical Science, Grades 8 Through 12
WTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
WTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
X98	Emergency Certificate For Teaching Engineering and Technology

210290 - Special Topics, Engineering (non-PLTW)

Grade Level: 9 - 12

Credits: 1-4

Description: Special Technology topics allows the teacher to develop a course for in-depth exploration of technological topics. This is a laboratory-based course designed to study a technological system or topic, and/or a recent technological advancement. This study should include how this advancement affects society and/or the environment. A culminating project integrating one or more of the seven contexts of technological literacy and the Kentucky Core Content is encouraged. It should include research, design, construction, analysis, writing, and presenting. Instruction should be enriched through participation in Kentucky technology Student Association. This course may be 18 to 36 weeks in duration.

Content: Engineering

Population: General

729	Engineering Technology
A50	Area Specialization: Science
A70	Area Specialization: Mathematics-Physical Science
A94	Area Specialization: Industrial Arts
A95	Area Specialization: Industrial Education-- Orientation And Exploration Levels
A99	Area Specialization: Technology Education
AJKT	Adjunct Instructor For Teaching Engineering and Technology, Grades 5-12
AJMA	Adjunct Instructor For Math, Grades 8-12
AJPH	Adjunct Instructor For Physics, Grades 8-12
B50	Teaching Major: Science
B53	Teaching Major: Physics
B71	Teaching Major: Mathematics
B74	Teaching Major: Computer Science And Mathematics
B94	Teaching Major: Industrial Arts
B95	Teaching Major: Industrial Education -- Orientation And Exploration Levels
C50	Teaching Minor: Science
C53	Teaching Minor: Physics
C71	Teaching Minor: Mathematics
C94	Teaching Minor: Industrial Arts
CMA	Professional Certificate For College Faculty, Mathematics, Grades 8-12
CMAI	Provisional Internship Certificate For College Faculty, Mathematics, Grades 8-12
COMA	Conditional One-Year Certificate For Math, Grades 8-12
COTE	Conditional One-Year Certificate For Engineering and Technology, Grades 5-12
CPH	Professional Certificate For College Faculty, Physics, Grades 8-12
CPHI	Provisional Internship Certificate For College Faculty, Physics, Grades 8-12
KIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITR	Probationary Certificate For Teaching Industrial Technology, Grades 5 Through 12
KMA	Professional Certificate For Teaching Mathematics, Grades 8 Through 12

KMAI	Provisional Internship Certificate For Teaching Mathematics, Grades 8 Through 12
KMAL	Certificate For Teaching Kentucky Math Limited, Grades 8-12
KPH	Professional Certificate For Teaching Physics, Grades 8-12
KPHI	Provisional Internship Certificate For Teaching Physics, Grades 8 Through 12
KPHL	Certificate for Teaching Kentucky Physics Limited, Grades 8-12
KPS	Professional Certificate For Teaching Physical Science, Grades 8 Through 12
KPSI	Provisional Internship Certificate For Teaching Physical Science, Grades 8 Through 12
KTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
KTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
KTER	Probationary Certificate For Teaching Engineering and Technology, Grades 5 Through 12
M95	Endorsement For Teaching Industrial Education Orientation And Exploration Levels, Grades 5-8
QMA	Teaching Field: Mathematics
R53	Area Specialization: Science Limited To Physics
T8MA	Temporary Provisional Certificate For Teaching Mathematics, Grades 8-12 (Option 8)
T8PH	Temporary Provisional Certificate For Teaching Physics, Grades 8-12 (Option 8)
TEMA	Temporary Certificate For Mathematics, Grades 8-12
TEPH	Temporary Certificate For Physics, Grades 8-12
TETE	Temporary Certificate For Engineering and Technology, Grades 5-12
TPMA	Temporary Provisional Certificate For Math, Grades 8-12
TPPH	Temporary Provisional Certificate For Physics, Grades 8-12
TPPS	Temporary Provisional Certificate For Physical Science, Grades 8-12
TPTE	Temporary Provisional Certificate For Engineering and Technology, Grades 5-12
WIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
WITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
WMA	Professional Certificate For Teaching Mathematics, Grades 8 Through 12
WMAI	Provisional Internship Certificate For Teaching Mathematics, Grades 8 Through 12
WPH	Professional Certificate For Teaching Physics, Grades 8-12
WPHI	Provisional Certificate For Internship For Teaching Physics, Grades 8-12
WPS	Professional Certificate For Teaching Physical Science, Grades 8 Through 12
WPSI	Provisional Internship Certificate For Teaching Physical Science, Grades 8 Through 12
WTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
WTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
X98	Emergency Certificate For Teaching Engineering and Technology

Engineering and Technology - Career Major Electives (210300)

Courses not falling into one of the other career majors/sub codes

210316 - Leadership Dynamics, Engineering and Technology

Grade Level: 9 - 12

Credits: 1/2-1

Description: This course is designed to assist students with developing skills needed to be successful leaders and responsible members of society. The student will develop personal attributes and social skills. Emphasis will be placed on interpersonal skills, team building communication, personal development and leadership. This course will include opportunities for students to apply their knowledge.

Content: Leadership Dynamics

Population: General

Due to the large number of certificates permitted to teach this course, no certificates are listed. Please check the certificate permissions on the EPSB website to verify a teacher's permission to teach this course. (Must be a CTE certified teacher)

210330 - Engineering and Technology Co-op

Grade Level: 11 - 12

Credits: 1-3

Description: Cooperative Education for CTE courses provide supervised work site experience related to the student's identified career pathway. A student must be enrolled in an approved capstone course during the same school year that the co-op experience is completed. Students who participate receive a salary for these experiences, in accordance with local, state and federal minimum wage requirements.

Content: Engineering

Population: General

729	Engineering Technology
A50	Area Specialization: Science
A70	Area Specialization: Mathematics-Physical Science
A94	Area Specialization: Industrial Arts
A95	Area Specialization: Industrial Education-- Orientation And Exploration Levels
A99	Area Specialization: Technology Education
AJKT	Adjunct Instructor For Teaching Engineering and Technology, Grades 5-12
AJMA	Adjunct Instructor For Math, Grades 8-12
AJPH	Adjunct Instructor For Physics, Grades 8-12
B50	Teaching Major: Science
B53	Teaching Major: Physics
B71	Teaching Major: Mathematics
B74	Teaching Major: Computer Science And Mathematics
B94	Teaching Major: Industrial Arts
B95	Teaching Major: Industrial Education -- Orientation And Exploration Levels
C50	Teaching Minor: Science
C53	Teaching Minor: Physics
C71	Teaching Minor: Mathematics

C94	Teaching Minor: Industrial Arts
CMA	Professional Certificate For College Faculty, Mathematics, Grades 8-12
CMAI	Provisional Internship Certificate For College Faculty, Mathematics, Grades 8-12
COMA	Conditional One-Year Certificate For Math, Grades 8-12
COTE	Conditional One-Year Certificate For Engineering and Technology, Grades 5-12
CPH	Professional Certificate For College Faculty, Physics, Grades 8-12
CPHI	Provisional Internship Certificate For College Faculty, Physics, Grades 8-12
KIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITR	Probationary Certificate For Teaching Industrial Technology, Grades 5 Through 12
KMA	Professional Certificate For Teaching Mathematics, Grades 8 Through 12
KMAI	Provisional Internship Certificate For Teaching Mathematics, Grades 8 Through 12
KMAL	Certificate For Teaching Kentucky Math Limited, Grades 8-12
KPH	Professional Certificate For Teaching Physics, Grades 8-12
KPHI	Provisional Internship Certificate For Teaching Physics, Grades 8 Through 12
KPHL	Certificate for Teaching Kentucky Physics Limited, Grades 8-12
KPS	Professional Certificate For Teaching Physical Science, Grades 8 Through 12
KPSI	Provisional Internship Certificate For Teaching Physical Science, Grades 8 Through 12
KTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
KTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
KTER	Probationary Certificate For Teaching Engineering and Technology, Grades 5 Through 12
M95	Endorsement For Teaching Industrial Education Orientation And Exploration Levels, Grades 5-8
QMA	Teaching Field: Mathematics
R53	Area Specialization: Science Limited To Physics
T8MA	Temporary Provisional Certificate For Teaching Mathematics, Grades 8-12 (Option 8)
T8PH	Temporary Provisional Certificate For Teaching Physics, Grades 8-12 (Option 8)
TEMA	Temporary Certificate For Mathematics, Grades 8-12
TEPH	Temporary Certificate For Physics, Grades 8-12
TETE	Temporary Certificate For Engineering and Technology, Grades 5-12
TPMA	Temporary Provisional Certificate For Math, Grades 8-12
TPPH	Temporary Provisional Certificate For Physics, Grades 8-12
TPPS	Temporary Provisional Certificate For Physical Science, Grades 8-12
TPTE	Temporary Provisional Certificate For Engineering and Technology, Grades 5-12
WIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
WITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
WMA	Professional Certificate For Teaching Mathematics, Grades 8 Through 12
WMAI	Provisional Internship Certificate For Teaching Mathematics, Grades 8 Through 12
WPH	Professional Certificate For Teaching Physics, Grades 8-12
WPHI	Provisional Certificate For Internship For Teaching Physics, Grades 8-12
WPS	Professional Certificate For Teaching Physical Science, Grades 8 Through 12
WPSI	Provisional Internship Certificate For Teaching Physical Science, Grades 8 Through 12
WTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
WTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
X98	Emergency Certificate For Teaching Engineering and Technology

210331 - Engineering and Technology Internship

Grade Level: 11 - 12

Credits: 1-3

Description: Internship for CTE courses provide supervised work-site experience for high school students who are enrolled in a capstone course associated with their identified career pathway. Internship experiences consist of a combination of classroom instruction and field experiences. A student receiving pay for an intern experience is one who is participating in an experience that lasts a semester or longer and has an established employee-employer relationship. A non-paid internship affects those students who participate on a short-term basis (semester or less).

Content: Engineering

Population: General

729	Engineering Technology
A50	Area Specialization: Science
A70	Area Specialization: Mathematics-Physical Science
A94	Area Specialization: Industrial Arts
A95	Area Specialization: Industrial Education-- Orientation And Exploration Levels
A99	Area Specialization: Technology Education
AJKT	Adjunct Instructor For Teaching Engineering and Technology, Grades 5-12
AJMA	Adjunct Instructor For Math, Grades 8-12
AJPH	Adjunct Instructor For Physics, Grades 8-12
B50	Teaching Major: Science
B53	Teaching Major: Physics
B71	Teaching Major: Mathematics
B74	Teaching Major: Computer Science And Mathematics
B94	Teaching Major: Industrial Arts
B95	Teaching Major: Industrial Education -- Orientation And Exploration Levels
C50	Teaching Minor: Science
C53	Teaching Minor: Physics
C71	Teaching Minor: Mathematics
C94	Teaching Minor: Industrial Arts
CMA	Professional Certificate For College Faculty, Mathematics, Grades 8-12
CMAI	Provisional Internship Certificate For College Faculty, Mathematics, Grades 8-12
COMA	Conditional One-Year Certificate For Math, Grades 8-12
COTE	Conditional One-Year Certificate For Engineering and Technology, Grades 5-12
CPH	Professional Certificate For College Faculty, Physics, Grades 8-12
CPHI	Provisional Internship Certificate For College Faculty, Physics, Grades 8-12
KIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITR	Probationary Certificate For Teaching Industrial Technology, Grades 5 Through 12
KMA	Professional Certificate For Teaching Mathematics, Grades 8 Through 12
KMAI	Provisional Internship Certificate For Teaching Mathematics, Grades 8 Through 12
KMAL	Certificate For Teaching Kentucky Math Limited, Grades 8-12
KPH	Professional Certificate For Teaching Physics, Grades 8-12
KPHI	Provisional Internship Certificate For Teaching Physics, Grades 8 Through 12
KPHL	Certificate for Teaching Kentucky Physics Limited, Grades 8-12
KPS	Professional Certificate For Teaching Physical Science, Grades 8 Through 12
KPSI	Provisional Internship Certificate For Teaching Physical Science, Grades 8 Through 12
KTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
KTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
KTER	Probationary Certificate For Teaching Engineering and Technology, Grades 5 Through 12
M95	Endorsement For Teaching Industrial Education Orientation And Exploration Levels, Grades 5-8
QMA	Teaching Field: Mathematics
R53	Area Specialization: Science Limited To Physics
T8MA	Temporary Provisional Certificate For Teaching Mathematics, Grades 8-12 (Option 8)
T8PH	Temporary Provisional Certificate For Teaching Physics, Grades 8-12 (Option 8)
TEMA	Temporary Certificate For Mathematics, Grades 8-12
TEPH	Temporary Certificate For Physics, Grades 8-12
TETE	Temporary Certificate For Engineering and Technology, Grades 5-12
TPMA	Temporary Provisional Certificate For Math, Grades 8-12
TPPH	Temporary Provisional Certificate For Physics, Grades 8-12
TPPS	Temporary Provisional Certificate For Physical Science, Grades 8-12
TPTE	Temporary Provisional Certificate For Engineering and Technology, Grades 5-12
WIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
WITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
WMA	Professional Certificate For Teaching Mathematics, Grades 8 Through 12
WMAI	Provisional Internship Certificate For Teaching Mathematics, Grades 8 Through 12
WPH	Professional Certificate For Teaching Physics, Grades 8-12
WPHI	Provisional Certificate For Internship For Teaching Physics, Grades 8-12
WPS	Professional Certificate For Teaching Physical Science, Grades 8 Through 12
WPSI	Provisional Internship Certificate For Teaching Physical Science, Grades 8 Through 12
WTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
WTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12

X98	Emergency Certificate For Teaching Engineering and Technology
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210341 - Foundations of Energy

Grade Level: 9 - 11

Credits: 1

Description: Foundations of Energy is a course in career and technical education for secondary students. The course provides an overview of renewable and nonrenewable energy resources reflecting how energy impacts the environment and the economy from regional, state, national and global perspectives. Extensive hands-on laboratory activities are vital components of the curriculum. This course can provide a basis for students working toward various career pathways in energy such as Engineering/Technology, Construction and Manufacturing Technology. Instruction should be enhanced through participation in Kentucky Technology Student Association challenges. This course may be 18 to 36 weeks in duration.

Content: Engineering

Population: General

729	Engineering Technology
A50	Area Specialization: Science
A70	Area Specialization: Mathematics-Physical Science
A94	Area Specialization: Industrial Arts
A95	Area Specialization: Industrial Education-- Orientation And Exploration Levels
A99	Area Specialization: Technology Education
AJKT	Adjunct Instructor For Teaching Engineering and Technology, Grades 5-12
AJMA	Adjunct Instructor For Math, Grades 8-12
AJPH	Adjunct Instructor For Physics, Grades 8-12
B50	Teaching Major: Science
B53	Teaching Major: Physics
B71	Teaching Major: Mathematics
B74	Teaching Major: Computer Science And Mathematics
B94	Teaching Major: Industrial Arts
B95	Teaching Major: Industrial Education -- Orientation And Exploration Levels
C50	Teaching Minor: Science
C53	Teaching Minor: Physics
C71	Teaching Minor: Mathematics
C94	Teaching Minor: Industrial Arts
CMA	Professional Certificate For College Faculty, Mathematics, Grades 8-12
CMAI	Provisional Internship Certificate For College Faculty, Mathematics, Grades 8-12
COMA	Conditional One-Year Certificate For Math, Grades 8-12
COTE	Conditional One-Year Certificate For Engineering and Technology, Grades 5-12
CPH	Professional Certificate For College Faculty, Physics, Grades 8-12
CPHI	Provisional Internship Certificate For College Faculty, Physics, Grades 8-12
KIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITR	Probationary Certificate For Teaching Industrial Technology, Grades 5 Through 12
KMA	Professional Certificate For Teaching Mathematics, Grades 8 Through 12
KMAI	Provisional Internship Certificate For Teaching Mathematics, Grades 8 Through 12
KMAL	Certificate For Teaching Kentucky Math Limited, Grades 8-12
KPH	Professional Certificate For Teaching Physics, Grades 8-12
KPHI	Provisional Internship Certificate For Teaching Physics, Grades 8 Through 12
KPHL	Certificate for Teaching Kentucky Physics Limited, Grades 8-12
KPS	Professional Certificate For Teaching Physical Science, Grades 8 Through 12
KPSI	Provisional Internship Certificate For Teaching Physical Science, Grades 8 Through 12
KTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
KTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
KTER	Probationary Certificate For Teaching Engineering and Technology, Grades 5 Through 12
M95	Endorsement For Teaching Industrial Education Orientation And Exploration Levels, Grades 5-8
QMA	Teaching Field: Mathematics
R53	Area Specialization: Science Limited To Physics
T8MA	Temporary Provisional Certificate For Teaching Mathematics, Grades 8-12 (Option 8)

T8PH	Temporary Provisional Certificate For Teaching Physics, Grades 8-12 (Option 8)
TEMA	Temporary Certificate For Mathematics, Grades 8-12
TEPH	Temporary Certificate For Physics, Grades 8-12
TETE	Temporary Certificate For Engineering and Technology, Grades 5-12
TPMA	Temporary Provisional Certificate For Math, Grades 8-12
TPPH	Temporary Provisional Certificate For Physics, Grades 8-12
TPPS	Temporary Provisional Certificate For Physical Science, Grades 8-12
TPTE	Temporary Provisional Certificate For Engineering and Technology, Grades 5-12
WIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
WITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
WMA	Professional Certificate For Teaching Mathematics, Grades 8 Through 12
WMAI	Provisional Internship Certificate For Teaching Mathematics, Grades 8 Through 12
WPH	Professional Certificate For Teaching Physics, Grades 8-12
WPHI	Provisional Certificate For Internship For Teaching Physics, Grades 8-12
WPS	Professional Certificate For Teaching Physical Science, Grades 8 Through 12
WPSI	Provisional Internship Certificate For Teaching Physical Science, Grades 8 Through 12
WTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
WTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
X98	Emergency Certificate For Teaching Engineering and Technology

Engineering and Technology - Engineering (Project Lead the Way) (219900)

Career Major: Engineering is a four year sequence of courses which, when combined with traditional mathematics and science courses in high school, introduces students to the scope, rigor and discipline of engineering. Any course not found under this career major/sub code may be found in another career major/sub code with in this program area.

219901 - Introduction to Engineering Design

Grade Level: 9 - 12

Credits: 1

Description: Students explore technology systems and engineering processes to find out how math, science, and technology help people.

NOTE TO SCHOOL - this course requires a District agreement with PLTW. You MUST have a current agreement with PLTW to offer this course.

Content: Pre-Engineering

Population: General

729	Engineering Technology
769	Drafting
773	Electricity
776	Machine Tool Technology
792	Industrial Machine Maintenance
A50	Area Specialization: Science
A70	Area Specialization: Mathematics-Physical Science
A94	Area Specialization: Industrial Arts
A95	Area Specialization: Industrial Education-- Orientation And Exploration Levels
A99	Area Specialization: Technology Education
AJBI	Adjunct Instructor For Biology, Grades 8-12
AJCH	Adjunct Instructor For Chemistry, Grades 8-12
AJEA	Adjunct Instructor for Earth Science, Grades 8-12
AJKT	Adjunct Instructor For Teaching Engineering and Technology, Grades 5-12
AJMA	Adjunct Instructor For Math, Grades 8-12
AJPH	Adjunct Instructor For Physics, Grades 8-12
APLW	Approval for Project Lead the Way
B50	Teaching Major: Science
B51	Teaching Major: Biology
B52	Teaching Major: Chemistry
B53	Teaching Major: Physics
B54	Teaching Major: Biology-Health
B56	Teaching Major: Earth Science
B57	Teaching Major: Geology
B71	Teaching Major: Mathematics
B74	Teaching Major: Computer Science And Mathematics
B94	Teaching Major: Industrial Arts
B95	Teaching Major: Industrial Education -- Orientation And Exploration Levels
C50	Teaching Minor: Science
C51	Teaching Minor: Biology
C52	Teaching Minor: Chemistry

C53	Teaching Minor: Physics
C56	Teaching Minor: Earth Science
C57	Teaching Minor: Geology
C71	Teaching Minor: Mathematics
C94	Teaching Minor: Industrial Arts
CBI	Professional Certificate For College Faculty, Biology, Grades 8-12
CBII	Provisional Internship Certificate For College Faculty, Biology, Grades 8-12
CBII	Provisional Internship Certificate For College Faculty, Biology, Grades 8-12
CCH	Professional Certificate For College Faculty, Chemistry, Grades 8-12
CCHI	Provisional Internship Certificate For College Faculty, Chemistry, Grades 8-12
CCHI	Provisional Internship Certificate For College Faculty, Chemistry, Grades 8-12
CEA	Professional Certificate For College Faculty, Earth Science, Grades 8-12
CEAI	Provisional Internship Certificate For College Faculty, Earth Science, Grades 8-12
CEAI	Provisional Internship Certificate For College Faculty, Earth Science, Grades 8-12
CFBI	Provisional One-Year College Faculty Certificate for Teaching Biological Science, Grades 8-12
CFCH	Provisional One-Year College Faculty Certificate for Teaching Chemistry, Grades 8-12
CFEA	Provisional One-Year College Faculty Certificate for Teaching Earth Science, Grades 8-12
CMA	Professional Certificate For College Faculty, Mathematics, Grades 8-12
CMAI	Provisional Internship Certificate For College Faculty, Mathematics, Grades 8-12
COBI	Conditional One-Year Certificate For Biology, Grades 8-12
COCH	Conditional One-Year Certificate For Chemistry, Grades 8-12
COEA	Conditional One-Year Certificate For Earth Science, Grades 8-12
COMA	Conditional One-Year Certificate For Math, Grades 8-12
COTE	Conditional One-Year Certificate For Engineering and Technology, Grades 5-12
CPH	Professional Certificate For College Faculty, Physics, Grades 8-12
CPHI	Provisional Internship Certificate For College Faculty, Physics, Grades 8-12
CPHI	Provisional Internship Certificate For College Faculty, Physics, Grades 8-12
KBI	Professional Certificate For Teaching Biological Science, Grades 8 Through 12
KBII	Provisional Internship Certificate For Teaching Biological Science, Grades 8 Through 12
KBII	Provisional Internship Certificate For Teaching Biological Science, Grades 8 Through 12
KBIL	Certificate For Teaching Kentucky Biology Limited, Grades 8-12
KCH	Professional Certificate For Teaching Chemistry, Grades 8 Through 12
KCH	Professional Certificate For Teaching Chemistry, Grades 8 Through 12
KCHI	Provisional Internship Certificate For Teaching Chemistry Grades 8 Through 12
KCHI	Provisional Internship Certificate For Teaching Chemistry Grades 8 Through 12
KCHL	Certificate for Teaching Kentucky Chemistry Limited, Grades 8-12
KCHL	Certificate for Teaching Kentucky Chemistry Limited, Grades 8-12
KEA	Professional Certificate For Teaching Earth Science, Grades 8-12
KEA	Professional Certificate For Teaching Earth Science, Grades 8-12
KEAI	Provisional Internship Certificate For Teaching Earth Science, Grades 8-12
KEAI	Provisional Internship Certificate For Teaching Earth Science, Grades 8-12
KIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITR	Probationary Certificate For Teaching Industrial Technology, Grades 5 Through 12
KMA	Professional Certificate For Teaching Mathematics, Grades 8 Through 12
KMAI	Provisional Internship Certificate For Teaching Mathematics, Grades 8 Through 12
KMAL	Certificate For Teaching Kentucky Math Limited, Grades 8-12
KPH	Professional Certificate For Teaching Physics, Grades 8-12
KPHI	Provisional Internship Certificate For Teaching Physics, Grades 8 Through 12
KPHI	Provisional Internship Certificate For Teaching Physics, Grades 8 Through 12
KPHL	Certificate for Teaching Kentucky Physics Limited, Grades 8-12
KPHL	Certificate for Teaching Kentucky Physics Limited, Grades 8-12
KPS	Professional Certificate For Teaching Physical Science, Grades 8 Through 12
KPSI	Provisional Internship Certificate For Teaching Physical Science, Grades 8 Through 12
KTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
KTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
KTER	Probationary Certificate For Teaching Engineering and Technology, Grades 5 Through 12
M95	Endorsement For Teaching Industrial Education Orientation And Exploration Levels, Grades 5-8
QBI	Teaching Field: Biology
QMA	Teaching Field: Mathematics
R51	Area Specialization: Science Limited To Biology

R52	Area Specialization: Science Limited To Chemistry
R53	Area Specialization: Science Limited To Physics
R56	Area Specialization: Science Limited To Earth Science
T8BI	Temporary Provisional Certificate For Teaching Biological Science, Grades 8-12 (Option 8)
T8BI	Temporary Provisional Certificate For Teaching Biological Science, Grades 8-12 (Option 8)
T8CH	Temporary Provisional Certificate For Teaching Chemistry, Grades 8-12 (Option 8)
T8CH	Temporary Provisional Certificate For Teaching Chemistry, Grades 8-12 (Option 8)
T8EA	Temporary Provisional Certificate For Teaching Earth Science, Grades 8-12 (Option 8)
T8EA	Temporary Provisional Certificate For Teaching Earth Science, Grades 8-12 (Option 8)
T8MA	Temporary Provisional Certificate For Teaching Mathematics, Grades 8-12 (Option 8)
T8PH	Temporary Provisional Certificate For Teaching Physics, Grades 8-12 (Option 8)
T8PH	Temporary Provisional Certificate For Teaching Physics, Grades 8-12 (Option 8)
TEBI	Temporary Certificate For Biology, Grades 8-12
TEBI	Temporary Certificate For Biology, Grades 8-12
TECH	Temporary Certificate For Chemistry, Grades 8-12
TECH	Temporary Certificate For Chemistry, Grades 8-12
TEEA	Temporary Certificate For Earth Science, Grades 8-12
TEEA	Temporary Certificate For Earth Science, Grades 8-12
TEMA	Temporary Certificate For Mathematics, Grades 8-12
TEPH	Temporary Certificate For Physics, Grades 8-12
TEPH	Temporary Certificate For Physics, Grades 8-12
TETE	Temporary Certificate For Engineering and Technology, Grades 5-12
TPBI	Temporary Provisional Certificate For Biology, Grades 8-12
TPBI	Temporary Provisional Certificate For Biology, Grades 8-12
TPCH	Temporary Provisional Certificate For Teaching Chemistry, Grades 8 Through 12
TPCH	Temporary Provisional Certificate For Teaching Chemistry, Grades 8 Through 12
TPEA	Temporary Provisional Certificate For Teaching Earth Science, Grades 8-12
TPEA	Temporary Provisional Certificate For Teaching Earth Science, Grades 8-12
TPMA	Temporary Provisional Certificate For Math, Grades 8-12
TPPH	Temporary Provisional Certificate For Physics, Grades 8-12
TPPH	Temporary Provisional Certificate For Physics, Grades 8-12
TPPS	Temporary Provisional Certificate For Physical Science, Grades 8-12
TPTE	Temporary Provisional Certificate For Engineering and Technology, Grades 5-12
WBI	Professional Certificate For Teaching Biological Science, Grades 8 Through 12
WBI	Professional Certificate For Teaching Biological Science, Grades 8 Through 12
WBII	Provisional Internship Certificate For Teaching Biological Science, Grades 8 Through 12
WBII	Provisional Internship Certificate For Teaching Biological Science, Grades 8 Through 12
WCH	Professional Certificate For Teaching Chemistry, Grades 8-12
WCH	Professional Certificate For Teaching Chemistry, Grades 8-12
WCHI	Provisional Internship Certificate For Teaching Chemistry, Grades 8-12
WCHI	Provisional Internship Certificate For Teaching Chemistry, Grades 8-12
WIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
WITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
WMA	Professional Certificate For Teaching Mathematics, Grades 8 Through 12
WMAI	Provisional Internship Certificate For Teaching Mathematics, Grades 8 Through 12
WPH	Professional Certificate For Teaching Physics, Grades 8-12
WPH	Professional Certificate For Teaching Physics, Grades 8-12
WPHI	Provisional Certificate For Internship For Teaching Physics, Grades 8-12
WPHI	Provisional Certificate For Internship For Teaching Physics, Grades 8-12
WPS	Professional Certificate For Teaching Physical Science, Grades 8 Through 12
WPSI	Provisional Internship Certificate For Teaching Physical Science, Grades 8 Through 12
WTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
WTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12

219902 - Principles of Engineering

Grade Level: 9 - 12

Credits: 1

Description: Using computer modeling software, students learn the design process. They solve design problems as they develop, create, and analyze product models.

NOTE TO SCHOOL - this course requires a District agreement with PLTW. You MUST have a current agreement with PLTW to offer this course.

Content: Pre-Engineering

Population: General

729	Engineering Technology
769	Drafting
773	Electricity
776	Machine Tool Technology
792	Industrial Machine Maintenance
A50	Area Specialization: Science
A70	Area Specialization: Mathematics-Physical Science
A94	Area Specialization: Industrial Arts
A95	Area Specialization: Industrial Education-- Orientation And Exploration Levels
A99	Area Specialization: Technology Education
AJBI	Adjunct Instructor For Biology, Grades 8-12
AJCH	Adjunct Instructor For Chemistry, Grades 8-12
AJEA	Adjunct Instructor for Earth Science, Grades 8-12
AJKT	Adjunct Instructor For Teaching Engineering and Technology, Grades 5-12
AJMA	Adjunct Instructor For Math, Grades 8-12
AJPH	Adjunct Instructor For Physics, Grades 8-12
APLW	Approval for Project Lead the Way
B50	Teaching Major: Science
B51	Teaching Major: Biology
B52	Teaching Major: Chemistry
B53	Teaching Major: Physics
B54	Teaching Major: Biology-Health
B56	Teaching Major: Earth Science
B57	Teaching Major: Geology
B71	Teaching Major: Mathematics
B74	Teaching Major: Computer Science And Mathematics
B94	Teaching Major: Industrial Arts
B95	Teaching Major: Industrial Education -- Orientation And Exploration Levels
C50	Teaching Minor: Science
C51	Teaching Minor: Biology
C52	Teaching Minor: Chemistry
C53	Teaching Minor: Physics
C56	Teaching Minor: Earth Science
C57	Teaching Minor: Geology
C71	Teaching Minor: Mathematics
C94	Teaching Minor: Industrial Arts
CB1	Professional Certificate For College Faculty, Biology, Grades 8-12
CB11	Provisional Internship Certificate For College Faculty, Biology, Grades 8-12
CB11	Provisional Internship Certificate For College Faculty, Biology, Grades 8-12
CCH	Professional Certificate For College Faculty, Chemistry, Grades 8-12
CCHI	Provisional Internship Certificate For College Faculty, Chemistry, Grades 8-12
CCHI	Provisional Internship Certificate For College Faculty, Chemistry, Grades 8-12
CEA	Professional Certificate For College Faculty, Earth Science, Grades 8-12
CEA1	Provisional Internship Certificate For College Faculty, Earth Science, Grades 8-12
CEA1	Provisional Internship Certificate For College Faculty, Earth Science, Grades 8-12
CFB1	Provisional One-Year College Faculty Certificate for Teaching Biological Science, Grades 8-12
CFCH	Provisional One-Year College Faculty Certificate for Teaching Chemistry, Grades 8-12

CFEA	Provisional One-Year College Faculty Certificate for Teaching Earth Science, Grades 8-12
CMA	Professional Certificate For College Faculty, Mathematics, Grades 8-12
CMAI	Provisional Internship Certificate For College Faculty, Mathematics, Grades 8-12
COBI	Conditional One-Year Certificate For Biology, Grades 8-12
COCH	Conditional One-Year Certificate For Chemistry, Grades 8-12
COEA	Conditional One-Year Certificate For Earth Science, Grades 8-12
COMA	Conditional One-Year Certificate For Math, Grades 8-12
COTE	Conditional One-Year Certificate For Engineering and Technology, Grades 5-12
CPH	Professional Certificate For College Faculty, Physics, Grades 8-12
CPHI	Provisional Internship Certificate For College Faculty, Physics, Grades 8-12
CPHI	Provisional Internship Certificate For College Faculty, Physics, Grades 8-12
KBI	Professional Certificate For Teaching Biological Science, Grades 8 Through 12
KBII	Provisional Internship Certificate For Teaching Biological Science, Grades 8 Through 12
KBII	Provisional Internship Certificate For Teaching Biological Science, Grades 8 Through 12
KBIL	Certificate For Teaching Kentucky Biology Limited, Grades 8-12
KCH	Professional Certificate For Teaching Chemistry, Grades 8 Through 12
KCH	Professional Certificate For Teaching Chemistry, Grades 8 Through 12
KCHI	Provisional Internship Certificate For Teaching Chemistry Grades 8 Through 12
KCHI	Provisional Internship Certificate For Teaching Chemistry Grades 8 Through 12
KCHL	Certificate for Teaching Kentucky Chemistry Limited, Grades 8-12
KCHL	Certificate for Teaching Kentucky Chemistry Limited, Grades 8-12
KEA	Professional Certificate For Teaching Earth Science, Grades 8-12
KEA	Professional Certificate For Teaching Earth Science, Grades 8-12
KEAI	Provisional Internship Certificate For Teaching Earth Science, Grades 8-12
KEAI	Provisional Internship Certificate For Teaching Earth Science, Grades 8-12
KIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITR	Probationary Certificate For Teaching Industrial Technology, Grades 5 Through 12
KMA	Professional Certificate For Teaching Mathematics, Grades 8 Through 12
KMAI	Provisional Internship Certificate For Teaching Mathematics, Grades 8 Through 12
KMAL	Certificate For Teaching Kentucky Math Limited, Grades 8-12
KPH	Professional Certificate For Teaching Physics, Grades 8-12
KPHI	Provisional Internship Certificate For Teaching Physics, Grades 8 Through 12
KPHI	Provisional Internship Certificate For Teaching Physics, Grades 8 Through 12
KPHL	Certificate for Teaching Kentucky Physics Limited, Grades 8-12
KPHL	Certificate for Teaching Kentucky Physics Limited, Grades 8-12
KPS	Professional Certificate For Teaching Physical Science, Grades 8 Through 12
KPSI	Provisional Internship Certificate For Teaching Physical Science, Grades 8 Through 12
KTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
KTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
KTER	Probationary Certificate For Teaching Engineering and Technology, Grades 5 Through 12
M95	Endorsement For Teaching Industrial Education Orientation And Exploration Levels, Grades 5-8
QBI	Teaching Field: Biology
QMA	Teaching Field: Mathematics
R51	Area Specialization: Science Limited To Biology
R52	Area Specialization: Science Limited To Chemistry
R53	Area Specialization: Science Limited To Physics
R56	Area Specialization: Science Limited To Earth Science
T8BI	Temporary Provisional Certificate For Teaching Biological Science, Grades 8-12 (Option 8)
T8BI	Temporary Provisional Certificate For Teaching Biological Science, Grades 8-12 (Option 8)
T8CH	Temporary Provisional Certificate For Teaching Chemistry, Grades 8-12 (Option 8)
T8CH	Temporary Provisional Certificate For Teaching Chemistry, Grades 8-12 (Option 8)
T8EA	Temporary Provisional Certificate For Teaching Earth Science, Grades 8-12 (Option 8)
T8EA	Temporary Provisional Certificate For Teaching Earth Science, Grades 8-12 (Option 8)
T8MA	Temporary Provisional Certificate For Teaching Mathematics, Grades 8-12 (Option 8)
T8PH	Temporary Provisional Certificate For Teaching Physics, Grades 8-12 (Option 8)
T8PH	Temporary Provisional Certificate For Teaching Physics, Grades 8-12 (Option 8)
TEBI	Temporary Certificate For Biology, Grades 8-12
TEBI	Temporary Certificate For Biology, Grades 8-12
TECH	Temporary Certificate For Chemistry, Grades 8-12
TECH	Temporary Certificate For Chemistry, Grades 8-12

TEEA	Temporary Certificate For Earth Science, Grades 8-12
TEEA	Temporary Certificate For Earth Science, Grades 8-12
TEMA	Temporary Certificate For Mathematics, Grades 8-12
TEPH	Temporary Certificate For Physics, Grades 8-12
TEPH	Temporary Certificate For Physics, Grades 8-12
TETE	Temporary Certificate For Engineering and Technology, Grades 5-12
TPBI	Temporary Provisional Certificate For Biology, Grades 8-12
TPBI	Temporary Provisional Certificate For Biology, Grades 8-12
TPCH	Temporary Provisional Certificate For Teaching Chemistry, Grades 8 Through 12
TPCH	Temporary Provisional Certificate For Teaching Chemistry, Grades 8 Through 12
TPEA	Temporary Provisional Certificate For Teaching Earth Science, Grades 8-12
TPEA	Temporary Provisional Certificate For Teaching Earth Science, Grades 8-12
TPMA	Temporary Provisional Certificate For Math, Grades 8-12
TPPH	Temporary Provisional Certificate For Physics, Grades 8-12
TPPH	Temporary Provisional Certificate For Physics, Grades 8-12
TPPS	Temporary Provisional Certificate For Physical Science, Grades 8-12
TPTE	Temporary Provisional Certificate For Engineering and Technology, Grades 5-12
WBI	Professional Certificate For Teaching Biological Science, Grades 8 Through 12
WBI	Professional Certificate For Teaching Biological Science, Grades 8 Through 12
WBII	Provisional Internship Certificate For Teaching Biological Science, Grades 8 Through 12
WBII	Provisional Internship Certificate For Teaching Biological Science, Grades 8 Through 12
WCH	Professional Certificate For Teaching Chemistry, Grades 8-12
WCH	Professional Certificate For Teaching Chemistry, Grades 8-12
WCHI	Provisional Internship Certificate For Teaching Chemistry, Grades 8-12
WCHI	Provisional Internship Certificate For Teaching Chemistry, Grades 8-12
WIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
WITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
WMA	Professional Certificate For Teaching Mathematics, Grades 8 Through 12
WMAI	Provisional Internship Certificate For Teaching Mathematics, Grades 8 Through 12
WPH	Professional Certificate For Teaching Physics, Grades 8-12
WPH	Professional Certificate For Teaching Physics, Grades 8-12
WPHI	Provisional Certificate For Internship For Teaching Physics, Grades 8-12
WPHI	Provisional Certificate For Internship For Teaching Physics, Grades 8-12
WPS	Professional Certificate For Teaching Physical Science, Grades 8 Through 12
WPSI	Provisional Internship Certificate For Teaching Physical Science, Grades 8 Through 12
WTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
WTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12

219903 - Digital Electronics

Grade Level: 9 - 12

Credits: 1

Description: Students use computer simulations to learn about the logic of electronics as they design, test, and actually construct circuits and devices.

NOTE TO SCHOOL - this course requires a District agreement with PLTW. You MUST have a current agreement with PLTW to offer this course.

Content: Pre-Engineering

Population: General

729	Engineering Technology
769	Drafting
773	Electricity
776	Machine Tool Technology
792	Industrial Machine Maintenance
A50	Area Specialization: Science
A70	Area Specialization: Mathematics-Physical Science
A94	Area Specialization: Industrial Arts
A95	Area Specialization: Industrial Education-- Orientation And Exploration Levels

A99	Area Specialization: Technology Education
AJB	Adjunct Instructor For Biology, Grades 8-12
AJCH	Adjunct Instructor For Chemistry, Grades 8-12
AJEA	Adjunct Instructor for Earth Science, Grades 8-12
AJKT	Adjunct Instructor For Teaching Engineering and Technology, Grades 5-12
AJMA	Adjunct Instructor For Math, Grades 8-12
AJPH	Adjunct Instructor For Physics, Grades 8-12
APLW	Approval for Project Lead the Way
B50	Teaching Major: Science
B51	Teaching Major: Biology
B52	Teaching Major: Chemistry
B53	Teaching Major: Physics
B54	Teaching Major: Biology-Health
B56	Teaching Major: Earth Science
B57	Teaching Major: Geology
B71	Teaching Major: Mathematics
B74	Teaching Major: Computer Science And Mathematics
B94	Teaching Major: Industrial Arts
B95	Teaching Major: Industrial Education -- Orientation And Exploration Levels
C50	Teaching Minor: Science
C51	Teaching Minor: Biology
C52	Teaching Minor: Chemistry
C53	Teaching Minor: Physics
C56	Teaching Minor: Earth Science
C57	Teaching Minor: Geology
C71	Teaching Minor: Mathematics
C94	Teaching Minor: Industrial Arts
CBI	Professional Certificate For College Faculty, Biology, Grades 8-12
CBII	Provisional Internship Certificate For College Faculty, Biology, Grades 8-12
CBII	Provisional Internship Certificate For College Faculty, Biology, Grades 8-12
CCH	Professional Certificate For College Faculty, Chemistry, Grades 8-12
CCHI	Provisional Internship Certificate For College Faculty, Chemistry, Grades 8-12
CCHI	Provisional Internship Certificate For College Faculty, Chemistry, Grades 8-12
CEA	Professional Certificate For College Faculty, Earth Science, Grades 8-12
CEAI	Provisional Internship Certificate For College Faculty, Earth Science, Grades 8-12
CEAI	Provisional Internship Certificate For College Faculty, Earth Science, Grades 8-12
CFBI	Provisional One-Year College Faculty Certificate for Teaching Biological Science, Grades 8-12
CFCH	Provisional One-Year College Faculty Certificate for Teaching Chemistry, Grades 8-12
CFEA	Provisional One-Year College Faculty Certificate for Teaching Earth Science, Grades 8-12
CMA	Professional Certificate For College Faculty, Mathematics, Grades 8-12
CMAI	Provisional Internship Certificate For College Faculty, Mathematics, Grades 8-12
COBI	Conditional One-Year Certificate For Biology, Grades 8-12
COCH	Conditional One-Year Certificate For Chemistry, Grades 8-12
COEA	Conditional One-Year Certificate For Earth Science, Grades 8-12
COMA	Conditional One-Year Certificate For Math, Grades 8-12
COTE	Conditional One-Year Certificate For Engineering and Technology, Grades 5-12
CPH	Professional Certificate For College Faculty, Physics, Grades 8-12
CPHI	Provisional Internship Certificate For College Faculty, Physics, Grades 8-12
CPHI	Provisional Internship Certificate For College Faculty, Physics, Grades 8-12
KBI	Professional Certificate For Teaching Biological Science, Grades 8 Through 12
KBII	Provisional Internship Certificate For Teaching Biological Science, Grades 8 Through 12
KBII	Provisional Internship Certificate For Teaching Biological Science, Grades 8 Through 12
KBIL	Certificate For Teaching Kentucky Biology Limited, Grades 8-12
KCH	Professional Certificate For Teaching Chemistry, Grades 8 Through 12
KCH	Professional Certificate For Teaching Chemistry, Grades 8 Through 12
KCHI	Provisional Internship Certificate For Teaching Chemistry Grades 8 Through 12
KCHI	Provisional Internship Certificate For Teaching Chemistry Grades 8 Through 12
KCHL	Certificate for Teaching Kentucky Chemistry Limited, Grades 8-12
KCHL	Certificate for Teaching Kentucky Chemistry Limited, Grades 8-12
KEA	Professional Certificate For Teaching Earth Science, Grades 8-12
KEA	Professional Certificate For Teaching Earth Science, Grades 8-12

KEAI	Provisional Internship Certificate For Teaching Earth Science, Grades 8-12
KEAI	Provisional Internship Certificate For Teaching Earth Science, Grades 8-12
KIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITR	Probationary Certificate For Teaching Industrial Technology, Grades 5 Through 12
KMA	Professional Certificate For Teaching Mathematics, Grades 8 Through 12
KMAI	Provisional Internship Certificate For Teaching Mathematics, Grades 8 Through 12
KMAL	Certificate For Teaching Kentucky Math Limited, Grades 8-12
KPH	Professional Certificate For Teaching Physics, Grades 8-12
KPHI	Provisional Internship Certificate For Teaching Physics, Grades 8 Through 12
KPHI	Provisional Internship Certificate For Teaching Physics, Grades 8 Through 12
KPHL	Certificate for Teaching Kentucky Physics Limited, Grades 8-12
KPHL	Certificate for Teaching Kentucky Physics Limited, Grades 8-12
KPS	Professional Certificate For Teaching Physical Science, Grades 8 Through 12
KPSI	Provisional Internship Certificate For Teaching Physical Science, Grades 8 Through 12
KTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
KTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
KTER	Probationary Certificate For Teaching Engineering and Technology, Grades 5 Through 12
M95	Endorsement For Teaching Industrial Education Orientation And Exploration Levels, Grades 5-8
QBI	Teaching Field: Biology
QMA	Teaching Field: Mathematics
R51	Area Specialization: Science Limited To Biology
R52	Area Specialization: Science Limited To Chemistry
R53	Area Specialization: Science Limited To Physics
R56	Area Specialization: Science Limited To Earth Science
T8BI	Temporary Provisional Certificate For Teaching Biological Science, Grades 8-12 (Option 8)
T8BI	Temporary Provisional Certificate For Teaching Biological Science, Grades 8-12 (Option 8)
T8CH	Temporary Provisional Certificate For Teaching Chemistry, Grades 8-12 (Option 8)
T8CH	Temporary Provisional Certificate For Teaching Chemistry, Grades 8-12 (Option 8)
T8EA	Temporary Provisional Certificate For Teaching Earth Science, Grades 8-12 (Option 8)
T8EA	Temporary Provisional Certificate For Teaching Earth Science, Grades 8-12 (Option 8)
T8MA	Temporary Provisional Certificate For Teaching Mathematics, Grades 8-12 (Option 8)
T8PH	Temporary Provisional Certificate For Teaching Physics, Grades 8-12 (Option 8)
T8PH	Temporary Provisional Certificate For Teaching Physics, Grades 8-12 (Option 8)
TEBI	Temporary Certificate For Biology, Grades 8-12
TEBI	Temporary Certificate For Biology, Grades 8-12
TECH	Temporary Certificate For Chemistry, Grades 8-12
TECH	Temporary Certificate For Chemistry, Grades 8-12
TEEA	Temporary Certificate For Earth Science, Grades 8-12
TEEA	Temporary Certificate For Earth Science, Grades 8-12
TEMA	Temporary Certificate For Mathematics, Grades 8-12
TEPH	Temporary Certificate For Physics, Grades 8-12
TEPH	Temporary Certificate For Physics, Grades 8-12
TETE	Temporary Certificate For Engineering and Technology, Grades 5-12
TPBI	Temporary Provisional Certificate For Biology, Grades 8-12
TPBI	Temporary Provisional Certificate For Biology, Grades 8-12
TPCH	Temporary Provisional Certificate For Teaching Chemistry, Grades 8 Through 12
TPCH	Temporary Provisional Certificate For Teaching Chemistry, Grades 8 Through 12
TPEA	Temporary Provisional Certificate For Teaching Earth Science, Grades 8-12
TPEA	Temporary Provisional Certificate For Teaching Earth Science, Grades 8-12
TPMA	Temporary Provisional Certificate For Math, Grades 8-12
TPPH	Temporary Provisional Certificate For Physics, Grades 8-12
TPPH	Temporary Provisional Certificate For Physics, Grades 8-12
TPPS	Temporary Provisional Certificate For Physical Science, Grades 8-12
TPTE	Temporary Provisional Certificate For Engineering and Technology, Grades 5-12
WBI	Professional Certificate For Teaching Biological Science, Grades 8 Through 12
WBI	Professional Certificate For Teaching Biological Science, Grades 8 Through 12
WBII	Provisional Internship Certificate For Teaching Biological Science, Grades 8 Through 12
WBII	Provisional Internship Certificate For Teaching Biological Science, Grades 8 Through 12
WCH	Professional Certificate For Teaching Chemistry, Grades 8-12
WCH	Professional Certificate For Teaching Chemistry, Grades 8-12

WCHI	Provisional Internship Certificate For Teaching Chemistry, Grades 8-12
WCHI	Provisional Internship Certificate For Teaching Chemistry, Grades 8-12
WIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
WITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
WMA	Professional Certificate For Teaching Mathematics, Grades 8 Through 12
WMAI	Provisional Internship Certificate For Teaching Mathematics, Grades 8 Through 12
WPH	Professional Certificate For Teaching Physics, Grades 8-12
WPH	Professional Certificate For Teaching Physics, Grades 8-12
WPHI	Provisional Certificate For Internship For Teaching Physics, Grades 8-12
WPHI	Provisional Certificate For Internship For Teaching Physics, Grades 8-12
WPS	Professional Certificate For Teaching Physical Science, Grades 8 Through 12
WPSI	Provisional Internship Certificate For Teaching Physical Science, Grades 8 Through 12
WTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
WTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12

219904 - Computer Integrated Manufacturing

Grade Level: 9 - 12

Credits: 1

Description: Students learn concepts of robotics and automated manufacturing by creating three-dimensional designs with modeling software and producing models of their designs.

NOTE TO SCHOOL - this course requires a District agreement with PLTW. You MUST have a current agreement with PLTW to offer this course.

Content: Pre-Engineering

Population: General

729	Engineering Technology
769	Drafting
773	Electricity
776	Machine Tool Technology
792	Industrial Machine Maintenance
A50	Area Specialization: Science
A70	Area Specialization: Mathematics-Physical Science
A94	Area Specialization: Industrial Arts
A95	Area Specialization: Industrial Education-- Orientation And Exploration Levels
A99	Area Specialization: Technology Education
AJBI	Adjunct Instructor For Biology, Grades 8-12
AJCH	Adjunct Instructor For Chemistry, Grades 8-12
AJEA	Adjunct Instructor for Earth Science, Grades 8-12
AJKT	Adjunct Instructor For Teaching Engineering and Technology, Grades 5-12
AJMA	Adjunct Instructor For Math, Grades 8-12
AJPH	Adjunct Instructor For Physics, Grades 8-12
APLW	Approval for Project Lead the Way
B50	Teaching Major: Science
B51	Teaching Major: Biology
B52	Teaching Major: Chemistry
B53	Teaching Major: Physics
B54	Teaching Major: Biology-Health
B56	Teaching Major: Earth Science
B57	Teaching Major: Geology
B71	Teaching Major: Mathematics
B74	Teaching Major: Computer Science And Mathematics
B94	Teaching Major: Industrial Arts
B95	Teaching Major: Industrial Education -- Orientation And Exploration Levels
C50	Teaching Minor: Science
C51	Teaching Minor: Biology
C52	Teaching Minor: Chemistry
C53	Teaching Minor: Physics

C56	Teaching Minor: Earth Science
C57	Teaching Minor: Geology
C71	Teaching Minor: Mathematics
C94	Teaching Minor: Industrial Arts
CBI	Professional Certificate For College Faculty, Biology, Grades 8-12
CBII	Provisional Internship Certificate For College Faculty, Biology, Grades 8-12
CBII	Provisional Internship Certificate For College Faculty, Biology, Grades 8-12
CCH	Professional Certificate For College Faculty, Chemistry, Grades 8-12
CCHI	Provisional Internship Certificate For College Faculty, Chemistry, Grades 8-12
CCHI	Provisional Internship Certificate For College Faculty, Chemistry, Grades 8-12
CEA	Professional Certificate For College Faculty, Earth Science, Grades 8-12
CEAI	Provisional Internship Certificate For College Faculty, Earth Science, Grades 8-12
CEAI	Provisional Internship Certificate For College Faculty, Earth Science, Grades 8-12
CFBI	Provisional One-Year College Faculty Certificate for Teaching Biological Science, Grades 8-12
CFCH	Provisional One-Year College Faculty Certificate for Teaching Chemistry, Grades 8-12
CFEA	Provisional One-Year College Faculty Certificate for Teaching Earth Science, Grades 8-12
CMA	Professional Certificate For College Faculty, Mathematics, Grades 8-12
CMAI	Provisional Internship Certificate For College Faculty, Mathematics, Grades 8-12
COBI	Conditional One-Year Certificate For Biology, Grades 8-12
COCH	Conditional One-Year Certificate For Chemistry, Grades 8-12
COEA	Conditional One-Year Certificate For Earth Science, Grades 8-12
COMA	Conditional One-Year Certificate For Math, Grades 8-12
COTE	Conditional One-Year Certificate For Engineering and Technology, Grades 5-12
CPH	Professional Certificate For College Faculty, Physics, Grades 8-12
CPHI	Provisional Internship Certificate For College Faculty, Physics, Grades 8-12
CPHI	Provisional Internship Certificate For College Faculty, Physics, Grades 8-12
KBI	Professional Certificate For Teaching Biological Science, Grades 8 Through 12
KBII	Provisional Internship Certificate For Teaching Biological Science, Grades 8 Through 12
KBII	Provisional Internship Certificate For Teaching Biological Science, Grades 8 Through 12
KBIL	Certificate For Teaching Kentucky Biology Limited, Grades 8-12
KCH	Professional Certificate For Teaching Chemistry, Grades 8 Through 12
KCH	Professional Certificate For Teaching Chemistry, Grades 8 Through 12
KCHI	Provisional Internship Certificate For Teaching Chemistry Grades 8 Through 12
KCHI	Provisional Internship Certificate For Teaching Chemistry Grades 8 Through 12
KCHL	Certificate for Teaching Kentucky Chemistry Limited, Grades 8-12
KCHL	Certificate for Teaching Kentucky Chemistry Limited, Grades 8-12
KEA	Professional Certificate For Teaching Earth Science, Grades 8-12
KEA	Professional Certificate For Teaching Earth Science, Grades 8-12
KEAI	Provisional Internship Certificate For Teaching Earth Science, Grades 8-12
KEAI	Provisional Internship Certificate For Teaching Earth Science, Grades 8-12
KIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITR	Probationary Certificate For Teaching Industrial Technology, Grades 5 Through 12
KMA	Professional Certificate For Teaching Mathematics, Grades 8 Through 12
KMAI	Provisional Internship Certificate For Teaching Mathematics, Grades 8 Through 12
KMAL	Certificate For Teaching Kentucky Math Limited, Grades 8-12
KPH	Professional Certificate For Teaching Physics, Grades 8-12
KPHI	Provisional Internship Certificate For Teaching Physics, Grades 8 Through 12
KPHI	Provisional Internship Certificate For Teaching Physics, Grades 8 Through 12
KPHL	Certificate for Teaching Kentucky Physics Limited, Grades 8-12
KPHL	Certificate for Teaching Kentucky Physics Limited, Grades 8-12
KPS	Professional Certificate For Teaching Physical Science, Grades 8 Through 12
KPSI	Provisional Internship Certificate For Teaching Physical Science, Grades 8 Through 12
KTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
KTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
KTER	Probationary Certificate For Teaching Engineering and Technology, Grades 5 Through 12
M95	Endorsement For Teaching Industrial Education Orientation And Exploration Levels, Grades 5-8
QBI	Teaching Field: Biology
QMA	Teaching Field: Mathematics
R51	Area Specialization: Science Limited To Biology
R52	Area Specialization: Science Limited To Chemistry

R53	Area Specialization: Science Limited To Physics
R56	Area Specialization: Science Limited To Earth Science
T8BI	Temporary Provisional Certificate For Teaching Biological Science, Grades 8-12 (Option 8)
T8BI	Temporary Provisional Certificate For Teaching Biological Science, Grades 8-12 (Option 8)
T8CH	Temporary Provisional Certificate For Teaching Chemistry, Grades 8-12 (Option 8)
T8CH	Temporary Provisional Certificate For Teaching Chemistry, Grades 8-12 (Option 8)
T8EA	Temporary Provisional Certificate For Teaching Earth Science, Grades 8-12 (Option 8)
T8EA	Temporary Provisional Certificate For Teaching Earth Science, Grades 8-12 (Option 8)
T8MA	Temporary Provisional Certificate For Teaching Mathematics, Grades 8-12 (Option 8)
T8PH	Temporary Provisional Certificate For Teaching Physics, Grades 8-12 (Option 8)
T8PH	Temporary Provisional Certificate For Teaching Physics, Grades 8-12 (Option 8)
TEBI	Temporary Certificate For Biology, Grades 8-12
TEBI	Temporary Certificate For Biology, Grades 8-12
TECH	Temporary Certificate For Chemistry, Grades 8-12
TECH	Temporary Certificate For Chemistry, Grades 8-12
TEEA	Temporary Certificate For Earth Science, Grades 8-12
TEEA	Temporary Certificate For Earth Science, Grades 8-12
TEMA	Temporary Certificate For Mathematics, Grades 8-12
TEPH	Temporary Certificate For Physics, Grades 8-12
TEPH	Temporary Certificate For Physics, Grades 8-12
TETE	Temporary Certificate For Engineering and Technology, Grades 5-12
TPBI	Temporary Provisional Certificate For Biology, Grades 8-12
TPBI	Temporary Provisional Certificate For Biology, Grades 8-12
TPCH	Temporary Provisional Certificate For Teaching Chemistry, Grades 8 Through 12
TPCH	Temporary Provisional Certificate For Teaching Chemistry, Grades 8 Through 12
TPEA	Temporary Provisional Certificate For Teaching Earth Science, Grades 8-12
TPEA	Temporary Provisional Certificate For Teaching Earth Science, Grades 8-12
TPMA	Temporary Provisional Certificate For Math, Grades 8-12
TPPH	Temporary Provisional Certificate For Physics, Grades 8-12
TPPH	Temporary Provisional Certificate For Physics, Grades 8-12
TPPS	Temporary Provisional Certificate For Physical Science, Grades 8-12
TPTE	Temporary Provisional Certificate For Engineering and Technology, Grades 5-12
WBI	Professional Certificate For Teaching Biological Science, Grades 8 Through 12
WBI	Professional Certificate For Teaching Biological Science, Grades 8 Through 12
WBII	Provisional Internship Certificate For Teaching Biological Science, Grades 8 Through 12
WBII	Provisional Internship Certificate For Teaching Biological Science, Grades 8 Through 12
WCH	Professional Certificate For Teaching Chemistry, Grades 8-12
WCH	Professional Certificate For Teaching Chemistry, Grades 8-12
WCHI	Provisional Internship Certificate For Teaching Chemistry, Grades 8-12
WCHI	Provisional Internship Certificate For Teaching Chemistry, Grades 8-12
WIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
WITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
WMA	Professional Certificate For Teaching Mathematics, Grades 8 Through 12
WMAI	Provisional Internship Certificate For Teaching Mathematics, Grades 8 Through 12
WPH	Professional Certificate For Teaching Physics, Grades 8-12
WPH	Professional Certificate For Teaching Physics, Grades 8-12
WPHI	Provisional Certificate For Internship For Teaching Physics, Grades 8-12
WPHI	Provisional Certificate For Internship For Teaching Physics, Grades 8-12
WPS	Professional Certificate For Teaching Physical Science, Grades 8 Through 12
WPSI	Provisional Internship Certificate For Teaching Physical Science, Grades 8 Through 12
WTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
WTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12

219905 - Civil Engineering and Architecture

Grade Level: 9 - 12

Credits: 1

Description: Teams of students collaborate on the development of community -based building projects and conceptual design for project presentations.

NOTE TO SCHOOL - this course requires a District agreement with PLTW. You MUST have a current agreement with PLTW to offer this course.

Content: Pre-Engineering

Population: General

729	Engineering Technology
769	Drafting
773	Electricity
776	Machine Tool Technology
792	Industrial Machine Maintenance
A50	Area Specialization: Science
A70	Area Specialization: Mathematics-Physical Science
A94	Area Specialization: Industrial Arts
A95	Area Specialization: Industrial Education-- Orientation And Exploration Levels
A99	Area Specialization: Technology Education
AJBI	Adjunct Instructor For Biology, Grades 8-12
AJCH	Adjunct Instructor For Chemistry, Grades 8-12
AJEA	Adjunct Instructor for Earth Science, Grades 8-12
AJKT	Adjunct Instructor For Teaching Engineering and Technology, Grades 5-12
AJMA	Adjunct Instructor For Math, Grades 8-12
AJPH	Adjunct Instructor For Physics, Grades 8-12
APLW	Approval for Project Lead the Way
B50	Teaching Major: Science
B51	Teaching Major: Biology
B52	Teaching Major: Chemistry
B53	Teaching Major: Physics
B54	Teaching Major: Biology-Health
B56	Teaching Major: Earth Science
B57	Teaching Major: Geology
B71	Teaching Major: Mathematics
B74	Teaching Major: Computer Science And Mathematics
B94	Teaching Major: Industrial Arts
B95	Teaching Major: Industrial Education -- Orientation And Exploration Levels
C50	Teaching Minor: Science
C51	Teaching Minor: Biology
C52	Teaching Minor: Chemistry
C53	Teaching Minor: Physics
C56	Teaching Minor: Earth Science
C57	Teaching Minor: Geology
C71	Teaching Minor: Mathematics
C94	Teaching Minor: Industrial Arts
CB1	Professional Certificate For College Faculty, Biology, Grades 8-12
CB11	Provisional Internship Certificate For College Faculty, Biology, Grades 8-12
CB11	Provisional Internship Certificate For College Faculty, Biology, Grades 8-12
CCH	Professional Certificate For College Faculty, Chemistry, Grades 8-12
CCHI	Provisional Internship Certificate For College Faculty, Chemistry, Grades 8-12
CCHI	Provisional Internship Certificate For College Faculty, Chemistry, Grades 8-12
CEA	Professional Certificate For College Faculty, Earth Science, Grades 8-12
CEA1	Provisional Internship Certificate For College Faculty, Earth Science, Grades 8-12
CEA1	Provisional Internship Certificate For College Faculty, Earth Science, Grades 8-12
CFB1	Provisional One-Year College Faculty Certificate for Teaching Biological Science, Grades 8-12
CFCH	Provisional One-Year College Faculty Certificate for Teaching Chemistry, Grades 8-12

CFEA	Provisional One-Year College Faculty Certificate for Teaching Earth Science, Grades 8-12
CMA	Professional Certificate For College Faculty, Mathematics, Grades 8-12
CMAI	Provisional Internship Certificate For College Faculty, Mathematics, Grades 8-12
COBI	Conditional One-Year Certificate For Biology, Grades 8-12
COCH	Conditional One-Year Certificate For Chemistry, Grades 8-12
COEA	Conditional One-Year Certificate For Earth Science, Grades 8-12
COMA	Conditional One-Year Certificate For Math, Grades 8-12
COTE	Conditional One-Year Certificate For Engineering and Technology, Grades 5-12
CPH	Professional Certificate For College Faculty, Physics, Grades 8-12
CPHI	Provisional Internship Certificate For College Faculty, Physics, Grades 8-12
CPHI	Provisional Internship Certificate For College Faculty, Physics, Grades 8-12
KBI	Professional Certificate For Teaching Biological Science, Grades 8 Through 12
KBII	Provisional Internship Certificate For Teaching Biological Science, Grades 8 Through 12
KBII	Provisional Internship Certificate For Teaching Biological Science, Grades 8 Through 12
KBIL	Certificate For Teaching Kentucky Biology Limited, Grades 8-12
KCH	Professional Certificate For Teaching Chemistry, Grades 8 Through 12
KCH	Professional Certificate For Teaching Chemistry, Grades 8 Through 12
KCHI	Provisional Internship Certificate For Teaching Chemistry Grades 8 Through 12
KCHI	Provisional Internship Certificate For Teaching Chemistry Grades 8 Through 12
KCHL	Certificate for Teaching Kentucky Chemistry Limited, Grades 8-12
KCHL	Certificate for Teaching Kentucky Chemistry Limited, Grades 8-12
KEA	Professional Certificate For Teaching Earth Science, Grades 8-12
KEA	Professional Certificate For Teaching Earth Science, Grades 8-12
KEAI	Provisional Internship Certificate For Teaching Earth Science, Grades 8-12
KEAI	Provisional Internship Certificate For Teaching Earth Science, Grades 8-12
KIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITR	Probationary Certificate For Teaching Industrial Technology, Grades 5 Through 12
KMA	Professional Certificate For Teaching Mathematics, Grades 8 Through 12
KMAI	Provisional Internship Certificate For Teaching Mathematics, Grades 8 Through 12
KMAL	Certificate For Teaching Kentucky Math Limited, Grades 8-12
KPH	Professional Certificate For Teaching Physics, Grades 8-12
KPHI	Provisional Internship Certificate For Teaching Physics, Grades 8 Through 12
KPHI	Provisional Internship Certificate For Teaching Physics, Grades 8 Through 12
KPHL	Certificate for Teaching Kentucky Physics Limited, Grades 8-12
KPHL	Certificate for Teaching Kentucky Physics Limited, Grades 8-12
KPS	Professional Certificate For Teaching Physical Science, Grades 8 Through 12
KPSI	Provisional Internship Certificate For Teaching Physical Science, Grades 8 Through 12
KTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
KTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
KTER	Probationary Certificate For Teaching Engineering and Technology, Grades 5 Through 12
M95	Endorsement For Teaching Industrial Education Orientation And Exploration Levels, Grades 5-8
QBI	Teaching Field: Biology
QMA	Teaching Field: Mathematics
R51	Area Specialization: Science Limited To Biology
R52	Area Specialization: Science Limited To Chemistry
R53	Area Specialization: Science Limited To Physics
R56	Area Specialization: Science Limited To Earth Science
T8BI	Temporary Provisional Certificate For Teaching Biological Science, Grades 8-12 (Option 8)
T8BI	Temporary Provisional Certificate For Teaching Biological Science, Grades 8-12 (Option 8)
T8CH	Temporary Provisional Certificate For Teaching Chemistry, Grades 8-12 (Option 8)
T8CH	Temporary Provisional Certificate For Teaching Chemistry, Grades 8-12 (Option 8)
T8EA	Temporary Provisional Certificate For Teaching Earth Science, Grades 8-12 (Option 8)
T8EA	Temporary Provisional Certificate For Teaching Earth Science, Grades 8-12 (Option 8)
T8MA	Temporary Provisional Certificate For Teaching Mathematics, Grades 8-12 (Option 8)
T8PH	Temporary Provisional Certificate For Teaching Physics, Grades 8-12 (Option 8)
T8PH	Temporary Provisional Certificate For Teaching Physics, Grades 8-12 (Option 8)
TEBI	Temporary Certificate For Biology, Grades 8-12
TEBI	Temporary Certificate For Biology, Grades 8-12
TECH	Temporary Certificate For Chemistry, Grades 8-12
TECH	Temporary Certificate For Chemistry, Grades 8-12

TEEA	Temporary Certificate For Earth Science, Grades 8-12
TEEA	Temporary Certificate For Earth Science, Grades 8-12
TEMA	Temporary Certificate For Mathematics, Grades 8-12
TEPH	Temporary Certificate For Physics, Grades 8-12
TEPH	Temporary Certificate For Physics, Grades 8-12
TETE	Temporary Certificate For Engineering and Technology, Grades 5-12
TPBI	Temporary Provisional Certificate For Biology, Grades 8-12
TPBI	Temporary Provisional Certificate For Biology, Grades 8-12
TPCH	Temporary Provisional Certificate For Teaching Chemistry, Grades 8 Through 12
TPCH	Temporary Provisional Certificate For Teaching Chemistry, Grades 8 Through 12
TPEA	Temporary Provisional Certificate For Teaching Earth Science, Grades 8-12
TPEA	Temporary Provisional Certificate For Teaching Earth Science, Grades 8-12
TPMA	Temporary Provisional Certificate For Math, Grades 8-12
TPPH	Temporary Provisional Certificate For Physics, Grades 8-12
TPPH	Temporary Provisional Certificate For Physics, Grades 8-12
TPPS	Temporary Provisional Certificate For Physical Science, Grades 8-12
TPTE	Temporary Provisional Certificate For Engineering and Technology, Grades 5-12
WBI	Professional Certificate For Teaching Biological Science, Grades 8 Through 12
WBI	Professional Certificate For Teaching Biological Science, Grades 8 Through 12
WBII	Provisional Internship Certificate For Teaching Biological Science, Grades 8 Through 12
WBII	Provisional Internship Certificate For Teaching Biological Science, Grades 8 Through 12
WCH	Professional Certificate For Teaching Chemistry, Grades 8-12
WCH	Professional Certificate For Teaching Chemistry, Grades 8-12
WCHI	Provisional Internship Certificate For Teaching Chemistry, Grades 8-12
WCHI	Provisional Internship Certificate For Teaching Chemistry, Grades 8-12
WIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
WITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
WMA	Professional Certificate For Teaching Mathematics, Grades 8 Through 12
WMAI	Provisional Internship Certificate For Teaching Mathematics, Grades 8 Through 12
WPH	Professional Certificate For Teaching Physics, Grades 8-12
WPH	Professional Certificate For Teaching Physics, Grades 8-12
WPHI	Provisional Certificate For Internship For Teaching Physics, Grades 8-12
WPHI	Provisional Certificate For Internship For Teaching Physics, Grades 8-12
WPS	Professional Certificate For Teaching Physical Science, Grades 8 Through 12
WPSI	Provisional Internship Certificate For Teaching Physical Science, Grades 8 Through 12
WTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
WTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12

219906 - Engineering Design and Development (Capstone)

Grade Level: 9 - 12

Credits: 1

Description: Teams of students, guided by community mentors, work together to research, design, and construct solutions to engineering problems.

NOTE TO SCHOOL - this course requires a District agreement with PLTW. You MUST have a current agreement with PLTW to offer this course.

Content: Pre-Engineering

Population: General

729	Engineering Technology
769	Drafting
773	Electricity
776	Machine Tool Technology
792	Industrial Machine Maintenance
A50	Area Specialization: Science
A70	Area Specialization: Mathematics-Physical Science
A94	Area Specialization: Industrial Arts
A95	Area Specialization: Industrial Education-- Orientation And Exploration Levels

A99	Area Specialization: Technology Education
AJB	Adjunct Instructor For Biology, Grades 8-12
AJCH	Adjunct Instructor For Chemistry, Grades 8-12
AJEA	Adjunct Instructor for Earth Science, Grades 8-12
AJKT	Adjunct Instructor For Teaching Engineering and Technology, Grades 5-12
AJMA	Adjunct Instructor For Math, Grades 8-12
AJPH	Adjunct Instructor For Physics, Grades 8-12
APLW	Approval for Project Lead the Way
B50	Teaching Major: Science
B51	Teaching Major: Biology
B52	Teaching Major: Chemistry
B53	Teaching Major: Physics
B54	Teaching Major: Biology-Health
B56	Teaching Major: Earth Science
B57	Teaching Major: Geology
B71	Teaching Major: Mathematics
B74	Teaching Major: Computer Science And Mathematics
B94	Teaching Major: Industrial Arts
B95	Teaching Major: Industrial Education -- Orientation And Exploration Levels
C50	Teaching Minor: Science
C51	Teaching Minor: Biology
C52	Teaching Minor: Chemistry
C53	Teaching Minor: Physics
C56	Teaching Minor: Earth Science
C57	Teaching Minor: Geology
C71	Teaching Minor: Mathematics
C94	Teaching Minor: Industrial Arts
CBI	Professional Certificate For College Faculty, Biology, Grades 8-12
CBII	Provisional Internship Certificate For College Faculty, Biology, Grades 8-12
CBII	Provisional Internship Certificate For College Faculty, Biology, Grades 8-12
CCH	Professional Certificate For College Faculty, Chemistry, Grades 8-12
CCHI	Provisional Internship Certificate For College Faculty, Chemistry, Grades 8-12
CCHI	Provisional Internship Certificate For College Faculty, Chemistry, Grades 8-12
CEA	Professional Certificate For College Faculty, Earth Science, Grades 8-12
CEAI	Provisional Internship Certificate For College Faculty, Earth Science, Grades 8-12
CEAI	Provisional Internship Certificate For College Faculty, Earth Science, Grades 8-12
CFBI	Provisional One-Year College Faculty Certificate for Teaching Biological Science, Grades 8-12
CFCH	Provisional One-Year College Faculty Certificate for Teaching Chemistry, Grades 8-12
CFEA	Provisional One-Year College Faculty Certificate for Teaching Earth Science, Grades 8-12
CMA	Professional Certificate For College Faculty, Mathematics, Grades 8-12
CMAI	Provisional Internship Certificate For College Faculty, Mathematics, Grades 8-12
COBI	Conditional One-Year Certificate For Biology, Grades 8-12
COCH	Conditional One-Year Certificate For Chemistry, Grades 8-12
COEA	Conditional One-Year Certificate For Earth Science, Grades 8-12
COMA	Conditional One-Year Certificate For Math, Grades 8-12
COTE	Conditional One-Year Certificate For Engineering and Technology, Grades 5-12
CPH	Professional Certificate For College Faculty, Physics, Grades 8-12
CPHI	Provisional Internship Certificate For College Faculty, Physics, Grades 8-12
CPHI	Provisional Internship Certificate For College Faculty, Physics, Grades 8-12
KBI	Professional Certificate For Teaching Biological Science, Grades 8 Through 12
KBII	Provisional Internship Certificate For Teaching Biological Science, Grades 8 Through 12
KBII	Provisional Internship Certificate For Teaching Biological Science, Grades 8 Through 12
KBIL	Certificate For Teaching Kentucky Biology Limited, Grades 8-12
KCH	Professional Certificate For Teaching Chemistry, Grades 8 Through 12
KCH	Professional Certificate For Teaching Chemistry, Grades 8 Through 12
KCHI	Provisional Internship Certificate For Teaching Chemistry Grades 8 Through 12
KCHI	Provisional Internship Certificate For Teaching Chemistry Grades 8 Through 12
KCHL	Certificate for Teaching Kentucky Chemistry Limited, Grades 8-12
KCHL	Certificate for Teaching Kentucky Chemistry Limited, Grades 8-12
KEA	Professional Certificate For Teaching Earth Science, Grades 8-12
KEA	Professional Certificate For Teaching Earth Science, Grades 8-12

KEAI	Provisional Internship Certificate For Teaching Earth Science, Grades 8-12
KEAI	Provisional Internship Certificate For Teaching Earth Science, Grades 8-12
KIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITR	Probationary Certificate For Teaching Industrial Technology, Grades 5 Through 12
KMA	Professional Certificate For Teaching Mathematics, Grades 8 Through 12
KMAI	Provisional Internship Certificate For Teaching Mathematics, Grades 8 Through 12
KMAL	Certificate For Teaching Kentucky Math Limited, Grades 8-12
KPH	Professional Certificate For Teaching Physics, Grades 8-12
KPHI	Provisional Internship Certificate For Teaching Physics, Grades 8 Through 12
KPHI	Provisional Internship Certificate For Teaching Physics, Grades 8 Through 12
KPHL	Certificate for Teaching Kentucky Physics Limited, Grades 8-12
KPHL	Certificate for Teaching Kentucky Physics Limited, Grades 8-12
KPS	Professional Certificate For Teaching Physical Science, Grades 8 Through 12
KPSI	Provisional Internship Certificate For Teaching Physical Science, Grades 8 Through 12
KTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
KTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
KTER	Probationary Certificate For Teaching Engineering and Technology, Grades 5 Through 12
M95	Endorsement For Teaching Industrial Education Orientation And Exploration Levels, Grades 5-8
QBI	Teaching Field: Biology
QMA	Teaching Field: Mathematics
R51	Area Specialization: Science Limited To Biology
R52	Area Specialization: Science Limited To Chemistry
R53	Area Specialization: Science Limited To Physics
R56	Area Specialization: Science Limited To Earth Science
T8BI	Temporary Provisional Certificate For Teaching Biological Science, Grades 8-12 (Option 8)
T8BI	Temporary Provisional Certificate For Teaching Biological Science, Grades 8-12 (Option 8)
T8CH	Temporary Provisional Certificate For Teaching Chemistry, Grades 8-12 (Option 8)
T8CH	Temporary Provisional Certificate For Teaching Chemistry, Grades 8-12 (Option 8)
T8EA	Temporary Provisional Certificate For Teaching Earth Science, Grades 8-12 (Option 8)
T8EA	Temporary Provisional Certificate For Teaching Earth Science, Grades 8-12 (Option 8)
T8MA	Temporary Provisional Certificate For Teaching Mathematics, Grades 8-12 (Option 8)
T8PH	Temporary Provisional Certificate For Teaching Physics, Grades 8-12 (Option 8)
T8PH	Temporary Provisional Certificate For Teaching Physics, Grades 8-12 (Option 8)
TEBI	Temporary Certificate For Biology, Grades 8-12
TEBI	Temporary Certificate For Biology, Grades 8-12
TECH	Temporary Certificate For Chemistry, Grades 8-12
TECH	Temporary Certificate For Chemistry, Grades 8-12
TEEA	Temporary Certificate For Earth Science, Grades 8-12
TEEA	Temporary Certificate For Earth Science, Grades 8-12
TEMA	Temporary Certificate For Mathematics, Grades 8-12
TEPH	Temporary Certificate For Physics, Grades 8-12
TEPH	Temporary Certificate For Physics, Grades 8-12
TETE	Temporary Certificate For Engineering and Technology, Grades 5-12
TPBI	Temporary Provisional Certificate For Biology, Grades 8-12
TPBI	Temporary Provisional Certificate For Biology, Grades 8-12
TPCH	Temporary Provisional Certificate For Teaching Chemistry, Grades 8 Through 12
TPCH	Temporary Provisional Certificate For Teaching Chemistry, Grades 8 Through 12
TPEA	Temporary Provisional Certificate For Teaching Earth Science, Grades 8-12
TPEA	Temporary Provisional Certificate For Teaching Earth Science, Grades 8-12
TPMA	Temporary Provisional Certificate For Math, Grades 8-12
TPPH	Temporary Provisional Certificate For Physics, Grades 8-12
TPPH	Temporary Provisional Certificate For Physics, Grades 8-12
TPPS	Temporary Provisional Certificate For Physical Science, Grades 8-12
TPTE	Temporary Provisional Certificate For Engineering and Technology, Grades 5-12
WBI	Professional Certificate For Teaching Biological Science, Grades 8 Through 12
WBI	Professional Certificate For Teaching Biological Science, Grades 8 Through 12
WBII	Provisional Internship Certificate For Teaching Biological Science, Grades 8 Through 12
WBII	Provisional Internship Certificate For Teaching Biological Science, Grades 8 Through 12
WCH	Professional Certificate For Teaching Chemistry, Grades 8-12
WCH	Professional Certificate For Teaching Chemistry, Grades 8-12

WCHI	Provisional Internship Certificate For Teaching Chemistry, Grades 8-12
WCHI	Provisional Internship Certificate For Teaching Chemistry, Grades 8-12
WIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
WITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
WMA	Professional Certificate For Teaching Mathematics, Grades 8 Through 12
WMAI	Provisional Internship Certificate For Teaching Mathematics, Grades 8 Through 12
WPH	Professional Certificate For Teaching Physics, Grades 8-12
WPH	Professional Certificate For Teaching Physics, Grades 8-12
WPHI	Provisional Certificate For Internship For Teaching Physics, Grades 8-12
WPHI	Provisional Certificate For Internship For Teaching Physics, Grades 8-12
WPS	Professional Certificate For Teaching Physical Science, Grades 8 Through 12
WPSI	Provisional Internship Certificate For Teaching Physical Science, Grades 8 Through 12
WTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
WTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12

219907 - Aerospace Engineering

Grade Level: 11 - 12

Credits: 1

Description: This course will introduce students to aerospace information systems, star sailing or astronautics rocketry, propulsion, and the physics of space science, space life sciences (BioSpace) that includes looking at habitat and crew systems with life support, and the biology of space science, principles of aeronautics, structures and materials, and systems engineering.

NOTE TO SCHOOL - this course requires a District agreement with PLTW. You MUST have a current agreement with PLTW to offer this course.

Content: Pre-Engineering

Population: General

729	Engineering Technology
769	Drafting
773	Electricity
776	Machine Tool Technology
792	Industrial Machine Maintenance
A50	Area Specialization: Science
A70	Area Specialization: Mathematics-Physical Science
A94	Area Specialization: Industrial Arts
A95	Area Specialization: Industrial Education-- Orientation And Exploration Levels
A99	Area Specialization: Technology Education
AJBI	Adjunct Instructor For Biology, Grades 8-12
AJCH	Adjunct Instructor For Chemistry, Grades 8-12
AJEA	Adjunct Instructor for Earth Science, Grades 8-12
AJKT	Adjunct Instructor For Teaching Engineering and Technology, Grades 5-12
AJMA	Adjunct Instructor For Math, Grades 8-12
AJPH	Adjunct Instructor For Physics, Grades 8-12
APLW	Approval for Project Lead the Way
B50	Teaching Major: Science
B51	Teaching Major: Biology
B52	Teaching Major: Chemistry
B53	Teaching Major: Physics
B54	Teaching Major: Biology-Health
B56	Teaching Major: Earth Science
B57	Teaching Major: Geology
B71	Teaching Major: Mathematics
B74	Teaching Major: Computer Science And Mathematics
B94	Teaching Major: Industrial Arts
B95	Teaching Major: Industrial Education -- Orientation And Exploration Levels
C50	Teaching Minor: Science
C51	Teaching Minor: Biology

C52	Teaching Minor: Chemistry
C53	Teaching Minor: Physics
C56	Teaching Minor: Earth Science
C57	Teaching Minor: Geology
C71	Teaching Minor: Mathematics
C94	Teaching Minor: Industrial Arts
CBI	Professional Certificate For College Faculty, Biology, Grades 8-12
CBII	Provisional Internship Certificate For College Faculty, Biology, Grades 8-12
CBII	Provisional Internship Certificate For College Faculty, Biology, Grades 8-12
CCH	Professional Certificate For College Faculty, Chemistry, Grades 8-12
CCHI	Provisional Internship Certificate For College Faculty, Chemistry, Grades 8-12
CCHI	Provisional Internship Certificate For College Faculty, Chemistry, Grades 8-12
CEA	Professional Certificate For College Faculty, Earth Science, Grades 8-12
CEAI	Provisional Internship Certificate For College Faculty, Earth Science, Grades 8-12
CEAI	Provisional Internship Certificate For College Faculty, Earth Science, Grades 8-12
CFBI	Provisional One-Year College Faculty Certificate for Teaching Biological Science, Grades 8-12
CFCH	Provisional One-Year College Faculty Certificate for Teaching Chemistry, Grades 8-12
CFEA	Provisional One-Year College Faculty Certificate for Teaching Earth Science, Grades 8-12
CMA	Professional Certificate For College Faculty, Mathematics, Grades 8-12
CMAI	Provisional Internship Certificate For College Faculty, Mathematics, Grades 8-12
COBI	Conditional One-Year Certificate For Biology, Grades 8-12
COCH	Conditional One-Year Certificate For Chemistry, Grades 8-12
COEA	Conditional One-Year Certificate For Earth Science, Grades 8-12
COMA	Conditional One-Year Certificate For Math, Grades 8-12
COTE	Conditional One-Year Certificate For Engineering and Technology, Grades 5-12
CPH	Professional Certificate For College Faculty, Physics, Grades 8-12
CPHI	Provisional Internship Certificate For College Faculty, Physics, Grades 8-12
CPHI	Provisional Internship Certificate For College Faculty, Physics, Grades 8-12
KBI	Professional Certificate For Teaching Biological Science, Grades 8 Through 12
KBII	Provisional Internship Certificate For Teaching Biological Science, Grades 8 Through 12
KBII	Provisional Internship Certificate For Teaching Biological Science, Grades 8 Through 12
KBIL	Certificate For Teaching Kentucky Biology Limited, Grades 8-12
KCH	Professional Certificate For Teaching Chemistry, Grades 8 Through 12
KCH	Professional Certificate For Teaching Chemistry, Grades 8 Through 12
KCHI	Provisional Internship Certificate For Teaching Chemistry Grades 8 Through 12
KCHI	Provisional Internship Certificate For Teaching Chemistry Grades 8 Through 12
KCHL	Certificate for Teaching Kentucky Chemistry Limited, Grades 8-12
KCHL	Certificate for Teaching Kentucky Chemistry Limited, Grades 8-12
KEA	Professional Certificate For Teaching Earth Science, Grades 8-12
KEA	Professional Certificate For Teaching Earth Science, Grades 8-12
KEAI	Provisional Internship Certificate For Teaching Earth Science, Grades 8-12
KEAI	Provisional Internship Certificate For Teaching Earth Science, Grades 8-12
KIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITR	Probationary Certificate For Teaching Industrial Technology, Grades 5 Through 12
KMA	Professional Certificate For Teaching Mathematics, Grades 8 Through 12
KMAI	Provisional Internship Certificate For Teaching Mathematics, Grades 8 Through 12
KMAL	Certificate For Teaching Kentucky Math Limited, Grades 8-12
KPH	Professional Certificate For Teaching Physics, Grades 8-12
KPHI	Provisional Internship Certificate For Teaching Physics, Grades 8 Through 12
KPHI	Provisional Internship Certificate For Teaching Physics, Grades 8 Through 12
KPHL	Certificate for Teaching Kentucky Physics Limited, Grades 8-12
KPHL	Certificate for Teaching Kentucky Physics Limited, Grades 8-12
KPS	Professional Certificate For Teaching Physical Science, Grades 8 Through 12
KPSI	Provisional Internship Certificate For Teaching Physical Science, Grades 8 Through 12
KTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
KTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
KTER	Probationary Certificate For Teaching Engineering and Technology, Grades 5 Through 12
M95	Endorsement For Teaching Industrial Education Orientation And Exploration Levels, Grades 5-8
QBI	Teaching Field: Biology
QMA	Teaching Field: Mathematics

R51	Area Specialization: Science Limited To Biology
R52	Area Specialization: Science Limited To Chemistry
R53	Area Specialization: Science Limited To Physics
R56	Area Specialization: Science Limited To Earth Science
T8BI	Temporary Provisional Certificate For Teaching Biological Science, Grades 8-12 (Option 8)
T8BI	Temporary Provisional Certificate For Teaching Biological Science, Grades 8-12 (Option 8)
T8CH	Temporary Provisional Certificate For Teaching Chemistry, Grades 8-12 (Option 8)
T8CH	Temporary Provisional Certificate For Teaching Chemistry, Grades 8-12 (Option 8)
T8EA	Temporary Provisional Certificate For Teaching Earth Science, Grades 8-12 (Option 8)
T8EA	Temporary Provisional Certificate For Teaching Earth Science, Grades 8-12 (Option 8)
T8MA	Temporary Provisional Certificate For Teaching Mathematics, Grades 8-12 (Option 8)
T8PH	Temporary Provisional Certificate For Teaching Physics, Grades 8-12 (Option 8)
T8PH	Temporary Provisional Certificate For Teaching Physics, Grades 8-12 (Option 8)
TEBI	Temporary Certificate For Biology, Grades 8-12
TEBI	Temporary Certificate For Biology, Grades 8-12
TECH	Temporary Certificate For Chemistry, Grades 8-12
TECH	Temporary Certificate For Chemistry, Grades 8-12
TEEA	Temporary Certificate For Earth Science, Grades 8-12
TEEA	Temporary Certificate For Earth Science, Grades 8-12
TEMA	Temporary Certificate For Mathematics, Grades 8-12
TEPH	Temporary Certificate For Physics, Grades 8-12
TEPH	Temporary Certificate For Physics, Grades 8-12
TETE	Temporary Certificate For Engineering and Technology, Grades 5-12
TPBI	Temporary Provisional Certificate For Biology, Grades 8-12
TPBI	Temporary Provisional Certificate For Biology, Grades 8-12
TPCH	Temporary Provisional Certificate For Teaching Chemistry, Grades 8 Through 12
TPCH	Temporary Provisional Certificate For Teaching Chemistry, Grades 8 Through 12
TPEA	Temporary Provisional Certificate For Teaching Earth Science, Grades 8-12
TPEA	Temporary Provisional Certificate For Teaching Earth Science, Grades 8-12
TPMA	Temporary Provisional Certificate For Math, Grades 8-12
TPPH	Temporary Provisional Certificate For Physics, Grades 8-12
TPPH	Temporary Provisional Certificate For Physics, Grades 8-12
TPPS	Temporary Provisional Certificate For Physical Science, Grades 8-12
TPTE	Temporary Provisional Certificate For Engineering and Technology, Grades 5-12
WBI	Professional Certificate For Teaching Biological Science, Grades 8 Through 12
WBI	Professional Certificate For Teaching Biological Science, Grades 8 Through 12
WBII	Provisional Internship Certificate For Teaching Biological Science, Grades 8 Through 12
WBII	Provisional Internship Certificate For Teaching Biological Science, Grades 8 Through 12
WCH	Professional Certificate For Teaching Chemistry, Grades 8-12
WCH	Professional Certificate For Teaching Chemistry, Grades 8-12
WCHI	Provisional Internship Certificate For Teaching Chemistry, Grades 8-12
WCHI	Provisional Internship Certificate For Teaching Chemistry, Grades 8-12
WIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
WITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
WMA	Professional Certificate For Teaching Mathematics, Grades 8 Through 12
WMAI	Provisional Internship Certificate For Teaching Mathematics, Grades 8 Through 12
WPH	Professional Certificate For Teaching Physics, Grades 8-12
WPH	Professional Certificate For Teaching Physics, Grades 8-12
WPHI	Provisional Certificate For Internship For Teaching Physics, Grades 8-12
WPHI	Provisional Certificate For Internship For Teaching Physics, Grades 8-12
WPS	Professional Certificate For Teaching Physical Science, Grades 8 Through 12
WPSI	Provisional Internship Certificate For Teaching Physical Science, Grades 8 Through 12
WTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
WTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12

219908 - Biotechnical Engineering

Grade Level: 11 - 12

Credits: 1

Description: This course includes experiences from the diverse fields of Bio-technology, Bio-engineering, Bio-medical engineering, and Bio-molecular engineering. Lessons engage students in engineering design problems that can be accomplished in a high school setting related to biomechanics, cardiovascular engineering, genetic engineering, agricultural biotechnology, tissue engineering, biomedical devices, human interface, bioprocess engineering, forensics, and bio-ethics.

NOTE TO SCHOOL - this course requires a District agreement with PLTW. You MUST have a current agreement with PLTW to offer this course.

Content: Pre-Engineering

Population: General

729	Engineering Technology
769	Drafting
773	Electricity
776	Machine Tool Technology
792	Industrial Machine Maintenance
A50	Area Specialization: Science
A70	Area Specialization: Mathematics-Physical Science
A94	Area Specialization: Industrial Arts
A95	Area Specialization: Industrial Education-- Orientation And Exploration Levels
A99	Area Specialization: Technology Education
AJBI	Adjunct Instructor For Biology, Grades 8-12
AJCH	Adjunct Instructor For Chemistry, Grades 8-12
AJEA	Adjunct Instructor for Earth Science, Grades 8-12
AJKT	Adjunct Instructor For Teaching Engineering and Technology, Grades 5-12
AJMA	Adjunct Instructor For Math, Grades 8-12
AJPH	Adjunct Instructor For Physics, Grades 8-12
APLW	Approval for Project Lead the Way
B50	Teaching Major: Science
B51	Teaching Major: Biology
B52	Teaching Major: Chemistry
B53	Teaching Major: Physics
B54	Teaching Major: Biology-Health
B56	Teaching Major: Earth Science
B57	Teaching Major: Geology
B71	Teaching Major: Mathematics
B74	Teaching Major: Computer Science And Mathematics
B94	Teaching Major: Industrial Arts
B95	Teaching Major: Industrial Education -- Orientation And Exploration Levels
C50	Teaching Minor: Science
C51	Teaching Minor: Biology
C52	Teaching Minor: Chemistry
C53	Teaching Minor: Physics
C56	Teaching Minor: Earth Science
C57	Teaching Minor: Geology
C71	Teaching Minor: Mathematics
C94	Teaching Minor: Industrial Arts
CBI	Professional Certificate For College Faculty, Biology, Grades 8-12
CBII	Provisional Internship Certificate For College Faculty, Biology, Grades 8-12
CBII	Provisional Internship Certificate For College Faculty, Biology, Grades 8-12
CCH	Professional Certificate For College Faculty, Chemistry, Grades 8-12
CCHI	Provisional Internship Certificate For College Faculty, Chemistry, Grades 8-12
CCHI	Provisional Internship Certificate For College Faculty, Chemistry, Grades 8-12
CEA	Professional Certificate For College Faculty, Earth Science, Grades 8-12
CEAI	Provisional Internship Certificate For College Faculty, Earth Science, Grades 8-12

CEAI	Provisional Internship Certificate For College Faculty, Earth Science, Grades 8-12
CFBI	Provisional One-Year College Faculty Certificate for Teaching Biological Science, Grades 8-12
CFCH	Provisional One-Year College Faculty Certificate for Teaching Chemistry, Grades 8-12
CFEA	Provisional One-Year College Faculty Certificate for Teaching Earth Science, Grades 8-12
CMA	Professional Certificate For College Faculty, Mathematics, Grades 8-12
CMAI	Provisional Internship Certificate For College Faculty, Mathematics, Grades 8-12
COBI	Conditional One-Year Certificate For Biology, Grades 8-12
COCH	Conditional One-Year Certificate For Chemistry, Grades 8-12
COEA	Conditional One-Year Certificate For Earth Science, Grades 8-12
COMA	Conditional One-Year Certificate For Math, Grades 8-12
COTE	Conditional One-Year Certificate For Engineering and Technology, Grades 5-12
CPH	Professional Certificate For College Faculty, Physics, Grades 8-12
CPHI	Provisional Internship Certificate For College Faculty, Physics, Grades 8-12
CPHI	Provisional Internship Certificate For College Faculty, Physics, Grades 8-12
KBI	Professional Certificate For Teaching Biological Science, Grades 8 Through 12
KBII	Provisional Internship Certificate For Teaching Biological Science, Grades 8 Through 12
KBII	Provisional Internship Certificate For Teaching Biological Science, Grades 8 Through 12
KBIL	Certificate For Teaching Kentucky Biology Limited, Grades 8-12
KCH	Professional Certificate For Teaching Chemistry, Grades 8 Through 12
KCH	Professional Certificate For Teaching Chemistry, Grades 8 Through 12
KCHI	Provisional Internship Certificate For Teaching Chemistry Grades 8 Through 12
KCHI	Provisional Internship Certificate For Teaching Chemistry Grades 8 Through 12
KCHL	Certificate for Teaching Kentucky Chemistry Limited, Grades 8-12
KCHL	Certificate for Teaching Kentucky Chemistry Limited, Grades 8-12
KEA	Professional Certificate For Teaching Earth Science, Grades 8-12
KEA	Professional Certificate For Teaching Earth Science, Grades 8-12
KEAI	Provisional Internship Certificate For Teaching Earth Science, Grades 8-12
KEAI	Provisional Internship Certificate For Teaching Earth Science, Grades 8-12
KIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITR	Probationary Certificate For Teaching Industrial Technology, Grades 5 Through 12
KMA	Professional Certificate For Teaching Mathematics, Grades 8 Through 12
KMAI	Provisional Internship Certificate For Teaching Mathematics, Grades 8 Through 12
KMAL	Certificate For Teaching Kentucky Math Limited, Grades 8-12
KPH	Professional Certificate For Teaching Physics, Grades 8-12
KPHI	Provisional Internship Certificate For Teaching Physics, Grades 8 Through 12
KPHI	Provisional Internship Certificate For Teaching Physics, Grades 8 Through 12
KPHL	Certificate for Teaching Kentucky Physics Limited, Grades 8-12
KPHL	Certificate for Teaching Kentucky Physics Limited, Grades 8-12
KPS	Professional Certificate For Teaching Physical Science, Grades 8 Through 12
KPSI	Provisional Internship Certificate For Teaching Physical Science, Grades 8 Through 12
KTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
KTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
KTER	Probationary Certificate For Teaching Engineering and Technology, Grades 5 Through 12
M95	Endorsement For Teaching Industrial Education Orientation And Exploration Levels, Grades 5-8
QBI	Teaching Field: Biology
QMA	Teaching Field: Mathematics
R51	Area Specialization: Science Limited To Biology
R52	Area Specialization: Science Limited To Chemistry
R53	Area Specialization: Science Limited To Physics
R56	Area Specialization: Science Limited To Earth Science
T8BI	Temporary Provisional Certificate For Teaching Biological Science, Grades 8-12 (Option 8)
T8BI	Temporary Provisional Certificate For Teaching Biological Science, Grades 8-12 (Option 8)
T8CH	Temporary Provisional Certificate For Teaching Chemistry, Grades 8-12 (Option 8)
T8CH	Temporary Provisional Certificate For Teaching Chemistry, Grades 8-12 (Option 8)
T8EA	Temporary Provisional Certificate For Teaching Earth Science, Grades 8-12 (Option 8)
T8EA	Temporary Provisional Certificate For Teaching Earth Science, Grades 8-12 (Option 8)
T8MA	Temporary Provisional Certificate For Teaching Mathematics, Grades 8-12 (Option 8)
T8PH	Temporary Provisional Certificate For Teaching Physics, Grades 8-12 (Option 8)
T8PH	Temporary Provisional Certificate For Teaching Physics, Grades 8-12 (Option 8)
TEBI	Temporary Certificate For Biology, Grades 8-12

TEBI	Temporary Certificate For Biology, Grades 8-12
TECH	Temporary Certificate For Chemistry, Grades 8-12
TECH	Temporary Certificate For Chemistry, Grades 8-12
TEEA	Temporary Certificate For Earth Science, Grades 8-12
TEEA	Temporary Certificate For Earth Science, Grades 8-12
TEMA	Temporary Certificate For Mathematics, Grades 8-12
TEPH	Temporary Certificate For Physics, Grades 8-12
TEPH	Temporary Certificate For Physics, Grades 8-12
TETE	Temporary Certificate For Engineering and Technology, Grades 5-12
TPBI	Temporary Provisional Certificate For Biology, Grades 8-12
TPBI	Temporary Provisional Certificate For Biology, Grades 8-12
TPCH	Temporary Provisional Certificate For Teaching Chemistry, Grades 8 Through 12
TPCH	Temporary Provisional Certificate For Teaching Chemistry, Grades 8 Through 12
TPEA	Temporary Provisional Certificate For Teaching Earth Science, Grades 8-12
TPEA	Temporary Provisional Certificate For Teaching Earth Science, Grades 8-12
TPMA	Temporary Provisional Certificate For Math, Grades 8-12
TPPH	Temporary Provisional Certificate For Physics, Grades 8-12
TPPH	Temporary Provisional Certificate For Physics, Grades 8-12
TPPS	Temporary Provisional Certificate For Physical Science, Grades 8-12
TPTE	Temporary Provisional Certificate For Engineering and Technology, Grades 5-12
WBI	Professional Certificate For Teaching Biological Science, Grades 8 Through 12
WBI	Professional Certificate For Teaching Biological Science, Grades 8 Through 12
WBII	Provisional Internship Certificate For Teaching Biological Science, Grades 8 Through 12
WBII	Provisional Internship Certificate For Teaching Biological Science, Grades 8 Through 12
WCH	Professional Certificate For Teaching Chemistry, Grades 8-12
WCH	Professional Certificate For Teaching Chemistry, Grades 8-12
WCHI	Provisional Internship Certificate For Teaching Chemistry, Grades 8-12
WCHI	Provisional Internship Certificate For Teaching Chemistry, Grades 8-12
WIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
WITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
WMA	Professional Certificate For Teaching Mathematics, Grades 8 Through 12
WMAI	Provisional Internship Certificate For Teaching Mathematics, Grades 8 Through 12
WPH	Professional Certificate For Teaching Physics, Grades 8-12
WPH	Professional Certificate For Teaching Physics, Grades 8-12
WPHI	Provisional Certificate For Internship For Teaching Physics, Grades 8-12
WPHI	Provisional Certificate For Internship For Teaching Physics, Grades 8-12
WPS	Professional Certificate For Teaching Physical Science, Grades 8 Through 12
WPSI	Provisional Internship Certificate For Teaching Physical Science, Grades 8 Through 12
WTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
WTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12

219909 - Design and Modeling

Grade Level: 6 - 8

Credits:

Description: In this Gateway To Technology course uses solid modeling (a very sophisticated mathematical technique for representing solid objects) to introduce students to the design process. Utilizing this design approach, students understand how solid modeling has influenced their lives. Students also learn sketching techniques, and use descriptive geometry as a component of design, measurement, and computer modeling. Using design briefs or abstracts, students create models and documentation to solve problems.

NOTE TO SCHOOL - this course requires a District agreement with PLTW. You MUST have a current agreement with PLTW to offer this course.

Content: Pre-Engineering

Population: General

729	Engineering Technology
A94	Area Specialization: Industrial Arts
A95	Area Specialization: Industrial Education-- Orientation And Exploration Levels

A99	Area Specialization: Technology Education
AJG5	Adjunct Instructor for Middle Grades Science
AJKT	Adjunct Instructor For Teaching Engineering and Technology, Grades 5-12
APLW	Approval for Project Lead the Way
B94	Teaching Major: Industrial Arts
B95	Teaching Major: Industrial Education -- Orientation And Exploration Levels
C94	Teaching Minor: Industrial Arts
CG50	Professional Certificate For College Faculty, Middle School Science, Grades 5-9
CG5I	Provisional Internship Certificate For College Faculty, Middle School Science, Grades 5-9
CO50	Conditional One-Year Certificate For Middle School Science, Grades 5-9
COTE	Conditional One-Year Certificate For Engineering and Technology, Grades 5-12
D50	Approval For Teaching Middle School Science, Grades 5-9
ELE	Endorsement For Elementary School Classroom Teaching, Grades 1-8
G50	Middle School Teaching Field: Science
G71	Middle School Teaching Field: Mathematics
J50	Junior High Major: Science
J51	Junior High Major: Biology
J52	Junior High Major: Chemistry
J54	Junior High Major: Biology-Health
J71	Junior High Major: Mathematics
K51	Junior High Semi-Major: Biology
K52	Junior High Semi-Major: Chemistry
K53	Junior High Semi-Major: Physics
K56	Junior High Semi-Major: Earth Science
K71	Junior High Semi-Major: Mathematics
KG50	Professional Certificate For Middle Grades Science, Grades 5-9
KG5I	Provisional Internship Certificate For Middle Grades Science, Grades 5-9
KG71	Professional Certificate For Middle Grades Mathematics, Grades 5-9
KG7I	Provisional Internship Certificate For Middle Grades Mathematics, Grades 5-9
KIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITR	Probationary Certificate For Teaching Industrial Technology, Grades 5 Through 12
KTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
KTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
KTER	Probationary Certificate For Teaching Engineering and Technology, Grades 5 Through 12
M50	Endorsement For Teaching Science, Grades 5-8
M50R	Probationary Certificate For Teaching Middle School Science, Grades 5-9
M71	Endorsement For Teaching Mathematics, Grades 5-8
M71R	Probationary Certificate For Teaching Middle School Math, Grades 5-9
M95	Endorsement For Teaching Industrial Education Orientation And Exploration Levels, Grades 5-8
MS50	Endorsement For Teaching Middle School Science, Grades 5-9
MS71	Endorsement For Teaching Middle School Math, Grades 5-9
PEA	Provisional Elementary Certificate, Grades 1-8
PEB	Provisional Elementary Certificate, Grades 1-8
PEBF	Provisional Elementary Certificate, Grades 1-8
QG71	Teaching Field: Middle Grades Mathematics
SEA	Standard Elementary Certificate, Grades 1-8
SEB	Standard Elementary Certificate, Grades 1-8
SEM	Standard Elementary Certificate, Grades 1-8
SEMF	Standard Elementary Certificate, Grades 1-8
T8G5	Temporary Provisional Certificate For Teaching Middle Grades Science, Grades 5-9 (Option 8)
T8G7	Temporary Provisional Certificate For Teaching Middle Grades Mathematics, Grades 5-9 (Option 8)
TE50	Temporary Certificate For Middle School Science, Grades 5-9
TE71	Temporary Certificate For Middle School Mathematics, Grades 5-9
TES	Endorsement For Elementary And Secondary Classroom Teaching
TETE	Temporary Certificate For Engineering and Technology, Grades 5-12
TPG5	Temporary Provisional Certificate For Middle Grades Science, Grades 5-9
TPG7	Temporary Provisional Certificate For Middle Grades Mathematics, Grades 5-9
TPTE	Temporary Provisional Certificate For Engineering and Technology, Grades 5-12
WG50	Professional Certificate for Middle Grades Science, Grades 5-9
WG5I	Provisional Internship Certificate For Middle Grades Science, Grades 5-9

WIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
WITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
WTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
WTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
XM50	Emergency Certificate For Teaching Middle School Science

219910 - Automation & Robotics

Grade Level: 6 - 8

Credits:

Description: In this Gateway To Technology course students will trace the history and development of automation and robotics. They learn about structures, energy transfer, machine automation, and computer control systems. Students acquire knowledge and skills in engineering problem solving and explore requirements for careers in engineering.

NOTE TO SCHOOL - this course requires a District agreement with PLTW. You MUST have a current agreement with PLTW to offer this course.

Content: Pre-Engineering

Population: General

729	Engineering Technology
A94	Area Specialization: Industrial Arts
A95	Area Specialization: Industrial Education-- Orientation And Exploration Levels
A99	Area Specialization: Technology Education
AJG5	Adjunct Instructor for Middle Grades Science
AJKT	Adjunct Instructor For Teaching Engineering and Technology, Grades 5-12
APLW	Approval for Project Lead the Way
B94	Teaching Major: Industrial Arts
B95	Teaching Major: Industrial Education -- Orientation And Exploration Levels
C94	Teaching Minor: Industrial Arts
CG50	Professional Certificate For College Faculty, Middle School Science, Grades 5-9
CG51	Provisional Internship Certificate For College Faculty, Middle School Science, Grades 5-9
CO50	Conditional One-Year Certificate For Middle School Science, Grades 5-9
COTE	Conditional One-Year Certificate For Engineering and Technology, Grades 5-12
D50	Approval For Teaching Middle School Science, Grades 5-9
ELE	Endorsement For Elementary School Classroom Teaching, Grades 1-8
G50	Middle School Teaching Field: Science
G71	Middle School Teaching Field: Mathematics
J50	Junior High Major: Science
J51	Junior High Major: Biology
J52	Junior High Major: Chemistry
J54	Junior High Major: Biology-Health
J71	Junior High Major: Mathematics
K51	Junior High Semi-Major: Biology
K52	Junior High Semi-Major: Chemistry
K53	Junior High Semi-Major: Physics
K56	Junior High Semi-Major: Earth Science
K71	Junior High Semi-Major: Mathematics
KG50	Professional Certificate For Middle Grades Science, Grades 5-9
KG51	Provisional Internship Certificate For Middle Grades Science, Grades 5-9
KG71	Professional Certificate For Middle Grades Mathematics, Grades 5-9
KG71	Provisional Internship Certificate For Middle Grades Mathematics, Grades 5-9
KIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITR	Probationary Certificate For Teaching Industrial Technology, Grades 5 Through 12
KTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
KTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
KTER	Probationary Certificate For Teaching Engineering and Technology, Grades 5 Through 12
M50	Endorsement For Teaching Science, Grades 5-8

M50R	Probationary Certificate For Teaching Middle School Science, Grades 5-9
M71	Endorsement For Teaching Mathematics, Grades 5-8
M71R	Probationary Certificate For Teaching Middle School Math, Grades 5-9
M95	Endorsement For Teaching Industrial Education Orientation And Exploration Levels, Grades 5-8
MS50	Endorsement For Teaching Middle School Science, Grades 5-9
MS71	Endorsement For Teaching Middle School Math, Grades 5-9
PEA	Provisional Elementary Certificate, Grades 1-8
PEB	Provisional Elementary Certificate, Grades 1-8
PEBF	Provisional Elementary Certificate, Grades 1-8
QG71	Teaching Field: Middle Grades Mathematics
SEA	Standard Elementary Certificate, Grades 1-8
SEB	Standard Elementary Certificate, Grades 1-8
SEM	Standard Elementary Certificate, Grades 1-8
SEMF	Standard Elementary Certificate, Grades 1-8
T8G5	Temporary Provisional Certificate For Teaching Middle Grades Science, Grades 5-9 (Option 8)
T8G7	Temporary Provisional Certificate For Teaching Middle Grades Mathematics, Grades 5-9 (Option 8)
TE50	Temporary Certificate For Middle School Science, Grades 5-9
TE71	Temporary Certificate For Middle School Mathematics, Grades 5-9
TES	Endorsement For Elementary And Secondary Classroom Teaching
TETE	Temporary Certificate For Engineering and Technology, Grades 5-12
TPG5	Temporary Provisional Certificate For Middle Grades Science, Grades 5-9
TPG7	Temporary Provisional Certificate For Middle Grades Mathematics, Grades 5-9
TPTTE	Temporary Provisional Certificate For Engineering and Technology, Grades 5-12
WG50	Professional Certificate for Middle Grades Science, Grades 5-9
WG51	Provisional Internship Certificate For Middle Grades Science, Grades 5-9
WIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
WIT1	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
WTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
WTE1	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
XM50	Emergency Certificate For Teaching Middle School Science

219911 - Science & Technology

Grade Level: 6 - 8

Credits:

Description: This course traces how science has affected technology throughout history. Students learn about the mechanics of motion, the conversion of energy, and the use of science to improve communication.

NOTE TO SCHOOL - this course requires a District agreement with PLTW. You MUST have a current agreement with PLTW to offer this course.

Content: Pre-Engineering

Population: General

729	Engineering Technology
A94	Area Specialization: Industrial Arts
A95	Area Specialization: Industrial Education-- Orientation And Exploration Levels
A99	Area Specialization: Technology Education
AJG5	Adjunct Instructor for Middle Grades Science
AJKT	Adjunct Instructor For Teaching Engineering and Technology, Grades 5-12
APLW	Approval for Project Lead the Way
B94	Teaching Major: Industrial Arts
B95	Teaching Major: Industrial Education -- Orientation And Exploration Levels
C94	Teaching Minor: Industrial Arts
CG50	Professional Certificate For College Faculty, Middle School Science, Grades 5-9
CG51	Provisional Internship Certificate For College Faculty, Middle School Science, Grades 5-9
CO50	Conditional One-Year Certificate For Middle School Science, Grades 5-9
COTE	Conditional One-Year Certificate For Engineering and Technology, Grades 5-12
D50	Approval For Teaching Middle School Science, Grades 5-9
ELE	Endorsement For Elementary School Classroom Teaching, Grades 1-8

G50	Middle School Teaching Field: Science
G71	Middle School Teaching Field: Mathematics
J50	Junior High Major: Science
J51	Junior High Major: Biology
J52	Junior High Major: Chemistry
J54	Junior High Major: Biology-Health
J71	Junior High Major: Mathematics
K51	Junior High Semi-Major: Biology
K52	Junior High Semi-Major: Chemistry
K53	Junior High Semi-Major: Physics
K56	Junior High Semi-Major: Earth Science
K71	Junior High Semi-Major: Mathematics
KG50	Professional Certificate For Middle Grades Science, Grades 5-9
KG5I	Provisional Internship Certificate For Middle Grades Science, Grades 5-9
KG71	Professional Certificate For Middle Grades Mathematics, Grades 5-9
KG7I	Provisional Internship Certificate For Middle Grades Mathematics, Grades 5-9
KIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITR	Probationary Certificate For Teaching Industrial Technology, Grades 5 Through 12
KTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
KTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
KTER	Probationary Certificate For Teaching Engineering and Technology, Grades 5 Through 12
M50	Endorsement For Teaching Science, Grades 5-8
M50R	Probationary Certificate For Teaching Middle School Science, Grades 5-9
M71	Endorsement For Teaching Mathematics, Grades 5-8
M71R	Probationary Certificate For Teaching Middle School Math, Grades 5-9
M95	Endorsement For Teaching Industrial Education Orientation And Exploration Levels, Grades 5-8
MS50	Endorsement For Teaching Middle School Science, Grades 5-9
MS71	Endorsement For Teaching Middle School Math, Grades 5-9
PEA	Provisional Elementary Certificate, Grades 1-8
PEB	Provisional Elementary Certificate, Grades 1-8
PEBF	Provisional Elementary Certificate, Grades 1-8
QG71	Teaching Field: Middle Grades Mathematics
SEA	Standard Elementary Certificate, Grades 1-8
SEB	Standard Elementary Certificate, Grades 1-8
SEM	Standard Elementary Certificate, Grades 1-8
SEMF	Standard Elementary Certificate, Grades 1-8
T8G5	Temporary Provisional Certificate For Teaching Middle Grades Science, Grades 5-9 (Option 8)
T8G7	Temporary Provisional Certificate For Teaching Middle Grades Mathematics, Grades 5-9 (Option 8)
TE50	Temporary Certificate For Middle School Science, Grades 5-9
TE71	Temporary Certificate For Middle School Mathematics, Grades 5-9
TES	Endorsement For Elementary And Secondary Classroom Teaching
TETE	Temporary Certificate For Engineering and Technology, Grades 5-12
TPG5	Temporary Provisional Certificate For Middle Grades Science, Grades 5-9
TPG7	Temporary Provisional Certificate For Middle Grades Mathematics, Grades 5-9
TPTE	Temporary Provisional Certificate For Engineering and Technology, Grades 5-12
WG50	Professional Certificate for Middle Grades Science, Grades 5-9
WG5I	Provisional Internship Certificate For Middle Grades Science, Grades 5-9
WIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
WITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
WTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
WTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
XM50	Emergency Certificate For Teaching Middle School Science

219912 - Flight and Space

Grade Level: 6 - 8

Credits:

Description: In this Gateway To Technology course students learn about the history of flight through hands-on activities, research, and a presentation in the form of an infomercial. In the Aeronautics unit students learn the science and art of flying through the air. Students will experience activities related to Newton's laws, Bernoulli's principle, wind tunnels, airfoils, and propulsion systems. Students will complete activities while learning about the history and principles of space travel. They will study the development of rocketry and the space program.

NOTE TO SCHOOL - this course requires a District agreement with PLTW. You MUST have a current agreement with PLTW to offer this course.

Content: Pre-Engineering

Population: General

729	Engineering Technology
A94	Area Specialization: Industrial Arts
A95	Area Specialization: Industrial Education-- Orientation And Exploration Levels
A99	Area Specialization: Technology Education
AJG5	Adjunct Instructor for Middle Grades Science
AJKT	Adjunct Instructor For Teaching Engineering and Technology, Grades 5-12
APLW	Approval for Project Lead the Way
B94	Teaching Major: Industrial Arts
B95	Teaching Major: Industrial Education -- Orientation And Exploration Levels
C94	Teaching Minor: Industrial Arts
CG50	Professional Certificate For College Faculty, Middle School Science, Grades 5-9
CG51	Provisional Internship Certificate For College Faculty, Middle School Science, Grades 5-9
CO50	Conditional One-Year Certificate For Middle School Science, Grades 5-9
COTE	Conditional One-Year Certificate For Engineering and Technology, Grades 5-12
D50	Approval For Teaching Middle School Science, Grades 5-9
ELE	Endorsement For Elementary School Classroom Teaching, Grades 1-8
G50	Middle School Teaching Field: Science
G71	Middle School Teaching Field: Mathematics
J50	Junior High Major: Science
J51	Junior High Major: Biology
J52	Junior High Major: Chemistry
J54	Junior High Major: Biology-Health
J71	Junior High Major: Mathematics
K51	Junior High Semi-Major: Biology
K52	Junior High Semi-Major: Chemistry
K53	Junior High Semi-Major: Physics
K56	Junior High Semi-Major: Earth Science
K71	Junior High Semi-Major: Mathematics
KG50	Professional Certificate For Middle Grades Science, Grades 5-9
KG51	Provisional Internship Certificate For Middle Grades Science, Grades 5-9
KG71	Professional Certificate For Middle Grades Mathematics, Grades 5-9
KG71	Provisional Internship Certificate For Middle Grades Mathematics, Grades 5-9
KIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITR	Probationary Certificate For Teaching Industrial Technology, Grades 5 Through 12
KTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
KTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
KTER	Probationary Certificate For Teaching Engineering and Technology, Grades 5 Through 12
M50	Endorsement For Teaching Science, Grades 5-8
M50R	Probationary Certificate For Teaching Middle School Science, Grades 5-9
M71	Endorsement For Teaching Mathematics, Grades 5-8
M71R	Probationary Certificate For Teaching Middle School Math, Grades 5-9
M95	Endorsement For Teaching Industrial Education Orientation And Exploration Levels, Grades 5-8

MS50	Endorsement For Teaching Middle School Science, Grades 5-9
MS71	Endorsement For Teaching Middle School Math, Grades 5-9
PEA	Provisional Elementary Certificate, Grades 1-8
PEB	Provisional Elementary Certificate, Grades 1-8
PEBF	Provisional Elementary Certificate, Grades 1-8
QG71	Teaching Field: Middle Grades Mathematics
SEA	Standard Elementary Certificate, Grades 1-8
SEB	Standard Elementary Certificate, Grades 1-8
SEM	Standard Elementary Certificate, Grades 1-8
SEMF	Standard Elementary Certificate, Grades 1-8
T8G5	Temporary Provisional Certificate For Teaching Middle Grades Science, Grades 5-9 (Option 8)
T8G7	Temporary Provisional Certificate For Teaching Middle Grades Mathematics, Grades 5-9 (Option 8)
TE50	Temporary Certificate For Middle School Science, Grades 5-9
TE71	Temporary Certificate For Middle School Mathematics, Grades 5-9
TES	Endorsement For Elementary And Secondary Classroom Teaching
TETE	Temporary Certificate For Engineering and Technology, Grades 5-12
TPG5	Temporary Provisional Certificate For Middle Grades Science, Grades 5-9
TPG7	Temporary Provisional Certificate For Middle Grades Mathematics, Grades 5-9
TPTE	Temporary Provisional Certificate For Engineering and Technology, Grades 5-12
WG50	Professional Certificate for Middle Grades Science, Grades 5-9
WG5I	Provisional Internship Certificate For Middle Grades Science, Grades 5-9
WIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
WITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
WTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
WTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
XM50	Emergency Certificate For Teaching Middle School Science

219913 - Magic of Electrons

Grade Level: 6 - 8

Credits:

Description: In this course students explore the science of electricity, the movement of atoms, circuit design, and sensing devices. Students acquire knowledge and skills in basic circuitry design and explore the impact of electricity on our lives.

NOTE TO SCHOOL - this course requires a District agreement with PLTW. You MUST have a current agreement with PLTW to offer this course.

Content: Pre-Engineering

Population: General

729	Engineering Technology
A94	Area Specialization: Industrial Arts
A95	Area Specialization: Industrial Education-- Orientation And Exploration Levels
A99	Area Specialization: Technology Education
AJG5	Adjunct Instructor for Middle Grades Science
AJKT	Adjunct Instructor For Teaching Engineering and Technology, Grades 5-12
APLW	Approval for Project Lead the Way
B94	Teaching Major: Industrial Arts
B95	Teaching Major: Industrial Education -- Orientation And Exploration Levels
C94	Teaching Minor: Industrial Arts
CG50	Professional Certificate For College Faculty, Middle School Science, Grades 5-9
CG5I	Provisional Internship Certificate For College Faculty, Middle School Science, Grades 5-9
CO50	Conditional One-Year Certificate For Middle School Science, Grades 5-9
COTE	Conditional One-Year Certificate For Engineering and Technology, Grades 5-12
D50	Approval For Teaching Middle School Science, Grades 5-9
ELE	Endorsement For Elementary School Classroom Teaching, Grades 1-8
G50	Middle School Teaching Field: Science
G71	Middle School Teaching Field: Mathematics
J50	Junior High Major: Science

J51	Junior High Major: Biology
J52	Junior High Major: Chemistry
J54	Junior High Major: Biology-Health
J71	Junior High Major: Mathematics
K51	Junior High Semi-Major: Biology
K52	Junior High Semi-Major: Chemistry
K53	Junior High Semi-Major: Physics
K56	Junior High Semi-Major: Earth Science
K71	Junior High Semi-Major: Mathematics
KG50	Professional Certificate For Middle Grades Science, Grades 5-9
KG5I	Provisional Internship Certificate For Middle Grades Science, Grades 5-9
KG71	Professional Certificate For Middle Grades Mathematics, Grades 5-9
KG7I	Provisional Internship Certificate For Middle Grades Mathematics, Grades 5-9
KIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITR	Probationary Certificate For Teaching Industrial Technology, Grades 5 Through 12
KTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
KTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
KTER	Probationary Certificate For Teaching Engineering and Technology, Grades 5 Through 12
M50	Endorsement For Teaching Science, Grades 5-8
M50R	Probationary Certificate For Teaching Middle School Science, Grades 5-9
M71	Endorsement For Teaching Mathematics, Grades 5-8
M71R	Probationary Certificate For Teaching Middle School Math, Grades 5-9
M95	Endorsement For Teaching Industrial Education Orientation And Exploration Levels, Grades 5-8
MS50	Endorsement For Teaching Middle School Science, Grades 5-9
MS71	Endorsement For Teaching Middle School Math, Grades 5-9
PEA	Provisional Elementary Certificate, Grades 1-8
PEB	Provisional Elementary Certificate, Grades 1-8
PEBF	Provisional Elementary Certificate, Grades 1-8
QG71	Teaching Field: Middle Grades Mathematics
SEA	Standard Elementary Certificate, Grades 1-8
SEB	Standard Elementary Certificate, Grades 1-8
SEM	Standard Elementary Certificate, Grades 1-8
SEMF	Standard Elementary Certificate, Grades 1-8
T8G5	Temporary Provisional Certificate For Teaching Middle Grades Science, Grades 5-9 (Option 8)
T8G7	Temporary Provisional Certificate For Teaching Middle Grades Mathematics, Grades 5-9 (Option 8)
TE50	Temporary Certificate For Middle School Science, Grades 5-9
TE71	Temporary Certificate For Middle School Mathematics, Grades 5-9
TES	Endorsement For Elementary And Secondary Classroom Teaching
TETE	Temporary Certificate For Engineering and Technology, Grades 5-12
TPG5	Temporary Provisional Certificate For Middle Grades Science, Grades 5-9
TPG7	Temporary Provisional Certificate For Middle Grades Mathematics, Grades 5-9
TPTE	Temporary Provisional Certificate For Engineering and Technology, Grades 5-12
WG50	Professional Certificate for Middle Grades Science, Grades 5-9
WG5I	Provisional Internship Certificate For Middle Grades Science, Grades 5-9
WIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
WITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
WTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
WTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
XM50	Emergency Certificate For Teaching Middle School Science

219914 - Energy & The Environment

Grade Level: 6 - 8

Credits:

Description: In this Gateway To Technology course students investigate the impact of energy on our lives and the environment. They design and model alternative energy sources and participates in an energy expo to demonstrate energy concepts and innovative ideas. Students evaluate ways to reduce energy consumption through energy efficiency and sustainability.

NOTE TO SCHOOL - this course requires a District agreement with PLTW. You MUST have a current agreement with PLTW to offer this course.

Content: Pre-Engineering

Population: General

729	Engineering Technology
A94	Area Specialization: Industrial Arts
A95	Area Specialization: Industrial Education-- Orientation And Exploration Levels
A99	Area Specialization: Technology Education
AJG5	Adjunct Instructor for Middle Grades Science
AJKT	Adjunct Instructor For Teaching Engineering and Technology, Grades 5-12
APLW	Approval for Project Lead the Way
B94	Teaching Major: Industrial Arts
B95	Teaching Major: Industrial Education -- Orientation And Exploration Levels
C94	Teaching Minor: Industrial Arts
CG50	Professional Certificate For College Faculty, Middle School Science, Grades 5-9
CG5I	Provisional Internship Certificate For College Faculty, Middle School Science, Grades 5-9
CO50	Conditional One-Year Certificate For Middle School Science, Grades 5-9
COTE	Conditional One-Year Certificate For Engineering and Technology, Grades 5-12
D50	Approval For Teaching Middle School Science, Grades 5-9
ELE	Endorsement For Elementary School Classroom Teaching, Grades 1-8
G50	Middle School Teaching Field: Science
G71	Middle School Teaching Field: Mathematics
J50	Junior High Major: Science
J51	Junior High Major: Biology
J52	Junior High Major: Chemistry
J54	Junior High Major: Biology-Health
J71	Junior High Major: Mathematics
K51	Junior High Semi-Major: Biology
K52	Junior High Semi-Major: Chemistry
K53	Junior High Semi-Major: Physics
K56	Junior High Semi-Major: Earth Science
K71	Junior High Semi-Major: Mathematics
KG50	Professional Certificate For Middle Grades Science, Grades 5-9
KG5I	Provisional Internship Certificate For Middle Grades Science, Grades 5-9
KG71	Professional Certificate For Middle Grades Mathematics, Grades 5-9
KG7I	Provisional Internship Certificate For Middle Grades Mathematics, Grades 5-9
KIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITR	Probationary Certificate For Teaching Industrial Technology, Grades 5 Through 12
KTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
KTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
KTER	Probationary Certificate For Teaching Engineering and Technology, Grades 5 Through 12
M50	Endorsement For Teaching Science, Grades 5-8
M50R	Probationary Certificate For Teaching Middle School Science, Grades 5-9
M71	Endorsement For Teaching Mathematics, Grades 5-8
M71R	Probationary Certificate For Teaching Middle School Math, Grades 5-9
M95	Endorsement For Teaching Industrial Education Orientation And Exploration Levels, Grades 5-8
MS50	Endorsement For Teaching Middle School Science, Grades 5-9
MS71	Endorsement For Teaching Middle School Math, Grades 5-9
PEA	Provisional Elementary Certificate, Grades 1-8
PEB	Provisional Elementary Certificate, Grades 1-8
PEBF	Provisional Elementary Certificate, Grades 1-8
QG71	Teaching Field: Middle Grades Mathematics
SEA	Standard Elementary Certificate, Grades 1-8
SEB	Standard Elementary Certificate, Grades 1-8
SEM	Standard Elementary Certificate, Grades 1-8
SEMF	Standard Elementary Certificate, Grades 1-8
T8G5	Temporary Provisional Certificate For Teaching Middle Grades Science, Grades 5-9 (Option 8)
T8G7	Temporary Provisional Certificate For Teaching Middle Grades Mathematics, Grades 5-9 (Option 8)
TE50	Temporary Certificate For Middle School Science, Grades 5-9

TE71	Temporary Certificate For Middle School Mathematics, Grades 5-9
TES	Endorsement For Elementary And Secondary Classroom Teaching
TETE	Temporary Certificate For Engineering and Technology, Grades 5-12
TPG5	Temporary Provisional Certificate For Middle Grades Science, Grades 5-9
TPG7	Temporary Provisional Certificate For Middle Grades Mathematics, Grades 5-9
TPT	Temporary Provisional Certificate For Engineering and Technology, Grades 5-12
WG50	Professional Certificate for Middle Grades Science, Grades 5-9
WG51	Provisional Internship Certificate For Middle Grades Science, Grades 5-9
WIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
WIT1	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
WTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
WTE1	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
XM50	Emergency Certificate For Teaching Middle School Science

219915 - Green Architecture

Grade Level: 6 - 8

Credits:

Description: In this course the concept of “being green” in a world of reduced resources and environmental challenges will be experienced by the next generation of designers and builders. Students are introduced to architectural plans, construction styles, alternative materials and processes, dimensioning, measuring and architectural sustainability. Students use a 3D architectural software program to create an environmentally friendly home using shipping containers.

NOTE TO SCHOOL - this course requires a District agreement with PLTW. You MUST have a current agreement with PLTW to offer this course.

Content: Pre-Engineering

Population: General

729	Engineering Technology
A94	Area Specialization: Industrial Arts
A95	Area Specialization: Industrial Education-- Orientation And Exploration Levels
A99	Area Specialization: Technology Education
AJG5	Adjunct Instructor for Middle Grades Science
AJKT	Adjunct Instructor For Teaching Engineering and Technology, Grades 5-12
APLW	Approval for Project Lead the Way
B94	Teaching Major: Industrial Arts
B95	Teaching Major: Industrial Education -- Orientation And Exploration Levels
C94	Teaching Minor: Industrial Arts
CG50	Professional Certificate For College Faculty, Middle School Science, Grades 5-9
CG51	Provisional Internship Certificate For College Faculty, Middle School Science, Grades 5-9
CO50	Conditional One-Year Certificate For Middle School Science, Grades 5-9
COTE	Conditional One-Year Certificate For Engineering and Technology, Grades 5-12
D50	Approval For Teaching Middle School Science, Grades 5-9
ELE	Endorsement For Elementary School Classroom Teaching, Grades 1-8
G50	Middle School Teaching Field: Science
G71	Middle School Teaching Field: Mathematics
J50	Junior High Major: Science
J51	Junior High Major: Biology
J52	Junior High Major: Chemistry
J54	Junior High Major: Biology-Health
J71	Junior High Major: Mathematics
K51	Junior High Semi-Major: Biology
K52	Junior High Semi-Major: Chemistry
K53	Junior High Semi-Major: Physics
K56	Junior High Semi-Major: Earth Science
K71	Junior High Semi-Major: Mathematics
KG50	Professional Certificate For Middle Grades Science, Grades 5-9
KG51	Provisional Internship Certificate For Middle Grades Science, Grades 5-9

KG71	Professional Certificate For Middle Grades Mathematics, Grades 5-9
KG7I	Provisional Internship Certificate For Middle Grades Mathematics, Grades 5-9
KIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITR	Probationary Certificate For Teaching Industrial Technology, Grades 5 Through 12
KTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
KTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
KTER	Probationary Certificate For Teaching Engineering and Technology, Grades 5 Through 12
M50	Endorsement For Teaching Science, Grades 5-8
M50R	Probationary Certificate For Teaching Middle School Science, Grades 5-9
M71	Endorsement For Teaching Mathematics, Grades 5-8
M71R	Probationary Certificate For Teaching Middle School Math, Grades 5-9
M95	Endorsement For Teaching Industrial Education Orientation And Exploration Levels, Grades 5-8
MS50	Endorsement For Teaching Middle School Science, Grades 5-9
MS71	Endorsement For Teaching Middle School Math, Grades 5-9
PEA	Provisional Elementary Certificate, Grades 1-8
PEB	Provisional Elementary Certificate, Grades 1-8
PEBF	Provisional Elementary Certificate, Grades 1-8
QG71	Teaching Field: Middle Grades Mathematics
SEA	Standard Elementary Certificate, Grades 1-8
SEB	Standard Elementary Certificate, Grades 1-8
SEM	Standard Elementary Certificate, Grades 1-8
SEMF	Standard Elementary Certificate, Grades 1-8
T8G5	Temporary Provisional Certificate For Teaching Middle Grades Science, Grades 5-9 (Option 8)
T8G7	Temporary Provisional Certificate For Teaching Middle Grades Mathematics, Grades 5-9 (Option 8)
TE50	Temporary Certificate For Middle School Science, Grades 5-9
TE71	Temporary Certificate For Middle School Mathematics, Grades 5-9
TES	Endorsement For Elementary And Secondary Classroom Teaching
TETE	Temporary Certificate For Engineering and Technology, Grades 5-12
TPG5	Temporary Provisional Certificate For Middle Grades Science, Grades 5-9
TPG7	Temporary Provisional Certificate For Middle Grades Mathematics, Grades 5-9
TPTE	Temporary Provisional Certificate For Engineering and Technology, Grades 5-12
WG50	Professional Certificate for Middle Grades Science, Grades 5-9
WG5I	Provisional Internship Certificate For Middle Grades Science, Grades 5-9
WIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
WITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
WTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
WTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
XM50	Emergency Certificate For Teaching Middle School Science

219916 - Medical Detective

Grade Level: 6 - 8

Credits:

Description: Medical Detectives (MD) explores the biomedical sciences through hands-on projects and labs that require students to solve a variety of medical mysteries. Students investigate medical careers, vital signs, diagnosis and treatment of diseases, as well as human body systems such as the nervous system. Genetic testing for hereditary diseases and DNA crime scene analysis put the students in the place of real life medical detectives.

NOTE TO SCHOOL - this course requires a District agreement with PLTW. You MUST have a current agreement with PLTW to offer this course.

Content: Pre-Engineering

Population: General

729	Engineering Technology
A94	Area Specialization: Industrial Arts
A95	Area Specialization: Industrial Education-- Orientation And Exploration Levels
A99	Area Specialization: Technology Education

AJG5	Adjunct Instructor for Middle Grades Science
AJKT	Adjunct Instructor For Teaching Engineering and Technology, Grades 5-12
APLW	Approval for Project Lead the Way
B94	Teaching Major: Industrial Arts
B95	Teaching Major: Industrial Education -- Orientation And Exploration Levels
C94	Teaching Minor: Industrial Arts
CG50	Professional Certificate For College Faculty, Middle School Science, Grades 5-9
CG51	Provisional Internship Certificate For College Faculty, Middle School Science, Grades 5-9
CO50	Conditional One-Year Certificate For Middle School Science, Grades 5-9
COTE	Conditional One-Year Certificate For Engineering and Technology, Grades 5-12
D50	Approval For Teaching Middle School Science, Grades 5-9
ELE	Endorsement For Elementary School Classroom Teaching, Grades 1-8
G50	Middle School Teaching Field: Science
G71	Middle School Teaching Field: Mathematics
J50	Junior High Major: Science
J51	Junior High Major: Biology
J52	Junior High Major: Chemistry
J54	Junior High Major: Biology-Health
J71	Junior High Major: Mathematics
K51	Junior High Semi-Major: Biology
K52	Junior High Semi-Major: Chemistry
K53	Junior High Semi-Major: Physics
K56	Junior High Semi-Major: Earth Science
K71	Junior High Semi-Major: Mathematics
KG50	Professional Certificate For Middle Grades Science, Grades 5-9
KG51	Provisional Internship Certificate For Middle Grades Science, Grades 5-9
KG71	Professional Certificate For Middle Grades Mathematics, Grades 5-9
KG71	Provisional Internship Certificate For Middle Grades Mathematics, Grades 5-9
KIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITR	Probationary Certificate For Teaching Industrial Technology, Grades 5 Through 12
KTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
KTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
KTER	Probationary Certificate For Teaching Engineering and Technology, Grades 5 Through 12
M50	Endorsement For Teaching Science, Grades 5-8
M50R	Probationary Certificate For Teaching Middle School Science, Grades 5-9
M71	Endorsement For Teaching Mathematics, Grades 5-8
M71R	Probationary Certificate For Teaching Middle School Math, Grades 5-9
M95	Endorsement For Teaching Industrial Education Orientation And Exploration Levels, Grades 5-8
MS50	Endorsement For Teaching Middle School Science, Grades 5-9
MS71	Endorsement For Teaching Middle School Math, Grades 5-9
PEA	Provisional Elementary Certificate, Grades 1-8
PEB	Provisional Elementary Certificate, Grades 1-8
PEBF	Provisional Elementary Certificate, Grades 1-8
QG71	Teaching Field: Middle Grades Mathematics
SEA	Standard Elementary Certificate, Grades 1-8
SEB	Standard Elementary Certificate, Grades 1-8
SEM	Standard Elementary Certificate, Grades 1-8
SEMF	Standard Elementary Certificate, Grades 1-8
T8G5	Temporary Provisional Certificate For Teaching Middle Grades Science, Grades 5-9 (Option 8)
T8G7	Temporary Provisional Certificate For Teaching Middle Grades Mathematics, Grades 5-9 (Option 8)
TE50	Temporary Certificate For Middle School Science, Grades 5-9
TE71	Temporary Certificate For Middle School Mathematics, Grades 5-9
TES	Endorsement For Elementary And Secondary Classroom Teaching
TETE	Temporary Certificate For Engineering and Technology, Grades 5-12
TPG5	Temporary Provisional Certificate For Middle Grades Science, Grades 5-9
TPG7	Temporary Provisional Certificate For Middle Grades Mathematics, Grades 5-9
TPTE	Temporary Provisional Certificate For Engineering and Technology, Grades 5-12
WG50	Professional Certificate for Middle Grades Science, Grades 5-9
WG51	Provisional Internship Certificate For Middle Grades Science, Grades 5-9
WIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12

WITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
WTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
WTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
XM50	Emergency Certificate For Teaching Middle School Science

219917 - Special Topics, Engineering (PLTW)

Grade Level: 9 - 12

Credits: 1-4

Description: Special Technology topics allows the teacher to develop a course for in-depth exploration of technological topics. This is a laboratory-based course designed to study a technological system or topic, and/or a recent technological advancement. This study should include how this advancement affects society and/or the environment. A culminating project integrating one or more of the seven contexts of technological literacy and the Kentucky Core Content is encouraged. It should include research, design, construction, analysis, writing, and presenting. Instruction should be enriched through participation in Kentucky technology Student Association. This course may be 18 to 36 weeks in duration.

NOTE TO SCHOOL - this course requires a District agreement with PLTW. You MUST have a current agreement with PLTW to offer this course.

Content: Pre-Engineering

Population: General

729	Engineering Technology
769	Drafting
773	Electricity
776	Machine Tool Technology
792	Industrial Machine Maintenance
A50	Area Specialization: Science
A70	Area Specialization: Mathematics-Physical Science
A94	Area Specialization: Industrial Arts
A95	Area Specialization: Industrial Education-- Orientation And Exploration Levels
A99	Area Specialization: Technology Education
AJBI	Adjunct Instructor For Biology, Grades 8-12
AJCH	Adjunct Instructor For Chemistry, Grades 8-12
AJEA	Adjunct Instructor for Earth Science, Grades 8-12
AJKT	Adjunct Instructor For Teaching Engineering and Technology, Grades 5-12
AJMA	Adjunct Instructor For Math, Grades 8-12
AJPH	Adjunct Instructor For Physics, Grades 8-12
APLW	Approval for Project Lead the Way
B50	Teaching Major: Science
B51	Teaching Major: Biology
B52	Teaching Major: Chemistry
B53	Teaching Major: Physics
B54	Teaching Major: Biology-Health
B56	Teaching Major: Earth Science
B57	Teaching Major: Geology
B71	Teaching Major: Mathematics
B74	Teaching Major: Computer Science And Mathematics
B94	Teaching Major: Industrial Arts
B95	Teaching Major: Industrial Education -- Orientation And Exploration Levels
C50	Teaching Minor: Science
C51	Teaching Minor: Biology
C52	Teaching Minor: Chemistry
C53	Teaching Minor: Physics
C56	Teaching Minor: Earth Science
C57	Teaching Minor: Geology
C71	Teaching Minor: Mathematics
C94	Teaching Minor: Industrial Arts
CBI	Professional Certificate For College Faculty, Biology, Grades 8-12

CBII	Provisional Internship Certificate For College Faculty, Biology, Grades 8-12
CBII	Provisional Internship Certificate For College Faculty, Biology, Grades 8-12
CCH	Professional Certificate For College Faculty, Chemistry, Grades 8-12
CCHI	Provisional Internship Certificate For College Faculty, Chemistry, Grades 8-12
CCHI	Provisional Internship Certificate For College Faculty, Chemistry, Grades 8-12
CEA	Professional Certificate For College Faculty, Earth Science, Grades 8-12
CEAI	Provisional Internship Certificate For College Faculty, Earth Science, Grades 8-12
CEAI	Provisional Internship Certificate For College Faculty, Earth Science, Grades 8-12
CFBI	Provisional One-Year College Faculty Certificate for Teaching Biological Science, Grades 8-12
CFCH	Provisional One-Year College Faculty Certificate for Teaching Chemistry, Grades 8-12
CFEA	Provisional One-Year College Faculty Certificate for Teaching Earth Science, Grades 8-12
CMA	Professional Certificate For College Faculty, Mathematics, Grades 8-12
CMAI	Provisional Internship Certificate For College Faculty, Mathematics, Grades 8-12
COBI	Conditional One-Year Certificate For Biology, Grades 8-12
COCH	Conditional One-Year Certificate For Chemistry, Grades 8-12
COEA	Conditional One-Year Certificate For Earth Science, Grades 8-12
COMA	Conditional One-Year Certificate For Math, Grades 8-12
COTE	Conditional One-Year Certificate For Engineering and Technology, Grades 5-12
CPH	Professional Certificate For College Faculty, Physics, Grades 8-12
CPHI	Provisional Internship Certificate For College Faculty, Physics, Grades 8-12
CPHI	Provisional Internship Certificate For College Faculty, Physics, Grades 8-12
KBI	Professional Certificate For Teaching Biological Science, Grades 8 Through 12
KBII	Provisional Internship Certificate For Teaching Biological Science, Grades 8 Through 12
KBII	Provisional Internship Certificate For Teaching Biological Science, Grades 8 Through 12
KBIL	Certificate For Teaching Kentucky Biology Limited, Grades 8-12
KCH	Professional Certificate For Teaching Chemistry, Grades 8 Through 12
KCH	Professional Certificate For Teaching Chemistry, Grades 8 Through 12
KCHI	Provisional Internship Certificate For Teaching Chemistry Grades 8 Through 12
KCHI	Provisional Internship Certificate For Teaching Chemistry Grades 8 Through 12
KCHL	Certificate for Teaching Kentucky Chemistry Limited, Grades 8-12
KCHL	Certificate for Teaching Kentucky Chemistry Limited, Grades 8-12
KEA	Professional Certificate For Teaching Earth Science, Grades 8-12
KEA	Professional Certificate For Teaching Earth Science, Grades 8-12
KEAI	Provisional Internship Certificate For Teaching Earth Science, Grades 8-12
KEAI	Provisional Internship Certificate For Teaching Earth Science, Grades 8-12
KIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
KITR	Probationary Certificate For Teaching Industrial Technology, Grades 5 Through 12
KMA	Professional Certificate For Teaching Mathematics, Grades 8 Through 12
KMAI	Provisional Internship Certificate For Teaching Mathematics, Grades 8 Through 12
KMAL	Certificate For Teaching Kentucky Math Limited, Grades 8-12
KPH	Professional Certificate For Teaching Physics, Grades 8-12
KPHI	Provisional Internship Certificate For Teaching Physics, Grades 8 Through 12
KPHI	Provisional Internship Certificate For Teaching Physics, Grades 8 Through 12
KPHL	Certificate for Teaching Kentucky Physics Limited, Grades 8-12
KPHL	Certificate for Teaching Kentucky Physics Limited, Grades 8-12
KPS	Professional Certificate For Teaching Physical Science, Grades 8 Through 12
KPSI	Provisional Internship Certificate For Teaching Physical Science, Grades 8 Through 12
KTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
KTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12
KTER	Probationary Certificate For Teaching Engineering and Technology, Grades 5 Through 12
M95	Endorsement For Teaching Industrial Education Orientation And Exploration Levels, Grades 5-8
QBI	Teaching Field: Biology
QMA	Teaching Field: Mathematics
R51	Area Specialization: Science Limited To Biology
R52	Area Specialization: Science Limited To Chemistry
R53	Area Specialization: Science Limited To Physics
R56	Area Specialization: Science Limited To Earth Science
T8BI	Temporary Provisional Certificate For Teaching Biological Science, Grades 8-12 (Option 8)
T8BI	Temporary Provisional Certificate For Teaching Biological Science, Grades 8-12 (Option 8)
T8CH	Temporary Provisional Certificate For Teaching Chemistry, Grades 8-12 (Option 8)

T8CH	Temporary Provisional Certificate For Teaching Chemistry, Grades 8-12 (Option 8)
T8EA	Temporary Provisional Certificate For Teaching Earth Science, Grades 8-12 (Option 8)
T8EA	Temporary Provisional Certificate For Teaching Earth Science, Grades 8-12 (Option 8)
T8MA	Temporary Provisional Certificate For Teaching Mathematics, Grades 8-12 (Option 8)
T8PH	Temporary Provisional Certificate For Teaching Physics, Grades 8-12 (Option 8)
T8PH	Temporary Provisional Certificate For Teaching Physics, Grades 8-12 (Option 8)
TEBI	Temporary Certificate For Biology, Grades 8-12
TEBI	Temporary Certificate For Biology, Grades 8-12
TECH	Temporary Certificate For Chemistry, Grades 8-12
TECH	Temporary Certificate For Chemistry, Grades 8-12
TEEA	Temporary Certificate For Earth Science, Grades 8-12
TEEA	Temporary Certificate For Earth Science, Grades 8-12
TEMA	Temporary Certificate For Mathematics, Grades 8-12
TEPH	Temporary Certificate For Physics, Grades 8-12
TEPH	Temporary Certificate For Physics, Grades 8-12
TETE	Temporary Certificate For Engineering and Technology, Grades 5-12
TPBI	Temporary Provisional Certificate For Biology, Grades 8-12
TPBI	Temporary Provisional Certificate For Biology, Grades 8-12
TPCH	Temporary Provisional Certificate For Teaching Chemistry, Grades 8 Through 12
TPCH	Temporary Provisional Certificate For Teaching Chemistry, Grades 8 Through 12
TPEA	Temporary Provisional Certificate For Teaching Earth Science, Grades 8-12
TPEA	Temporary Provisional Certificate For Teaching Earth Science, Grades 8-12
TPMA	Temporary Provisional Certificate For Math, Grades 8-12
TPPH	Temporary Provisional Certificate For Physics, Grades 8-12
TPPH	Temporary Provisional Certificate For Physics, Grades 8-12
TPPS	Temporary Provisional Certificate For Physical Science, Grades 8-12
TPTE	Temporary Provisional Certificate For Engineering and Technology, Grades 5-12
WBI	Professional Certificate For Teaching Biological Science, Grades 8 Through 12
WBI	Professional Certificate For Teaching Biological Science, Grades 8 Through 12
WBII	Provisional Internship Certificate For Teaching Biological Science, Grades 8 Through 12
WBII	Provisional Internship Certificate For Teaching Biological Science, Grades 8 Through 12
WCH	Professional Certificate For Teaching Chemistry, Grades 8-12
WCH	Professional Certificate For Teaching Chemistry, Grades 8-12
WCHI	Provisional Internship Certificate For Teaching Chemistry, Grades 8-12
WCHI	Provisional Internship Certificate For Teaching Chemistry, Grades 8-12
WIT	Professional Certificate For Teaching Industrial Technology, Grades 5 Through 12
WITI	Provisional Internship Certificate For Teaching Industrial Technology, Grades 5 Through 12
WMA	Professional Certificate For Teaching Mathematics, Grades 8 Through 12
WMAI	Provisional Internship Certificate For Teaching Mathematics, Grades 8 Through 12
WPH	Professional Certificate For Teaching Physics, Grades 8-12
WPH	Professional Certificate For Teaching Physics, Grades 8-12
WPHI	Provisional Certificate For Internship For Teaching Physics, Grades 8-12
WPHI	Provisional Certificate For Internship For Teaching Physics, Grades 8-12
WPS	Professional Certificate For Teaching Physical Science, Grades 8 Through 12
WPSI	Provisional Internship Certificate For Teaching Physical Science, Grades 8 Through 12
WTE	Professional Certificate For Teaching Engineering and Technology, Grades 5 Through 12
WTEI	Provisional Internship Certificate For Teaching Engineering and Technology, Grades 5-12