Highlands High School A National Blue Ribbon School of Excellence



Catalogue of Courses 2018-2019

FORT THOMAS INDEPENDENT SCHOOLS

Mission

Rich in tradition and focused on the future, the Fort Thomas Independent School District provides engaging and challenging learning experiences which foster creativity, curiosity and innovation, while inspiring all students to pursue lifelong learning and become productive members of the global community.

Vision

- Our students engage in a variety of experiences that foster creativity and curiosity, demonstrating the skills and dispositions needed to solve real-world problems and to become caring and productive members of the global community.
- *Our teachers* exhibit a student-centered passion for teaching and a deep understanding of content, utilizing research-based strategies to challenge and meet the needs of all learners.
- *Our support staff* plays a crucial role in student achievement, contributing to all aspects of the educational process.
- Our leadership maintains high expectations, works collaboratively with all stakeholders, focuses on a shared mission and demonstrates a commitment to individual student growth and achievement.
- Our parents are an important resource in their child's education, serving as essential participants in a partnership of mutual respect.
- Our community, as a valued partner, reciprocates our desire to develop a highly-skilled workforce that demonstrates civic pride, global citizenship and service to others.
- Our instruction focuses on individual student growth toward mastery of college and career readiness standards and instills a
 passion for lifelong learning.
- Our technology is utilized by teachers and students in transformative ways to enhance student achievement and to make realworld global connections.
- Our District's culture welcomes all stakeholders and allows students to feel safe, encouraged, nurtured and challenged to achieve at high levels.



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(to be used by the class of 2022)



Highlands High School 2400 Memorial Parkway Fort Thomas, KY 41075 (859) 781-5900

Web address: <u>http://www2.fortthomas.kyschools.us/hhs/default.htm</u> Please keep this handbook during the next four years. Updates will be supplied as needed. Please call your child's counselor if you have questions during the registration process at 815.2606.

This document, along with any updates, is available on the district's web site at <u>http://www.fortthomas.kyschools.us</u> under the link to Teaching and Learning.

Approved by the Site Based Decision Making Council on February 26, 2018 Photographs Courtesy of HHS Photo Journalism Class Fort Thomas Independent Board of Education

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Advanced Placement

Students in Advanced Placement courses must sit for the College Board AP exam in the spring. Students who do not take the exam will receive regular course credit toward their GPA – not Advanced Placement or Advanced course credit. Should the student receive regular course credit, AP designation will be removed from the course title on their transcript. Students who elect the dual credit option are not required to sit for the AP exam but do not receive AP credit for the course.

Class Rank and Grade Point Averages

Individual class rank and grade point average (GPA) shall be calculated at the end of the fourth, sixth and eighth semesters. This calculation shall be based on performance in all courses taken during the high school years.

Quality points shall be assigned as follows:

Advanced Placement	Advanced Courses	<u>Regular Courses</u>
A = 5.00	A = 4.50	A = 4.00
B+ = 4.25	B+ = 3.75	B+ = 3.25
B = 4.00	B = 3.50	B = 3.00
C+ = 3.25	C+ =2.75	C+ =2.25
C = 3.00	C = 2.50	C = 2.00
D = 2.00	D = 1.50	D = 1.00
F = 0.00	F = 0.00	F = 0.00

The "Weighted" GPA

determine Class Rank and Valedictorian/Salutatorian Honors.

To determine the "Unweighted" GPA, quality points shall be assigned as follows:

ALL COURSES	<u>)</u>
A = 4.00	
B = 3.00	
C = 2.00	
D = 1.00	
F = 0.00	

The "Unweighted" GPA will be used for KEES scholarship reporting requirements. Advanced Placement courses receive additional weighting.

Advanced Placement Courses include the following: Art, Biology, Calculus AB, Calculus BC, Chemistry, Computer Science, AP CS Principles, English Language, English Literature, Environmental Science, German, Government, Human Geography, Macro Economics, Music Theory, Physics C, Psychology, Spanish, Statistics, American History, Art History, European History, World History, AP Seminar/English II and AP Research.

Advanced Courses include the following: English: Pre-AP English I World Language: Spanish III, IV, V - German III, IV, V Business: Accounting II Mathematics: Algebra II Advanced, Geometry Advanced, Pre-Calculus Advanced, Advanced Computer Science II Science: Physics I, Biology I Advanced, Chemistry I Advanced, Anatomy & Physiology Advanced Social Studies: Introduction to Education, We The People

Correspondence Courses/Alternative Credit Options

In addition to regular classroom-based instruction, high school students may earn a maximum of two (2) elective credits toward graduation through correspondence courses or through virtual on-line courses. Except as noted below, the Board shall only award credit for those courses that qualify as an elective for the student.

Only courses offered by agencies and institutions recognized by the Board will be accepted. The express approval of the Principal/designee shall be obtained before the course is taken and an official record of the final grade must be received

will be used to

by the school before a diploma may be issued to the student. Under ordinary circumstances, students or their parents/guardians shall pay for approved courses the student chooses to take.

All correspondence or online coursework must be completed outside the regular school day and off the school campus.

Virtual/Online Courses

As determined by school/council policy, students applying for permission to take a virtual course shall complete prerequisites and provide teacher/counselor recommendations to confirm the student possesses the maturity level needed to function effectively in an online learning environment.

Credit from an online or virtual course may be earned only in the following circumstances:

- 1. The approved elective course is not offered at the high school;
- 2. Although an elective course is offered at the high school, the student will not be able to take it due to an unavoidable scheduling conflict;
- 3. The course will serve as a supplement to extend homebound instruction;
- 4. The student has been expelled from the regular school setting, but educational services are to be continued; or
- 5. The Principal, with agreement from the student's teachers and parents/guardians, determines the student requires a differentiated or accelerated learning environment.

Students who, because of an expulsion, must be provided with educational services by the District may enroll in correspondence or virtual/on-line courses to meet graduation requirements. In such instances, the Board shall pay the most economical fee for expelled students who are permitted to enroll in approved courses.

Course Credits and Failing

If a course is failed the second semester, the course is failed for the year no matter what the first semester grade.

Course Selection Decisions

Each student will confer individually with his/her counselor regarding the choice of subjects for each year. Once the student has made a decision and this decision is approved and signed by the parents, **that decision on the part of the student is final**; no schedule changes will be made except in special circumstances and with approval from the principal.

Cum Laude Society

The Cum Laude Society honors students who excel in academics. Highlands is the only public high school in Kentucky to have a chapter in the Cum Laude Society. Any senior having a cumulative grade point average of 4.0000 or higher (weighted) at the end of the sixth semester (as determined by the method of calculating grade point averages described in Class Rank) may be eligible for membership in the society. The top ten percent of the senior class will be awarded membership in the society during the fall awards program.

Directory Information

Directory information contained in an educational record which would not generally be considered harmful or an invasion of privacy if disclosed may include the following:

- Student's name and address
- Student's telephone number
- Student's date and place of birth
- Student's major field of study
- Information about the student's participation in officially recognized activities and sports
- Student's weight and height, if a member of an athletic team
- Student's dates of attendance
- Degrees and awards the student has received
- Most recent educational institution attended by the student
- Student's photograph along with name

This information may be released to news media, athletic organizations, scholarship or college entrance committees, or official organizations whose need for the data is connected with student activities. The parent, guardian or eligible student may request all or part of directory information to be withheld. The request must be in writing, specifically stating the information to be withheld, and be received by the school no later than 30 days after the first day of the school year or the date of the student's enrollment. Parents may contact the school principal for an official copy of the *Student's Directory Information Notification* form.

Dropping from Class

No pupil who has enrolled in a course at the high school shall be permitted to drop a course without parent and teacher consent and approval of the principal or his designee (Board Policy 08.1).

Dropping Out of School

All children in the district who have entered kindergarten or who are between the ages of six (6), as of October 1, and eighteen (18), except those specifically exempted by statute, shall enroll and be in regular attendance in the schools to which they are assigned. Written permission for withdrawal shall not be required after the child's eighteenth birthday. Each school district shall contact each student between the ages of sixteen (16) and eighteen (18) who has voluntarily withdrawn from school under subsection (2) of this section within three (3) months of the date of withdrawal to encourage the student to reenroll in a regular program, alternative program, or GED preparation program. In the event the student does not reenroll at that time, the school district shall make at least one (1) more attempt to reenroll the student before the beginning of the school year following the school year in which the student the student. (Board Policy 09.122) (KRS 159.010).

Dual Credit

Dual credit is awarded when a high school and a postsecondary institution give credit to a high school student for the same course. The objective of dual credit courses is to offer high school students an opportunity to take affordable, high-quality college courses. Through a cooperative agreement with Northern Kentucky University, Thomas More College and Western Kentucky University, students may enroll in a dual credit course that generally transfers to the college or university. For purposes of grade point average, dual credit classes taken simultaneously as an AP course will be factored as an AP course as long as the student sits for the AP exam. Northern Kentucky University, Thomas More College, University of Cincinnati and Western Kentucky University will assess students a reduced tuition payable each semester. Questions about dual credit may be addressed to the Director of Teaching and Learning.

On-Campus Courses

High school students may be permitted to take on-campus (HHS) college/dual credit courses that count as secondary school credit, provided the following conditions have been fulfilled:

- 1. Recommendation and approval from the high school Principal and the chair of the high school guidance department are required.
- 2. Courses will count toward graduation requirements and be used in calculating grade point average (GPA).
- 3. Costs associated with dual credit courses are the responsibility of the parent/guardian.

The following courses are eligible for dual credit opportunities (other courses may be added as made available).

HHS Course	College Course	Institution	Credit Hours Available
Introduction to Education	EDU 101 – Introduction to Education	Thomas More College	3
Music Appreciation	MUS 120 – Music Appreciation	WKU	3
Introduction to Theatre	THEA 151 – Theatre Appreciation	WKU	3
Acting I	THEA 101 – Acting I	WKU	3
Foundations of Technical Theatre	PERF 121 – Rehearsal & Production II and PERF 220 – Rehearsal & Production III	WKU	1 each
Speech Communication	COMM 145 – Fundamentals of Public Speaking (WKU)or COMM 110 (NKU)	WKU or NKU	3
Anatomy & Physiology Adv	BIO 208 & BIO 209	NKU	8 (4 each)
AP European History (2 classes	HIS 203 – Modern Europe I HIS 204 – Modern Europe II	TMC	6 (3 each)
Foundations of Exercise Science	ATP101 – Kinesiology 200 & Kinesiology 260	NKU	6 (3 each)
Engineering Design II A&B	ENED1020-Engineering Foundations	UC	2

Important Note: It is the student's responsibility to check with the college or university to which he/she plans to enroll about the acceptance and transferability of dual credit courses. There is no guarantee on the part of Highlands High

School that these courses will be accepted or transferred to other colleges and/or universities. * Contingent on available faculty meeting college and/or university criteria.

Off-Campus Courses

High school students also may be permitted to take college/dual credit courses off-campus that count as secondary school credit, provided the following conditions have been fulfilled:

- 1. In order to be eligible to take an off-campus course, students must be making normal progress toward graduation and maintain at least a 3.0 grade point average.
- 2. Students may only take elective courses not offered by the District. No required courses may be taken offcampus.
- 3. A written request for permission and a signed release from the parent or guardian of a high school student and written documentation of course enrollment from the college or university must be provided to the high school Principal each semester. Students must agree to enroll in a three (3) credit hour course both semesters.
- 4. Each three-hour college course completed will equal one (1) unit of high school credit.
- 5. Students taking college courses may not earn more than one (1) credit toward graduation each year, which will require successful completion of two (2) three-hour college courses.
- 6. Recommendation and approval from the high school Principal, the high school guidance department and the chair of the appropriate department at the high school are required.
- 7. Qualifying courses will count toward graduation requirements, but will not be used in calculating grade point average (GPA).
- 8. The parent or guardian must provide information as to how the student will be transported to and from the college or university.
- 9. The course taken at a college must be at a time that coincides with the last period at the high school; i. e., the student may leave early (for one period), but will not be permitted to arrive late or come and go within the school day.
- 10. Transportation, college tuition, and other associated costs are the responsibility of the parent/guardian.

EARLY GRADUATION CERTIFICATE

Students who meet all applicable legal requirements shall be eligible for early graduation in relation to receipt of an Early Graduation Certificate. Students wishing to follow an early graduation pathway shall notify the Principal of their intent prior to the beginning of grade nine (9) or as soon thereafter as the intent is known, but within the first thirty (30) school days of the academic year in which they wish to graduate. A Letter of Intent to Apply shall be entered into the student information system by October 1 of the year the student declares intent to graduate early.⁴

Students working toward receipt of an Early Graduation Certificate shall be supported by development and monitoring of an individual learning plan.

Students who meet all applicable legal requirements shall be awarded a diploma and an Early Graduation Certificate.

Exam Exemption

Any students in grades 9 through 12 shall be exempt from final examinations if they meet the following criteria*:

- 1. They have earned a numerical average of 95 or higher (90 Math) in the second semester and a first semester average of 85 or higher (80 Math) shall be eligible for an exemption.
- 2. They have maintained a 95 of higher (90 Math) in the semester courses that are conducted during the second semester. Students shall not be exempt from examinations for semester courses conducted during the first semester.
- 3. They must have been regular in attendance to each class in which exemption is being considered. Regular attendance is defined as 97% or six (6) or fewer absences (3 absences for semester courses). Special consideration by the Principal and/or Assistant Principal may be given to students who have extended absences due to surgery, hospitalization, or major illnesses (as verified by a doctor). In the implementation of this policy consideration will be granted to students who otherwise would have qualified for exemption prior to consecutive days missed as a result of previously defined extenuating circumstances. This policy does not address chronic illness, which results in students being unable to meet the "regular attendance" requirement. Students must complete the appropriate forms in order to request special consideration. College visitation days shall not count against this total (2 total).
- 4. All exempt students must be in attendance on exam days. Students who are absent will receive an incomplete and must make up exams or receive a 0.

* All high school students must take no fewer than two (2) final exams, and at least one (1) exam must be in a Core Content area (English, Math, Science, Social Studies).

A Student may not be exempt from any final exam in which a Kentucky End of Course test exists. In 2012 this will include Biology, Algebra II, U.S. History and English II. These tests may count toward the two required exams to be taken.

- 5. Any Senior who scores a Distinguished or Proficient on his/her writing portfolio, shall be exempt from any (one) final exam if a writing piece from that subject area is in the final portfolio and the students has a "C" or higher average in that class.
- 6. Any Senior who was exempt from first semester exams must meet the criteria above to be exempt from the final exam in that class*.
- 7. Students have the option to take any or all final examinations if they qualify for exemption. If the final examination is taken, the score will be used to compute the final grade (Board Policy 08.222).

Senior 1st Semester Exam Exemption Incentive

If the current Junior class increases existing ACT composite scores as compared to the previous class or if their ACT composite score is number one in the state of Kentucky, all Juniors who maintain a grade of at least a "C" for both quarters will be exempt from their first semester exams in their senior year. Students deemed by school administration to not give a "good faith effort" are not eligible for exam exemption.

Any Senior who earns four points (4) or more as determined by performance on the ACT (11th grade) on the chart below when taken as part of the school accountability testing window and who maintains a grade of at least a 75 or higher (70 Math) for both quarters will be exempt from first semester exams his/her senior year. See score chart below.

	I
Area	ACT
English (15 PLAN, 18ACT) benchmark)	20+ (2 points)
	17-19 (1 point)
Math (19 PLAN, 22 ACT benchmark)	23+ (2 points)
	20-22 (1 point)
Reading (17 PLAN, 21 ACT benchmark)	22+ (2 points)
	19-21 (1 point)
Science (21 PLAN, 24 ACT benchmark)	25+ (2 points)
	21-24 (1 point)

Students would need to earn a number of points.

*Any student who does not take the ACT during the testing window is not eligible for the exam exemption for first semester exams.

4th Year Students

Students who have special circumstances at the completion of their junior year and have a "B" average (3.000) with no final course grade below "C "may be considered for approval to attend less than full day at Highlands if they are enrolled half-time at another educational institution. Those students may submit a written request to the Principal explaining the circumstances and requesting permission to either arrive one (1) period late or leave one (1) period early. Students who lack three credits toward graduation and have a grade point average below 3.000 or a final course grade below C shall be required to attend Highlands full-time to broaden their educational experience and improve the quality of their work. A student may be excused to work with special permission (Board Policy 09.1221).

5th Year Students

When a senior student is two or more credits behind, he or she will be required to attend high school for the fifth year on a half-day or one semester full-day basis to complete the necessary work. At the end of a fourth year, a student who lacks only one credit toward graduation shall receive a recommendation from the principal (or designee) to a program whereby the student may obtain the diploma without the necessity of returning for a fifth year (Board Policy 09.1221).

Grades/Credits Transfer

Any student who transfers classes and credits from an accredited institution to Highlands High School shall have those classes and credits evaluated using the 4.0000 regular class scale for purposes of calculating grade point averages

and class rank at Highlands High School. In order for an AP course to transfer as a weighted AP course, the student must have passed the AP course and taken the national AP exam.

Middle School Courses for High School Credit

Middle school students may take designated courses that will count toward graduation requirements. However, the following requirement shall apply:

- 1. Middle school student taking such courses must earn at least a C average and pass the final exam in the class for the course to count toward graduation.
- 2. Grades earned in those courses shall not be used to calculate a student's high school grade point average (GPA).

Grading Scale

Grades A, B, C, and D are passing. The grade given at the end of the semester is a cumulative grade for that semester and is recorded. The numerical grading scale is as follows:

All Courses (Except Math)			ept N	<u>1ath)</u>	M	ath	Cour	<u>ses</u>	
А	=	95	-	100	А	=	90	-	100
B+	=	92	-	94	B+	=	87	-	89
В	=	85	-	91	В	=	80	-	86
C+	- =	82	-	84	C+	=	77	-	79
С	=	75	-	81	С	=	70	-	76
D	=	70	-	74	D	=	60	-	69
F	=	0	-	69	F	=	0	-	59

To arrive at a semester average for an academic subject, add the two quarter grades together, double that value, add the semester exam grade and divide by five.

To arrive at a yearly average for academic subjects, add the two semester grades, and divide by two.

Guidance

Guidance services are available for every student in the school. These services include assistance with educational planning, interpretation of test scores, occupational information, career information, individual graduation plan, study help, help with personal, school and/or social concerns, or any questions the student may feel he or she would like to discuss with the counselor. Developmental activities for all students are scheduled during the year. Students wishing to visit a counselor should contact the secretary in the guidance office to arrange for an appointment.

Homebound Instruction

A student who resides in the Fort Thomas school district is eligible for enrollment in a homebound instructional program if a medical doctor, psychologist, psychiatrist, or health officer states:

The student will be out of school for 5 days or more due to medical disability. The student does not have a communicable disease. (This does not apply in those instances where telephone service is utilized.)

There are three alternative programs that will be considered for the student qualifying for homebound instruction. They are:

- Procure the services of a homebound teacher from a neighboring school district with such a program.
- Secure the services of a certified teacher to assist the student.
- Utilize the services of the telephone company. The Board would be responsible for the initial cost of the hook-up. The parents or guardians would be responsible for the monthly bills for the telephone service.

The building principal and the assistant superintendent for pupil personnel services shall administer this policy (Board Policy 08.1312).

Homework

The Board believes homework used in a practical and sensible manner can be a useful tool in the learning situation. Homework assignments should be purposeful and related to current work. They should not be used as punishment. When appropriate, homework assignments should be individualized according to the needs and skills of the pupil. Teachers should make every effort to allocate time for students to begin the homework assignments under their supervision. In those instances, where homework assignments are to be graded, this should be done and the work returned within a reasonable time. The building principal shall administer this policy (Board Policy 08.211).

Honor Roll and Honor Pins

In order for a student to qualify for the Honor Roll, he or she must have earned an unweighted grade point average of 3.00 or better in his or her academic classes, with no semester average below a "C". A student will qualify for the Super

Honor Roll if he or she has earned an un-weighted grade point average of 3.50 or better in his or her academic classes, with no semester average below a "C". An "F" as a quarter grade in any subject disqualifies a student. Co-op grades count, and grades from vocational school count if the student meets the minimum per semester hour requirements. (One unit of credit equals one grade.)

Advanced courses are not upgraded when honor roll averages are computed; these are used only when computing class rank. Weighted rank will be used for class rank and will be reported on the cumulative high school transcript.

Silver honor pins will be given to those students who have been on either honor roll for four consecutive semesters. A student who has been on either honor roll for eight consecutive semesters (grades 9-12) will receive a gold honor pin and special recognition during the Commencement program.

Progress Reports

Midterm progress reporting will be done through Infinite Campus based on the district calendar. Students failing a course will be notified by mail.

Repeating Courses

Students may repeat courses; however, both grades will be used to calculate the GPA. The repeat option would allow a student to gain a better grasp of material or to meet a pre-requisite. The student must be aware that credit can only be earned once for a course, even if it is repeated. Although both grades will count in the overall GPA, credit will only be awarded once.

Report Cards

Report cards are issued at the end of each quarter or nine-week session. Letter grades are used to designate a pupil's progress. Report card envelopes should be signed by the parent and returned to the school within three (3) days.

Parent/Student Portals: Infinite Campus/Schoology

In an effort to improve communication between home and school, parents are encouraged to establish an account with Infinite Campus, the state required student information system, as well as Schoology, the Learning management system used at HHS. These tools for parents and students are used to access instant, online, timely and secure student information: class schedule, assignments, attendance, report cards, transcripts and course registrations for next year.

All parents and students have the capability to access a secure website using a specific user ID and password to gather student information. Students will create their own account which will allow access to their information only. Parents will create a separate account which will allow access to all children in the family enrolled in a Fort Thomas Independent School. Both custodial and non-custodial parents/guardians will be allowed to create an account, unless a court order prohibits rights to student information.

Instructions on how to establish an account will be provided upon enrollment or at the beginning of each school year for individuals who have not activated an account. Once an account has been established it is not necessary to reactivate it annually.

The online grading/student reporting feature will be disabled the last week of school each year, as students are required to pick up final grades and report cards from the guidance office. Questions about student progress during this time should be directed to the particular teacher.

Student Classification

The grade level and homeroom placement of each student is determined by the number of credits that have been completed preceding the opening of school.

5 credits for sophomore classification

10 credits for junior classification

16 credits for senior classification

Summer School

A high school student will be permitted to take a required course in summer school to fulfill his graduation requirements if he plans to enter college early. In some instances, the fourth year English requirement could be completed during the first year of college studies. In either instance, prior written approval must be secured from the high school principal (Board Policy 08.136). Only one (1) credit per year can be obtained through summer school.

In order to be permitted to enroll in a summer school program to make up for a failed course, a student must have earned an average of 60% or higher (50% in a Math course). A yearly average of less than 60% (50% in a Math course) will result in the class being repeated in the following year.

Writing Portfolio Policy (Seniors)

Students must be accountable for the completion of acceptable writing portfolios. Therefore, an apprentice portfolio is mandatory for passing the senior English requirement, regardless of the course average. After the scoring process is completed, any student with a novice portfolio must attend assigned ESS sessions until his/her portfolio reaches an apprentice level or the ESS teacher verifies that the student has exhibited a sustained effort resulting in a significant improvement. The student will have until one week before graduation to meet the requirement. Students who do not fulfill this obligation will receive an incomplete in their senior English class and will be required to attend summer school to complete the requirement.

Students who are enrolled in AP English must earn a minimum score of "proficient" on the writing portfolio as scored by the faculty as the accountability score of record in order to receive credit for the specified course.

Students who are enrolled in regular English IV must earn a minimum score of "apprentice" on the writing portfolio as scored by the faculty as the official accountability score of record in order to receive credit for the specified course.

Students who do not earn these performance levels, must attend a series of writing remediation and tutorial sessions (not during school hours) as determined by the Literacy Leader and make significant improvement on the writing portfolio in order to receive credit.

ACCESS TO ELECTRONIC MEDIA

The Board supports the right of students, staff, and community members to have reasonable access to various information formats and believes it is incumbent upon students, staff, and community members to utilize this privilege in an appropriate and responsible manner.

Certified employees are required to follow Board policy and administrative procedures and guidelines designed to provide guidance for access to electronic media. In addition, all staff members are required to sign a written request/agreement prior to being granted independent access to electronic media involving District technological resources. Individuals who refuse to sign required responsible use documents or who violate District rules governing the use of District technology shall be subject to loss or restriction of the privilege of using equipment, software, information access systems or other computing and telecommunications technologies.

Except in cases involving students who are at least eighteen (18) years of age and have no legal guardian, parents/guardians may request that the school/District:

- Provide access so that the parent may examine the contents of their child(ren)'s email files;
- Terminate their child(ren)'s individual email account and/or Internet access; and
- Provide alternative activities for their child(ren) that do not require Internet access.

Parents/guardians wishing to challenge information accessed via the District's technology resources should refer to Policy 08.2322/Review of Instructional Materials and any related procedures.

NO PRIVACY GUARANTEE

The Superintendent/designee has the right to access information stored in any user directory, on the current user screen, or in electronic mail. S/he may review files and communications to maintain system integrity and ensure that individuals are using the system responsibly. Users should not expect files stored on District servers or through District provided or sponsored technology services, to be private.

The Board recognizes that as telecommunications and other new technologies shift the ways that information may be accessed, communicated, and transferred by members of the society, those changes may also alter instruction and student learning. The Board generally supports access by students to rich information resources along with the development by staff of appropriate skills to analyze and evaluate such resources. In a free and democratic society, access to information is a fundamental right of citizenship.

Telecommunications, electronic information sources and networked services significantly alter the information landscape for schools by opening classrooms to a broader array of resources. In the past, instructional and library media materials could usually be screened—prior to use—by committees of educators and community members intent on subjecting all such materials to reasonable selection criteria. Board policy requires that all such materials be consistent with District-adopted guides, supporting and enriching the curriculum while taking into account the varied instructional needs, learning styles, abilities and developmental levels of the students. Telecommunications, because

they may lead to any publicly available fileserver in the world, will open classrooms to electronic information resources, which have not been screened by educators for use by students of various ages.

Electronic information research skills are now fundamental to preparation of citizens and future employees during an Age of Information. The Board expects that staff will blend thoughtful use of such information throughout the curriculum and that the staff will provide guidance and instruction to students in the appropriate use of such resources. Staff will consult the guidelines for instructional materials contained in Board policy and will honor the goals for selection of instructional materials contained therein.

Students and staff are responsible for good behavior on school computer networks just as they are in a classroom or a school hallway. Communications on the network are often public in nature. General school rules for behavior and communications apply. The network is provided for students and staff to conduct research and communicate with others. Access to network services will be provided to students and staff who agree to act in a considerate and responsible manner.

Student and staff use of telecommunications and electronic information resources will be permitted upon submission of permission and/or agreement forms by staff, parents of minor students [under eighteen (18) years of age] and by students themselves.

Access to telecommunications will enable students to explore thousands of libraries, databases, and bulletin boards while exchanging messages with people throughout the world. The Board believes that the benefits to students from access in the form of information resources and opportunities for collaboration exceed the disadvantages. But ultimately, parents and guardians of minors are responsible for setting and conveying the standards that their children should follow when using media and information sources. To that end, the Ft. Thomas Independent Schools support and respect each family's right to decide whether or not to apply for access to information resources.

The Board authorizes the Superintendent to prepare appropriate procedures for implementing this policy and for reviewing and evaluating its effect on instruction and student achievement.

THE NETWORK:

The Ft. Thomas Independent School District provides students and staff with a service called the Network. The Network is a computer service, which includes the use of computers, servers, software, Internet and e-mail. These procedures also address the use of stand-alone computers, peripherals, telephone usage and other instructional technology equipment.

In addition to providing students and staff with the understanding and skills needed to use technology resources and telephone services in an appropriate manner, the Ft. Thomas Independent School District:

- Reserves the right to monitor all activity on the Network, Internet and e-mail.
- Reserves the right to monitor computer use or lack of use.
- Reserves the right to deny access to the Network, Internet and e-mail to any individual.
- Shall establish procedures that will maximize the Network system security.
- Shall supervise student and staff use of the Network, Internet, e-mail, and telephones.

The standards for student and staff access to the Ft. Thomas Independent School District Network are:

- Network access throughout the District is to be used for instruction, research, school administration and reasonable, non-work related communications. District access is not to be used for private business.
- Instructional staff will select and guide students on the appropriate use of Internet and instructional software on the Network.
- The District will be responsible for supervising network use. Auditing procedures are in place to monitor access to the network. However, the District cannot continually monitor every communication and network session for every student and staff member beyond the scope of supervision defined in the user agreement.
- Internet access and supervision from outside the District premises is the responsibility of the parents and guardians of students.
- Student users should not reveal their full name and personal information (address, phone number, financial information, social security number, etc.) or establish relationships with "strangers" on the network, unless instructional staff has coordinated the communication.
- Staff will not reveal a student's full name or post a picture of the student or the student's work on the Network with personally identifiable information if the parent has signed the "Do Not Publish" form.

- The content of any District web page is the responsibility of the sponsoring staff member who hosts the page.
- School-related clubs and organizations that wish to establish a web or social media site must complete forms as required by Board policy.

TELEPHONE USAGE:

- Telephone service is available primarily to provide two-way communications with school offices and for contact with parents.
- Staff will refrain from using telephones during instructional time.
- Students may use the telephones under staff supervision when there is a legitimate need such as calling parents to arrange transportation, delivery of medicine or clothes, or similar rare circumstances.
- Instruction time will not be interrupted to transfer calls except in emergencies.

All guidelines governing inappropriate language apply to telephone usage and procedures governing telephone usage also apply to District cellular phones and other wireless telecommunication systems.

COMPUTER USE GUIDELINES:

When a student, teacher, or staff member at a Ft. Thomas school accesses computers, computer systems, and computer networks owned or operated by the Ft. Thomas Independent Schools, he or she assumes certain responsibilities and obligations. All access of this type is subject to school policies and to local, state, and federal laws. The school administration expects that student, faculty, and staff use of computers provided by the school will be ethical and will reflect academic honesty. Students, faculty and staff must demonstrate respect for intellectual property, ownership of data, system security mechanisms, and rights to privacy.

As a computer operator, you are expected to make appropriate use of computer resources provided by the Ft. Thomas Independent Schools. You must:

- use computer resources only for authorized purposes following established procedures;
- be responsible for all activities on your assigned computer;
- access only files and data that are your own, which are publicly available, or to which you have been given authorized access;
- use only legal versions of copyrighted software;
- be considerate in your use of shared resources;
- abide by the responsible use policy.

Computer operators must not make inappropriate use of computer resources provided by the Ft. Thomas Independent Schools. The following are non-exhaustive actions that are considered inappropriate:

- violating State and Federal legal requirements addressing student and employee rights to privacy, including unauthorized disclosure, use and dissemination of personal information;
- using another person's login name or password, "hacking" or gaining unauthorized access to computers or computer systems, or attempting to gain such unauthorized access.;
- installing or using any unauthorized software or hardware on any District computer system or Network;
- using another person's files, system, or data without permission;
- using computer programs to decode passwords or to access control information;
- attempting to circumvent or subvert system security measures;
- engaging in any activity that might be harmful to systems or to any information stored thereon, such as creating viruses, damaging files, damaging systems, networks, school/District websites, or disrupting service;
- making or using illegal copies or copyrighted software, storing such copies on school systems, or sending them over networks;
- using mail service to harass or intimidate others;
- wasting computing resources, such as paper, by printing excessive copies or downloading of freeware or shareware programs;
- using technology resources to bully, threaten or attack a staff member or student or to access and/or set up unauthorized blogs and online journals.

- engaging in any activity that does not comply with the general principles listed at the beginning of this document;
- playing games across the network;
- violating the regulations of the Ft. Thomas Independent Schools regarding appropriate use of the Internet.

The Ft. Thomas Independent Schools considers any violation of responsible use principles or guidelines to be a serious offense and reserves the right to copy and examine any files or information that may suggest that a person is using school computer systems inappropriately. Violators are subject to disciplinary action by school officials that may include loss of computer privileges and in- or out- of school suspension. Offenders may also be prosecuted under laws including, but not limited to, the Privacy Protection Act of 1974, the Computer Fraud and Abuse Act of 1986, the Computer Virus Eradification Act of 1989, and the Electronic Communications Privacy Act.

INTERNET ACCESS:

The Ft. Thomas Independent Schools provide access to the Internet for all students, faculty, and staff that is obtained through Kentucky's Public Education Network. Students must have permission from at least one of their parents or guardians to access the Internet at school.

The use of an Internet account is a privilege, not a right, and inappropriate use will result in disciplinary action by school officials and/or cancellation of those privileges. A person's activities while using the Internet in any school must be in support of education and research, and consistent with the educational objectives of the Ft. Thomas Independent Schools. In addition, anyone accessing the Internet from a school site is responsible for all on-line activities that take place through the use of his or her account.

The following is a non-exhaustive list of activities that constitute unacceptable use of the Internet, whether that use is initiated from school or any other site:

- using impolite, abusive, or otherwise objectionable language in either public or private messages, including profanity or obscenity;
- placing unlawful information on the Internet;
- using the Internet illegally in ways that violate federal, state, or local laws or statutes;
- using the Internet at school for non-school related activities;
- sending messages that are likely to result in the loss of the recipient's work or systems;
- using the Internet for commercial purposes, financial gain or any illegal activity;
- using the Internet for political lobbying;
- changing any computer file that does not belong to the user;
- sending or receiving copyrighted materials without permission;
- knowingly giving one's password to others;
- using Internet access for sending or retrieving pornographic material, inappropriate text files, or files dangerous to the integrity of the network;
- circumventing security measures on school or remote computers or networks;
- attempting to gain access to another's resources, programs, or data;
- vandalizing, which is any malicious attempt to harm or destroy data or another user on the Internet, and includes the uploading or creation of computer viruses;
- falsifying one's identity to others while using the Internet;
- changing any computer files that do not belong to the user.

STUDENT E-MAIL:

Fort Thomas Independent Schools is committed to providing educational opportunities to students that help extend physical boundaries. In addition, the District is equipped to provide individual e-mail accounts for students. Therefore, all students have the opportunity to receive a student e-mail account.

An e-mail account is available to students who agree to act in a considerate and responsible manner and who agree to use the e-mail account for educational purposes. Students may not use e-mail accounts for personal use.

System administrators are able to monitor all outgoing and incoming e-mail traffic and deem what is inappropriate and appropriate use. The administration and staff may revoke or suspend student e-mail accounts when RUP terms are violated.

DISCIPLINARY ACTION FOR INAPPROPRIATE USE:

- •Student discipline for violation of any part of these procedures shall be based on the severity of the infraction.
- •Student disciplinary action includes, but is not limited to, the loss of any or all computer privileges, termination of the user's account, removal from the class with a failing grade and/or suspension or expulsion. Privileges will be reinstated at the discretion of the District administrators.
- •Discipline of staff may involve actions up to and including termination of employment.
- •Parents, guardians and/or perpetrators may be billed for damages to technology resources.

Illegal/criminal activities will be referred to the appropriate law enforcement agency.

All students and staff are required to sign the <u>Responsible Use Agreement Form</u>. By signing the user agreement and/or parent permission form, the student or staff member has agreed to abide by Board policy governing access to technology resources.

Related Procedure:

08.2323 AP.1



GRADUATION REQUIREMENTS

GRADUATION REQUIREMENTS, RECOGNITION, AND HONORS

Graduation Requirements for The Class of 2012 and Beyond

In order to fulfill requirements for graduation from Highlands High School, a student must earn a minimum of 22 Carnegie units of credit. Of the 22 units required for graduation, 16 specific requirements are hereby established.

English	
English I or English I Pre-AP English II or AP	Advanced
English III or AP English Lan	anade analiti
English IV or AP English Life	rature or Senior AP English Language
Mathematics (all of these must be taken durin Choose one of the following of A. Algebra B, Geometry, Alg	g high school) 4 credits ptions: ebra II and one elective
b. Applied Algebid I, Applied	
 C. Geometry, Algebra II, Pre- D. Algebra I, Geometry, Alge or one approved math eli E. Algebra II, Pre-Calculus, A 	Calculus and one elective bra II and Technical Applied Math, Medical Math, ective P Calculus and 1 elective
Science	
Choose one of the following c A. Introduction to Physics or AND Chemistry I Advance B. Physics AND Biology AND C Physics AND Biology AND	ptions: Physics I AND Biology I Advanced or Biology I I or Chemistry I Chemistry Dane Science elective as offered by McCormick Vocational School
C. Thysics / AD biology / AD	one selence elective as onered by meeonnick vocational school
Social Studies	
Social Studies Choose one from each bullet World Civilizations or AP W	orld History History
Social Studies Choose one from each bullet World Civilizations or AP W US History or AP American Government or AP Gover	orld History History nment or We The People (Advanced)
Social Studies Choose one from each bullet World Civilizations or AP W US History or AP American Government or AP Gover History and Appreciation of the Visual and Pe Choose one of the following of	orld History History nment or We The People (Advanced) forming Arts
Social Studies Choose one from each bullet World Civilizations or AP W US History or AP American Government or AP Gover History and Appreciation of the Visual and Pe Choose one of the following of A. Humanities course	orld History History hment or We The People (Advanced) forming Arts
Social Studies Choose one from each bullet World Civilizations or AP W US History or AP American Government or AP Gover History and Appreciation of the Visual and Pe Choose one of the following of A. Humanities course B. By taking any one of the following of Artl/Foundations in Ar AP History of Art Introduction to Theatr Foundations in Technic Strings Highlands Chorale	
Social Studies Choose one from each bullet World Civilizations or AP W US History or AP American Government or AP Gover History and Appreciation of the Visual and Pe Choose one of the following of A. Humanities course B. By taking any one of the following of A. Humanities course B. By taking any one of the following of Artl/Foundations in Ar AP History of Art Introduction to Theatr Foundations in Techni Strings Highlands Chorale	aredits aredits aredits aredits aredits aredits aredits aredits aredits aredit
Social Studies Choose one from each bullet World Civilizations or AP W US History or AP American Government or AP Gover History and Appreciation of the Visual and Pe Choose one of the following of A. Humanities course B. By taking any one of the following of B. By taking any one of the following of Health or Life Skills AND Physical Exercise, Health and Wellness	
Social Studies Choose one from each bullet World Civilizations or AP W US History or AP American Government or AP Gover History and Appreciation of the Visual and Pe Choose one of the following of A. Humanities course B. By taking any one of the following of History of Art Health or Life Skills AND Physical Exercise, Health and Wellness	and History History Inment or We The People (Advanced) forming Arts

the same World Language are required.

It is strongly recommended that students choose 1 credit in Computer and Technology Applications

Other Requirements

The Fort Thomas Board of Education approved in 1994 the following additional requirements: Students must successfully complete requirements of the Student Assessment Program.

Successful completion of the state assessment will be based upon (a) taking sufficient time to do a reasonable job and (b) writing answers related to the content of the question.

Successful completion of portfolios shall be determined by (a) completing the portfolio. A complete portfolio is one that has all the required pieces and fulfills the intended purpose.

KENTUCKY'S PRE-COLLEGE CURRICULUM

For the Class of 2004 and beyond, the Council on Higher Education has established the following pre-college curriculum:

- Twenty-two (22) or more total units in high school Four (4) units of English, specifically English I, II, III, and IV (or AP English) Four (4) units of mathematics, specifically Algebra I, Algebra II, and Geometry* Three (3) units of science that includes life science, physical science, and earth/space science (at least one of them must be a lab course) Three (3) units of social studies that includes content from U.S. History, Economics, Government,
- World Geography, and World Civilization
- One-half (1/2) credit in health One-half (1/2) credit in physical education
- One (1) unit in the history and appreciation of visual and performing arts
- Two (2) units of nonnative (world) language
- Four (4) units of elective credit. At least one course that develops computer literacy is stronally recommended. Three of the five elective units must be rigorous**.

*In 2002, a student may substitute an integrated, applied, interdisciplinary, or higher level course within a program of study if the substituted course offers the same or greater academic rigor and the course covers or exceeds the minimum required content.

**Rigorous electives should have academic content at least as challenging as that in courses required in the minimum high school graduation requirements. These electives also should be in social studies, science, math, language arts, arts and humanities, nonnative language, and, above the introductory level, in agriculture, industrial technology, business, marketing, family and consumer sciences, health sciences, and technology education and career pathways. Electives in physical education and health are limited to ½ unit each.

HIGHLANDS HIGH SCHOOL ADVANCED CURRICULUM

For those students who want to pursue at least a four-year college program, the following curriculum is recommended.

- Completion of all the requirements of Kentucky's Pre-College Curriculum.
- Completion of at least 10 "Advanced"-level courses. Advanced courses are indicated in the Program of Studies/Course Catalog and in the title of the course. (Note: additional Advanced Placement (AP) courses may substitute for advanced courses.
- Completion of at least two "Advanced Placement (AP)" courses. AP courses are indicated in the Program of Studies/Course Catalog and are in the course title.
- A minimum overall grade point average (GPA) of 3.75 on the weighted scale.

Students who complete the requirements of this diploma will be awarded a seal on their diplomas indicating they have fulfilled the requirements of an advanced course of study. Additionally, students who complete this program will be noted in the Graduation Program.

MAJOR OF INTENSIVE STUDY

Students who wish to declare a graduation major with honors recognition must complete the following requirements:

- Successful completion of a presentation and defense of a senior thesis project as determined by a panel of examiners comprised of three persons, including the student's adviser, a professional in the field, and another teacher or community member.
- Completion of a course entitled, Senior Seminar or AP Research, where students learn the basics of proposal design, research methodology, and presentation skills. Additionally, this course will allow for independent study, shadowing, mentoring, and research.
- Completion of at least four courses in the intended area of study with a minimum average of "B" (85%).
- Completion of Kentucky's Pre-College Curriculum.

Students who achieve this honor will wear an honor cord during commencement in the color that corresponds with the college major. This distinction will be noted on the diploma and on the final transcript.

ADVANCED PLACEMENT CAPSTONE DIPLOMA

(Beginning with the Class of 2019)

Students who wish to earn the Capstone Diploma must complete the following requirements:

- Completion of the requirements of Kentucky's Pre-College Curriculum.
- Complete the College Board courses titled AP Seminar and AP Research and complete the accompanying exams.
- Complete and earn a passing score of 3 or better in 4 additional Advanced Placement courses.

Students who meet the above criteria will be awarded the Capstone Diploma and be recognized at the Highlands High School Commencement. Students who earn a 3 or better in both AP Seminar and AP Research as well as a 3 or better in 4 additional AP courses will be awarded the AP Capstone Diploma through the College Board. Those who meet the requirements but not on 4 additional courses will earn a Capstone Certificate through the College Board.



CAREER PATHWAYS

	Gro	ide 9		Gra	de 10	Grade 11		de 11	Grade 12		
Yea	r:		Yea	r:		Year:			Yea	r:	
RFQ			RFQ		COURSE/LEVEL	RFG			RFQ	UIRED	
1	UNCED		1			1			1		
•	English I		1	English II		•	English III		•	English IV	
2	Math		2	Math		2	Math		2	Math	
3	Physics		3	Biology		3	Chemistry				
4	Health/PE		4	World History		4	US History		3	Gov't	
ELEC	CTIVES		ELEC	TIVES		ELEC	CTIVES		ELEC	CTIVES	
5			5			5			4		
6			6			6			5		
*7			*7			*7			6		
	*7 – is only available to students who choose to take an Early Bird (EB) course.										

Highlands High School Academic Outlook – Class of _____

Frequently Asked Questions (FAQs) Career Pathways

Q.1. What are career clusters?

A.1. Career clusters provide a way for a school to organize instruction and student experience around 16 broad categories that encompass virtually all occupations from entry level through professional levels. The career cluster approval makes it easier for students to understand the relevance of their required courses and electives in relation to a career pathway.

Q. 2. What are career pathways?

A.2. Career pathways are systemic frameworks for addressing the needs of students & employers across the learning continuum which includes a related program of studies for each pathway. Career pathways provide a coherent, articulated sequence of rigorous academic and career/technical courses including dual credit opportunities leading to postsecondary degrees and/or industry recognized certifications and/or licensures. Career Pathways are developed, implemented and maintained in partnership among secondary and postsecondary institutions, business and employers. They are available to all students, including adult learners and are designed to lead to rewarding careers.

Q. 3. What is meant by program in relation to Career Clusters and Pathways in Kentucky?

A.3. Program areas are programs of study for Career and Technical using state learning standards of career development and are organized by specific disciplines.

Program Area	Career Cluster	Examples of Career Majors
Agriculture Education	Agriculture, Food and Natural Resources	Agribusiness Agribiotechnology Animal Science Systems Agriculture Education, Communication and Leadership Environmental Science & Natural Resources Food Science and Processing Systems Horticulture and Plant Systems Agriculture Power, Structural and Technical Systems

Q. 4. How do program areas in Kentucky relate to career clusters and majors? A.4

Program Area	Career Cluster	Examples of Career Majors
Industrial Technology Education	Architecture and Construction	Carpentry Electrical Technology HVAC/Air Conditioning Technology Masonry Plumbing
Industrial Technology Education	Arts, A/V Technology & Communications	CAD/Drafting Technology Digital Media Printing Technology Visual Arts Communications
Business Education	Business Management and Administration	Accounting Administrative Support Business Management Business Multimedia Business Technology Data Base Management Information Processing Legal Office Medical Office Business/Marketing Education
Family and Consumer Science	Education and Training	Fundamentals of Teaching
Business Education	Finance	Finance Accounting Finance Technology Accounting
	Government & Public Administration	
Health Sciences	Health Science	Allied Health Pre-Nursing General Biomedical Sciences Project Lead the Way - Biomedical Sciences Health Sciences
Family and Consumer Science Marketing	Hospitality & Tourism	Hospitality Services Hospitality, Travel Tourism, & Recreation

Program Area	Career Cluster	Examples of Career Majors				
Family and Consumer Sciences	Human Services	Consumer and Family Management Culinary Arts Early Childhood Education Fashion and Interior Design				
Information Technology	Information Technology	Computer Science Information Support & Services Network Administration Security CISCO MCSA Programming Web Development/Administration Informatics – Pilot/Field testing 2012 – 2013 GIS – Geographic Information Systems				
	Law, Public Safety Corrections & Security	Fire Protection & Safety Technology Emergency & Fire Management Services Law Enforcement/ Police Services Legal – Pre-Law Studies				
Industrial Technology Education	Manufacturing	Industrial Electronic Technology Industrial Maintenance Major Appliance Repair Metal Fabrication Welding Wood Manufacturing Technology Industrial Chemical Technology Industrial Automations Technology Plastics Technology				
Marketing Education	Marketing	Advertising E-Commerce Fashion Marketing Financial Services Management/Entrepreneurship Business Marketing Marketing Education Retailing/Wholesaling Sports Marketing				

Program Area	Career Cluster	Example of Career Majors
Technology Education	Science, Technology, Engineering and Mathematics	Engineering Technology Project Lead the Way - Engineering
Industrial Technology Education	Transportation, Distribution & Logistics	Auto Body Technology Auto Body Collision Repair Automotive Technology Aviation Technology Diesel Technology Small Engines/Motorcycles Technology Marine Technology Small Engine Repair Aviation Maintenance Flight/Aeronautics Motorcycle/Power Sports

Q. 5. When should students begin to develop career pathways?

A.5. Plans for a career pathway should be formalized by the ninth grade. Informal plans should be started in middle school.

Q. 6. What is meant by courses needed to meet graduation requirement?

A.6. Minimum graduation requirements are the courses necessary for students in achieving a high school diploma. The requirements as established by Kentucky Board of Education and any additional requirements established by local schools district.

Q. 7. What courses are considered to be required courses for CTE?

A.7. Within each of the career pathways, students can identify a career major. Each major includes the basic required courses identified in the Program of Studies document for the specific area.

http://www.education.ky.gov/KDE/Instructional+Resources/Career+and+Technical+Education/Career+and+Technication/Career+and+Technication/Career+and+Technication/Career+and+Technication/Career+and+Technication/Career+and+Technication/Career+and+Technication/Career+and+Technication/

Q. 8. Where can I find suggestions for elective courses relating to a pathway?

A.8. Elective courses are those courses that relate to needs and interest of students and provide additional support in preparing for success in a chosen pathway. <u>http://www.education.ky.gov/KDE/Instructional+Resources/Career+and+Technical+Education/Career+and+Technical+Education+Programs/</u>

Q. 9. How are credentials used in planning a career pathway?

A.9. A credential provides evidence of authority, status, rights and entitlement to privileges as established by various standards. This usually is a paper document. Certificates in CTE may be awarded by local school districts, area technology centers and industry. Industry Certification is industry's way of recognizing confirmation of subject knowledge and on the ability to perform specific tasks(s).

A diploma is awarded on the basis of completing appropriate coursework and the actual document is received or the end of high school.

Degree is a title given to an individual who has completed a prescribed course of study. Most common degrees awarded are Associate's (2-year program), Bachelor's (4-year program), Master's (5-year) and Doctoral (beyond Master's program).

Career pathways are formulated to identify the potential of a Bachelor's degree.

Q. 10. Is a license a form of credentialing?

A.10. Yes, it provides permission from a governmental authority to perform certain tasks (e.g. nail technician, cosmetologist and barbering).

Q. 11. What is meant by the terms credit based transition programs?

A.11. Dual credit means that a college – level course of study may be offered to high school students who have concurrent enrollment with a post – secondary institution. Credit is awarded by the high school and the college.

Q. 12. Which types of programming are included in credit basis transition programs?

A.12.Programming includes articulated agreements for credit awarded at both the high school and college level, A 2+2+2 program supports a formalized plan for articulating course work beginning in high school and continuing through two and/or four year programs.

CAREER PATHWAYS OFFERED BY THE STATE OF KENTUCKY *Pathways offered by Highlands High School are listed in each Department Section

BUSINESS EDUCATION CAREER PATHWAYS 2015-2016

ACCOUNTING CIP 52.0301.00

PATHWAY DESCRIPTION: A program that prepares individuals to practice the profession of accounting and to perform related business functions. Includes instruction in accounting principles and theory, financial accounting, managerial accounting, cost accounting, budget control, tax accounting, legal aspects of accounting, auditing, reporting procedures, statement analysis, planning and consulting, business information systems, accounting research methods, professional standards and ethics, and applications to specific for-profit, public, and non-profit organizations.

BEST PRACTICE CORE	EXAMPLE ILP-RELATED CAREER TITLES
Foundational Skills Necessary for Career-Ready Measure: (KOSSA/Industry Certification)	Accountant
Complete (2-3) TWO-THREE CREDITS from the following:	Forensic Accountant
 i 060112 Digital Literacy <u>OR</u> 110110 Computer Literacy (IT) <u>OR</u> 060111 Business Principles and Applications i 060122 Accounting & Finance Foundations i 070122 Financial Accounting i 070125 Advanced Accounting (Requires Special Teacher Training) <i>Choose</i> (1-2) ONE-TWO CREDITS from the following: 	Planner Tax Preparer Auditor Auditing Clerk Budget Analyst Tax Examiner
 i 060170 Financial Literacy (CTE Credit)/060171 (Math Credit)/ 080718 (CTE Credit Marketing/080719 (Math Credit) Marketing i 060411 Business Management/080311 (Marketing) i 070743 Advanced Computer Applications i 060108 Business Education Internship i 060107 Business Education Co-op 	

BUSINESS EDUCATION CAREER PATHWAYS 2015-2016

ADMINISTRATIVE SUPPORT CIP 52.0401.00

PATHWAY DESCRIPTION: A program that generally prepares individuals to perform the duties of administrative assistants and/or secretaries and stenographers. Includes instruction in business communications, principles of business law, word processing and data entry, office machines operation and maintenance, office procedures, public relations, secretarial accounting, filing systems and records management, and report preparation.

BEST PRACTICE CORE	EXAMPLE ILP-RELATED
	CAREER TITLES
Foundational Skills Necessary for Career-Ready Measure: (KOSSA/Industry Certification)	Administrative Assistant
Complete (2-4) TWO-FOUR CREDITS from the following:	Human Resources Specialist
 060112 Digital Literacy <u>OR</u> 110110 Computer Literacy (IT) <u>OR</u> 060111 Business Principles and Applications 	Bookkeeper
	Court Reporter
 060122 Accounting & Finance Foundations <u>OR</u> 060170 Financial Literacy (CTE Credit)/060171 (Math Credit)/ 080718 (CTE Credit) Marketing/080719 (Math Credit) Marketing 	Billing & Accounts Collector
 070743 Advanced Computer Applications 070750 Microsoft Office (MOS) 	
Choose (1-2) ONE-TWO CREDITS from the following:	
 060155 Business Communications 060142 Word Processing 060121 Business Law 060511 Business Economics (CTE Credit)/ 060596 (Economics Credit) <u>OR</u> 080317 (CTE Credit) Marketing /080318 (Economics Credit) Marketing 060108 Business Education Internship 060107 Business Education Co-op 	

BUSINESS EDUCATION CAREER PATHWAYS 2015-2016

BUSINESS MANAGEMENT CIP 52.0201.01

PATHWAY DESCRIPTION: A program that generally prepares individuals to plan, organize, direct, and control the functions and processes of a firm or organization. Includes instruction in management theory, human resources management and behavior, accounting and other quantitative methods, purchasing and logistics, organization and production, marketing, and business decision-making.

BEST PRACTICE CORE	EXAMPLE ILP-RELATED CAREER TITLES
Foundational Skills Necessary for Career-Ready Measure: (KOSSA/Industry Certification)	Entry Level Manager
Complete (2) TWO CREDITS from the following:	Money Manager
B 060111 Business Principles and Applications <u>OR</u> 080716 Principles of Marketing	Account Manager
	Real Estate Agent
0007101 melples of Marketing	Venture Capitalist
C 060411 Business Management/080311 (Marketing)	Insurance Agent
Choose (2) TWO CREDITS from the following:	Association Manager
	Quality Controller
D 060112 Digital Literacy <u>OR 110110</u> Computer Literacy (IT)	
E 060511 Business Economics (CTE Credit)/	
060596 (Economics Credit) <u>OR</u> 080317 (CTE Credit) Marketing	5
/080318 (Economics Credit) Marketing	
F 060122 Accounting & Finance Foundations	
G 060170 Financial Literacy (CTE Credit)/060171 (Math Credit)/ 080718 (CTE Credit) Marketing (080710 (Math Credit) Marketing	
H 060121 Business Law	Ig
I 060121 Dusiness Law	
I 060108 Business Education Internship	
K 060107 Business Education Co-on	

BUSINESS TECHNOLOGY CIP 52.0408.00 **PATHWAY DESCRIPTION**: A program that prepares individuals to provide basic administrative support under the supervision of office managers, administrative assistants, secretaries, and other office personnel. Includes instruction in typing, keyboarding, filing, general business correspondence, office equipment operation, and communications skills. **EXAMPLE BEST PRACTICE CORE ILP-RELATED CAREER TITLES** Foundational Skills Necessary for Career-Ready Measure: Data Entry Clerk (KOSSA/Industry Certification) **Telephone Operator** Complete (3) THREE CREDITS from the following: Receptionist/Information Clerk i 060112 Digital Literacy OR 110110 Computer Literacy (IT) OR Courier/Messenger 060111 Business Principles and Applications 060751 Multimedia Publishing OR ï 060199 Web Page Design 060411 Business Management/080311 (Marketing) OR ï 060511 Business Economics (CTE Credit)/ 060596 (Economics Credit) OR 080317 (CTE Credit) Marketing /080318(Economics Credit) Marketing Choose (1) ONE CREDIT from the following: 060170 Financial Literacy (CTE Credit)/060171 (Math Credit)/ ï 080718 (CTE Credit) Marketing/080719 (Math Credit) Marketing 060172 Mathematics for Business & Industry (CTE Credit)/ ï 060190 (Math Credit)/080772 (CTE Credit) Marketing/080780 (Math Credit) Marketing ï 070743 Advanced Computer Applications 060122 Accounting & Finance Foundations ï ï 060142 Word Processing ï 060108 Business Education Internship ï 060107 Business Education Co-op **2013-2014 was the last year this pathway consisted of ANY four business credits. The sequence of courses for this pathway was designed by the Kentucky Business Education Task Force.

BUSINESS EDUCATION CAREER PATHWAYS 2015-2016

FINANCE CIP 52.0803.01

PATHWAY DESCRIPTION: A program that prepares individuals to perform a wide variety of customer services in banks, insurance agencies, savings and loan companies, and related enterprises. Includes instruction in communications and public relations skills, business equipment operation, and technical skills applicable to the methods and operations of specific financial or insurance services.

	EXAMPLE
BEST PRACTICE CORE	ILP-RELATED
	CAREER TITLES
Foundational Skills Necessary for Career-Ready Measure:	
(KOSSA/Industry Certification)	Bank Teller
Complete (2-3) TWO-THREE CREDITS from the following:	Bank Manager
	Loan Officer
ï 060112 Digital Literacy <u>OR</u>	Investment Banker
110110 Computer Literacy (IT) <u>OR</u>	
060111 Business Principles and Applications	Actuary (evaluates
i 060122 Accounting & Finance Foundations	insurance risk/ciarins)
i 060311 Financial Services I/080410 (Marketing)	Investment Advisor
Choose (1-2) ONE-TWO CREDITS from the following:	Personal Financial Planner
i 060351 Financial Services II/080451 (Marketing)	Research Analyst
i 070122 Financial Accounting	(Financial)
i 070125 Advanced Accounting (Requires Special Teacher Training)	
i 060399 Advanced Finance & Credit OR 080411 (Marketing)	
i 070743 Advanced Computer Applications	
i 060170 Financial Literacy (CTE Credit)/060171 (Math Credit)/	
080718 (CTE Credit) Marketing/080719 (Math Credit) Marketing	
i 060108 Business Education Internship	
i 060107 Business Education Co-op	
r	
BUSINESS EDUCATION CAREER PATHWAYS 2015-2016

INFORMATION PROCESSING CIP 52.0407.00

PATHWAY DESCRIPTION: A program that prepares individuals to support business information operations by using computer equipment to enter, process, and retrieve data for a wide variety of administrative purposes. Includes instruction in using basic business software and hardware, business computer networking, principles of desktop publishing, preparing mass mailings, compiling and editing spreadsheets, list maintenance, preparing tables and graphs, receipt control, and preparing business performance reports.

BEST PRACTICE CORE	EXAMPLE ILP-RELATED CAREER TITLES
Foundational Skills Necessary for Career-Ready Measure: (KOSSA/Industry Certification)	Receptionist/Information Clerk
Complete (1) ONE CREDIT:	Data Entry Clerk
 i 060112 Digital Literacy <u>OR</u> 110110 Computer Literacy (IT) <u>OR</u> 060111 Business Principles and Applications <i>Complete (1) ONE CREDIT:</i> 	Bill and Account Collector Insurance Claims Adjuster
ï 070743 Advanced Computer Applications <u>OR</u>	Administrative Assistant
070750 Microsoft Office (MOS)	
Complete (1) ONE CREDIT:	
 i 060751 Multimedia Publishing <u>OR</u> 060142 Word Processing <u>OR</u> 081512 Promotional Applications & Media (Marketing) <u>OR</u> 060155 Business Communications 	
Complete (1) ONE CREDIT:	
 i 060122 Accounting & Finance Foundations <u>OR</u> 060170 Financial Literacy (CTE Credit)/060171 (Math Credit)/ 080718 (CTE Credit) Marketing/080719 (Math Credit) Marketing <u>OR</u> 060172 Mathematics for Business & Industry (CTE Credit)/ 060190 (Math Credit)/080772 (CTE Credit) Marketing/080780 (Math Credit) Marketing <u>OR</u> 060108 Business Education Internship <u>OR</u> 060107 Business Education Co-op 	

MANUFACTURING ENGINEERING TECHNOLOGY TECHNICIAN CIP 15.0613.00

PATHWAY DESCRIPTION: A program that prepares individuals to apply basic engineering principles, mathematical and scientific principles to the design, development and operational evaluation of integrated systems for managing industrial production processes, just-in-time manufacturing, industrial quality control, automation, cost analysis, and technical skills to the identification and resolution of production problems in the manufacture of products. Includes instruction in machine operations, production line operations, engineering analysis, systems analysis, instrumentation, physical controls, automation, computer-aided manufacturing (CAM), manufacturing planning, quality control, and informational infrastructure.

	EXAMPLE
BEST PRACTICE CORE	ILP-RELATED
	CAREER TITLES
Foundational Skills Necessary for Career-Ready Measure:	Engineering
(KOSSA/Industry Certification)	Technology
	Instructor
Complete (2) TWO CREDITS from the following:	Production
	Woodworker
i 210222 Desig Electricity & Energy Systems	Manufaaturina
i 210232 Basic Electricity & Energy Systems	Manufacturing
i 210224 Principles of Engineering & Technology	wianager
i 210225 Introduction to Manufacturing & Manufacturing Systems	Manufacturing Worker
i 210126 Advanged Technology for Design & Productions (SPEP)	Industrial Engineer
i 210137 Systems of Advanced Technology (SPER)	
1 210157 Systems of Advanced Technology (SRED)	Electronics Assembler
Choose (2) TWO CREDITS from the following:	Industrial Engineer
	Industrial Technician
i 210134 Material Process	Quality Controllar
ï 210135 Production Technology	Quality Controller
i 210221 Fundamentals of Engineering Design I	
ï 210238 Foundations of Robotics	
ï 210290 Special Topics in Engineering	
i 210330 Engineering & Technology Co-Op <u>OR</u>	
210331 Engineering & Technology Internship	
Note: (SREB) courses require an agreement between	
the Southern Region Education Board and the District.	

AERONAUTICS & AEROSPACE Flight & Aeronautics CIP 49.0102.00

PATHWAY DESCRIPTION: Allows student to complete what is considered the first phase of aviation training leading to a commercial pilot license. They will gain technical knowledge and skills to the flying and/or navigation of commercial passenger and cargo, agricultural, public service, corporate and fixed wing aircraft. Includes instruction in principles of aircraft design and performance, aircraft flight systems and controls, flight crew operations and procedures, radio communications, navigation procedures and systems, airways safety and traffic regulations, and governmental rules and regulations pertaining to piloting aircraft.

BEST PRACTICE CORE	EXAMPLE ILP-RELATED CAREER TITLES
Foundational Skills Necessary for Career-Ready Measure: (KOSSA/Industry Certification)	Aerospace Engineer Aerospace Technician
 Complete (4) FOUR CREDITS from the following: 210226 Introduction to Aerospace 210233 Fundamentals of Aviation Science I 210234 Aviation Science II 210237 Introduction to Commercial Aviation Science 210330 Engineering & Technology Co-Op <u>OR</u> 210331 Engineering & Technology Internship 	Private Pilot Commercial Pilot Crew Chief Flight Instructor Commercial Aviator Military Aviator Military Navigator

AERONAUTICS & AEROSPACE Aeronautical Engineering CIP 14.0201.01

PATHWAY DESCRIPTION: A program that prepares individuals to apply basic engineering principles and technical skills in support of engineers and other professionals engaged in developing, manufacturing and testing aircraft, spacecraft and their systems. The program provides students with a foundation of knowledge and technically oriented experiences in the study of Aerospace Technologies, its effect upon our lives, and the choosing of an occupation. Includes instruction in aircraft/spacecraft systems technology, design and development testing, prototype and operational testing, inspection and maintenance procedures, instrument calibration, test equipment operation and maintenance, and report preparation.

BEST PRACTICE CORE	EXAMPLE ILP-RELATED
	CAREER TITLES
 Foundational Skills Necessary for Career-Ready Measure: (KOSSA/Industry Certification) Complete (4) FOUR CREDITS from the following: L 210226 Introduction to Aerospace 	Astronaut Aerospace Engineer Aerospace Technician Mechanical Engineer Aircraft Mechanic
 M 210233 Fundamentals of Aviation Science I N 210229 Fundamentals of Aeronautical Engineering <u>OR</u> 219907 Aerospace Engineering (<i>PLTW</i>) O 210290 Special Topics in Engineering P 210330 Engineering & Technology Co-Op <u>OR</u> Q 210331 Engineering & Technology Internship 	Crew Chief Aircraft Manufacturing Manager Aircraft Structural Assembler
Note: (PLTW) courses require an agreement between Project Lead The Way and the Local School District please see the link to <u>PLTW</u> <u>Program Requirements</u> for further information.	Quality Control Inspector Mechanical Design Engineer

AERONAUTICS & AEROSPACE Space Systems Engineering CIP 14.0201.02

PATHWAY DESCRIPTION: An instructional program in astronautics designed to develop basic knowledge of space systems and to gain practical experience in designing, fabricating, and testing space type experiments. Students will learn and understand the constraints on device design to operate in the LEO (Low Earth Orbit) space environment. Students will also get hands-on experience in a laboratory environment and in the safe use of shop equipment.

BEST PRACTICE CORE	EXAMPLE ILP-RELATED CAREER TITLES
Foundational Skills Necessary for Career-Ready Measure: (KOSSA/Industry Certification) Complete (4) FOUR CREDITS from the following	Astronaut Aerospace Engineer Aerospace Technician
 i 210226 Introduction to Aerospace i 210235 Introduction to Space Systems Engineering I i 210236 Space Systems Engineering II i 210229 Fundamentals of Aeronautical Engineering <u>OR</u> 219907 Aerospace Engineering (<i>PLTW</i>) <u>OR</u> 219903 Digital Electronics (<i>PLTW</i>) Note: (PLTW) courses require an agreement between Project Lead The Way and the Local School District please see the link to <u>PLTW</u> <u>Program Requirements</u> for further information. 	Mechanical Engineer Mechanical Design Engineer Electronics Engineer Electronics Technician Mission Planner Orbit Analyst Satellite Flight Engineer

AERONAUTICS & AEROSPACE Aircraft Maintenance Technician CIP 47.0607.00

PATHWAY DESCRIPTION: A program that prepares individuals to apply technical knowledge and skills to repair, service, and maintain all aircraft components other than engines, propellers, avionics, and instruments. Includes instruction in layout and fabrication of sheet metal, fabric, wood, and other materials into structural members, parts, and fittings, and replacement of damaged or worn parts such as control cables and hydraulic units.

		EXAMPLE
BEST	PRACTICE CORE	ILP-RELATED
		CAREER TITLES
Found	lational Skills Necessary for Career-Ready Measure:	Aircraft Maintenance
(KOSS	SA/Industry Certification)	Technician
C	omplete (3) THREE CREDITS from the following:	(AP) Aircraft & Power
C	implete (5) TIREE CREDITS from the following.	Plant Mechanic
ï	210226 Introduction to Aerospace	(IA) Inspector
ï	210233 Fundamentals of Aviation Science I	Authorization
ï	210139 Introduction to Aircraft Maintenance Technology I	(ASI) Aviation Safety
C	noose (1) ONE CREDIT from the following:	Inspector
Cr	loose (1) ONE CREDIT from the jouowing.	Crew Chief
ï	210234 Aviation Science II	
ï	210229 Fundamentals of Aeronautical Engineering OR	
	219907 Aerospace Engineering (<i>PLTW</i>)	
ï	210330 Engineering & Technology Co-Op OR	
	210331 Engineering & Technology Internship	
	Note: To gain FAA work experience and training	
	requirements students must log hours and work with	
	approved FAA (AP or IA).	
	Note: (PI TW) courses require an agreement	
	between Project Lead The Way and the Local	
	School District please see the link to PLTW	
	Program Requirements for further information.	
		1

ENGINEERING & TECHNOLOGY DESIGN 15.1302.00

PATHWAY DESCRIPTION: This program of study is designed for students interested in the various disciplines of engineering and engineering technology. The sequences of courses will provide students with the opportunity to develop critical thinking skills and understanding of engineering concepts. Students then apply these skills in conjunction with the multi-step engineering design process to solve real-world problems. Includes instruction in engineering graphics, two-dimensional and three-dimensional engineering design, solids modeling, engineering animation, computer-aided drafting (CAD), computer-aided design (CADD), and auto-CAD techniques.

	EXAMPLE
BEST PRACTICE CORE	ILP-RELATED
	CAREER TITLES
Foundational Skills Necessary for Career-Ready Measure: (KOSSA/Industry Certification) Complete (2) TWO CREDITS from the following:	Engineering Technology Instructor CAD Engineer
 i 210138 Mechanical & Technical Design i 210221 Fundamentals of Engineering Design I i 210108 Technological Design 	CAD Technician/Drafter Mold Designer
Choose (2) TWO CREDITS from the following:	Mechanical Designer
 i 210222 Engineering Design II i 210109 Technological Issues and Impacts i 210117 Advanced Design Applications i 210290 Special Topics in Engineering i 210224 Principles of Engineering & Technology i 210330 Engineering & Technology Co-Op <u>OR</u> 210331 Engineering & Technology Internship 	Industrial Material Handling Designer Mechanical Engineer

CIVIL ARCHITECTURE & CONSTRUCTION TECHNOLOGY 15.0101.01

PATHWAY DESCRIPTION: A program that prepares individuals to apply basic engineering principles and technical skills in support of architects, engineers and planners engaged indesigning and developing buildings, urban complexes, and related systems. Includes instruction in design testing procedures, building site analysis, model building and computer graphics, structural systems testing, analysis of prototype mechanical and interior systems, report preparation, basic construction and structural design, architectural rendering, architectural-aided drafting (CAD), layout and designs, architectural blueprint interpretation, building materials, and basic structural wiring diagramming.

	EXAMPLE
BEST PRACTICE CORE	ILP-RELATED
	CAREER TITLES
Foundational Skills Necessary for Career-Ready Measure:	Engineering
(KOSSA/Industry Certification)	Technology
	Instructor
Complete (2) TWO CREDITS from the following:	Architect
	Interior Designer
1 210138 Mechanical & Technical Design <u>OR</u>	Home Improvement
210221 Fundamentals of Engineering Design I	Contractor
I 210223 Fundamentals of Architectural & Civil Engineering	OR Carpenter
219905 Civil Engineering & Architecture (<i>PLTW</i>)	Construction Laborer
	Construction Manager
Choose (2) TWO CREDITS from the following:	Construction
" 210140 Austria During & Civil Environming H	Supervisor
i 210140 Architectural Design & Civil Engineering II i 210141 Fundamentals of Building Construction Technologies	Project Manager
i 210141 Fundamentals of Dunding Construction Technologies	Building Inspector
i 210330 Engineering & Technology Co-On OR	Drafter
210331 Engineering & Technology Internship	Renovator
	Quality Controller
	Property Assessor
	Building
	Superintendent

POWER & ENERGY MANAGEMENT SYSTEMS TECHNOLOGY (Sustainability & Energy Application) CIP 15.0503.01

PATHWAY DESCRIPTION: A program that prepares individuals to apply basic engineering principles and technical skills in support of engineers and other professionals engaged in developing energy-efficient systems or monitoring energy use. The content includes activities to develop knowledge and skill in, but is not limited to the study of power systems and the kinds and sources of energy, repair, service, and maintenance of small internal-combustion engines used on portable power equipment such as generators, electrical motors, generators, and wind turbines. The content and activities will also include the study of safety, and leadership skills.

BEST	PRACTICE CORE	EXAMPLE ILP-RELATED CAREER TITLES
Found (KOSS	lational Skills Necessary for Career-Ready Measure: SA/Industry Certification)	Engineering Technology Instructor
Ca ï	<i>pmplete</i> (2-3) TWO-THREE CREDITS from the following: 201341 Foundations of Energy	Outdoor Power Equipment Technician
ï	201232 Basic Electricity & Energy Systems	Small Engine Mechanic
ï	210242 Introduction to Alternative Energy I	Solar Energy Technician
Cŀ	noose (1-2) ONE-TWO CREDITS from the following:	Wind Power Technician
ï	210243 Alternative Energy II	Energy Auditor
ï	210244 Global Energy Issues	Wind Power Technician
ï	210142 Power & Energy Equipment Technology <u>OR</u>	Energy Auditor
210290 Special Topics in Engineering <u>OR</u> 210330 Engineering & Technology Co-Op <u>OR</u> 210331 Engineering & Technology Internship	210290 Special Topics in Engineering <u>OR</u> 210330 Engineering & Technology Co-Op <u>OR</u> 210331 Engineering & Technology Internship	Electrical Mechanical Technician
		Power Plant Technician
		Turbine Technician
		Energy Analyst
		Electrical Engineering
		Mechanical Engineering

POWER & ENERGY MANAGEMENT SYSTEMS TECHNOLOGY (Energy Management) CIP 15.0503.02

PATHWAY DESCRIPTION: A program that prepares individuals to apply basic engineering principles and technical skills in support of engineers and other professionals engaged indeveloping energy-efficient systems or monitoring energy use. Includes instruction in principles of energy conservation, instrumentation calibration, monitoring systems and test procedures, energy loss inspection procedures, energy conservation techniques, and report preparation and problem solving skills.

BEST PRACTICE CORE	EXAMPLE ILP-RELATED CAREER TITLES
Foundational Skills Necessary for Career-Ready Measure: (KOSSA/Industry Certification)	Engineering Technology Instructor
Complete (4) FOUR CREDITS from the following:	Outdoor Power Equipment Technician
i TBA - Energy II: Electric Power Generation & Distribution	Small Engine Mechanic
 TBA - Energy III: Careers & Emerging Technologies in Energy TBA - Sustainability Management 	Solar Energy Technician
T TDA - Sustainability Management	Wind Power Technician
	Energy Auditor
Note: This Pathway requires partnership with a post-secondary	Wind Power Technician
institution to enable student achievement of the industry certification which can equate to post-secondary credit.	Energy Auditor
	Electrical Mechanical Technician
	Power Plant Technician
	Turbine Technician
	Energy Analyst
	Electrical Engineering
	Mechanical Engineering

ROBOTICS & AUTOMATION 15.0405.00

PATHWAY DESCRIPTION: A program that prepares individuals to apply basic engineering principles and technical skills in support of engineers and other professionals engaged in developing and using robots. Includes instruction in the principles of robotics, design and operational testing, system maintenance and repair procedures, robot computer systems and control language, specific system types and applications to specific industrial tasks, and report preparation.

		EXAMPLE
BEST	PRACTICE CORE	ILP-RELATED
		CAREER TITLES
Found	lational Skills Necessary for Career-Ready Measure:	Engineering
(KOS)	SA/Industry Certification)	Technology
, ,		Instructor
Ca	omplete (2) TWO CREDITS from the following:	Solar Energy
		Technician
 	210238 Foundations of Robotics	W. al Daman
1	210239 Robotics Design Essentials and Systems	Wind Power
C	acose (2) TWO CREDITS from the following:	rechnician
Ci	loose (2) 1 WO CREDITS from the following.	Energy Auditor
ï	210232 Basic Electricity & Energy Systems	Electrical Mechanical
ï	210230 Fundamentals of Mechatronics OR	Technician
	219902 Principles of Engineering (PLTW)	Power Plant
ï	210240 Robotics Applications	Technician
ï	210221 Fundamentals of Engineering Design I OR	Turbing Tashnisian
	219901 Introduction to Engineering Design (<i>PLTW</i>)	rurbine rechincian
ï	210290 Special Topics in Engineering	Energy Analyst
Ï	210330 Engineering & Technology Co-Op <u>OR</u> 210331 Engineering & Technology Internship	Electrical Engineering
		Mechanical
	Note: (PLTW) courses require an agreement	Engineering
	between Project Lead The Way and the Local	
	School District please see the link to <u>PLTW</u>	
	<u>Program Requirements</u> for further information.	

GRAPHIC & DIGITAL COMMUNICATIONS 10.0105.00

PATHWAY DESCRIPTION: A program that generally prepares individuals to function as workers and managers within communications industries. Includes instruction in business economics; basic management; principles of interpersonal and mediated communications; radio, television, and digital media production; and related aspects of technology and communications systems.

BEST PRACTICE CORE	EXAMPLE ILP-RELATED CAREER TITLES
 Foundational Skills Necessary for Career-Ready Measure: (KOSSA/Industry Certification) Complete (2) TWO CREDITS from the following: ï 060112 Digital Literacy ï 210138 Mechanical & Technical Design <u>OR</u> 210221 Fundamentals of Engineering Design I Choose (2) TWO CREDITS from the following: 	Technology TeacherCommunications TechnicianGraphic Designer Desktop Publisher Web Designer
 i 210133 Graphic Communications i 210118 Advanced Technological Application i 210111 Special Problems in Technology i 210330 Engineering & Technology Co-Op <u>OR</u> 210331 Engineering & Technology Internship 	

PROJECT LEAD THE WAY (PLTW) CIP 14.0101.01

PATHWAY DESCRIPTION: A program that generally prepares individuals to apply mathematical and scientific principles to solve a wide variety of practical problems in industry, social organization, public works, and commerce. Includes instruction in undifferentiated and individualized programs in engineering.

DEST DDACTICE CODE	EXAMPLE II D DELATED
DEST I RACTICE CORE	CAREER TITLES
Foundational Skills Necessary for Career-Ready Measure: (KOSSA/Industry Certification)	Engineering Technology Instructor
 Complete (2) TWO CREDITS from the following: i 219901 Introduction to Engineering Design (PLTW) i 219902 Principles of Engineering (PLTW) Choose (2) TWO CREDITS from the following: i 219903 Digital Electronics (PLTW) i 219904 Computer Integrated Manufacturing (PLTW) i 219905 Civil Engineering & Architecture (PLTW) i 219906 Engineering Design & Development (PLTW) i 219907 Aerospace Engineering (PLTW) i 219908 Biotechnical Engineering (PLTW) i 219917 Special Topics in Engineering (PLTW) i 110730 Computer Science & Software Engineering i 210330 Engineering & Technology Co-Op OR 210331 Engineering & Technology Internship Note: (PLTW) courses require an agreement between Project Lead The Way and the Local School District please see the link to PLTW Program Requirements for further information. 	Instructor Production Woodworker Manufacturing Manager Manufacturing Worker Electronics Assembler Industrial Engineer Industrial Technician Quality Controller Architect Aerospace Engineer Interior Designer Nuclear Engineer Electrical Engineer Civil Engineer
	Engineer

CAREER & TECHNICAL EDUCATION (CTE)

PROJECT LEAD THE WAY (PLTW) HYBRID PATHWAYS

Project Lead the Way and the Office of Career and Technology Education have worked together to create further opportunities for students that are enrolled in secondary Career & Technical Education (CTE) specific programs. These are referred to as Hybrid pathways that consist of courses within the specific program area with the addition of selected PLTW Engineering courses relative to that career area. These pathways blend Career & Technical Education (CTE) courses with Project Lead The Way (PLTW) courses to help students applytechnical skills along with science, technology, engineering, and math (STEM) skills to solve real-world problems and to meet the demands of industry for individuals with both technical and engineering knowledge and skills.

DESIGN ENGINEERING CIP 15.1304.00

PATHWAY DESCRIPTION: This pathway provides the opportunity to blend Career & Technical Education (CTE) courses with Project Lead the Way (PLTW) courses to help students apply technical skills along with science, technology, engineering, and math (STEM) skills to solve real-world problems. Design Engineers have a working knowledge of mechanical parts as well as computer-aided design (CAD) software, such as AutoCAD. Mechanical designers begin a project by meeting with project managers, engineers, and clients to understand the needs and requirements for a new product or mechanical system. For example, designers working on a project to create an automobile engine may consult engineers regarding which structural materials to use or clients regarding engine efficiency requirements. Once materials and specifications have been determined, designers begin using CAD software to plan and develop models.

BEST PRACTICE CORE	EXAMPLE ILP-RELATED CAREER TITLES
Foundational Skills Necessary for Career-Ready Measure: (KOSSA/Industry Certification)	Engineer Technician Electrical Engineer
Complete (5) FIVE CREDITS from the following:	Industrial Engineer
 219901 Introduction to Engineering Design (<i>PLTW</i>) 480110 Introduction to Computer Aided Drafting 480136 Parametric Modeling 480113 Engineering Graphics 219906 Engineering Design & Development (<i>PLTW</i>) <u>OR</u> 219902 Principles of Engineering (<i>PLTW</i>) 	Mechanical Engineer Civil Engineer
Note: (PLTW) courses require an agreement between Project Lead The Way and the Local School District please see the link to <u>PLTW</u> <u>Program Requirements</u> for further information.	

COMPUTERIZED MANUFACTURING AND MACHINING (CMM) ENGINEERING CIP 48.0510.00

PATHWAY DESCRIPTION: This pathway provides the opportunity to blend Career & Technical Education (CTE) courses with Project Lead the Way (PLTW) courses to help students apply technical skills along with science, technology, engineering, and math (STEM) skills to solve real-world problems. CMM Engineers design, develop and run programs which direct machines to cut and shape metal or plastic for such things as airplanes, automobiles and other industrial machines. CMM Engineers use blueprints and 3-dimensional computer designs to create the programs which result in precisely cut products.

BEST PRACTICE CORE	EXAMPLE ILP-RELATED CAREER TITLES
Foundational Skills Necessary for Career-Ready Measure: (KOSSA/Industry Certification)	Machine Operator
Complete (5) FIVE CREDITS from the following:	Machinist Technician Machinist
 219901 Introduction to Engineering Design (<i>PLTW</i>) 470913 Fundamentals of Machine Tools-A 470914 Fundamentals of Machine Tools-B 470915 Manual Programming 219904 Computer Integrated Manufacturing (<i>PLTW</i>) 	Maintenance Machinist CNC Machine Operator CNC Programmer
Note: (PLTW) courses require an agreement between Project Lead The Way and the Local School District please see the link to <u>PLTW</u> <u>Program Requirements</u> for further information.	Quality Control Manager Mechanical Engineer Engineer Technician Industrial Engineer

WELDING ENGINEERING CIP 15.0614.00

PATHWAY DESCRIPTION: This pathway provides the opportunity to blend Career & Technical Education (CTE) courses with Project Lead the Way (PLTW) courses to help students apply technical skills along with science, technology, engineering, and math (STEM) skills to solve real-world problems. Welding Engineers design and develop metal components for products for the pipeline, automotive, boiler making, ship building, aircraft and mobile home industry. Welding Engineers must have knowledge of cutting processes and gas metal arc welding procedures for efficient development of these industrial processes.

BEST PRACTICE CORE	EXAMPLE ILP-RELATED CAREER TITLES
Foundational Skills Necessary for Career-Ready Measure: (KOSSA/Industry Certification)	Pipe Welder Certified Welding
 <i>Complete (5) FIVE CREDITS from the following:</i> 219901 Introduction to Engineering Design (<i>PLTW</i>) 480505 Blueprint Reading for Welding 480501 Cutting Processes 480522 Gas Metal Arc Welding 219902 Principles of Engineering (<i>PLTW</i>) 	Inspector (CWI) Certified Welding Educator (CWE) Welding Engineer Structural Engineer Mechanical Engineer
Note: (PLTW) courses require an agreement between Project Lead The Way and the Local School District please see the link to <u>PLTW</u> <u>Program Requirements</u> for further information.	

ELECTRICAL ENGINEERING CIP 14.4101.00

PATHWAY DESCRIPTION: This pathway provides the opportunity to blend Career & Technical Education (CTE) courses with Project Lead the Way (PLTW) courses to help students apply technical skills along with science, technology, engineering, and math (STEM) skills to solve real-world problems. Electrical Engineers apply electrical theory and related knowledge to diagnose and modify developmental or operational electrical machinery and electrical control equipment and circuitry in industrial or commercial plants and laboratories. Electrical Engineers experiment with motor-control devices, switch panels, transformers, generator windings, solenoids, and other electrical equipment and components according to engineering data and knowledge of electrical principles.

BEST PRACTICE CORE	EXAMPLE ILP-RELATED CAREER TITLES
Foundational Skills Necessary for Career-Ready Measure: (KOSSA/Industry Certification)	Electrical Technician Electrical Supervisor Electrical Engineer
 Complete (5) FIVE CREDITS from the following: 219901 Introduction to Engineering Design (<i>PLTW</i>) 470322 Industrial Maintenance Electrical Principles 470348 Industrial Maintenance Electrical Motor Controls 470330 Industrial Maintenance of PLC 219903 Digital Electronics (<i>PLTW</i>) 	
Note: (PLTW) courses require an agreement between Project Lead The Way and the Local School District please see the link to <u>PLTW</u> <u>Program Requirements</u> for further information.	

FLUID POWER ENGINEERING CIP 15.1103.00

PATHWAY DESCRIPTION: This pathway provides the opportunity to blend Career & Technical Education (CTE) courses with Project Lead the Way (PLTW) courses to help students apply technical skills along with science, technology, engineering, and math (STEM) skills to solve real-world problems. Fluid Power Engineers design, fabricate, and test industrial hydraulic equipment. Fluid Power Engineers apply knowledge of hydraulic, pneumatic, and electrical principles to test equipment, and analyzes and records data, such as fluid pressure, flow measure, and power loss due to friction and parts wear. Fluid Power Engineers understand hydraulic symbols, reads system schematics, understands electrical principles, and is skilled in test procedures and instrumentation.

BEST PRACTICE CORE	EXAMPLE ILP-RELATED
	CAREER TITLES
Foundational Skills Necessary for Career-Ready Measure: (KOSSA/Industry Certification)	Industrial Hydraulic Technician
Complete (5) FIVE CREDITS from the following:	Mechanical Engineer Industrial Engineer
 219901 Introduction to Engineering Design (<i>PLTW</i>) 470321 Fluid Power 470316 Advanced Hydraulic Systems 470326 Pneumatic Systems 219902 Principles of Engineering (<i>PLTW</i>) 	Pneumatic Specialist Fluid Power Supervisor Hydraulic Engineer
Note: (PLTW) courses require an agreement between Project Lead The Way and the Local School District please see the link to <u>PLTW</u> <u>Program Requirements</u> for further information.	

FABRICATION ENGINEERING CIP 14.1901.00

PATHWAY DESCRIPTION: This pathway provides the opportunity to blend PLTW courses and CTE courses to promote training with applied technical skills and the science, technology, engineering and math required to solve real-world problems. The Fabrication Engineer design parts to engineering specifications that are required for the development of metal parts and interior metal structures. Fabrication Engineers work with Sheet Metal Technicians in the development of complex geometrical parts. The Fabrication Engineer provides direct support to the manufacturing industry in the areas of design, fabrication, modification and development of metal assemblies, components and sub-assemblies.

BEST PRACTICE CORE	EXAMPLE ILP-RELATED CAREER TITLES
Foundational Skills Necessary for Career-Ready Measure: (KOSSA/Industry Certification)	Manufacturin g Engineer
Complete (5) FIVE CREDITS from the following:	Sheet Metal Engineer
 219901 Introduction to Engineering Design (<i>PLTW</i>) 480816 Metal Trade Information & Metals 480813 Parallel Line Layout 480817 Sheet Metal 1-A 219902 Principles of Engineering (<i>PLTW</i>) 	
Note: (PLTW) courses require an agreement between Project Lead The Way and the Local School District please see the link to <u>PLTW</u> <u>Program Requirements</u> for further information.	

WOOD MANUFACTURING ENGINEERING CIP 03.0509.00

PATHWAY DESCRIPTION: This pathway provides the opportunity to blend Career & Technical Education (CTE) courses with Project Lead the Way (PLTW) courses to help students apply technical skills along with science, technology, engineering, and math (STEM) skills to solve real-world problems. Wood Manufacturing Engineers design and create interior cabinets and wood products for homes and businesses. Wood Manufacturing Engineers consult with clients and Cabinetmakers for cutting, shaping wood, preparing surfaces and forming a completed product.

BEST PRACTICE CORE	EXAMPLE ILP-RELATED CAREER TITLES
Foundational Skills Necessary for Career-Ready Measure: (KOSSA/Industry Certification)	Wood Product Supervisor
Complete (5) FIVE CREDITS from the following:	Wood Technologist Wood Product
 219901 Introduction to Engineering Design (<i>PLTW</i>) 480740 Wood Product Manufacturing 480731 Cabinet Making Technology 480716 Lumber Grading and Drying 219904 Computer Integrated Manufacturing (<i>PLTW</i>) 	Engineer
Note: (PLTW) courses require an agreement between Project Lead The Way and the Local School District please see the link to <u>PLTW</u> <u>Program Requirements</u> for further information.	

AUTOMOTIVE ENGINEERING CIP 15.0803.00

PATHWAY DESCRIPTION: This pathway provides the opportunity to blend Career & Technical Education (CTE) courses with Project Lead the Way (PLTW) courses to help students apply technical skills along with science, technology, engineering, and math (STEM) skills to solve real-world problems. A program that prepares individuals to apply basic engineering principles and technical skills in support of engineers and other professionals engaged in developing, manufacturing and testing self-propelled ground vehicles and their systems. Includes instruction in vehicular systems technology, design and development testing, prototype and operational testing, inspection and maintenance procedures, instrument calibration, test equipment operation and maintenance, and report preparation.

BEST PRACTICE CORE	EXAMPLE ILP-RELATED CAREER TITLES
Foundational Skills Necessary for Career-Ready Measure: (KOSSA/Industry Certification)	Automotive Engineer
Complete (6) SIX CREDITS from the following:	Service Manager
 219901 Introduction to Engineering Design (<i>PLTW</i>) 470507 Automotive Maintenance and Light Repair Section A and Lab 470509 Automotive Maintenance and Light Repair Section B and Lab 470511 Automotive Maintenance and Light Repair Section C and Lab 470513 Automotive Maintenance and Light Repair Section D and Lab 219903 Digital Electronics (<i>PLTW</i>) 	
Note: (PLTW) courses require an agreement between Project Lead The Way and the Local School District please see the link to <u>PLTW Program Requirements</u> for further information.	

CONSTRUCTION ARCHITECTURAL ENGINEERING CIP 15.0101.02

PATHWAY DESCRIPTION: This pathway provides the opportunity to blend Career & Technical Education (CTE) courses with Project Lead the Way (PLTW) courses to help students apply technical skills along with science, technology, engineering, and math (STEM) skills to solve real-world problems. A program that prepares individuals to apply basic engineering principles and technical skills in support of architects, engineers and planners engaged in designing and developing buildings, urban complexes, and related systems. Includes instruction in design testing procedures, building site analysis, model building and computer graphics, structural systems testing, analysis of prototype mechanical and interior systems, report preparation, basic construction and structural design, architectural rendering, architectural-aided drafting (CAD), layout and designs, architectural blueprint interpretation, building materials, and basic structural wiring diagramming.

BEST PRACTICE CORE	EXAMPLE ILP-RELATED CAREER TITLES
Foundational Skills Necessary for Career-Ready Measure: (KOSSA/Industry Certification)	Flooring Engineer Construction Engineer Structural Engineer
 219901 Introduction to Engineering Design (<i>PLTW</i>) 460201 Introduction to Construction Technology 460212 Floor and Wall Framing 460213 Ceiling and Roof Framing 219905 Civil Engineering & Architecture (<i>PLTW</i>) 	
Note: (PLTW) courses require an agreement between Project Lead The Way and the Local School District please see the link to <u>PLTW</u> <u>Program Requirements</u> for further information.	

STRUCTURAL ENGINEERING CIP 14.0803.00

PATHWAY DESCRIPTION: This pathway provides the opportunity to blend Career & Technical Education (CTE) courses with Project Lead the Way (PLTW) courses to help students apply technical skills along with science, technology, engineering, and math (STEM) skills to solve real-world problems. A program that prepares individuals to apply basic engineering principles and technical skills in support of architects, engineers and planners engaged in designing and developing buildings, urban complexes, and related systems. Includes instruction in design testing procedures, building site analysis, model building and computer graphics, structural systems testing, analysis of prototype mechanical and interior systems, report preparation, basic construction and structural design, architectural rendering, architectural-aided drafting (CAD), layout and designs, architectural blueprint interpretation, building materials, and basic structural wiring diagramming.

BEST PRACTICE CORE	EXAMPLE ILP-RELATED CAREER TITLES
Foundational Skills Necessary for Career-Ready Measure: (KOSSA/Industry Certification)	Engineering Technology Instructor
Complete (5) FIVE CREDITS from the following:	Architect
 219901 Introduction to Engineering Design (<i>PLTW</i>) 460201 Introduction to Construction Technology 460218 Construction Forms 460214 Site Layout and Foundations 219905 Civil Engineering & Architecture (<i>PLTW</i>) 	Interior Designer Home Improvement Contractor Carpenter Construction Laborer
Note: (PLTW) courses require an agreement between Project Lead The Way and the Local School District please see the link to <u>PLTW</u> <u>Program Requirements</u> for further information.	Construction Manager Construction Supervisor Project Manager

ELECTRICAL CONSTRUCTION ENGINEERING CIP 15.0303.00

PATHWAY DESCRIPTION: This pathway provides the opportunity to blend Career & Technical Education (CTE) courses with Project Lead the Way (PLTW) courses to help students apply technical skills along with science, technology, engineering, and math (STEM) skills to solve real-world problems. A program that prepares individuals to apply technical knowledge and skills to install, operate, maintain, and repair electric apparatus and systems such as residential, commercial, and industrial electric-power wiring; and DC and AC motors, controls, and electrical distribution panels. Includes instruction in the principles of electronics and electrical systems, wiring, power transmission, safety, industrial and household appliances, job estimation, electrical testing and inspection, and applicable codes and standards.

BEST PRACTICE CORE	EXAMPLE ILP-RELATED CAREER TITLES
Foundational Skills Necessary for Career-Ready Measure: (KOSSA/Industry Certification) Complete (5) FIVE CREDITS from the following:	Electrical Engineer Electrical Engineering Tech Electrician
 219901 Introduction to Engineering Design (<i>PLTW</i>) 460316 Circuits I 460319 Circuits II 219903 Digital Electronics (<i>PLTW</i>) 	
Note: (PLTW) courses require an agreement between Project Lead The Way and the Local School District please see the link to <u>PLTW</u> <u>Program Requirements</u> for further information.	

FAMILY AND CONSUMER SCIENCES CAREERPATHWAYS 2015-2016

CONSUMER & FAMILY MANAGEMENT CIP Code 19.0403.00

PATHWAY DESCRIPTION: The Consumer and Family Management pathway helps students develop skills associated with early career employment opportunities and rigorous education programs that prepare for this level of the career ladder. The knowledge and skills validated span across a broad range of Family and Consumer Sciences content areas and are central to career areas involving human services, consumer services/protection/advising, education and training as well as social and community services.

BEST PRACTICE CORE	EXAMPLE ILP-RELATED CAREER TITLES
Foundational Skills Necessary for Career-Ready Measure: (KOSSA/Industry Certification)	Marriage and Family Therapist
Complete (3) THREE CREDITS from the following:	Family and Consumer Scientist
 i 200113 FACS Essentials <u>AND/OR</u> 200161 FACS Essentials Health* i 201010 Money Skills <u>OR</u> 201011 Money Skills for Math <u>OR</u> 201015 Consumer Economics for SS credit i 200171 Relationships** i 200441 Foods & Nutrition 	Gerontologist Abuse/Crisis Counselor Personal Financial Planner
 i 200226 Middle to Late Lifespan Development** i 200173 Parenting** Note:(*) Indicates half-credit (.5) course Note: (**) Indicates course can be half-credit (.5) <u>OR</u> a full 1 credit course 	

FAMILY AND CONSUMER SCIENCES CAREERPATHWAYS 2015-2016

CULINARY & FOOD SERVICES CIP Code 12.0500.00

PATHWAY DESCRIPTION: The Culinary & Food Service pathway addresses a skill set necessary for success in the culinary industry. The courses in this pathway will help students develop skills in early career ladder positions and promote continuing education at the post-secondary level preparing for careers associated with restaurants, institutional food service, hospitality and catering, as well as food and beverage operations.

BEST PRACTICE CORE	EXAMPLE ILP-RELATED CAREED TITLES
Foundational Skills Necessary for Career-Ready Measure: (KOSSA/Industry Certification)	Chef/Cook Baker
Complete (3) THREE CREDITS from the following:	Entrepreneur Food Inspector
 200441 Foods & Nutrition 200411 Culinary Arts I 200412 Culinary Arts II <i>Choose (1) ONE CREDIT from the following:</i> 	Butcher
 200113 FACS Essentials <u>AND/OR</u> 200161 FACS Essentials Health* 200442 Advanced Foods & Nutrition** 200478 Internship: Culinary Arts 200409 Co-op: Culinary Arts 	
Note: (*) Indicates half-credit (.5) course Note: (**) Indicates course can be half-credit (.5) <u>OR</u> a full (1) credit course	

FAMILY AND CONSUMER SCIENCES CAREER PATHWAYS 2015-2016

EARLY CHILDHOOD EDUCATION CIP Code 13.1210.00

PATHWAY DESCRIPTION: The Early Childhood Education pathway will address a skill set necessary for success in early childhood education so that individuals can teach students ranging in age from infancy through eight years (grade three), depending on the school system or state regulations. This pathway is targeted for individuals preparing for careers related to early childhood education, such as those associated with child care, teaching, community-based children's programs, social services or counseling for children, and after-school programs.

BEST PRACTICE CORE	EXAMPLE ILP-RELATED CAREER TITLES
Foundational Skills Necessary for Career-Ready Measure: (KOSSA/Industry Certification)	Early Childhood Educator
	Psychologist
Complete (3) THREE CREDITS:	Nanny
R 200223 Early Lifespan Development**	Pediatrician
S 200261 Child Development Services I	Midwife
T 200262 Child Development Services II	
Choose (1) ONE CREDIT	
U 200113 FACS Essentials AND/OR	
200161 FACS Essentials Health*	
V 331020 Principles of Teaching	
W 200171 Relationships**	
X 200173 Parenting**	
Y 200210 Co-op: Early Childhood Education	
Note: (*) Indicates half-credit (.5) course	
Note:(**) Indicates course can be half-credit (.5) <u>OR</u> a full Y.5. credit course	

FAMILY AND CONSUMER SCIENCES CAREERPATHWAYS 2015-2016

FASHION & INTERIOR DESIGN CIP Code 50.0407.00

PATHWAY DESCRIPTION: The Fashion and Interior Design pathway will address a skill set necessary for success in the fashion industry as well as a career in the residential housing and furnishings industry. This pathway targets individuals who are interested in pursuing careers in the following areas: retail and wholesale buying, apparel and textile development and production, fashion and textile design, and visual merchandising as well as public and private sector housing programs, residential property and facility management, real estate, retail home furnishings, or home decorating and staging.

		EXAMPLE
BEST	PRACTICE CORE	ILP-RELATED
		CAREER TITLES
Found	lational Skills Necessary for Career-Ready Measure:	Fashion Designer
(KOSS	SA/Industry Certification)	Interior Designer
Complete (3) THREE CREDITS from the following:		Fashion Retailer
T		Clothing Manufacturer
ï	200113 FACS Essentials	Furniture Designer
ï	200821 Fashion and Interior Design I	
ï	200825 Fashion and Interior Design II	
Choos	te (1) ONE CREDIT from the following:	
ï	201010 Money Skills <u>OR</u>	
	201011 Money Skills for Math	
ï	200801 Internship: Fashion & Interior Design	
ï	200810 Co-op: Fashion & Interior Design	
	Note: (*) Indicates half-credit (.5) course	
	Note: (**) Indicates course can be half-credit (.5) <u>OR</u> a full(1) credit course	

FAMILY AND CONSUMER SCIENCES CAREER PATHWAYS 2015-2016

FOOD SCIENCE & DIETETICS CIP Code 51.3199.00

PATHWAY DESCRIPTION: The Food Science & Dietetics pathway addresses competencies and a skill set necessary for success as a pre-professional in a career with a substantial focus on food science. It will facilitate employment in early career ladder positions and promote continuing education at the post-secondary level in career areas involving: food science, food safety, food quality, food technology, or food preservation and packaging.

BEST	PRACTICE CORE	EXAMPLE ILP-RELATED CAREER TITLES
Found	ational Skills Necessarv for Career-Ready Measure:	Dietitian
(KOSS	A/Industry Certification)	Food Scientist
Complete (2) THEFE CEEDITS from the following	Flavor Chemist	
Compi	ele (3) THREE CREDH'S from the following.	Food Engineer
ï ï	200441 Foods & Nutrition 200442 Advanced Foods & Nutrition**	Food Safety Inspector
ï	200415 Nutritional Food Science	
I	200414 Fundamentals of Dietetics	
Choos	e (1) ONE CREDIT from the following:	
ï	200113 FACS Essentials AND/OR	
	200161 FACS Essentials Health*	
ï	010702 Food Science & Technology	
ï	304526 AP Chemistry <u>OR</u>	
	302646 AP Biology	
	Note: (*) Indicates half-credit (.5) course	
	Note: (**) Indicates course can be half-credit (.5) <u>OR</u> a full(1) credit course	

FAMILY AND CONSUMER SCIENCES CAREERPATHWAYS 2015-2016

FUNDAMENTALS OF TEACHING CIP Code 13.1308.00

PATHWAY DESCRIPTION: The Fundamentals of Teaching pathway will facilitate employment in early career ladder positions and promote continuing education at the postsecondary level preparing for careers associated with education and training in public and private school programs, elementary, middle, and secondary schools, after-school programs; higher education, non-profit, and corporate settings.

		EXAMPLE
BEST	PRACTICE CORE	ILP-RELATED CAREER
		Teacher all levels and
Found	lational Skills Necessary for Career-Ready Measure:	areas
(KOSS	SA/Industry Certification)	areas
		Teacher Assistant
Сотр	lete (3) THREE CREDITS from the following:	Principal
ï	200223 Early Lifespan Development**	Superintendent
ï	200226 Middle to Late Lifespan Development**	School Counselor
ï	331020 Principles of Teaching	
Choos	se (1) ONE CREDIT from the following:	
ï	200199 Leadership Dynamics**	
ï	200113 FACS Essentials	
ï	200171 Relationships**	
	Note: (**) Indicates course can be half-credit (.5)	
	OR a full (1) credit course	

FAMILY AND CONSUMER SCIENCES CAREERPATHWAYS 2015-2016

HOSPITALITY SERVICES CIP Code 52.0905.00

PATHWAY DESCRIPTION: The Hospitality Services pathway prepares individuals to plan, manage, and market restaurants, food services in hospitality establishments, food service chains and franchise networks, and restaurant supply operations. Includes instruction in hospitality administration, food services management, wholesale logistics and distribution, franchise operations, business networking, personnel management, culinary arts, business planning and capitalization, food industry operations, marketing and retailing, business law and regulations, finance, and professional standards and ethics.

BEST PRACTICE CORE	EXAMPLE ILP-RELATED CAREER TITLES
Foundational Skills Necessary for Career-Ready Measure:	Restaurant/Hote
(KOSSA/Industry Certification)	Event Planner
Complete (3) THREE CREDITS:	Travel Agent
 i 200442 Advanced Foods & Nutrition** i 200610 Principles of Hospitality 	Caterer
i 200641 Specialized Services in Hospitality	Concierge
i 200113 FACS Essentials Choose (1) ONE CREDIT:	
ï 200441 Foods & Nutrition	
i 080716 Principles of Marketing	
ï 200601 Internship: Hospitality Services	
i 200690 Co-op: Hospitality Services	
Note: (**) Indicates course can be half-credit (.5) OR a full (1) credit course	



The following guidelines will be in place for online dual credit course options:

- Courses that are taken as dual credit count toward elective credit. Core graduation courses cannot be taken as online dual credit courses.
- Students are eligible for the Kentucky Dual Credit Scholarship during the junior and senior years. Students can take up to 2 courses total during their high school career that are paid for by the state. Any student who pursues a course beyond the allowable scholarship limit will be required to pay the high school dual credit course fee directly to the university. (The course fee has typically been between \$52-62/credit hour.)
- Some courses may require additional fees to cover books and materials. This would not be covered by the Dual Credit Scholarship or the high school unless a student is on free/reduced lunch.
- Eligible online dual credit courses will be presented to students when they become available from the universities. When students schedule for the upcoming school year, they will enter a placeholder course to indicate that they are interested in an online dual-credit option. Student will finalize their choices when the courses are available with their courselor.
- Students are permitted to take an online course after school hours in addition to their current 6 or 7 period school day.
- Students are permitted to take an online course as one period of the student's school day. Students are still required to take 5 Highlands High School courses on campus; the additional course will be completed at home or in the school library after 5th period.
- Students who take an online course as one of the scheduled HHS periods are REQUIRED to enroll in a dual credit course during fall and spring semesters.

OFF-CAMPUS COURSES

High school students also may be permitted to take college/dual credit courses off-campus that count as secondary school credit, provided the following conditions have been fulfilled:

- 1. In order to be eligible to take an off-campus course, students must be making normal progress toward graduation and maintain at least a 3.0 grade point average.
- 2. Students may only take elective courses not offered by the District. No required courses may be taken off campus.
- 3. A written request for permission and a signed release from the parent or guardian of a high school student and written documentation of course enrollment from the college or university must be provided to the high school Principal or school designee each semester. Students must agree to enroll in a three (3) credit hour course both semesters.
- 4. Each three-hour college course completed will equal 1 unit of high school credit.
- 5. The parent or guardian must provide information as to how the student will be transported to and from the college or university.
- 6. The course taken at a college must be at a time that coincides with the last period at the high school; i. e., the student may leave early (for one period), but will not be permitted to arrive late or come and go within the school day.
- 7. Transportation, college tuition, and other associated costs are the responsibility of the parent/guardian. Students are permitted to use the KDE Dual Credit Scholarship to defray costs of tuition, if the student is eligible.

TRANSFERABILITY

As stated in <u>Dual Credit 101: A Guide for Parents, Counselors and Students</u>, published by the Kentucky Department of Education:

The Kentucky Statewide General Education Transfer Policy assists with transfer of general education credit among the Kentucky Community and Technical College System (KCTCS) and the eight participating public universities in Kentucky. These eight participating universities include: Eastern Kentucky University, Kentucky State University, Morehead State University, Murray State University, Northern Kentucky University, University of Kentucky, University of Louisville and Western Kentucky University. This policy eases the processes of transferring general education college credit between the schools. Private and for-profit colleges may have different transfer policies. Students considering attendance out of state or in a private or for-profit college will want to research transferring of general education college will want to research transferring attendance out of state or in a sist with the specific institution of interest. Additionally, a website has been established to assist with credit. Visit KnowHow2transfer.org. to see how courses transfer, plan a degree, etc.

Highlands Dual Credit Application Process

Students who are interested in taking a dual credit class must complete a Highlands Dual Credit application process first.

STEP 1: Students will be given a dual credit application website to indicate to HHS that they are interested in taking a dual credit course.

STEP 2: After students have completed the application, an email will be sent home with an agreement that must be completed by the student's parents.

STEP 3: Students will be notified of their acceptance into the courses of their choice.

Northern Kentucky University

Northern Kentucky University Admission Requirements (School Based Scholars):

- Have completed their Sophomore year of high school.
- Have a cumulative GPA of **3.0 or higher**.
- Have a composite ACT score of **20** or higher. If a student does not have an ACT Score, they may submit an SAT score. If a student has no ACT or SAT scores, they may be admitted with their GPA and a letter of recommendation; however, eligible courses will be limited.
- Meet any pre-requisites for individual courses. English, Math, and Sciences typically require specific ACT subscores.
- Once in the program, students must **earn a grade of C or better** in each dual-enrollment class to take courses in any subsequent semesters.
- 2017-2018 SBS Tuition Rate (rate may change for the 2018-2019 year):
 - \$54/credit hour (\$162 for a 3-credit hour class)
 - This does not include the cost of textbooks, materials, or parking pass if needed.
- The final deadline to register for a NKU dual credit course is August 1. In order for NKU dual credit classes to be approved to run, a minimum of 15 students are required. Therefore, we encourage HHS students to make dual credit choices as a part of their initial scheduling process.
- Students who qualify for Free and Reduced lunch should contact the counselor regarding additional college textbook and materials fees.

NKU Online Courses

Online NKU courses will be offered. Fall semester course offerings are typically available in March and Spring semester offering are available in November prior to the semester. When the schedule is available, HHS will advertise available options via Schoology and interested students are responsible for applying through the HHS Dual Credit application process and then following any other NKU application procedures.

NKU has the right to change the schedule at any time. Some online classes are reserved for only School Based Scholars students and others are open to any NKU student. Students who take online courses are solely responsible for the content and completion of the work. HHS personnel do not have access to assignments and grading; all communication regarding the course should be directed to the course professor.

NKU HHS In-Class Dual Credit Courses
The courses list below are connected. This means that if the student selects the course for the fall semester then they must take the connected course for spring semester. These courses are offered at Highlands High School and are taught by a college credentialed HHS teacher or visiting college professor.

Fall Semester	Course Title	Spring Semester	Course Title
BIO 208 (3 credits)	Human Anatomy & Physiology	BIO 209 (3 credits)	Human Anatomy &
BIO 208L (1 credit)	I	BIO 209L (1 credit)	Physiology II
	Teacher: Mrs. Jean Becker	, Highlands High School	
KIN 200 (2 credits)	Concepts of Lifetime Fitness	KIN 260 (3 credits)	Intro. to Strength &
ATP 101 (1 credits)	-		Conditioning
L	Teacher: NKL	J Professor	
CMST 101 (3 credits)	Public Speaking	POP 205 (3 credits)	Intro. to Popular Culture
	Teacher: Mrs. Kym Grillot	, Highlands High School	
Highlands Non-Dual	HHS Astronomy	GLY 110 (3 credits)	Faces of the Earth
Credit Course		GLY 110L (1 credit)	
	Teacher: Mr. Tim Auch, I	Highlands High School	
ENTP 201 (3 credits)	Entrepreneurial Mindset	ENTP 202 (3 credits)	Opportunity Recognition
	Teacher: Mrs. Elise Carter	, Highlands High School	
Highlands Non-Dual	Fundamentals of	EGT 212 (3 credits)	Computer-aided Drafting
Credit Course	Engineering Design I		and Design
	(CAD I)		
	Teacher: Mr. Ron Rosel, 1	Highlands High School	
MUSM 111 (3 credits)	Music Theory I	MUSM 112 (3 credits)	Music Theory II
	This will be offered in during t	the 2019-2020 school year.	
Highlands Non-Dual	HHS Music Appreciation and	MUSM 100 (3 credits)	Music Appreciation
Credit Course	Music Effects		**
	Teacher: Mr. Jacob Young	. Highlands High School	

Continued on the next page.

NKU/KDE Teaching and Learning Pathway

To complete the Teaching and Learning Career Pathway, students must complete three (3) required courses plus one (1) selected course, and receive a qualifying score on one (1) of the three (3) assessment options determined by NKU and/or Highlands HS. The tables below provide the required courses.

Students must complete the following three (3) required Teaching and Learning Career Pathway courses:

Learning Communities	Learner Centered Classroom			
Students develop an understanding of the various responsibilities and systems involved in the K-12 educational system. Specifically, students acquire the knowledge of education through the perspectives of classroom, school, district, state, and federal roles.	Students develop rising educators' awareness of their funds of knowledge, as well as their personal biases that develop from their life experiences. Using research- based methods, students develop methods to impact student equity based on culturally competent models as well as growth mindset method.			
The Professional Educator				
Students will develop an understanding of how educators advance their profession within the classroom. Specifically, students will gain both the knowledge and skills to plan, deliver, and reflect on the process of teaching and learning.				

Students select one (1) additional Teaching and Learning Career Pathway Course from the following options:

Collaborative Clinical Experience

Students refine the required knowledge and skills to be an effective educator while also practicing the dispositions necessary for the educational profession. Specifically, students will gain an understanding of how teachers lead through individual and collaborative growth and reflection.

Principles of Career and Technical Education

Provides a general overview of career and technical education including program areas, components, philosophy and current trends and issues. Students examine a variety of topics including: history of CTE, work based learning, career and technical student organizations, advisory councils, professional organizations as well as the influence of legislation on CTE.

AP or Dual Credit

Students may complete an Advanced Placement or Dual Credit course in intended teaching discipline

Dual Credit Course Pathway Course Sequence

Fall Semester	Course Title	Spring Semester	Course Title
EDU 104 (1 credit)	Orientation to Education Programs/Professions	EDU 300 (3 credits)	Human Growth & Development
EDU 305 (2 credits)	Introduction to Education		Online
The Learning Community		The Learner-Centered Classroom	
These courses will be offered during the 2016		18-2019 school year and subsequent years.	
EDU 316 (3 credits)	Racism and Sexism in Educational Institutions	EDU ??? (3 credits)	Education Capstone
		In development	
	Online		
Local/regional culture		The Professional Educator	
Identifying equity			
Cultural competence			
These courses will be offered during the 2019-2020 school year and subsequent years.			

The purpose of the NKU Teaching and Learning Career Pathway is to empower students with the knowledge, dispositions, and skills to be effective educators in a variety of disciplines and grade levels. Cooperative experience, internships, shadowing and mentoring opportunities provide depth and breadth of learning in the instructional program, and allow students to directly apply concepts learned in the classroom. The hybrid teaching approach (on-site and online) will enable the Teacher Education Scholars, Fort Thomas Independent School teachers, and NKU faculty to provide opportunities for hands-on teaching experience, sustain an interest in the profession, and help cultivate skills and dispositions to be successful educators.

Students can enroll in these classes as a junior or senior. Senior students will not be able to complete the KDE Pathway, but will earn 6 dual-credit course credits and a better understanding of basic of teacher education. Junior students will be able to complete the KDE pathway, earn 12 dual-credit course credits, and will earn the distinction of a Teacher Education Scholar.

Thomas More College

Fall Semester	Course Title	Spring Semester	Course Title
Highlands Non-Dual Credit Course	HHS Intro. to Education	EDU 101 (3 credits)	Intro. to Education
Teacher: Dr. Karen Cheser, Mr. Bill Bradford, Mrs. Jamee Flaherty, Highlands High School			

Thomas More College Admission Requirements (Gemini Dual Credit Program):

The Gemini Dual Credit Program is open to junior or senior high school students who:

- Have submitted a High School Transcript showing the student has completed 2 units of English, 2 units of Science, 2 units of Mathematics and 2 units in Social Studies.
- Have an overall GPA of 3.5 or better in the above units.

Students not meeting the above requirements may be admitted to the program with the joint approval of the Vice President for Academic Affairs at Thomas More College (or designee) and the student's guidance counselor.

Once enrolled in the Gemini program, to register for subsequent semesters a student must maintain a cumulative GPA of 2.0 in Thomas More courses. This requirement is set up to assist students in meeting the goal of successfully earning college credit at the high school level.

The courses for the current school year are offered at the discounted rate of \$53 per credit hour for in-state students and \$200 per course for out of state students. This fee is payable upon registration. Parking pass, printing, and student IDs are included but books are not.

Western Kentucky University

Fall Semester	Course Title	Spring Semester	Course Title
Highlands Non-Dual	Intro. to Theatre	THEA 151 (3 credits)	Theatre Appreciation
Credit Course			
Highlands Non-Dual	Acting I	THEA 101 (3 credits)	Acting I
Credit Course			
Highlands Non-Dual	Foundations of Technical	PERF 121 (1 credit)	Rehearsal & Production
Credit Course	Theatre		II
		PERF 220 (1 credit)	Rehearsal & Production
			III
Teacher: Mr. Jason Burgess, Highlands High School			

Western Kentucky University Dual Credit Program

WKU Dual Credit offers qualified high school students the opportunity to earn university credit as part of their high school curriculum. We provide high school students with a bridge to college at a fraction of the tuition cost.

Tuition for a college course taken through WKU Dual Credit is \$159* (\$53 per credit hour). This is a substantial savings, considering that in-state tuition at WKU is typically \$1,143 per course.



ENGLISH

ENGLISH

230107 - English 1

Credit: 1 Grade Scale: Regular Scale – 4.0 Prerequisite: English 8, Teacher and counselor recommendation Comments: In order to pass the course, the student must complete acceptable pieces in the following categories: cause/effect essay, character analysis, literary analysis, and an annotated bibliography.

Description

This is a survey and introduction to the genres of literature-short story, drama, novel, poetry, essay, and nonfiction. Students will read at least three longer works (2 novels and 1 play). Grammar will be taught through drills and through writing. Writing assignments will include a cause/effect essay, character analysis, literary analysis, and researched annotated bibliography. Attention will also be given to reading and writing in the real world with a focus on practical/workplace, informative, and literary texts. The acquisition and development of study and vocabulary skills are emphasized.

Course standards

Student will:

- Develop reading skills applicable to all literary genres (literary, informational, persuasive, and practical/workplace
- Read a variety of literary genres -short story, drama, novel, poetry, and nonfiction
- Continue to develop writing skills by exploring a variety of writing forms
- Read and analyze various forms of informational writing
- Demonstrate knowledge of writing process to produce literary and informational and argumentative pieces
- Use the research process to create a focused thesis, to prepare an outline, to use release technology, and the write a document essay
- Use related and relevant available technology
- Continue to develop speaking, listening and observing skills
- Read and analyze a minimum of four longer works (e.g., novels plays)
- Receive skill development in grammar and the mechanics of writing.

230108 - English I Advanced

Credit: 1 Grade Scale: Advanced Scale - 4.5

Prerequisites: English 8, Teacher and counselor recommendation

Comments: In order to pass the course, the student must complete acceptable pieces in following categories: personal narrative, cause/ effect essay, position paper, literary analysis, and an annotated bibliography.

Description

This course is an in-depth study of literary genres. Literary reading will include a minimum of four longer works, several poems, a work of Shakespeare, and several short stories. There will be an intense focus on literary elements and literary analysis. Writing assignments include but are not limited to poetry, cause-effect essay, literary analysis, and an informative speech: all done with emphasis on the complete writing process. Formal oral presentations will be required. Active discussion skills and thinking beyond the literal are expected. Students begin to refine grammar, usage, and vocabulary skills. Grammar will be taught through drills and through writing.

Course standards

- Develop an appreciation for different genres of literature through class reading and discussions
- Enhance writing skills by learning to create researched essays, poems, creative stories, and personal narratives
- Continue to grow and develop their personal vocabulary skills
- Cultivate critical thinking and analyzing skills through class discussions and responses to open-ended questions
- Improve and build on grammar skills and apply them to their own written works
- Prepare and present class assignments orally
- Create and appropriate voice based upon genre of written and audience
- Read and analyze longer works (e.g., novels, plays)
- Receive skill development in grammar and the mechanics of writing.

Credit: 1 Grade Scale: Regular Scale - 4.0

Prerequisites: English 1, Teacher and counselor recommendation

Comments: In order to pass the course, the student must complete acceptable pieces in the following categories: the Literary Analysis Essay and the Argumentative Research Essay.

Description

In this course, students will read various literary works and examine several authors to understand and master literary tools and conventions. Students will read novels inside and outside of class while receiving direct instruction as well as practicing self-driven inquiry. Along with continued vocabulary instruction to develop and acquire new vocabulary skills in context, grammar and writing strategies will be emphasized as students create a variety of written, spoken, and visual products. Attention will also be given to reading and writing in the real world with a focus on persuasive and literary texts. With each unit, students can expect to complete work for appropriate ACT prep, EOC prep, grammar skills, and writing skills. We believe in all students at all levels having access to appropriate, challenging, and engaging literature that reflects on the human experience. As students read multiple author voices, the course will facilitate each student's discovery of their own voice as an expository, persuasive and narrative writer.

Course Standards

Students will:

- Read and analyze a variety of materials including workplace/informational, classic and contemporary persuasive pieces
- Respond critically to and analyze a variety of literary genres through in-class discussion and activities
- Understand vocabulary in the context of readings
- Demonstrate organizational skills through writing and note taking
- Complete research and publish results
- Present and demonstrate informational with the use of technology
- Read and analyze longer works (e.g., novels, plays)
- Receive skill development in grammar and the mechanics of writing.

230170 - AP Seminar/English II

Credit: 1 Grade Scale: AP Scale – 5.0 Prerequisites: English I, Teacher and counselor recommendation

Description

This course fulfills the requirements of English II. Part of the AP Capstone Program, this course is a foundational course for both AP Language and Composition and AP Literature and Composition. The course provides students with opportunities to think critically and creatively, research, explore, pose solutions, develop arguments, collaborate, and communicate using various media. Students explore the complexities of real-world topics and themes through cross curricular conversations. Students consider multiple points of view to develop deep understanding of complex issues as they make connections between these issues and their own lives, ultimately building understanding, sensitivity, and respect in an ever-changing, complex, and culturally diverse world. In order to pass this course, the student must complete acceptable writing pieces in the 3 rhetorical modes including to narrate, to inform, and to argue. ACT preparation for English and Reading Subsections will be part of the curriculum. Students will take the state-required end of course exam which will be calculated into the final grade as well, students will complete two extensive research investigations and presentation as part of the AP requirement. Finally, students will be required to sit for an AP end-of-course exam given in the spring.

Course Standards

- Develop the habits of creative and critical thinking to build understanding and respect for multiple perspectives in a world of constant change
- Integrate knowledge and the application of skills in cross-curricular contexts and in new situations
- Employ rigorous, college-level, disciplinary thinking and understanding
- Synthesize knowledge, skills, and capacities to address personal goals and passions
- Use technology and media to communicate for a variety of audiences and purposes appropriate to the task
- Read and analyze a minimum of three works
- Write for a variety of purposes
- Read primarily nonfiction
- Produce expository, analytical, and argumentative compositions that are developed with research and effective commentary when appropriate
- Write under time constraints
- Gain a deeper understanding of the research process

• Develop his or her own research question to pursue and present.

230113 - English III

Credit: 1 Grade Scale: Regular Scale - 4.0

Prerequisites: English II, Teacher and counselor recommendation

Comments: In order to pass the course, the student must complete acceptable pieces in the following categories: Definition essay, literary analysis, Argument and Multimedia Presentation.

Description

This course is an in-depth study of literary genres. Literary reading will include a minimum of four longer works, several poems, a work of Shakespeare, and several short stories. There will be an intense focus on literary elements and literary analysis. Writing assignments include but are not limited to poetry, cause-effect essay, literary analysis, and an informative speech: all done with emphasis on the complete writing process. Formal oral presentations will be required. Active discussion skills and thinking beyond the literal are expected. Students begin to refine grammar, usage, and vocabulary skills. Grammar will be taught through drills and through writing.

Course Standards

Students will:

- Develop reading skills applicable to all genres and types of reading (literary, informational, persuasive, and practical/workplace)
- Read and analyze a variety of literary genres- short story, poetry, novel, drama, and non-fiction
- Continue to develop writing skills by examining various writing forms
- Read and analyze various forms of text
- Use appropriate technology
- Continue to develop speaking, listening, and observing skills
- Read and analyze a minimum of three longer works (e.g., novels, plays)
- Demonstrate effective and appropriate use of grammar conventions.

230166 – Junior AP English Language and Composition

Credit: 1 Grade Scale: AP Scale - 5.0

Prerequisites: English II or AP Seminar

Comments: Fulfills the junior English requirement. The composition requirements include a personal essay, an argumentative writing, synthesis and research essay, rhetorical analysis, and a multimedia presentation. Students must sit for the AP English Language and Composition exam. Grade(s): 11 only

Description

This course engages students in becoming skilled readers of prose written in a variety of periods, disciplines, and rhetorical contexts and in becoming skilled writers who compose for a variety of purposes and audiences. Both their writing and their reading should make students aware of the interactions among a writer's purpose, audience expectations, and subjects as well as how the generic conventions and the resources of language contribute to effectiveness in writing. Much of the class discussion will focus on the author's technique, meaning, and expression of philosophical ideas and the relationship of texts to historical and cultural contexts. Students should expect this course to be similar to an introductory college writing course that focuses on exposition, argument, and literary analysis.

Course Standards

- Analyze and interpret samples of good writing, identifying and explaining an author's use of rhetorical strategies and techniques
- Apply effective strategies and techniques in their own writing
- Create and sustain arguments based on readings, research, and/or personal experience
- Demonstrate understanding and mastery of standard written English as well as stylistic maturity in their own writings
- Write for a variety of purposes
- Produce expository, analytical, and argumentative compositions that introduce a complex central idea and develop it with appropriate evidence drawn from primary and/or secondary source material, cogent explanations, and clear transitions
- Demonstrate understanding of the conventions of citing primary and secondary source material.
- Move effectively through the stages of the writing process, with careful attention to inquiry and research, drafting, revising, editing, and review
- Write thoughtfully about their own process of composition
- Revise a work to make it suitable for a different audience
- Analyze image as text

- Evaluate and incorporate reference documents into researched papers
- Analyze the historical and cultural development of American literature with insight and clarity.
- Write under time constraints
- Read and analyze a minimum of four longer works (novels, plays) in addition to the required summer reading.

230195 – College & Career Readiness English Language Arts

Credit: 1 Grade Scale: Regular Scale - 4.0

Prerequisites: English III or AP Language, Teacher and counselor recommendation

Comment: Completion of at least an apprentice-level portfolio is a requirement for the class. Placement will be based on test scores as well.

Description

Through the use of various texts, students will learn reading strategies to improve their analysis, fluency, and comprehension skills. They will identify main ideas and details, draw conclusions, make generalizations, understand cause and effect and apply logical reasoning. They will engage in strategies that deal with usage/mechanics and rhetorical skills such as punctuation, grammar and usage, sentence structure, style, organization, and writing

230116 - English IV

Credit: 1 Grade Scale: Regular Scale – 4.0 Prerequisites: English III or AP Language, Teacher and counselor recommendation Comment: Completion of at least an apprentice-level portfolio is a requirement for the class.

Description

The course encompasses various uses of each of the five language arts (reading, writing, speaking, listening, and observing). A primary goal of the course is to prepare the student for the expectations and rigor or college reading, composition, and study. Various methods of seminar, writing/composition, workshopping, outside projects, interviewing, presentations, etc. will be used throughout the year. The year requires completion of a culminating course-long Capstone Project. This project will consist of both group and individual work on a topic of student choice as it relates to a larger global theme, which is selected by the teacher and will vary year to year. Differentiated opportunities will be provided to assist those not meeting College and Career Readiness benchmarks on Junior ACT.

Course Standards

Students will:

- Read, analyze, question, discuss and write about a variety of works from English literature with a critical and open point of view
- Evaluate and analyze the influence of literary concepts and elements within a piece of literature
- Compose a literary analysis, an argumentative essay, a research paper, and a college essay
- Write within, and interchangeably between, various rhetorical modes of narrative, informational, persuasive and entertainment writing
- Understand how grammar and punctuation have a rhetorical effect on writing
- Choose the appropriate words and voice for a particular situation
- Listen and observe with a critical and open ear and eye
- Speak with effective language, tone and voice
- Develop and enhance products using the appropriate technology

230166 - Senior AP Language and Composition

Credit: 1 Grade Scale: AP Scale - 5.0

Prerequisites: English III

Comments: Fulfills the senior English requirements. The composition requirements include a Post Graduate application essay, problem/ solution essay, argumentative essay, literary analysis, and technology enhanced presentation or culminating project. Students must sit for the AP English Language and Composition exam. Grade: 12 only

Description

This course engages students in becoming skilled readers of prose written in a variety of periods, disciplines, and rhetorical contexts and in the becoming skilled writers who compose for a variety of purposes and audiences. The emphasis is on reading and analyzing nonfiction texts. Students study the historical and cultural development of British literature with an emphasis on Contemporary literature. Both their writing and their reading should make students aware of the interactions among a writer's purpose, audience expectations, and subjects as well as how the generic conventions and the resources of language contribute to effectiveness in writing. Much of the class discussions will focus on the author's technique, meaning, and the expression of philosophical ideas. Students should

expect this course to be similar to an introductory college writing course that focuses on exposition, argument, and literary analysis.

Course Standards

Students will:

- Analyze and interpret samples of good writing, identifying and explaining an author's use of rhetorical strategies and techniques
- Apply effective strategies and techniques in their own writing
- Create and sustain arguments based on readings, research, and/or personal experience
- Demonstrate understanding and mastery of standard written English as well as stylistic maturity in their own writings
- Write for a variety of purposes
- Produce expository, analytical, and argumentative compositions that introduce a complex central idea and develop it with appropriate evidence drawn from primary and/or secondary source material, cogent explanations, and clear transitions
- Demonstrate understanding of the conversations of the citing primary and secondary source material
- Move effectively through the stages of the writing process, with careful attention to inquiry and research, drafting, revising, editing, and review
- Write thoughtfully about their own process of composition
- Revise a work to make it suitable for a different audience
- Analyze image as text
- Evaluate and incorporate reference documents into researched papers
- Analyze the historical and cultural development of British literature with insight and clarity
- Write under time constraints
- Read and analyze a minimum of two longer works (novels, plays).

230167 – AP English Literature and Composition

Credit: 1 Grade Scale: AP Scale - 5.0

Prerequisite: English III or AP Language and Composition, Teacher and counselor recommendation Comments: Fulfills requirement for English IV. Students <u>must</u> sit for the AP English Literature exam in the spring. Completion of at least a proficient level writing portfolio is required for course credit.

Description

According to The College Board, AP English Literature and Composition engages students in the careful reading and critical analysis of imaginative literature. Through the close reading of selected texts, students deepen their understanding of the ways writers use language to provide both meaning and pleasure for their readers. As they read, students consider a work's structure, style and themes, as well as such smaller-scale elements as the use of figurative language, imagery, symbolism and tone.

The description and expectations for this course will mirror the College Board's description, but broaden to include the practice of those techniques about which we study during the course. This course, though an intensive study of literature, is also founded on a study of composition and how those elements of composition create the literature which we study. Students are expected to take risks and mature, critically and creatively, beyond where they are at the beginning of the course. This requires both an open mind and a ready voice for participation. Participation is compulsory – there is no such thing as a passive education. We will regularly confer and discuss progress in the course, including development of participation skills, growth of writing (both "formal" and "informal"), and evolution of thinking and logic skills.

Course Standards

- Build upon and complement the reading done in previous English courses so that by the time students complete their AP course, they will have read, studied, and built an understanding (and hopefully appreciation for) works from several genres and periods from the 16th to the 21st century
- Read deliberately and thoroughly, taking time to understand a work's complexity, to absorb its richness of meaning, and to analyze how that meaning is embodied in literary form
- Develop a greater understanding for how an author creates meaning with a variety of literary techniques and devices and how they, too, might manipulate language by incorporating these different techniques and devices in their own writing
- In addition to considering a work's literary artistry, reflect on the social and historical values it reflects and embodies
- Demonstrate growth as a participant in a community of critical and creative readers and writers, learning to respond to, evaluate, and integrate not only the texts, but also the ideas developed and presented by their peers

- Understand and incorporate the various critical approaches (deconstructionist, psychoanalytical, feminist, new historicist, reader response etc.) and the relative theories into their own thinking, discussion, and writing within their critical community
- Pay careful attention to how both textual detail and historical context provides a foundation for interpretation, whatever critical perspectives are brought to bear on the literary work studied
- Write regularly, both creatively and analytically, to sharpen understanding of what writers have accomplished and deepen their appreciation of the art
- Speak, Listen and Observe in both formal and informal settings and developing the skills needed to participate in a learning community
- Employ (in both writing and discussion) a wide-ranging, succinct vocabulary used with denotative accuracy and connotative resourcefulness; a variety of effective sentence structures, including appropriate use of subordinate and coordinate constructions
- Compose using logical organization, enhanced by specific techniques of coherence such as repetition, transitions and emphasis; a balance of generalization with specific illustrative detail; and an effective use of rhetoric, including controlling tone, maintaining a consistent voice, and achieving emphasis through parallelism and antithesis
- Develop an understanding of how grammar and language create a rhetorical effect in what they read and manipulate each to create similar effects in their own writing.

ENGLISH ELECTIVES

Students may take the following courses as electives. (These do not count toward English credit for graduation.)

230511 - Creative Writing

Credit: 1 Grade Scale: Regular Scale – 4.0 Prerequisites: Teacher recommendation, approval of Creative Writing teacher Grade(s): 10, 11, 12

Description

Creative Writing is for students who enjoy writing and are willing to express themselves and their creative natures through writing projects. Students will explore various writing genres including, but not limited to, poetry, short stories, non-fiction and dramatic writing. Submission for publication and presentation to the class is mandatory. Students are required to keep daily journals. Students will design, construct, and contribute writing pieces to the Highlands literary magazine, *Blueprints*.

Course Standards

Students will:

- Write a selection of persuasive pieces including a personal narrative, a personal essay, or a memoir
- Write a selection of literary pieces including short stories, poems, scripts, guided imagery, children's stories, and mysteries
- Write a selection of transitive pieces including letters, editorials, essays, and feature articles
- Complete many prewriting activities to encourage writing
- Critique the author's word choice, style, content, and use of literary elements
- Make connections among literature, students' lives and real world issues
- Analyze and evaluate the use of persuasion within a passage.

230402- Creative Writing II

Credit: 1 Grade Scale: Regular Scale – 4.0 Grade(s): 10, 11, 12 Prerequisites: Creative Writing I, approval of creative writing teacher

Description

Creative Writing II is for students who enjoy writing and are willing to express themselves and their creative natures through writings and writing projects. Students will continue to explore various writing genres including, but not limited to, poetry, short story, non-fiction, and dramatic writing. Submission for publication and presentation to the class is mandatory as well as a large, independent project. Students will be required to keep daily journals. Finally, students will design, construct, and contribute writing pieces to the Highlands literary magazine, Blueprints.

Course Standards

Students Will:

• Write a selection of personal pieces, a selection of literary pieces, and persuasive pieces

- Manage a large independently organized and creative writing project requiring time management and initiative
- Complete numerous prewriting activities to encourage writing
- Critique other author's work and provide peer support
- Make connections among literature with students' lives and real world issues
- Analyze and evaluate persuasive media and writing

904010 - Study Skills

Credit: 1 Grade Scale: Regular Scale - 4.0

Description

This class is designed to help increase students' confidence in their ability to succeed by helping them learn strategies to become more responsible, self-reliant, organized and self-aware. May be taken for a second credit based on counselor recommendation.

Course Standards

Students Will:

- Develop a growth mindset and utilize "grit" strategies
- Develop success- building strategies utilizing The 7 Habits of Highly Effective Teens. This curriculum includes: goal setting, time management, concentration, note- taking skills, organizational skills, textbook study methods, test- taking strategies, decision- making strategies, effective communication strategies and critical-thinking skills.
- Successfully implement study skills habits into other classes
- Reflect on past study habits in order to make improvements

230171 - AP Research

Credit: 1 Grade Scale: AP Scale – 5.0 Grade(s): 11, 12

Prerequisites: Teacher recommendations, completion of AP Seminar with a passing grade. Students will also be required to have a mentor in their field of study by November 1st.

Comment: This course will fulfill the capstone course requirement associated with the AP Capstone Diploma as well as the Major of Intensive Study designation. It does not meet a core requirement.

Description

AP Research allows students to deeply explore an academic topic, problem, or issue of individual interest. Through this exploration, students design, plan, and conduct a yearlong mentored, research-based investigation to address a research question. In the AP Research course, students further their skills acquired in the AP Seminar course by understanding research methods; employing ethical research practices; and accessing, analyzing, and synthesizing information as they address a research question. The course culminates in an academic thesis paper of approximately 5,000 words and a presentation, performance, or exhibition with an oral defense. Students who enroll in AP Research must sit for the exam.

Course Standards:

- Introduces and contextualizes a research question
- Synthesizes information and perspectives related to the research question
- Explains and rationalizes the research method
- Analyzes and interprets the evidence
- Illustrates a cogent argument that uses a clear line of reasoning based on evidence
- Discuss and reflect on evidence and present implications and consequences
- Manage research process to create an academic thesis and paper of 5000 words
- Present publicly the research
- Create and performance, or exhibition
- Orally defend the research and presentation
- Choose an appropriate format or medium (e.g., multimedia presentation, performance, and exhibition).



HEALTH AND PHYSICAL EDUCATION

340133 - Health Education I

Credit: ½ Grade Scale: Regular Scale – 4.0 Grade: 9 Prerequisite: None

Description

The general focus of Health and Wellness revolves around a holistic approach involving the three components of health, social, physical, and emotional well-being. A broad knowledge base is established through class/ group discussion, group projects, guest speakers, role- playing, and a variety of teaching methods engaging all styles of learning.

Modern-day issues include: drug/alcohol, peer pressure situations, abstinence, teen pregnancy, STD's/ AIDS, family relationships, and the life cycle are several major areas of emphasis. Health is a graduation requirement and calculated into the G.P.A.

Course Standards

Students will:

- Demonstrate skills that promote individual well-being and healthy relationships
- Demonstrate knowledge and skills they need to remain physically healthy, while accepting responsibility for their well-being
- Develop strategies for becoming and remaining mentally and emotionally healthy
- Develop skills necessary to evaluate and use services available in the community.

340216 - Physical Education I

Credit: 1/2 Grade Scale: Regular Scale - 4.0

Grade: 9

Prerequisite: None

Comment: 9th Grade Physical Education is a great avenue to "exercise" physically and socially. Positive peer interaction is a necessary part of this course. The course is not designed to create an athlete, but rather to build a better understanding and appreciation for physical activity as an integral part of our total well-being. The importance of lifetime fitness is taught and stressed.

Description

Students will participate in a fitness based program designed to inform and expose them to principles of fitness that may improve their overall well-being. The fitness units will be 3 days a week and scored on a 4-point rubric. The remaining 2 days will be spent in activity based games that may enhance or feature the fitness concepts and scored on a 3-point system. Students will have a variety of choices in these activities. Students will have written assignments and a portfolio piece as well. The fitness components featured will be cardiovascular endurance, muscular strength/endurance and flexibility.

Course standards

- Understand the importance of positive peer interaction and the social implications
- Understand how to lose body fat safely and in a manner that can be achieved throughout their life
- Examine components of fitness and analyze how they relate to reduction of injuries as well as overall fitness and health
- Develop a fitness plan addressing two components of fitness and how they might Improve those areas
- Demonstrate some of the basic skills involved with the various sports
- Understand the benefits of exercise and make real life applications by understanding how various activities can help them achieve their fitness goals.

Prerequisite: none Grade: 9 Note: Meets Health/P.E. Requirement

Description

This Early Bird class will be a combination of Health and Physical Education. In Health a broad knowledge base will be established so students have the needed skills to make decisions about their physical, mental and emotional health throughout their lifespan. Modern issues such as drugs, STD's, teen pregnancy, and eating disorders will be studied, as well as, diseases such as cancer, heart disease and diabetes. Students will participate in a fitness based program designed to inform and expose them to principles of fitness that may improve their overall well-being with an emphasis on lifetime health. THIS CLASS FULFILLS THE GRADUATION REQUIREMENT FOR HEALTH & PHYS. ED.

Course Standards

Students will:

- Demonstrate skills that promote individual well-being and healthy relationships
- Develop strategies for becoming and remaining mentally and emotionally healthy
- Understand how their decisions impact their personal health
- Develop a fitness plan addressing different fitness components which they can measure
- Understand the importance of positive peer interaction and the social implications
- Examine the five fitness components and determine how each component affects their overall health
- Understand the benefits of exercise and make real life applications by understanding how various activities can help them achieve their fitness goals.

Contemporary Issues – Personal Finance, Adult Wellness, and Fitness for Life

Two Semester Course: 060170 – Financial Literacy (0.5 credit) & 340219 – Lifetime Fitness (0.5 credit) Credit: 1 Grade Scale: Regular Scale – 4.0 Prerequisite: None Grade: 12

Personal Finance Description:

Understanding and managing personal finances are keys to one's future financial success. This course will present essential knowledge and skills to make informed decisions about real world financial issues. The course content is designed to help the learner make wise spending, saving, and credit decisions and to make effective use of income personal financial success.

Literacy principles taught in this course include managing a Checking Account, Payroll Taxes, budgeting, Credit, Taxes, Employee Benefits, and Insurance. Decision-making, problem solving, goal setting and using technology are integrated throughout the content.

P.E. Description:

The general focus of Contemporary Issues revolves around the decision-making process and knowledge required to achieve an overall healthy lifestyle. A knowledge base will be established covering heart disease, sexually transmitted diseases, common cancers, nutrition, mental illnesses, and addictions. This will be achieved through class/group discussion, group projects, guest speakers, and variety of teaching methods engaging all styles of learning.

Modern-day issues include drug/alcohol, peer pressure situations, abstinence, teen pregnancy, S.T.D.'s/AIDS, family relationships, and the life cycle are several major areas of emphasis.

Course Standards

- Be able to evaluate and compare different depository institutions and the products/accounts they offer
- Understand and be able to demonstrate how to open, maintain and reconcile a checking account
- Evaluate the differences between debit and credit cards
- Understand various forms for credit and how to use them wisely
- Understand how to build good credit
- Understand how to read a credit report
- Understand terms and concepts related to budgeting.
- Understand the difference between simple and compounding interest
- Demonstrate skills that promote individual well-being and healthy relationships
- Demonstrate knowledge and skills they need to remain physically healthy, while accepting responsibility for their well-being.
- Develop strategies for becoming and remaining mentally and emotionally healthy

• Develop skills necessary to evaluate and use services available in the community

170301 –Essentials of Sports Medicine

Credit: 1 Grade Scale: Regular Scale – 4.0 Prerequisite: 9th Grade Physical Education Grade (s): 10-12

Description

This course is designed to include the basic concepts of anatomy, mechanism of injury, and administration of athletic training. Students should be able to demonstrate a basic mastery of how athletic injuries occur, how they are treated, and can be prevented. This course is designed to teach students components of exercise science and sports medicine including exploration of athletic training, medical terminology, anatomy, physiology, first aid, injury prevention, physical therapy (preventative and treatment of injuries), rehabilitation techniques, strength and conditioning principles, cardiovascular conditioning, fitness and training programs, sport nutrition, sport psychology and performance enhancement philosophies.

Course Standards

Students will:

- Know the principles of lifetime health
- Understand the basic anatomy and physiology of the human body
- Develop a working knowledge of basic first aid and the treatment of athletic injuries, diseases and conditions
- Understand the basic assessment procedures used by the athletic trainer
- Demonstrate knowledge of nutrition and weight control
- Gain knowledge of various drugs, drug abuse, and aids for athletic participation
- Understand life-threatening conditions and shock
- Understand the use of rehabilitation and reconditioning techniques
- Comprehend the use of therapeutic modalities in the care of athletic injuries
- Understand basic sport psychology
- Know and understand the functions of soft tissue and bones
- Describe the classification of joints, and explain the type of movements produced
- Explain common types of injuries at different areas of the body and how to prevent and treat.

DC170301- DC170302 KIN 200 NKU– Lifetime Fitness/KIN 260 NKU – Strength and Conditioning/ATP 101 NKU Athletic Training

Credit 1: (NKU Dual Credit-6hrs) Grade Scale: Regular Scale – 4.0 Prerequisite: GPA 3.0 or above, ACT score of 18 or PLAN score of 20 (if ACT has not been taken) Comment: This course may be taught in collaboration with NKU by NKU staff. Grade(s): 11 and 12

Description

Foundations of Exercise Science may be beneficial to students who are interested in careers in Physical Therapy, Athletic Training, Kinesiology, Coaching, Physical Education, Personal Training and Nursing. Students will receive 6 credit hours in ATP101, Kinesiology 200 and Kinesiology 260. Concepts will include health related problems associated with a sedentary society, benefits of regular exercise and individual psychomotor and psychological developmental patterns.

This course also provides theoretical knowledge and practical skills in exercise science, strength training and aerobic conditioning. Topics include guidelines for instructing safe, efficient and purposeful exercise, essentials of the client-trainer relationship, conducting health/fitness assessments and designing and implementing exercise programs. An understanding of Athletic Training and professional requirements are also a part of this class.

Course Standards

Students will:

- Understand the principals involved in the design and implementation of exercise programs
- Develop an ability to assess an individual's health risks and suggest appropriate responses
- Understand basic anatomy and functions of the cardiac, muscular and skeletal systems
- Explain and administer therapeutic modalities and rehabilitation techniques
- Apply injury prevention strategies.

The cost for the dual credit for this course is \$450 (\$225.00 per semester) and the student receives 6 hours of credit at NKU.

340220- Personal Fitness

Credit 1 Grade Scale: Regular Scale – 4.0 Prerequisite: Health/P.E. Comment: Activity based class

Description

This is an upper level Physical Education class that stresses physical conditioning. The class is based off of the basic principles learned in freshman Physical Education but is a high level activity class. The class consists of learning about and participating in an organized program of physical conditioning that includes development of flexibility, power, muscular strength, muscular endurance, speed and agility/mobility. This class is highly attractive and beneficial to individuals that are serious about improving body composition and overall health. The course includes the study of and participation in a safe and encompassing training regimen designed to improve the performance of body's skeletal muscles, energy systems and cardio respiratory systems as they work to sustain the necessary needs during a daily workout. This class is for the non-athlete (due to in season demands) or an athlete with coaches' permission to improve health and well-being with fitness and assess fitness. Students will have the opportunity and knowledge to reduce body fat percentage or increase if needed. Students will be able to help fight the obesity epidemic by education and application. This is an activity based class so we will be lifting or doing some type of fitness **daily** so please take this into account when signing up. Participation is 90% of the grade.

Course standards

Students will:

- Understand the essential elements of the safe conduct of a viable physical conditioning program.
- Know the muscle physiology, anatomy, bioenergetics, muscle, bone, cardio respiratory and endocrine responses to exercise.
- Learn the essential nutritional considerations. All of these concepts and class conditioning regiments will be related to exercise and training regiments for individuals interested in improving balance, body control, and body composition. A considerable emphasis will be placed on safe and effective exercise technique and participation in resistance and mobility training.
- Be exposed to testing and evaluation as it relates to flexibility, strength and conditioning activities.
- Be exposed and participate in and understand the benefits of new concepts in fitness such as muscle confusion (P90X), Ta Chai, Yoga, Pilates, Zumba, Band training and Kettlebells.

340299 - Physical Education Leader

Credit: 1 Grade Scale: Regular Scale - 4.0

Prerequisite: Student must have completed Sports Medicine class, complete application and have a recommendation from the PE/Health teacher. Student must have maintained an A/B average in 9th grade PE and Sports Medicine.

Grade: 11, 12

Description

This course places students in a position of functional authority, thereby gaining insight into problems of management while fulfilling their own personal needs for growth. This will include a supervisor's role which assists the teacher in all phases of management, monitoring work assignments, and assisting other students. Student will calculate and record target heart rates during cardiovascular unit and help with setting and instruction of heart rate monitors. Student will record and instruct on flexibility testing during flexibility unit. Student will monitor, instruct and help with weight room during strength training unit. As a part of each unit the student will present a short research based presentation on benefits and importance of each fitness component. Students who take this course will be required to do research on topics related to physical Education. This experience will validate their previous education in Physical Education and Sports Medicine by deepening their knowledge with their instruction of others and its application.

- Demonstrate leadership abilities by directing and assisting freshmen with personal exercise plans and day to day class operations
- Work with technology by setting, recording and instructing of heart rate monitors
- Develop interpersonal communication skills by instructing students in a variety of settings
- Develop a research project on the benefits of specific exercise programs
- Assess exercise programs based on their knowledge from this class and previous classes



HISTORY AND APPRECIATION OF THE VISUAL AND PERFORMING ARTS

VISUAL ART

500710 - Art I/Foundations in Art

Credit: 1 Grade Scale: Regular Scale – 4.0 Grades: 9, 10, 11, 12 Comments: This course fulfills the Humanities requirement.

Description

Full year of study designed to introduce students to basic 2-d and 3-d art. Emphasis will be on visual problem solving, understanding and appreciating art, and a general introduction to the fundamental concepts of art.

Course Standards

Students will:

- Be able to critically evaluate artwork
- Be able to create individual works or art using various media
- Be exposed to many historical and cultural techniques
- Gain an appreciation for various types of visual art
- Build creative problem solving skills
- Develop an ability to discuss works of art through critiques and self-assessments.

500712 - Art II

Credit 1 (This course may be repeated as Drawing II for a serious student who is not yet ready for AP Studio Art) Grade Scale: Regular Scale – 4.0

Prerequisite: Art I/Foundations in Art

Grades: 10, 11, 12

Comment: This course fulfills the Humanities requirement to AP Art History

Description

A full year of study dealing with 2D and 3D media. Students will work on developing proficiency in various techniques and materials as well as develop work based on their own personal vision.

Course Standards

Students will:

- Be exposed to various media and techniques
- Develop a sound awareness and appreciation for both 2d and 3d art
- Gain an understanding of various art movements and their respective artists
- Gain a main more advanced understanding of the principles of art
- Build creative problem solving skills
- Develop an ability to discuss works of art through critiques and self- assessment.

500212 - Ceramics

Credit: 1 (This course may be repeated for up to two credits) Grade Scale: Regular Scale – 4.0 Grades: 10, 11, 12 Prerequisite Foundations of Art

Description

This course is a full year study of three-dimensional art. The class concentrates on differentiated building techniques using a variety of clay. Proficiency and understanding of materials are essential as the emphasis will be on personal expression and development of an individual style. The class will allow students the opportunity to experiment with new ways of constructing both functional and non-functional works of art using ceramics. This course is considered a level two art course.

Course Standards

- Be exposed to various sculptural techniques
- Develop a sound awareness and appreciation for 3 dimensional art
- Gain an understanding of various art movements and their respective artist
- Gain a more advanced understanding of the principles of art and 3-d design

- Build creative problem solving skills
- Develop an ability to discuss works of art through critiques and self-assessments.

500611 – Visual Art - Photography

Credit: 1 Grade Scale: Regular Scale – 4.0 Prerequisite: Foundations in Art or Photojournalism

Description

This course is a full year study of the fundamentals of photography and design. Emphasis will be placed on the creation of a portfolio of work showing various abilities and a stretching of traditional photographic methodologies. Access to a quality camera is preferred.

Course Standards

Students will:

- Understand the fundamentals of photography and camera functions
- Express a theme or subject effectively using photography
- Develop a general understanding of Adobe Photoshop tools and techniques through digital editing
- Create and present to peers a photographic portfolio
- Increase their ability to discuss their work through individual/group critiques and personal writing
- Participate in various regional exhibits.

500614 – Visual Art – Photography II

Credit: 1 Grade Scale: Regular Scale – 4.0 Prerequisite: Digital Photography Design I

Description

This is a second level photography course for students wishing to further develop their photography and digital design skills. Students in this course should expect a combination of both in and out of class assignments that will build on their existing design skills and challenge them to become creative problem solvers. Emphasis will be placed on the creation of a portfolio of work demonstrating various abilities and stretching beyond traditional photographic methodologies. Access to a quality camera is preferred.

Course Standards

Students will:

- Explore new techniques of photography and camera functions while mastering the fundamentals learned in the previous course
- Develop a sense of individuality in work
- Strengthen and explore new concepts in Adobe Photoshop tools and techniques through digital editing
- Create and present to peers a photographic portfolio
- Increase ability to discuss their work through individual/group critiques and personal writing
- Participate in various regional exhibits.

500714 - Art III

Credit: 1 Grade Scale: Regular Scale – 4.0 Prerequisite- Drawing/ Painting or Ceramics/ Sculpture

Description

This is a 3rd year Art Level/ Pre-AP course. This course is for those students wishing to further develop their ability in art. New techniques will be explored while old techniques will be rediscovered. Students in this course should expect a combination of both in and out of class assignments that will challenge them to become creative problem solvers.

Course standards

- Develop a sense of individuality in their work
- Focus less on working from sight and begin to use imaginative concepts that are rooted in the principles of art
- Begin to focus more on the creative process of art and less on the "final" product
- Begin to develop a portfolio for either/both AP art and college
- Increase their ability to discuss their work through individual/group critiques and personal writing
- Participate in various regional exhibits.

Credit: 1 Grade Scale: AP Scale - 5.0

Prerequisites: Foundations in Art, Drawing I, Independent Study and recommendation through application process. Ceramics I is required for 3-D Design Portfolio for ceramic media users. Comment: Application required Grade: 12

Description

The AP Studio Art portfolios are designed for students who are seriously interested in the practical experience of art. AP Studio Art is not based on a written exam; instead, students submit portfolios for evaluation in Drawing, 2-D Design or 3-D Design, which are mandatory. AP Studio Art sets a national standard for performance in the visual arts. The quality and breadth of work reflect first year college level standards. The major concerns of this course are the sense of quality in a student's work, breadth of experience, and the student's concentration and particular visual interest or problem.

Students will submit in their final portfolio five original works of their best quality and twelve concentration pieces and twelve breadth pieces in slide format for the Drawing and 2-D Design portfolio. The 3-D Design will submit no art except in slide format: ten for quality, twelve for concentration and sixteen for breadth section of the portfolio. This is a two-year course designed to get full advanced credit the test-taking year. A mandatory summer class is required both years of the application.

Course Standards

Students will:

- Communicate in their chosen media, in writing as well as orally to the point that personal feelings, thoughts and reactions are oriented to personal style
- Use a vocabulary to assess their own and each other's work in a critical manner
- Have a deeper understanding of the cultural impact of the historical movement and their respective artist and leaders
- Enter competitions and display art work at various venues.

500721 - AP Art History

Credit: 1 Grade Scale: AP Scale – 5.0 Prerequisite: Recommendation of art teacher Grade(s): 9, 10, 11, 12 Comment: Summer work required; AP exam required.

Description

The AP Art History course prepares students for the AP Art History exam. The course covers art from the Paleolithic period through post modernism and is designed to provide students with the same material that is covered in an introductory art course in art history. Students gain knowledge of architecture, sculpture, painting and other art forms within diverse historical and cultural contexts. Students examine and critically analyze major forms of artistic expression from the past and present and from variety of European and non-European cultures. In this course students engage in both visual and historical study about art and its context, considering patronage, gender, politics, religion and ethnicity. Attention is given to the interpretations of a work of art in a particular society. Throughout the study of AP Art History students examine how and why the work looks the way it does, what it means within a particular context, and how and why it has this meaning. Including art and architecture outside the European Tradition a possible approach is to use world religions and sacred spaces as one possibility for example, after we study Early Christianity, we address Islam as a religion, the sacred spaces of Islam, the Mosque and the decorative arts within the Islamic tradition. We learn about philosophies, religions and world views. Students are introduced to the ways art and architecture facilitates worship and expresses the values of the culture. This approach has provided us with an opportunity to look for common ground, because as through observation and reflection we gain understanding and began to see connections as well as differences.

Course Standards

- Have a deeper understanding of the cultural impact of the historical movements and their respective artist and leaders
- Show knowledge in their cultural heritage and be able to know and appreciate the diversity in others cultures
- Develop reading and vocabulary that would improve the skills of oral and written critical analysis
- Learn to analyze content from reading passages and be able to compare and contrast differing points of view
- Synthesize the interrelationship of the elements and principals of design in visual images
- Convey the knowledge of techniques, media and processes of major art forms
- Develop a sound awareness and appreciation for the visual arts.

DRAMA AND THEATRE

500511 - non-dual credit choice/DC500511 - dual credit choice - Introduction to Theatre/Theatre Appreciation (THEA 151 WKU) - Dual Credit eligible

Credit: 1 (dual credit - THEA151) Grade Scale: Regular Scale - 4.0 Prerequisite: An interest in the study for theatre

Comment: Dual credit offering with Western Kentucky University. This course fulfills the Humanities requirement.

Description

Students will study all aspects of theatre including: acting, directing, technical aspects, etc. Students will learn the basics of storytelling, the history of theatre, character development, improvisation, theatre jobs and much more! Participation and an opinion are a requirement. This class is great for non-actors and actors. It is designed to develop an understanding and appreciation of the art of theatre.

Course Standards

Student will:

- Learn fundamentals of the stage ٠
- Learn fundamentals of acting •
- Learn fundamentals of improvisation ٠
- Learn the history of theatre
- Perform monologues and scenes
- Read plays and analyze characters and plot •
- Learn about the importance of technical theatre
- Attend plays and critique them ٠
- Learn to write a short play or monologue.

500513 - non-dual credit choice/DC500513 - dual-credit choice - Acting I (THEA WKU) - Dual Credit

Credit: 1 (dual credit THEA101) Grade Scale: Regular Scale - 4.0 Prerequisite: Introduction to Theatre

Comment: Dual credit offering with Western Kentucky University.

Description

This course is designed to be performance-based and students will be in performance much of the year. This course is designed for students who wish to further their acting and directing skills. Focus will be on performance of monologues, scenes, reader's theatre, and one-act plays. Students who take this course should be comfortable performing for others. The intention is to develop fundamental performance and ensemble collaboration skills.

Course Standards

Students will:

- Perform monologues
- Read and analyze plays •
- Write monologues, scenes, or a 10-minute play ٠
- Develop skills in improvisation .
- Study the various styles of acting ٠
- Learn the basics of stage combat •
- Write play reviews •
- Develop voice and movement ٠
- Learn the basics of stage makeup .
- Analyze and develop characters ٠
- Work on the drama department's productions.

500512 - non-dual credit/500512/500514 – dual-credit choice - Foundations of Technical Theatre (PERF 121 WKU/PERF 220 WKU)

Credit: 1 (dual credit PERF121 & PERF220) Grade Scale: Regular Scale - 4.0 Prerequisite: None

Comment: Dual credit offering with Western Kentucky University. This course fulfills the Humanities requirement.

Description

Students will explore the technical aspects of live performance. Students will interpret technical drawing, as well as learn fundamental concepts of shop and theatre safety, construction techniques, and equipment set-up and operation. Students are expected to participate in class in such areas as building and designing. Topics to be covered include set construction, lighting set-up and operation, costume construction, and stage management. An experiential learning course designed to provide practical experience in all areas of theatrical production under actual production conditions. Students are required to gain 40 hours of productions on events that occur throughout the school year. Course may be repeated in grades 10-12 as Lighting Design, Sound Design, and/or Set Design.

Course Standards

Students will:

- Learn vocabulary of technical theatre
- Learn various jobs and responsibilities of technical theatre
- Learn and apply fundamentals of sound design, lighting design, scenic design, costume design and stage management
- Discover and use theatre and scene shop safety
- Be trained and operate machinery and tools
- Construct and work on a high school production.

500515 - Directing

Credit: 1 Grade Scale: Regular Scale – 4.0 Prerequisites: Intro to Theatre, Acting I Grade(s): 10, 11, 12

Description

This course is intended to provide students with the basic principles involved in directing for the stage, a foundation for artistic and conceptual analysis of a script, and the artistic exploration needed to bring that script to realization on the stage. Topics included are the elementary principles of directing, exercises in implementation of specific skills relevant to the exercise of that craft, text analysis and interpretation, goals and methods of collaboration, and interpretive/creative projects in which research and experimentation is stressed.

Course standards

Students will:

- Understand the various approaches to directing
- Learn the skill of managing large groups of people to accomplish a task
- Experience the staging of a production from conceptual phase to its completion
- Develop critical thinking skills and decision making compatibilities.

500516 - Playwriting

Credit: 1 Grade Scale: Regular Scale – 4.0 Prerequisites: Introduction to Theatre Grades: 10, 11, 12

Description

This course focuses on the skills necessary to create, and ultimately, write a play. The focus of the first semester is on the elements of drama and the intellectual and creative understanding of those concepts. Assignments will help spark creative impulses culminating in a scene reflecting those concepts at the end of the first semester. The second semester will focus on expanding those scenes into true plays. A workshop format will be used for student feedback and constructive criticism. Student plays will be read by actors and a public staging of student plays will take place at the end of the year.

Course Standards

Students will:

- Understand a playwright's use of conflict, character, dialogue, and structure
- Develop of sense of creativity
- Produce a series of written vignettes to understand concepts of playwriting
- Become comfortable with a workshop format of idea sharing
- Revise and edit plays for public and class readings.

500599- Theatre Assistant

Credit: 1 Grade Scale: Regular Scale – 4.0 Grade(s): 11, 12 Prerequisite: Participation in a Theatre Class and Instructor Approval

Description

This class is designed for a theatrically strong student who is involved in the theatre program and may have a desire to major in theatre in college.

Course Standards

Students will:

- Assist the theatre teacher/director with daily rehearsals and class by working with other students
- Help manage organizational aspects of the class
- Attend productions, events and meetings associated with the class/department
- Work on duties catered to the student's desires in the fields of technical direction, director or producer
- Observe daily practices of teacher and focus conversation and assignments based on different leadership styles and practices
- Help develop assessments and rubrics
- Complete self-reflections about personal growth and best practices.

500530 – Foundations of Technical Theatre II

Prerequisite: Foundations of Technical Theatre

Description

Students will deepen their exploration of the technical aspect of live performance by choosing a certain field in technical theatre to focus on their development. The fields of focus that are available are: Scenic Design, Light Design, Sound Design, Stage Management, Prop Design and Technical Direction. At the beginning of the school year, students will decide their specialized field with the guidance of the instructor. Students will then spend the entire year with specialized instruction in that field with separate tasks, projects and learning outcomes.

Course Standards

Students will:

- Learn a deeper vocabulary of their field in technical theatre
- Learn and apply intermediate and advanced concepts in that field
- Discover and use the safety protocols desired in that field
- Be trained and operate the machinery, instruments and software attached to the field
- Work and lead that field in the middle and high school productions of the year.

MUSIC

500929 - non-dual credit choice - DC500929 - dual-credit choice - AP Music Theory (MUS100)

Credit: 1 (dual credit) Grade Scale: AP Scale - 5.0

Prerequisites: Students must have a sincere desire to study and improve abilities in the field of music, a love of classical music literature, and a talent for performing music. Student must have a GPA of 3.0 or higher. Grade(s): 10, 11, 12

Comment: Application required. Students must sit for the AP Music Theory exam. Dual credit offering with Western Kentucky University. Meets Humanities requirement.

Description

A major component of any college music curriculum is a course introducing the first-year student to musicianship, theory, musical materials, and procedures. This course will integrate aspects of melody, harmony texture, rhythm, form, musical analysis, elementary composition, and style. Musicianship skills such as dictation and other listening skills, sight-singing, and keyboard harmony are considered an important part of this course.

Course Standards

- Develop aural (ear-training) skills through listening exercises
- Develop sight-signing through performance exercises
- Develop written skills through written exercises
- Develop compositional skills through creative exercises
- Develop analytical skills through analytical exercises.

500912 - non-dual credit choice – DC500929 – dual-credit choice - Music Appreciation

Credit: 1 (dual credit – MUS 120) Grade Scale: Regular Scale – 4.0 Prerequisites: None Comment: Dual credit offering with Western Kentucky University. This course fulfills the Humanities requirement.

Description

This course is designed to help the student critically listen to and develop an enjoyment of extraordinary music. The student will understand, recognize and hopefully delight in a wide variety of musical forms and formats. This is a survey of Western music from early to modern times. The course aims to widen the musical horizons and receptivities of the general student and to make them a more discriminating listener. Emphasis is placed on the ability to aurally identify a variety of musical styles and to describe the characteristics of each.

Course Standards

Students will:

- Demonstrate effective listening skills
- Identify and analyze music
- Think critically and creatively about philosophical issues and their relationship to the arts
- Understand the role of arts in civilization
- Develop an understanding of the individual's response to the arts
- Recognize the importance and broaden awareness of the artistic expression in the visual and performing arts
- Recognize the relationships between the various arts disciplines
- Make connections between contemporary music and music of previous musical style periods.

VOCAL MUSIC

500925 - Highlandaire Chorale

Credit: 1 (May be repeated for up to four credits) Grade Scale: Regular Scale – 4.0 Prerequisites: Audition and instructor approval

Grade (s): 9-12

Comment: This course fulfills the Humanities requirement.

Description

Highlanders Chorale is the entry-level choral ensemble at the high school. The ensemble will perform music from all major style periods and genres, including contemporary music. Special emphasis will be placed on the teaching of vocal technique, musical literacy and the performance of quality music. Students will also learn the function of music in society throughout history and how music relates to other disciplines. This ensemble will perform at least four formal concerts per academic year.

Course standards

Student will:

- Identify and describe the use of the musical elements as they pertain to the choral literature
- Sing with good intonation, breath support, and vocal production throughout the entire vocal range
- Sight-sing tonal melodies including all intervals to the octave using the solfege system with Kodaly handsignals
- Perform music of appropriate difficulty from each of the major style periods each academic year
- Perform music of appropriate difficulty from non-Western cultures each academic year
- Perform the assigned repertoire in the style in which it was intended
- Describe how music makes them feel and give reasons for their statements
- Describe their musical preferences and give reasons for their decisions
- Describe how music can elicit different emotions
- Describe how much music affects their daily life.

500927 - Chamber Choir

Credit: 1 (May be repeated for up to 3 credits) Grade Scale: Regular Scale – 4.0 Grade(s): 10, 11, 12 Prerequisites: Audition and instructor approval Comment: This course fulfills the Humanities requirement.

Description

Chamber Choir is a highly selective, auditioned choral ensemble that will perform music from all major style periods and genres. This ensemble will perform challenging, developmentally-appropriate music. Special emphasis will be

placed on the teaching of vocal technique, musical literacy and the performances of quality music. Students will also learn the function of music in society throughout history and how music relates to other disciplines. This ensemble will perform at least four formal concerts per academic year.

Course Standards

Students will:

- Identify and describe the use of the musical elements as they pertain to the choral literature
- Sing with good intonation, breath support, and vocal production throughout the entire vocal range
- Sight-sing tonal melodies including all intervals to the octave using the solfege system with Kodaly hand signals
- Perform advanced choral music from each of the major style periods each academic year
- Perform music of appropriate difficulty from a variety of cultures each academic year
- Perform the assignment repertoire in the style in which it was intended
- Describe how music makes them feel and give reasons for their statement
- Describe their musical performances and give reasons for their statements
- Describe how music can elicit different emotions
- Describe how music affects their daily life.

500926 - Bel Canto (Women's Choir)

Credit: 1 Grade Scale: Regular Scale – 4.0 Grade(s): 9-12 Prerequisites: Audition and instructor approval Comment: This course fulfills the Humanities requirement

Description

Bel Canto is a highly selective, auditioned choral ensemble for women's voices that will perform music from all major style periods and genres. This ensemble will perform challenging, developmentally-appropriate music. Special emphasis will be placed on the teaching of vocal technique, music literacy and the performance of quality music. Students will also learn the function of music in society throughout history and how music relates to other disciplines. This ensemble will perform at least four formal concerts per academic year.

Course Standards:

Students will:

- Identify and describe the use of the musical elements as they pertain to the choral literature
- Sing with good intonation, breath support, and vocal production throughout the entire vocal range
- Sight-sing tonal melodies including all intervals to the octave using the solfege system with Kodaly hand signals
- Perform music of appropriate difficulty from each of the major style periods each academic year
- Perform music of appropriate difficulty from a variety of cultures each academic year
- Perform the assigned repertoire in the style in which it was intended
- Describe how music makes them feel and give reasons for their statements
- Describe their musical preferences and give reasons for their decisions
- Describe how music can elicit different emotions
- Describe how music affects their daily life.

INSTRUMENTAL MUSIC

500919 - Symphonia

Credit: 1 (May be repeated for up to four credits) Grade Scale: Regular Scale - 4.0

Comment: Students do not have to perform in the marching band to participate in the band class. This course fulfills the Humanities requirement.

Description

Instrumental music is a course that explores the performing arts. The performing ensemble consists of string instruments (violin, viola, cello & bass). Emphasis is placed on the playing of notes and rhythms, musicality, and the understanding of the music. Students will gain a better appreciation for music by studying and performing various works.

Course Standards

Students will:

- Develop an appreciation for the basic elements of music and for the performing arts
- Gain an understanding of rhythmic values, note names, and basic musical interpretation of any work; this concept will be illustrated through scales, etudes, musical excerpts and compositions
- Develop a repertoire of musical terms and concepts that can be applied to any work
- Express creativity and expression through performing
- Increase awareness of listening with an ensemble
- Develop their abilities as a performer individually and within an ensemble
- Evaluate both individual and group performances using musical vocabulary and ideals of achievement.

500917 – Concert Band

Credit: 1 (May be repeated for up to four credits) Grade Scale: Regular Scale – 4.0 Comment: Students do not have to perform in the marching band to participate in the band class. This course fulfills the Humanities requirement.

Description

Instrumental music is a course that explores the performing arts. The performing ensemble consists of woodwind, brass, and percussive instrumentalists. Emphasis is placed on the playing of notes and rhythms, musicality, and the understanding of the music. Students will gain a better appreciation for music by studying and performing various works.

Course Standards

Students will:

- Develop an appreciation for the basic elements of music and for the performing arts
- Gain an understanding of rhythmic values, note names, and basic musical interpretation of any work; this concept will be illustrated through scales, etudes, musical excerpts and compositions
- Develop a repertoire of musical terms and concepts that can be applied to any work
- Express creativity and expression through performing
- Increase awareness of listening with an ensemble
- Develop their abilities as a performer individually and within an ensemble
- Evaluate both individual and group performances using musical vocabulary and ideals of achievement.

500921 - Percussion Ensemble

Credit: 1 (May be repeated up to four credits) Grade Scale: Regular Scale – 4.0 Comment: Students do not have to perform in the marching band to participate in the percussion ensemble class. This class is an extension of the concert band class. This course fulfills the Humanities requirement.

Description

Percussion ensemble is a course that explores the performing arts. This performing ensemble will consist of only percussive instrumentalists. Emphasis is placed on exploring all instruments in the percussion family, the playing of notes and rhythms, percussion technique, and the understanding of percussion literature. Students will gain a better appreciation for music by studying and performing various concert band works and percussion ensemble pieces. The percussion ensemble class will study the works being performed by the concert band, along with several percussion ensemble pieces. The ensemble will give various percussion ensemble concerts throughout the year and perform with the concert band on concerts.

Course Standards

- Develop an appreciation for the basic elements of music and the performing arts.
- Enhance the ability to perform various percussion rudiments, as found in standard percussion literature.
- Gain an understanding of rhythmic values, note names, and basic musical interpretation of any percussion work; this concept will be illustrated through percussion ensemble literature, scales, etudes, musical excerpts and compositions.
- Develop a repertoire of musical terms and concepts that can be applied to any work.

- Express creativity and expression through performing.
- Increase awareness of listening with an ensemble.
- Develop abilities on all percussion instruments as a performer individually and within an ensemble.
- Evaluate both individual and group performances using musical vocabulary and ideals of achievement.

500926 - Chamber Orchestra

Credit: 1 Grade Scale: Regular Scale – 4.0

Prerequisite: Students are accepted by <u>audition only</u>. Chamber Orchestra is the most advanced performing group. Students must exhibit the technical and music reading skills necessary to perform advanced orchestra literature, as established in audition requirements.

Description:

This is a major performing orchestra. Further training is provided both in technical skills and in music reading. Advanced string orchestra literature is performed. Students will perform music from a broad range of musical styles. Attendance at scheduled performances and after school rehearsals is part of the required class work and is mandatory. Training is provided which will enable the student to continue music training and/or performance beyond the high school level.

Students are encouraged to participate in appropriate enrichment opportunities, such as private lessons, All-State Orchestra, Regional Honors Orchestra, Solo and Ensemble Festival, community music school orchestra programs, and other various community orchestras.

Course Standards

Students will:

- Use performance skills to express musical ideas
- Show variation of width and speed of vibrato appropriate to repertoire
- Increase bow skills: mixed slur patterns, multiple stops/chords
- Show shifting skills: 4th and 5th positions for violin and viola. Thumb position for cello and bass
- Enhance musicianship: Repertoire through grade 5; Improvisation: improvise melodies in various minor keys
- Improve reading skills: allargando, agitato, attaca, cadenza, concertino, ripieno, dolore, espressivo, fuoco, guisto, lento, ma non troppo, morendo, ossia, più, quasi, rubato, secco, stringendo, tacit
- Improve sight reading skills:
 - *Key Signatures
 - *Meters
 - *Clefs And Transposition
 - *Position Work For Strings
 - * Intervals Played and Sung (aural training): Melodic minor scales
 - * Improve Finger Patterns and Scales
 - * Composition

500940 - Music Workplace Experience

Credit: 1 Grade Scale: Regular Scale – 4.0 Grade(s): 11, 12 Prerequisite: Participation in a Music Performance Class and Instructor approval

Description:

This class is designed for a musically strong student who is involved in performance ensembles and may have a desire to major in music in college. Assistant positions may be available in both the choral and instrumental performance classes.

Course Standards

- Assist the director with daily rehearsals by leading sectionals or working with other students
- Help manage organizational aspects of the class
- Attend concerts associated with the class
- Work to become an independent director of the ensemble ideally by learning to conduct music with the ensemble
- Observe daily practices of teacher and focus conversation and assignments based on different leadership styles and practices
- Help develop assessments and rubrics
- Complete self-reflections about personal growth and best practices.

MASS COMMUNICATIONS

JOURNALISM

239111 - Journalism I 239111 - Journalism II 239111 - Journalism III 239111 - Journalism IV Credit: 1 (May be repeated for up to four credits) Grade Scale: Regular Scale – 4.0 Prerequisites: None Grade(s): 9-12

Description

Journalism I is a course for good writers who want to learn to write in the specialized style of news, editorials and feature writing. Students will also learn to design and publish *The Highlander*, *The Hilltopper* and *Bird's Eye View*. Students who enroll in this class should have genuine curiosity about the school and community. This class requires a great deal of self-discipline and an ability to meet deadlines. Students will leave Journalism with a working knowledge of news writing, feature writing and editorial writing. Students will also assist in the production of the yearbook. Students will become proficient in desktop publishing and digital photography.

Course Standards

Students will:

- Write transactive pieces of writing including, but not limited to, editorials, newspaper articles, feature articles, and other workplace and practical writing
- Evaluate the effectiveness of organization and format in fulfilling the purpose of a passage
- Formulate opinions in response to a read passage
- Identify the purpose of persuasion
- Recognize the appropriateness of an argument for an audience
- Accept or reject an argument, giving supporting evidence from the passage
- Identify essential information needed to accomplish a task
- Apply the information contained in practical/workplace materials
- Follow the sequence of information
- Utilize page format and layout to interpret information
- Utilize the available technology to produce publications.

239142 - Photojournalism

Credit: 1 Grade Scale: Regular Scale – 4.0 Prerequisites: Successful completion of Journalism I Comment: Students are considered part of the journalism staff and may be required to complete tasks not directly related to photography. Grade(s): 10, 11, 12

Description:

Photojournalism is a class that will offer students the opportunity to develop several skills in the field of photography, journalism, and desktop publishing.

Course Standards

- Learn the composition of a good picture
- Examine other photographers and their styles
- Be tested on their knowledge of key terminology
- Understand the process involved with photography both digital and film
- Examine the importance photography plays in the media
- Learn the basics of journalism and impact it has on society
- Take several pictures, examine them for quality and write a story based on this picture. This process will be

repeated throughout the year

- Use Photoshop to manipulate photos
- Work in conjunction with the publication staff all year as far as coverage of sports, dances, academic events and general pictures of the year
- Contribute to the publications all year.

FILM

480901 - Intro to Filmmaking/Broadcasting

Credit: 1 Grade Scale: Regular Scale – 4.0 Prerequisite: None Grade(s): 9,10,11.12 Comments: This course fulfills the Humanities requirement.

This course is an introduction to production focusing on all aspects of creative filmmaking and television news broadcasting. In addition, the class explores how film is an art form, how the elements of art contribute to the final product, and how film allows for expression of ideas, feelings, and experiences. Students will perform actual jobs conducted by today's film, video, and television broadcasting professionals. As film, video, and television news production is a collaborative field, students will learn to function as members of an integrated production team on a wide variety of creative projects. This develops a framework to access, analyze, evaluate and create messages in a variety of forms, while exercising the skills of inquiry and self-expression necessary for citizens of a participatory culture.

Course Standards

Students will:

- Produce quality films in various formats and production styles
- Gain a working knowledge of the skills involved in filmmaking and broadcasting production
- Maintain a professional work ethic
- Understand the terminology used in film production
- Work collaboratively with other students towards a common goal
- Learn how film is an art form and how the elements of art combine to create a final product
- Discover how film allows one to express their feelings, emotions, and experiences.

480911 - News Broadcasting I

Credit: 1 (may be repeated as News Broadcasting II and III) Grade Scale: Regular Scale – 4.0 Prerequisite: Intro to Filmmaking and Broadcasting Grades(s): 10,11,12

Description:

In this course students will be responsible for producing the monthly news program, as well as the afternoon video announcements. Through this process they will learn interviewing and investigative skills, along with expanding their production skills, which are necessary to film, edit, and broadcast a consistently high quality production.

Course standards

Students will:

- Produce the monthly Highlander News Show
- Produce the daily afternoon announcements
- Learn the technologies involved in the broadcasting field
- Acquire a working vocabulary of common broadcasting terminology
- Learn to work as a member of a productive team
- Learn to meet deadlines
- Learn the research skills necessary to produce quality news segments
- Develop their presentation skills and learn to work on a live production.

480910 - Advanced Filmmaking

Credit: 1 Grade Scale: Regular Scale – 4.0 Prerequisites: Intro to Filmmaking/Broadcasting, or by approval

Grade(s): 10, 11, 12

Description

This is an advanced filmmaking class aimed at giving the students the ability to take their recently developed production skills to another level. The students will work on multiple projects, including documentaries, trailers, animated storybooks and short films. They will continue to develop their lighting, camera, sound and editing skills. They will also have opportunities to present their final products to multiple audiences.

Course Standards

Students will:

- Produce advanced films in various formats and production styles
- Continue to develop production skills while integrating more artistic elements into their projects
- Develop more specific skills in their individual areas of interest, i.e. camera, editing, sound or on-camera talent
- Learn to produce with a specific audience in mind.

480912 - Video Production

Credit: 1 Grade Scale: Regular Scale – 4.0 Prerequisite: Intro to Filmmaking and Broadcasting, Grade(s): 10,11,12

This class is for advanced production students with an interest in continuing to develop their technical skills and storytelling abilities and applying them in real world scenarios. They will work on various projects for the school, the district, and the wider community. They will work by themselves or within small groups and create projects with agreed upon objectives. They will learn to meet with "clients" as well as other stakeholders to establish these objectives as well as listen to and apply feedback.

Course Standards

Students will:

- Produce videos for their school, district, and community
- Continue to develop production skills and storytelling abilities
- Interact with "clients" and process feedback appropriately
- Continue to develop their individual skills in the areas of editing, color correction, and audio mixing.

480913 – Independent Film Making and Production

Credit: 1 Grade Scale: Regular Scale – 4.0 Prerequisite: Video Production, or by approval Grade(s): 10,11,12

This class is for advanced production students who are self-motivated and independent minded. The students will fine-tune their production skills acquired through their earlier filmmaking or broadcasting classes by working individually on projects throughout the community. They will work on various projects for the school, the district, and the wider community, with minimal oversight. They will mentor students with less experience in all of the areas of production.

Course Standards

Students will:

- Learn to work independently with little teacher oversight
- Develop leadership skills in the areas of production and post-production
- Produce videos for their school, district, and community.
- Instruct students in the areas of production and post-production
- Learn self-discipline and time management skills.

480914- Sports Broadcasting

Credit: 1 Grade Scale: Regular Scale – 4.0 Prerequisite: Video Production, or by approval; Grade(s): 10, 11, 12

This class is designed for advanced production students who are self-motivated, independent minded, with a strong interest in sports related production. Responsibilities for these students will include: production of various sporting events, seasonal recap videos designed to highlight different teams and their achievements, as well as training small groups to produce different events for online streaming.

Course Standards

Students will:

- Learn to work independently with little teacher oversight
- Develop leadership skills in the areas of sports production and broadcasting
- Produce videos for the various sports programs
- Develop and train small teams to produce streaming events.

SPEECH

DC800015- CMST-101 NKU Public Speaking

Credit: 1 (dual credit) Grade Scale: Regular Scale – 4.0 Prerequisite: None Comment: Dual credit offering with Western Kentucky University. Grade(s): 11, 12

Description:

This course is designed to introduce the student to the elements involved in public speaking and to acquaint the student with speech as a performing art. The student presents informative and persuasive speeches as well as being introduced to the elements of debate and group discussion. Students will participate in a formal professional job interview complete with a resume. A strong research component is included as well.

Course Standards:

- Demonstrate awareness of audience, purpose and situation in oral presentation both with and without technology
- Apply appropriate verbal and nonverbal elements (gestures, facial expressions, tone volume and rate) to enhance delivery
- Analyze persuasive technique with listening and observing to make informal decisions
- Collaborate to solve problems (debate, panel discussions and simulations)
- Use correct and appropriate language in speaking
- Identify the most important demographic characteristics of an audience
- Evaluate oral presentations, including those using multimedia.



MATHEMATICS

The math curriculum is designed to help students learn more mathematics by the time they leave school and to ensure that the school mathematics curriculum will keep up with changes in mathematics and the ways in which mathematics is used. In addition, the mathematics curriculum at Highlands is designed to meet the high standards set by the National Council of Teachers of Mathematics and by the Kentucky Department of Education.

There are certain general features that all courses in the mathematics curriculum possess. One of these is the wider scope provided by the curriculum. Geometry and discrete mathematics are present in all the courses. Substantial amounts of statistics are integrated into the study of algebra and functions. The history of concepts and recent developments in mathematics and its applications are included throughout the curriculum.

A second feature is reality orientation. Each mathematical idea is studied in detail for its applications to the understanding of real-world situations. The reality orientation extends also to the approaches allowed the student in working out problems. Since virtually all individuals who use mathematics today use calculators, students are expected to use graphing calculators in every course.

A major feature of the mathematics curriculum is problem solving. Like skills, problem solving must be practiced. When practiced, problem solving becomes far less difficult. Each course contains a variety of questions so that students do not blindly copy one question to do the next. Explorations of mathematical concepts are a feature of each course. Open-ended and open-response questions and projects are incorporated into each course. Some problem solving techniques are so important that at times they are the focus of instruction.

Each course in the curriculum is designed to maximize the acquisition of both skills and concepts. Within each course there is ample and constant review of material from previous units. This gives the student more time to learn the material and helps to solidify performance of skills and concepts.

Throughout the curriculum, four dimensions of understanding are emphasized: skill in carrying out various algorithms; developing and using mathematical properties and relationships; applying mathematics in realistic situations; and representing or picturing mathematical concepts. When appropriate, a fifth dimension of understanding, the historical dimension, is discussed.

A final feature of the mathematics is technology. All mathematics classes will make use of graphing calculators. Calculators use an order of operations closer to that found in understanding concepts at the secondary level. Work with computers is sequenced within each course and between courses with a gradual gain in sophistication.
270308 - Applied Algebra 1

Credit: 1 Grade Scale: Regular Scale – 4.0

Prerequisites: Pre- Algebra and teacher recommendation

Comment: Credit cannot be earned in Applied Algebra I after earning credit in Algebra I.

Description

This course has been written to prepare students for success in their careers and the 21st century by helping them develop their abilities to explore and solve mathematical problems, think critically, work cooperatively with others and communicate ideas clearly. A better conceptual understanding of mathematics and stronger problem solving skills are developed as students see the connections among different branches of mathematics, are actively involved in the learning process, and study mathematics that is meaningful. Targeted concepts include formulas, linear equations, nonlinear functions, statistics and probability, systems of equations, right triangle relationships, inequalities, polynomials, and quadratic functions.

Course Standards

Students will:

- Solve one- and two- variable equations using manipulatives, procedures, graphing, real number operations, field properties, and order of operations
- Write and solve linear inequalities
- Extend ideas of transformation to transformations of nonlinear equations
- Use characteristics of the graphs of linear functions, such as slope and intercepts, transformations
- Write and solve linear sentences, describing real world situations by using and relating formulas, tables, graphs, and equations
- Collect, organize, and display two-variable data using the curve of best fit as a model to make predictions
- Write and solve proportions
- Design and conduct probability simulations, and interpret the results
- Connect geometric diagrams with algebraic representations
- Use right triangle relationships to solve problems
- Use of planar regions to determine volume and surface area of solids
- Use properties of quadrilaterals and other polygons.

270408 - Applied Geometry

Credit: 1 Grade Scale: Regular Scale – 4.0 Prerequisites: Applied Algebra I or teacher recommendation

Description

While this course presents material at a "hands-on", lab-based setting, it covers all the content and standards of a traditional geometry class. The lessons are designed to have a direct application to the work force, it has computer and manipulative assisted instruction, and a smaller class size contributes to a better one-on-one instructional environment. Students are required to do projects and activities as well as their standard course work. Targeted applications will include Euclidean geometry, inductive and deductive reasoning, coordinate geometry and 2 and 3 dimensional geometry and some algebra applications.

Course Standards

Students will be introduced to:

- Shapes: characteristics structure and relationships of two and three-dimensional figures. Contents will include work with circles, classification of quadrilaterals as well as other two and three-dimensional figures
- Spatial relationships: students will be able to specify and describe a variety of spatial relationships such as those involving angles, lines, triangles and quadrilaterals
- Systems: the use and application of coordinate geometry and other representational systems
- Transformations: investigations and applications of the similarities and differences of transformations such reflection, rotation, and translation
- Visualization: use of spatial reasoning and geometric modeling to solve problems
- Real-life applications: throughout the course students will be given real-life applications and connections of all concepts studied
- Tools and Constructions: Use of the traditional geometric tools as well as Geometry Sketchpad software for measurement and constructions
- Problem Solving: Investigation and evaluation of geometric conjectures and problem solving techniques
- Formulas and Procedures: Use of formulas and procedures for areas, perimeters and volumes and the
- Pythagorean Theorem
- Right Triangle Trigonometry
- Congruence and Similarity: use of proportional reasoning, scale drawing and congruence properties and concepts

- Interpret categorical and quantitative data
- Conditional probability.

270318 - Applied Algebra II

Credit: 1 Grade Scale: Regular Scale – 4.0 Prerequisites: Applied Geometry or teacher recommendation Comment: Upon completion of this course each student must take the state mandated end of course assessment.

Description

In this course, the student will further his/her study of mathematics with the use of hands-on activities and computer and calculator activities. Students are provided the opportunity of an informal study of linear and quadratic equations; power and roots; logarithms, trigonometry, matrices, polynomial and other special functions. An emphasis will on real world-applications.

Course Standards

Students will:

- Generalize patterns using explicitly defined and recursively defined functions
- Understand relations and functions and select, convert flexibly among, and use various representations for them
- Analyze functions of one variable by investigating rates of change, intercepts, zeros, asymptotes, and local and global behavior
- Understand and perform transformations such as arithmetically combining, composing, and inverting commonly used functions. Understand and compare the properties of classes of functions including exponential and rational functions
- Represent and analyze mathematical situations and structures using algebraic symbols
- Understand the meaning of equivalent forms of expressions, equations, inequalities, and relations
- Write equivalent forms of equations, inequalities, and systems of equations and solve them
- Use a variety of symbolic representations for functions and relations
- Judge the meaning, utility, and reasonableness of the results of symbol manipulations, including those carried out by technology
- Identify essential quantitative relationships in a situation and determine the class or classes of functions that might model the relationships
- Use symbolic expressions, including iterative and recursive forms, to represent relationships arising from various contexts
- Approximate and interpret rates of change from graphical and numerical data.

270303 - Algebra 1-B

Credit: 1 Grade Scale: Regular Scale – 4.0 Prerequisites: Algebra 1 A or teacher recommendation Comment: Credit cannot be earned in Algebra 1 AB or Applied Algebra 1 AB.

Description

This course has a scope for wider than most other algebra courses. It uses statistics and geometry as settings for work with linear expressions and sentences. Probability provides a context for algebraic fractions, functions and set ideas. There is much work with graphing. Applications motivate all topics and include exponential growth and compound interest. Extensive problem solving, mathematical communication, reasoning and mathematical connections will be woven throughout the course. Emphasis will be given to real-world applications, graphing calculators to develop conceptual understanding for solving equations and inequalities, and structure of number systems.

Course standards

- Solve a wide variety of equations including linear and quadratic, as well as work with algebraic properties such as commutative, distributive and associative
- Extensive work with problem solving skills, order of operations and working with formulas
- Students will work with various types of modeling, graphing, data collection, representations of data and the computed results, charts, areas perimeters and volume
- Work with relationships and representations of various patterns and functions
- Throughout the course the student will be given numerous applications of the concepts learned, and will apply them to real-life situations
- Introduction and application of basic probability patterns, representations and situations
- Analyze slope in various forms; rate of change, average rate of change, instantaneous rate of change

- Interpret representations of function and function notation
- Solve systems of equations using a variety of methods including matrices
- Recognize the difference between exponential functions and logarithmic functions and be able to convert between the two forms
- Perform different operations with polynomials and factor them.

270304 - Algebra I

Credit: 1 Grade Scale: Regular Scale – 4.0 Prerequisites: Pre-Algebra or teacher recommendation Comment: Credit cannot be earned in Algebra I and Applied Algebra I after taking Algebra I.

Description

This course has a scope for wider than most other algebra courses. It uses statistics and geometry as settings for work with linear expressions and sentences. Probability provides a context for algebraic fractions, functions, and set ideas. There is much work with graphing. Applications motivate all topics, and include exponential growth and compound interest. Extensive problem solving, mathematical communication, reasoning, and mathematical connections will be woven throughout the course. Emphasis will be given to real-world applications, graphing calculators to develop conceptual understanding, for solving equations and inequalities, and structure of number systems.

Course Standards

Students will be introduced to:

- Number systems and operations: the focus on the relationships and representations of real and rational numbers
- Mathematical Procedures: extensive work with problem solving skills, order of operations and working with formulas
- Equations: the students will know how to solve a wide variety of equations including linear and quadratic, as well as work with algebraic properties such as commutative, distributive and associative
- Data Analysis, Space and Dimension: Students will work with various types of modeling, graphing, data collection, representations of data and the computed results, charts, areas, perimeters and volumes
- Measurements: use of various tools and methods for exact measurement as well as estimations and formulas.
- Algebraic Ideas and Concepts: working with the relationships and representations of various patterns and functions
- Real-life Applications: throughout the course the student will be given numerous applications of the concepts learned, and will apply them to real-life situations
- Probability: introduction and application of basic probability patterns, representations and situations.

270401- Geometry

Credit: 1 Grade Scale: Regular Scale - 4.0

Prerequisites: Algebra I and teacher recommendation. Entering 9th grade students must earn a passing score on the Algebra I competency exam to gain placement in Geometry.

Description

This course integrates coordinates and transformations throughout, and gives strong attention to measurement formulas and three-dimensional figures. Work with proof writing follows a carefully sequenced development of the logical and conceptual precursors to proof. Manipulatives such as three-dimensional models and tools for paper folding will be incorporated into the course. Emphasis will be given to real-world applications and modeling, computer based explorations, coordinate and transformation approaches, deductive arguments expressed in both two-column and paragraph form, and three-dimensional geometry.

Course standards

Students will be introduced to:

- Shapes: characteristics structure and relationships of two and three-dimensional figures. Contents will include work with circles, Classification of quadrilaterals as well as other 2 and 3 dimensional figures
- Spatial relationships: Students will be able to specify and describe a variety of spatial relationships such as those involving angles, lines, triangles, and quadrilaterals
- Systems: the use and application of coordinate geometry and other representational systems
- Transformations: investigations and applications of the similarities and differences of transformations such as reflection, rotation and translation
- Visualization: use of spatial reasoning and geometric modeling to solve problems
- Real-life applications: throughout the course students will be giving real-life applications and connections of all concepts studied

- Tools and constructions: use of the traditional geometric tools as well as geometry, Sketchpad software for measurement and constructions
- Proofs and problem solving: investigation and evaluation of geometric conjectures, problem solving techniques and limited proofs
- Formulas and procedures: use of formulas and procedures for areas, Perimeters, Volumes, Pythagorean Theorem etc.
- Right trigonometry
- Congruence and similarity: use of proportional reasoning, scale drawing and congruence properties and concepts.

270402 - Geometry Advanced

Credit: 1 Grade Scale: Advanced Scale - 4.5

Prerequisites: Must have completed an Algebra I course with a final average of "C" or better, and teacher recommendation. Students entering 9th grade from outside of the Fort Thomas district must earn a passing score on the Algebra I competency exam to gain placement in Geometry.

Comment: This is an advanced level course. <u>Students will move at a quicker pace and will cover material in more depth. Many problems will be of a high difficulty level.</u>

Description

This course integrates coordinates and transformations throughout, and gives strong attention to measurement formulas and three-dimensional figures. Work with proof writing follows a carefully sequenced development of the logical and conceptual precursors to proof. Manipulatives such as three-dimensional models and tools for paper folding will be incorporated into the course. Emphasis will be giving to real-world applications and modeling, computer based explorations, coordinate and transformation approaches, deductive arguments expressed in both two-column and paragraph form, and three dimensional geometry.

Course Standards

Students will be introduced to:

- Shapes: characteristics structure and relationships of two and three-dimensional figures. Contents will include work with circles, classification of quadrilaterals as well as other 2 and 3 dimensional figures
- Spatial relationships: students will be able to specify and describe a variety of spatial relationships as those involving angles, lines, triangles, and quadrilaterals
- Systems: the use and application of coordinate geometry and other representational systems
- Transformations: investigations and applications of the similarities and differences of transformations such as reflection, rotation, translation, size changes, and scale changes
- Visualization: use of spatial reasoning and geometric modeling to solve problems
- Real-life applications: throughout the course students will be given real-life applications and connections of all concepts studied
- Tools and constructions: use of the traditional geometric tools as well as Geometry Sketchpad software for measurement and constructions
- Proofs and Problem Solving: Investigation and evaluation of geometric conjectures, problem solving techniques and proofs
- Formulas and Procedures: Use of formulas and procedures for areas, perimeters, volumes, Pythagorean Theorem etc.
- Right Triangle Trigonometry
- Congruence and Similarity: Use of proportional reasoning, scale drawing and congruence properties and Concepts.
- Indirect proofs
- Tangents and secants to circles.

270311 - Algebra II

Credit: 1 Grade Scale: Regular Scale – 4.0

Prerequisites: Algebra I and Geometry and teacher recommendation

Comment: Upon completion of this course each student must take the state mandated end of course assessment.

Description

This Course emphasizes facility with algebraic expression and forms, especially linear and quadratic forms, powers and roots, and functions based on these concepts. Students study logarithmic, trigonometric, polynomial, and other special functions both for their abstract properties and as tools for modeling real world situations. In this course, the history of major ideas and recent developments in mathematics and applications are presented. In addition, Algebra II includes a substantial amount of geometry which is used to develop and apply algebraic concepts and ensure skills maintenance.

Course Standards

Students will:

- Understand patterns, relations, and functions
- Generalize patterns using explicitly defined and recursive defined functions
- Understand relations and functions and select, convert flexibility among and use various representations for them
- Analyze functions of one variable by investigating rates of change, intercepts, zeros, asymptotes, and local and global behavior
- Understand and perform transformation such as arithmetically combining, composing, and inverting commonly used functions
- Understand and compare the properties of classes of functions including exponential, logarithmic, periodic, and rational functions
- Interpret representations of functions of two variables
- Represent and analyze mathematical situations and structures using algebraic symbols
- Understand the meaning of equivalent forms of expressions, equations, inequalities, and relations
- Write equivalent forms of equations, inequalities, and systems of equations and solve them with fluency
- Use symbolic algebra to represent and explain mathematical relationships
- Use a variety of symbolic representations for functions and relations
- Judge the meaning, utility, and reasonableness of the results of symbol manipulations, including those carried out by technology
- Use mathematical models to represent and understand quantitative relationships
- Identify essential quantitative relationships in a situation and determine the class or classes of functions that might model the relationships
- Use symbolic expressions, including iterative and recursive forms, to represent relationships arising from various contexts
- Analyze change in various contexts
- Approximate and interpret rates of change from graphical and numerical data.

270312 - Algebra II Advanced

Credit: 1 Grade Scale: Advanced Scale - 4.5

Prerequisites: Algebra I and Geometry and teacher recommendation

Comment: This is an advanced level course. <u>Students will move at a quicker pace and will cover the material in</u> <u>more depth. Many problems will be of high difficulty level.</u> Upon completion of this course each student must take the state mandated end of course assessment.

Description

This course emphasizes facility with algebraic expression and forms, especially linear and quadratic forms, powers and roots, and functions based on these concepts. Students study logarithmic, trigonometric, polynomial, and other special functions both for their abstract properties and as tools for modeling real world situations. In this course, the history of major ideas and recent developments in mathematics and applications are presented. In addition, Algebra II includes a substantial amount of geometry which is used to develop and apply algebraic concepts and to ensure skills maintenance.

Course Standards

- Understand patterns, relations, and functions
- Generalize patterns using explicitly defined and recursively defined functions
- Understand relations and functions and select, convert flexibly among, and use various representations for them.
- Analyze functions of one variable by investigating rates of change, intercepts, zeros, asymptotes, and local and global behavior
- Understand and perform transformations such as arithmetically combining, composing, and inverting commonly used functions
- Understand and compare the properties of classes of functions including exponential, logarithmic, periodic, and rational functions
- Interpret representations of functions of two variables
- Represent and analyze mathematical situations and structures using algebraic symbols
- Understand the meaning of equivalent forms of expressions, equations, inequalities, and relations
- Write equivalent forms of equations, inequalities, and systems of equations and solve them with fluency
- Use symbolic algebra to represent and explain mathematical relationships
- Use a variety of symbolic representations for functions and relations

- Judge the meaning, utility, and reasonableness of the results of symbol manipulations, including those carried out by technology
- Use mathematical models to represent and understand quantitative relationships
- Identify essential quantitative relationships in a situation and determine the class or classes of functions that might model the relationships
- Use symbolic expressions, including iterative and recursive forms, to represent relationships arising from various contexts
- Analyze change in various contexts
- Approximate and interpret rates of change from graphical and numerical data
- Use Law of Sines and Law of Cosines in real life situations
- Estimate solution to polynomial equations.

270631-Trigonometry

Credit: 1

Prerequisites: Algebra I, Algebra II, Geometry, Pre-Calculus

Description: This course is designed for students who have completed Pre-calculus and want to proceed further into more advanced aspects of trigonometry. This course builds on the student's understanding of right triangle trigonometry and extends that understanding to the unit circle, inverse trigonometric functions, analytic trigonometry, Law of Sines/Cosines, vectors, and analytic geometry. Real world applications are incorporated throughout the course. This course further prepares students for calculus and culminates in an introduction to limits and derivatives.

Students should be able to:

- Use trigonometric functions to solve real world problems
- Understand the meaning of circular functions and calculate exact values for these
- Evaluate and graph trigonometric functions and their inverses
- Use and verify trigonometric identities
- Solve trigonometric equations
- Write equations for conic sections in standard form
- Use Law of Sines, Law of Cosines, and vectors to model and solve real world problems
- Graph trigonometric functions and interprets graphs of trigonometric functions in polar form
- Finding limits graphically and numerically
- Evaluate limits analytically
- Determine continuity at a point
- Use the definition of a derivative to find the slope of a tangent line
- Use the power, product, quotient, and chain rules to find the derivative of a function
- Find higher order derivatives
- Use the first and second derivative to find the velocity and acceleration in application problems
- Use the first and second derivatives to determine where a function is increasing and decreasing and the functions concavity
- Find the derivatives of trig functions

270671 – College Transitions

1st Semester class taught in conjunction with DC800022 – MAT 114 NKU Finite Mathematics Credits: 0.5 Grade Scale: Regular Scale – 4.0

Prerequisites: Pre-Calculus Regular

Comment: To earn one full math credit, students must register for both College Transitions and Finite Math during the same school year.

Description

This course is designed to be taken after completion of Algebra 1, Geometry, Algebra 2, and Pre-Calculus. Topics include discrete mathematics, extensions of functions, algebra concepts, geometry concepts, probability, and statistics.

Course Standards

- Extend their knowledge of number concepts such as rounding, ordering decimals and fractions, primes, greatest common factors, and least common multiples.
- Find the distance between 2 points on a number line

- Find the distance between two points in the coordinate plane with the same x- coordinates or y-coordinates.
- Perform arithmetic operations on matrices of number and integer elements.
- Solve 2- or 3-step arithmetic problems involving rates, proportions, and percentages.
- Solve problems involving unit conversions.
- Write expressions, equations, or inequalities with a single variable for rate, distance, and proportion problems.
- Evaluate algebraic expressions by substituting integers for unknown quantities.
- Add and subtract algebraic expressions and multiply two binomials.
- Solve first-degree equations and first-degree inequalities.
- Graph simple inequalities on the number line.
- Determine the slope of a line from points or from an equation.
- Evaluate linear and quadratic and polynomial functions, expressed in function notation, at integer values.
- Use properties of parallel lines to find the measure of an angle.
- Use angle properties to find an unknown angle measure.
- Compute the area of triangles, rectangles, and circles, perimeter of triangles and rectangles and circumference of circles.
- Find the length of the hypotenuse or one of the sides of a right triangle.
- Use symmetry of isosceles triangles to find unknown side lengths and angle measures.
- Locate and translate points in the coordinate plane.
- Calculate the missing data value given the average and all data values but one.
- Calculate the average given the frequency counts of all the data values.
- Translate from one graphical representation of data to another.
- Determine the probability of a simple event and describe events as combinations of other events using and, or, and not.
- Use simple counting techniques and Venn diagrams to count.

DC800022 - MAT 114 NKU Finite Mathematics

2nd Semester class taught in conjunction with 270671 – College Transitions Algebra

Credits: 0.5 Grade Scale: Regular Scale – 4.0

Prerequisites: College Transitions

Comment: Finite Mathematics may be offered as a dual credit course (MAT 114) with NKU if it is taught by a Highlands teacher that meets the requirements to teach at the college level. If offered as dual credit, each student must meet the qualifications to earn dual credit from NKU.

Description

Finite Mathematics serves as an introduction to non-calculus portions of mathematics. It is intended for senior students not planning to pursue a degree in the physical sciences, engineering, mathematics, computer science, or other related fields. The course will include the study of logic, mathematics of finance, probability, combinatorics, statistics, linear programming, and other special topics such as game theory. Emphasis will be placed on mathematical model comprehension and problem-solving in the areas of business and the life and social sciences.

Course Standards

- Solve systems of linear equations algebraically using Gaussian elimination
- Use elementary row operation and matrices to solve a system of linear equations and perform operations with matrices
- Use the inverse of a matrix to solve a system of equations
- Solve a linear programming problem using the graphical approach and the simplex method
- Use Venn diagrams to understand set theory
- Apply the various counting techniques, such as the multiplication principle and calculating permutations and combinations
- Use the Binomial Theorem to expand powers of binomial expressions
- Find the probability of an event, including application of Bayes' Theorem to compute conditional probabilities
- Find the frequency of a random variable and construct a frequency distribution
- Find the mean, median, and mode of a collection of numbers or frequency distribution
- Calculate the variance and standard deviation of a collection of numbers or frequency distribution
- Use the uniform and normal probability density function
- Find a stable matrix for a regular Markov chain, write an absorbing transition in matrix in standard form, and find an absorbing Markov chain
- Determine simple interest, compound interest, present value

• Create an increasing and decreasing annuity, determine a monthly installment, and create an amortization table

270661 – Mathematics Concepts

Credit: 1 Grade Scale: Regular Scale – 4.0 Prerequisites: Algebra II and teacher recommendation

Description

This course provides a general survey of mathematical topics that are useful in our contemporary world, such as consumer loans, investing and voting methods. The primary purpose is to show the students how mathematics is applied to their everyday life. Students will acquire knowledge of fundamental mathematics as they solve authentic problems that apply to their lives. The emphasis of the course will be an understanding and reasoning with quantitative issues and mathematical ideas that students are likely to encounter in college, career and life. Course will be most appropriate for students who have not yet met ACT benchmark for math (score less than 21).

Course Standards:

Students will:

- Acquire knowledge of fundamental mathematics
- See authentic problems that can apply to their lives
- Be enabled to understand and reason with quantitative issues and mathematical ideas
- Use algebraic and basic mathematical operations to solve problems
- Use mathematical procedures to analyze and solve business problems
- Analyze and interpret data using common statistical procedures
- Use mathematical models to gain insights into a variety of real world topics
- Use geometry to study the shape of the world
- Understand simple counting methods and probability
- Understand the rules of logic.

270501 - Pre-Calculus

Credit: 1 Grade Scale: Regular Scale – 4.0 Prerequisites: Algebra I, Algebra II, Geometry

Description

Functions are widely recognized as a major unifying theme in mathematics. This course builds on the student's understanding of functions by analyzing both algebraically and graphically a variety of different functions such as polynomials, rational, exponential, logarithmic, and trigonometric. Trigonometry is a fundamental concept to many real world problems and situations. In this course, traditional topics of trigonometry are investigated and explored using real world applications. In fact, real world applications are integrated throughout the course in all areas of study. Graphing calculators are a necessary tool for plotting functions, analyzing data, and exploring concepts. This course establishes a firm foundation for calculus and future work in mathematics.

Course Standards

Students should be able to:

- Work with several functions represented in a variety of ways: graphical, numerical, analytical, and verbal. They should understand the connections between these representations
- Perform different transformations to graphs, equations, and data. They should be able to find a new equation for the function after performing these transformations
- Understand the meaning of circular functions and calculate the exact values for these. They should also use the trigonometric functions to solve real-world problems
- Comprehend the properties of root, power, and logarithmic functions and their relationship with each other. The students will apply these to solve real-world applications
- Understand the principles of probability including permutations and combinations
- Do further study with sequences and series and apply these to other concepts of mathematics
- Understand polynomial models. The students should also be able to find roots of polynomial using several different methods
- Develop an appreciation of mathematics as a means to solve many real-world problems.

270502 - Pre-Calculus Advanced

Credit: 1 Grade Scale: Advanced Scale – 4.5 Prerequisites: Algebra I, Geometry, Algebra II

Description

Functions are widely recognized as a major unifying theme in mathematics. This course builds on the student's understanding of functions by analyzing both algebraically and graphically a variety of different functions such as polynomials, rational, exponential, logarithmic, and trigonometric. Trigonometry is a fundamental concept to many real world problems and situations. In this course, traditional topics of trigonometry are investigated and explored using real-world applications. In fact, real world applications are integrated throughout the course in all areas of study. Graphing calculators are a necessary tool for plotting functions, analyzing data, and exploring concepts. This course establishes a firm foundation for calculus and future work in mathematics. Students will move at a quicker pace and cover material in more depth. Many problems will be at a higher difficulty level.

Course Standards

Students should be able to:

- Work with several functions represented in a variety of ways: graphical, numerical, analytical, and verbal. They should understand the connections between these representations
- Perform different transformations to graphs, equations, and data. They should be able to find a new equation for the function after performing these transformations
- Understand the meaning of circular functions and calculate the exact values of these. They should also use the trigonometric functions to solve real world problems
- Comprehend the properties of root, power, and logarithmic functions and their relationship with each other. The students will apply these to solve real world applications
- Do further study with sequences and series and apply these to other concepts of mathematics
- Understand polynomial models. The students should also be able to find roots of polynomial using several different methods
- Develop an appreciation of mathematics as a means to solve many real-world problems
- Simplify rational functions
- Determine the limit of a function and use it to find the derivative.

270604 - AP Statistics

Credit: 1 Grade Scale: AP Scale – 5.0 Prerequisite: Algebra II Comment: Students must sit for the AP Statistics exam.

Description

The purpose of the AP course in statistics is to introduce students to the major concepts and tools for collecting, analyzing, and drawing conclusions from data. Students will be expected to complete summer work. Students are exposed to four conceptual themes:

- 1. Exploring Data: Observing patterns and departures from patterns
- 2. Planning a Study: Deciding what and how to measure
- 3. Anticipating Patterns: Producing models using probability theory and simulation
- 4. Statistical Inference: Confirming models.

Upon completion of the course, students will take the Advanced Placement Exam in Statistics and will bear the expense of the exam. The student may, depending upon the policy of the college of choice and the score on the AP test, enter with credit.

Course Standards

Students will:

- Detect important characteristics, such as shape, location, variability, and unusual values from data
- Summarize distributions of data using several techniques and determine the effect of changing the units
- Explore bivariate data
- Explore categorical data
- Collect data according to a well-developed plan. The plan must identify important variables related to the conjecture and specify how they are to be measured
- From the data collection plan, a model can be formulated from which inferences can be drawn
- Use probability for statistical inferences and describe data distributions
- Draw inferences from data collected.

270513 - AP Calculus (AB)

Credit: 1 Grade Scale: AP Scale - 5.0

Prerequisites: Pre-Calculus Advanced, recommendations of previous math teachers and of counselors Comment: Students who sign up to take AP Calculus are required to do work over the summer. If the summer work is not completed by the stated due date, you will receive a zero for that portion of the assignment. Students must sit for the AP calculus AB exam.

Description

Calculus is a field of mathematics which studies change and motion. Students in this course will study the math of tangent lines, slopes, areas, volumes, and a variety of other concepts that scientists, engineers, and economists use to model real life situations. Both differential calculus, which deal with the rate at which a variable quantity is changing, and integral calculus, which deals with finding a function when the rate of change is known, are studied in this course. A rigorous development of functions and graph, limits, continuity, differentiation, integration, and applications of differentiation and integration is a feature of this course. Students will be expected to represent problems graphically, numerically, analytically, and verbally. The student should be able to make connections between these representations. The use of technology, both computers and graphic calculators, is integrated throughout the course. Technology should be used every day to reinforce the relationships between functions, to confirm written work, to experiment with ideas, and in interpreting results. Students will receive a strong foundation which will help them in future math classes.

Course Standards

Students should be able to:

- Work with functions represented in a variety of ways: graphical, numerical, numerical, analytical, or verbal. They should understand the connections among these representations
- Understand the meaning of the derivative in terms of rate of change and local linear approximation and should be able to use derivatives to solve a variety of problems
- Understand the meaning of the definite integral both as a limit of Riemann sums and as the net accumulation of a rate of change and should be able to use integrals to solve a variety of problems
- Understand the relationship between the derivative and the definite integral as expressed in both parts of the Fundamental Theorem of Calculus
- Communicate mathematics both orally and in well-written sentences and should be able to explain solutions to problems
- Model a written description of a physical situation with a function, a differential equation, or an integral
- Use technology to help us solve problems, experiment, interpret results, and verify conclusions
 Determine the reasonableness of solutions, including sign, size, relative accuracy, and units of
- Develop an appreciation of calculus as a coherent body of knowledge and as a human
- accomplishment.

270514 - AP Calculus (BC)

Credit: 1 Grade Scale: AP Scale – 5.0

Prerequisites: AP Calculus AB, recommendations of previous math teacher and of the counselors, and established criteria. In exceptional circumstances, a student with Advanced Pre-Calculus may take this course with the recommendation of the principal, counselor and department chair.

Comment: Students who sign up to take AP Calculus are required to do work over the summer. If the summer work is not completed by the stated due date, you will receive a zero for that portion of the assignment. Students must sit for the AP Calculus BC exam.

Description

Calculus BC is designed to provide students with a learning experience equivalent to a full-year of a college course in a single variable calculus. This course will develop the student's understanding of the concepts of calculus and provide experience with its methods and application. This course emphasizes a multi-representational approach to calculus with concepts, results, and problems being expressed graphically, numerically, analytically, and verbally. Calculus BC includes all the topics in Calculus AB (techniques and applications of the derivative and techniques and applications of the definite integral and the fundamental Theorem of Calculus) plus additional topics in differential and integral calculus (including parametric, polar, and vector functions) and series. The use of technology, both computers and graphic calculators, is integrated throughout the course. Technology should be used every day to reinforce the relationships between functions, to confirm written work, to experiment with ideas, and in interpreting results. Students will receive a strong foundation which will help them in the future math courses.

Course Standards

- Work with functions represented in a variety of ways: graphical, numerical, analytical, or verbal. They should understand the connections among these representations
- Understand the meaning of the derivative in terms of a rate of change and local linear approximation and should be able to use derivatives to solve a variety of problems
- Understand the meaning of the definite integral both as a limit of Riemann sums and as the net accumulation of a rate of change and should be able to use integrals to solve a variety of problems
- Understand the relationship between the derivative and the definite integral as expressed in both parts of the Fundamental Theorem of Calculus
- Model a written description of a physical situation with a function, a differential equation, or an integral
- Use technology to help solve problems, experiment, interpret results, and verify conclusions

- Determine the reasonableness of solutions, including sign, size, relative accuracy, and units of measurement
- Develop an appreciation of calculus as a coherent body of knowledge and as a human accomplishment.

110701- AP Computer Science A

Credits: 1 Grade Scale: AP Scale - 5.0

Prerequisites: Concurrent enrollment in Algebra II or higher unless recommended by instructor. Comment: Application required. Students must sit for the AP Computer Science A exam.

Description

AP Computer Science is an introductory course in computer science. Because the development of computer programs to solve problems is a skill fundamental to the study of computer science, a large part of the APCS course is built around the development of computer programs or parts of programs that correctly solve a given problem. The course also emphasizes the design issues that make programs understandable, adaptable, and, when appropriate, reusable. At the same time, the development of useful computer programs and classes is used as a context for introducing other important concepts in computer science, including the development and analysis of algorithms, the development and use of fundamental data structures, and the study of standard algorithms and typical applications. In addition, an understanding of the basic hardware and software components of computer systems and the responsible use of these systems are integral parts of the course.

The APCS course is intended to prepare students for the AP Computer Science "A" exam. The course uses the Java programming language to emphasize object-oriented programming methodology with emphasis on problem solving and algorithm development. It also includes the study of data structures, design, and abstraction. That nature of the course is suggested by the words "computer science", which indicates a disciplined approach to a more broadly conceived subject than "computer programming".

Course Standards

Students will:

- Design and implement computer-based solutions to problems in a variety of application areas
- Use and implement well-known algorithms and data structures
- Develop and select appropriate algorithms and data structures to solve problems
- Code fluently in an object-oriented paradigm using the programming language Java. Students are expected to be familiar with and be able to use standard Java library classes from the AP Java subset
- Read and understand a large program consisting of several classes and interacting objects. Students should be able to read and understand a description of the design and development process leading to such a program
- Identify the major hardware and software components of a computer system, their relationship to one another, and the roles of these components within the system
- Recognize the ethical and social implications of computer use.

110220 - Advanced Computer Science II – Python I

Credits: 1 Grade Scale: Advanced Scale – 4.5 Prerequisite: AP Computer Science

Description

Advanced Computer Science II is a course that follows AP Computer Science. This course will develop the student's current understanding and concepts of object-oriented programming using a different programming language than Java called Python. This course will also include some advanced graphics and topics in programming that were not covered in APCS. Advanced Computer Science II emphasizes object-oriented programming methodology with an emphasis on problem solving and algorithm development and is meant to be the equivalent of a college-level course in computer science. It also includes the study of data structures and abstraction. Because the development of computer programs to solve problems is a skill fundamental to the study of computer science, a large part of this course is built around the development of computer programs or parts of programs that correctly solve a given problem.

The nature of the course is suggested by the words "computer science", which indicates a disciplined approach to a more broadly conceived subject than "computer programming."

Course Standards

Students should be able to:

- Design and implement computer-based solutions to problems in a variety of application areas.
- Use and implement well-known algorithms and data structures.
- Develop and select appropriate algorithms and data structures to solve problems.
- Code fluently in an object-oriented paradigm using the programming language Python.

• Read and understand a description of the design and development process leading to such a program.

• Identify the major hardware and software components of a computer system, their relationship to one another,

and the roles of these components within the system.

• Recognize the ethical and social implications of computer use.

110711 - AP Computer Science Principles

Credits: 1 Grade Scale: AP Scale - 5.0

Prerequisites: Concurrent enrollment in Advanced Geometry, Algebra II, or higher

Comments: AP Computer Science Principles is intended to be taken prior to AP Computer Science, but it may be taken concurrently or after AP Computer Science A. Students must sit for the AP Computer Science Principles exam.

Description

AP Computer Science Principles introduces you to the essential ideas of computer science with a focus on how computing can impact the world. Along with the fundamentals of computing, you will learn to analyze data, information, or knowledge represented for computational use; create technology that has a practical impact; and gain a broader understanding of how computer science impacts people and society.

The major areas of study in the AP Computer Science Principles course are organized around seven big ideas, which are essential to studying computer science. The seven big ideas include Creativity, Abstraction, Data and Information, Algorithms, Programming, the Internet, and Global Impact.

Course Standards

Students will:

- Use the tools and techniques of computer science to create interesting and relevant digital artifacts (e.g., a video, spreadsheet, graph, or electronic slide show) with characteristics that are enhanced by computation.
- Use abstraction to model the world and communicate with people as well as with machines.
- Work with data using a variety of computational tools and techniques to better understand the many ways in which data is transformed into information and knowledge.
- Work with algorithms in many ways: You will develop and express original algorithms, implement algorithms in a language, and analyze algorithms analytically and empirically.
- Be introduced to the fundamental concepts of programming that can be applied across a variety of projects and languages.
- Create programs, translating human intention into computational artifacts.
- Gain insight into how the Internet operates, study characteristics of the Internet and systems built on it, and analyze important concerns such as cybersecurity.
- Become familiar with many ways in which computing enables innovation.
- Analyze the potential benefits and harmful effects of computing in a number of contexts.

110752 – Special Topics, Computer Science - Lab Assistant

Credit: 1 Grade Scale: Regular Scale - 4.0

Prerequisite: Application, AP Computer Science A. Students selecting Lab Assistant for AP Computer Science A should be planning on pursuing Computer Science or Computer Science education as a career. Elective: One student per period per section

Description

Student will assist in setting up programming labs and assisting in the classroom during labs being implemented under the direction of the classroom teacher. By providing assistance with programming skills, the student that is interested in pursuing a career in either Computer Science or teaching Computer Science will better understand common misconceptions in coding and gaps in the learning that takes place. They will also be able to help create real world problems for the students in class to solve.

Course Standards

Students will:

• Provide assistance in the preparation and student debugging of laboratory assignments including assisting with the creation of the labs from the required material in each unit. This will help the students write and understand code that is more relevant to their lives.

• Use critical-thinking skills to help solve problems including how to structure the specifications to fit the needs of the students in class and optimize learning.

230171 - AP Research

Credit: 1 Grade Scale: AP Scale - 5.0

Grade(s): 11, 12

Prerequisites: Teacher recommendations, completion of AP Seminar with a passing grade. As well, students intending on taking this class must have a mentor by June 1 of the preceeding year or they will be removed from the class and given another elective.

Comment: This course will fulfill the capstone course requirement associated with the AP Capstone Diploma as well as the Major of Intensive Study designation.

Description

AP Research allows students to deeply explore an academic topic, problem, or issue of individual interest. Through this exploration, students design, plan, and conduct a yearlong mentored, research-based investigation to address a research question. In the AP Research course, students further their skills acquired in the AP Seminar course by understanding research methods; employing ethical research practices; and accessing, analyzing, and synthesizing information as they address a research question. The course culminates in an academic thesis paper of approximately 5,000 words and a presentation, performance, or exhibition with an oral defense. Students who enroll in AP Research must sit for the exam.

Course Standards:

- Introduces and contextualizes a research question
- Synthesizes information and perspectives related to the research question
- Explains and rationalizes the research method
- Analyzes and interprets the evidence
- Illustrates a cogent argument that uses a clear line of reasoning based on evidence
- Discuss and reflect on evidence and present implications and consequences
- Manage research process to create an academic thesis and paper of 5000 words
- Present publicly the research
- Create and performance, or exhibition
- Orally defend the research and presentation
- Choose an appropriate format or medium (e.g., multimedia presentation, performance, and exhibition).



SCIENCE

304821 - Physics I

Credit: 1 Grade Scale: Regular Scale - 4.0

Prerequisite: Recommendation of science teacher in 8th grade.

Comment: If you have taken Algebra I in the eighth grade and earned a "C" or higher, sign up for Physics I Advanced.

Description

Introduction to Physics provides topics from basic physics and Earth and space sciences emphasizing how the selected topics in each discipline reflect aspects of broad scientific themes. Attention is given to current issues and applications of science and technology in today's world. The approach of the course is inquiry based, enabling students to develop skills and capture concepts through lab exercises and activities. Math skills will be frequently used to generate data for analysis and interpretation.

Course Standards

Students will:

- Demonstrate Newton's Laws of Motion
- Predict motion, speed, acceleration, distance, force, etc.
- Predict gravitational effects between two bodies
- Be able to successfully make a variety of measurements such as mass, volume, area, temperature, acceleration etc. using appropriate technologies
- Discuss relationships between magnetism and electricity; work problems
- Discuss conservation of energy and various forms of energy and energy transformations
- Discuss concepts of temperature and heat, and the relationships between them
- Discuss sound and be able to characterize its properties and work problems with it
- Discuss light and be able to characterize its properties and work problems with it
- Discuss other forms of radiation, in addition to visible light, and be able to characterize its properties and work problems with it
- Discuss plate tectonics and how earthquakes form and relate to waves, and seismic activity.

304824 - Physics I Advanced

Credit: 1 Grade Scale: Advanced Scale – 4.5

Prerequisites: Algebra I, with a final average of "C" or better, and recommendation of science teacher in 8th grade.

Description

Physics is the study of the nature of things such as motion, force, energy, matter, heat, sound, light, and the behavior of atoms and how those affect earth systems and astronomical phenomena. The course will consist of lectures, laboratory activities, and other activities relating to physics and Earth-space sciences. This course is recommended for those students interested in attending college or technical school and interested in health careers, computer technology, mathematics, or education. Students should check with their counselor, college, or technical school catalogs for specific information. This course may be used as an introduction, but not a necessary course for AP Physics.

Course Standards

Students will:

- Demonstrate measuring techniques
- Demonstrate Newton's Laws of Motion
- Predict motion, speed, acceleration, and distance when working with motion
- Discuss conservation of momentum and energy
- Predict characteristics of rotating bodies
- Predict gravitational effects between 2 bodies
- Discuss the motion of projectiles
- Discuss the physical changes that occur with time, length, and mass at high rates of speed
- Predict amounts of thermal expansion
- Demonstrate types of heat transfer
- Discuss light, sound, and other radiation and be able to characterize its propertied and work problems using them
- Discuss relationships between magnetism and electricity and be able to work problems with them.

302601 - Biology I

Credit: 1 Grade Scale: Regular Scale - 4.0

Prerequisite: Physics

Description

Biology I is an introductory course designed to provide students with a fundamental understanding of important biological concepts, strengthen critical thinking skills and relate various scientific issues to their everyday lives and to society as a whole. Topics covered will include the structure and function of the cell, genetics, molecular biology, zoology, botany, evolution, ecology and a systematic survey of the taxonomy and natural history of the major groups of living organisms. Classroom instruction will include lab investigations, individual projects, etc. Course includes an end of course assessment mandated by the state of Kentucky. That test is the final exam for the class and comprises 20% of the student's 2nd semester grade.

Course Standards

Students will:

- Develop critical thinking skills and utilize scientific method to solve problems effectively
- Develop a basic understanding of the chemistry of life
- Acquire knowledge of cell structure and function
- Examine diversity of organisms and biological classification
- Examine interrelationships and interdependencies of organisms in ecosystems
- Investigate photosynthesis and cellular respiration
- Examine the flow of energy through living systems
- Understand the role of natural selection in the evolution of life on Earth
- Investigate the role DNA plays in the expression of the characteristics of organisms
- Investigate earth history as it relates to the history of life
- Examine organism response behaviors to their environments.

302603 - Biology I Advanced

Credit: I Grade Scale: Advanced Scale – 4.5 Prerequisites: Recommendation of teacher and/or Counselor

Description

This course is designed to introduce students to the most important biological principles. The advanced class in biology provides in-depth studies, laboratory investigations and individual projects for students who have a deeper interest in biology. The concepts presented are centered around the modern cell and cell processes essential to life. Topics covered in this course include biochemistry, cytology, photosynthesis/respiration, genetics, evolution, ecology, botany, and a systematic survey of the classification and natural history of the major groups of living organisms. Independent study in the various fields of biology will provide the student with knowledge of the basic life processes and make the student more aware of his or her own role in life. Course includes an end of course assessment mandated by the state of Kentucky. That test is the final exam for the class and comprises 20% of the student's 2nd semester grade.

Course Standards

Students will:

- Use the scientific method to develop and test hypothesis
- Develop a basic understanding of the chemistry of life
- Explain the structure of function of cells
- Examine how biological classification defines the diversity of organisms
- Analyze interrelationships and interdependencies of organisms in ecosystems
- Explain the relationship between photosynthesis and cellular respiration
- Examine the flow of energy though living systems
- Understand the role of natural selection in the evolution of life on Earth
- Explore the role DNA plays in the expressions of the characteristics of organisms
- Investigate earth history as it relates to the history of life
- Examine organism response behaviors to their environments.

304521 - Chemistry I

Credit: 1 Grade Scale: Regular Scale - 4.0

Prerequisites: Successful completion of Algebra I, Physics or Biology I. Currently enrolled in Algebra II or Geometry.

Description

Designed for the college bound student in a non-science or technical field, the goal of this course is to allow students practical experiences with solving problems related to chemistry in the community. The student is lead to integrate what they have learned to see how it addresses issues in the real world. Chemistry I is a practical approach to understanding how Chemistry drives the interactions of everyday materials. The resource text, Chemistry in the Community, is divided into eight units that revolve around a societal question. The chemistry presented to the student builds upon vocabulary, thinking skills, problem-solving and lab techniques, without as much emphasis on mathematical calculations. In Chemistry I, students are presented with the skills to acquire chemical knowledge to make intelligent decisions for themselves and for the communities in which they belong.

Course Standards

Students will:

- Work with scientific concepts that will guide them through a design of scientific investigations and discoveries
- Use equipment, tools, techniques, technology, and mathematics to improve scientific investigations and communications
- Investigate nuclear structure, nuclear forces, and nuclear reactions
- Investigate atomic structure and electric forces
- Investigate how the structure of matter relates to physical properties of matter
- Examine how energy is transferred and recognize that the universe is constant
- Distinguish between types of energy
- Investigate how the structure of matter relates to chemical properties of matter
- Examine the transfer of electrons or hydrogen ions between reacting ions, molecules, or atoms
- Investigate factors affecting reaction rates
- Examine how everything tends to become less organized and less orderly over time.

304523 - Chemistry I Advanced

Credit: 1 Grade Scale: Advance Scale – 4.5

Prerequisites: Algebra I, Physics and currently enrolled or completed Algebra II.

Description

Designed for college bound students pursuing a science/engineering career (other professional fields of study are encouraged if desired). The goal of this course is to adequately prepare students for success in a first year college chemistry course designed for science related professions. Chemistry I Advanced is aligned with the National Science Education Standards, which emphasize inquiry and high-level thinking/logic skills. Students discover concepts through strategies that allow them to obtain a great depth of understanding of chemistry principles, which provides the foundation for Advanced Placement Chemistry. Active involvement in classroom activities utilizing independent problem solving, research skills, data collection and interpretation, reading for understanding, hypothesizing and developing logical explanations/models for observations are required rather than memorization of facts/completion of work. Safe, independent laboratory practices as well as abstract mathematical applications as they relate to chemistry concepts are stressed. The pace and depth of content of this course is rigorous, yet prepares students for the next step in their scientific pursuits.

Course Standards

- Work with scientific concepts that will guide them through the design of scientific investigations and discoveries
- Become familiar with scientific equipment, techniques, technology, and mathematics to improve scientific investigations and communications and communicate designs, procedures, and results of scientific investigations
- Investigate nuclear structure, nuclear forces, and nuclear reactions
- Investigate atomic structure and electric forces. Matter is made of minute particles called atoms, and atoms are composed of even smaller components, which will be investigated
- Investigate of how the structure of matter (i.e. constituent atoms, distances and angles between atoms) relates to physical properties of matter
- Examine how energy is transferred (i.e. collisions, light waves) and recognize that the universe is constant
- Distinguish between types of energy (i.e. kinetic energy, potential energy, energy fields)
- Investigate how the structure of matter (i.e. outer electrons, type of bond) relates to chemical properties of matter
- Examine the transfer of electrons or hydrogen ions between reacting ions, molecules, or atoms
- Investigate factors (i.e. temperature catalysts) affecting reaction rates. Chemical reactions occur all around us and in every cell in our bodies. These reactions may release or consume energy. The reaction rates vary depending on concentration, temperature, properties of reactants, and catalysts

• Examine how everything tends to become less organized and less orderly over time (i.e. heat moves from hotter to colder objects).

302616 - Forensics

Credit: 1 Grade Scale: Regular Scale – 4.0 Prerequisite: Biology I and Algebra I Grade(s): 11, 12

Description

Forensics is the application of scientific methods to those criminal and civil laws that are enforced by police agencies in a criminal justice system. This course may cover the topics listed below. This course has a strong emphasis on laboratory work, inquiry and problem solving. Working as a team is strongly stressed throughout the course.

Course Standards

Students will:

- Have a background of the history and use of forensics
- Properly investigate, document and illustrate a crime scene
- Analyze impressions from shoes, tolls, tires, etc.
- Perform experiments analyzing the properties of glass
- Microscopically work with their and fiber
- Take, identify and interpret fingerprints and the various methods for collecting them
- Evaluate, identify and deduce scenarios involving DNA, blood and blood spatter
- Mathematically investigate human long bones, pelvises, skulls and teeth and apply knowledge to determine age, gender, height and condition of deceased
- Understand the effects of drugs and alcohol and test for them in a lab setting
- Evaluate poisons using gas chromatography and titration experiments
- Learn about accident reconstruction and apply the physics of forces to investigate accident scenes
- Use chromatography and handwriting analysis clues to evaluate documents for forgery
- Study firearms and experiment with ballistics data to identify which weapon fired which bullet
- Look at forensic entomology, the use of insects, to determine time of death as well as environment conditions.

304612 – Astronomy / 304631 Geology

Credit: 1 Grade Scale: Regular Scale – 4.0 Prerequisites: Algebra I and Physics Grade(s): 10, 11, 12

Description

This course is designed to prepare students for the rigors of introductory astronomy and geology classes in college (whether they be science or non-science majors), and to provide opportunities for students to learn about the universe and Earth. The contents of the course are divided into two semesters, one for astronomy and the other for geology and basic elements of meteorology. Attention is given to current issues and applications of science and technology in today's world. The approach to the course is inquiry-oriented, enabling students to develop skills and understanding through direct laboratory experience.

Course Standards

Students will for Astronomy:

- Investigate how the motion of the Earth influences our view of the Sun and night sky
- Use the Starry Night software to investigate the night sky
- Examine the progression of astronomy from the geocentric to heliocentric view
- Investigate the characteristics and motion of the planets
- Explain current model of the formation of the solar system and investigate its components
- Explain the inner workings of the Sun and the role of light in astronomy
- Participate in star gazing events
- Investigate the evolution of stars, neutron stars and black holes
- Discuss the structure and cosmology of the universe
- Discuss recent developments in astronomy and space exploration.

Students will for Geology:

- Explain the components and layers of the Earth and how the Earth formed
- Investigate the theory of plate tectonics and the evidence
- Examine the processes that change the Earth's surface
- Investigate the geologic time scale and the timing of the appearance different forms of life

- Identify basic minerals and mineral groups
- Investigate the formation of magma and igneous rocks
- Explore volcanism and earthquakes and the hazards associated with each
- Investigate the relationship of geology to rivers, lakes, coastal regions and beaches, alpine regions and glaciers, and deserts
- Investigate meteorology and how climate has changed during geologic time

Comment: Although not a requirement for students taking Astronomy and Geology, dual credit may be offered in collaboration with NKU for those who opt to do so and may be taught in part by NKU staff. Students may receive 4 credit hours in GLY 110 with lab. This content will be covered in the spring semester only, however, students who elect to participate in the dual credit class at NKU must take the entire year course at Highlands High School. Students who choose to complete the course for both Highlands High School and dual credit must also complete the following:

- Dual credit grades reported to NKU will be determined by college policies and rely on major assessments. HHS grades will follow policy communicated by the instructor.
- Students must meet ACT and GPA requirements for the University Scholars program.
- Current cost associated with the dual credit program.
- A course syllabus explaining additional details from NKU is available upon request.

302631 – Anatomy; Human Physiology

Credit: 1 Grade Scale: Advanced Scale - 4.5

Description

Anatomy & Physiology involves an in-depth study of human anatomy and physiology. The dissection of the cat is a very important part of the curriculum. Other topics, which are studied in detail, are cytology, histology, cell energetic, and nutrition. Guest speakers from various health related fields, such as nurses, doctors, and physical therapists, greatly enhance the program. Field trips are also taken to hospitals and medical institutions.

Course Standards

Students will:

- Develop an advanced level of understanding of the various structures and functions of the human body
- Become proficient at utilizing the laboratory with a variety of lab procedures and equipment
- Be able to use medical and biological vocabulary in relevant ways to communicate proper functioning as well as pathologies of the human body
- Gain new insights into the historical and current perspectives on human health
- Understand the interdependences between the various systems of the human body
- Be prepared for more extensive studies in life sciences at the college level.

Comment: Although not a requirement for students taking Anatomy and Physiology, dual credit maybe offered in collaboration with NKU for those who opt to do so and maybe taught in part by NKU staff. Students may receive 8 credit hours in Bio208 and Bio209. Students who choose to complete the course for both Highlands High School credit AND dual credit must also complete the following:

- Attend an additional lab component that will be offered on Thursday afternoons on the Highland Heights campus of NKU. These laboratories will have a cadaver component. Credit will not be earned unless students also earn credit in lab
- Dual credit grades reported to NKU will be determined by college policies and rely primarily on major assessments. HHS grades will follow policy communicated by the instructor
- Students must meet ACT and G.P.A. requirements for University Scholars program
- Current cost associated to dual credit program
- A course syllabus explaining additional details from NKU is available upon request.

304999 - Lab Technology

Credit: 1 Grade Scale: Regular Scale - 4.0

Elective in grade 12

Prerequisite: Application, interview and/or approval of science department. Students selecting Lab Technology should have indicated pursuit of science related major in post-secondary studies Comment: Limited to one student per science teacher per day

Description

Student will work with science teacher in discipline of their choice. Under the direction of a participating teacher, the student will set up and break down labs, maintain supply inventories, clean glassware, organize supplies, and troubleshoot equipment problems. The goal is to give the student who is interested in science and technology an opportunity to learn new laboratory operational skills.

Course Standards

Students will:

- Provide assistance in the preparation of laboratory investigations
- Use critical-thinking skills to solve problems.

302646 - AP Biology

Credit: 1 Grade Scale: AP Scale - 5.0

Prerequisites: Biology I Advanced. Chemistry I or currently enrolled in Chemistry I, Teacher recommendation. Comment: Summer work is required. Students must sit for the AP Biology exam.

Description

With the exponential growth of biological information in recent years, it has become very apparent that students should have not just have a broad factual base in their subject but should also develop a deep understanding of the major concepts that run through the discipline and an appreciation of science as an exciting and ongoing process. To that and, the AP Biology Development Committee has expanded the course outline to include the following themes: the overarching concepts which recur, connect and unify our understanding of topics; and concepts which enhance understanding of how and why particular processes or patterns occur.

Course Standards

Students will:

- Understand, be able to discuss and apply biological concepts from the following eight thematic units:
 - Science as a process
 - Evolution
 - Energy transfer
 - Continuity and Change
 - Relationship of Structure to Function
 - Regulation
 - Interdependence in nature
 - Science, technology and society
- Develop to a deeper level their working biological vocabulary as well as their ability to engage biological concepts in a variety of circumstances
- Increase ability to successfully operate in the lab setting using current technologies to solve scientific inquiry questions
- Develop critical thinking skills so as to be able to get at important aspects of a biological issue. This will allow for the student to be a more efficient, insightful problem solver
- Be able to connect other discipline issues into biological topics more accurately so as to help others gain new insights into these connections
- Gain an understanding and appreciation for the history of biology and science and from that be able to more clearly discuss the critical interactions between science and society.

304526 - AP Chemistry

Credit: 1 Grade Scale: AP Scale - 5.0

Prerequisites: Successful completion of Algebra I, Algebra II, Physics, Chemistry. Teacher recommendation. Comment: Summer work is required. Students must sit for the AP Chemistry exam.

Description

AP Chemistry is the equivalent of the general chemistry survey course usually taken during the first year of college by a student pursuing a science or engineering degree. This course includes laboratory investigations that provide practical application of chemistry topics and support the course standards. The curriculum includes all of the topics covered in the College Board AP Chemistry exam.

Course Standards

- Use equipment, tools, techniques, technology, and mathematics in conducting scientific investigations
- Follow the development of chemistry by following the major breakthroughs in the field

- Be introduced to periodicity and the periodic table
- Be able to name chemicals using IUPAC and write formulas given name. They will also be exposed to common names of chemicals and be able to name complex ions
- Be able to balance chemical reactions and perform stoichiometric calculations
- Understand and be able to calculate and use Molarity and other concentration units
- Apply solubility rules when determining products of a double replacement reaction
- Write net ionic equations
- Write and balance redox equations
- Be able to calculate properties of a gas by using the appropriate gas law
- Be exposed to how real gases are different from ideal, and how to calculate values given table of constants for gases
- Be able to use enthalpy in stoichiometric calculations
- Be able to calculate heat capacity/ specific heats and/or use provide constants to determine the amount of heat absorbed or radiated
- Use Hess's law to solve for heat of reaction
- Be able to solve mathematical problems for energy, wavelength, and frequency
- Be able to assign electron configuration to elements by applying rules/principles/periodic table
- Understand that electron configurations control many properties of the elements, and that the periodic table is the best tool for seeing patterns between the elements based on the number of electron in the outer orbital
- Be able to draw resonance structures and assign charges
- Be able to determine polarity based on structure and electronegativities of the atoms in the compound
- Be able to use VESPR to predict molecular and polyatomic ion shape
- Be able to predict hybridization
- Be able to interpret heating curves through solid, liquid, and gas
- Discuss intermolecular forces and predict relative physical properties of compounds based on these forces
- Solve problems using Enthalpy of a solution
- Determine rate constants and rate expressions from data
- Compare and contrast zero, first, and second order reactions
- Use experimental data to postulate a reaction mechanism
- Use Le Chatelier's Principle to predict the direction of a shift in the equilibrium
- Perform a titration, determine end points and calculate the concentrations of unknown solutions
- Be able to identify the conjugate acid-based pairs in a reaction
- Be able to use solubility product constants to determine molar solubility
- Be able to determine the concentrations required to cause precipitate
- Discuss internal energy, system, PV work, entropy and free energy
- Determine the enthalpy and entropy of a reaction using standard molar entropies and enthalpies
- Use to Gibbs free energy equation to determine the spontaneity of a reaction
- Understand the relationship between free energy change and the equilibrium constant
- Calculate cell potentials using a table of standard reduction potentials.

304622 - AP Environmental Science

Credit: 1 Grade Scale: AP Scale - 5.0

Grade (s): 11, 12

Prerequisites: Successful completion of Algebra I and/concurrent enrollment in Algebra II, Biology I or Biology I Advanced, successful completion or concurrent enrollment in Chemistry I or Chemistry I Advanced. Comment: Teacher recommendation. Field worked required, which may take place after school or on Saturdays. Students must sit for the AP Environmental Science Exam. Summer assignment may be required.

Description

AP Environmental Science is designed to be the equivalent of a one-semester, introductory college course in environmental science. The course will provide students with the scientific principles, concepts, and methodologies required to understand the interrelationships of the natural world, to identify and analyze environmental problems both natural and human-made, to evaluate the relative risks associated with these problems, and to examine alternative solutions for resolving or preventing them. The course includes a wide variety of science disciplines including geology, biology, environmental studies, chemistry and geography.

Course Standards

- Describe various Earth systems and dynamics of the resources that are utilized
- Develop and design models of the living world that can explain ecosystem structures, energy flow, diversity change and biogeochemical cycles
- Explain population biology concepts and develop strategies for sustainability by examining case studies and national policies

- Determine the impact of various land and water uses such as agriculture, transportation, deforestation, fishing, and mining on global economics
- Calculate energy consumption and predict future needs based on current uses and trends
- Compare the advantages and disadvantages of various alternative energy sources
- Describe various pollution types, sources, effects and control measures
- Explain the impacts of pollution on the environment, human health, and the economy
- Analyze atmospheric and ecological data relating to stratospheric ozone, global warming, and biodiversity
- Complete laboratory and field experiences such as collecting and analyzing water samples from a nearby stream, and/or building and maintaining a school composting area. Field experiences will be based on number of students and available resources.

304825 - AP Physics C: Mechanics

Credit: 1 Grade Scale: AP Scale - 5.0

Prerequisites: Successful completion of Physics I and concurrent enrollment in AP Calculus or instructor approval. Comment: Teacher recommendation. Students must sit for the AP Physics C Exam. Summer assignment may be required.

Description

AP Physics C builds on the conceptual framework attained in a first course in physics and is intended to be equivalent to a one-semester sequence of an introductory college-level physics course. For students planning to specialize in a physical science (physics, chemistry, astronomy, etc.) or in engineering, most colleges require an introductory physics sequence in which the C course is the first part.

Course Standards

Students will:

- Read, understand, and interpret physical information verbal, mathematical and graphical
- Describe and explain the sequence of steps in the analysis of a particular physical phenomenon or problem
- Use mathematical reasoning, arithmetic, algebraic, geometric, trigonometric, or calculus, where appropriate in a physical situation or problem
- Design experiments and observe and measure real phenomena
- Organize, display and critically analyze data and make an assessment of experimental uncertainties
- Draw inferences from observations and data and communicate results, including suggested ways to improve experiments and proposed questions for further study.

230171 - AP Research

Credit: 1 Grade Scale: AP Scale - 5.0

Grade(s): 11, 12

Prerequisites: Teacher recommendations, completion of AP Seminar with a passing grade. As well, students intending on taking this class must have a mentor by June 1 of the preceeding year or they will be removed from the class and given another elective.

Comment: This course will fulfill the capstone course requirement associated with the AP Capstone Diploma as well as the Major of Intensive Study designation.

Description

AP Research allows students to deeply explore an academic topic, problem, or issue of individual interest. Through this exploration, students design, plan, and conduct a yearlong mentored, research-based investigation to address a research question. In the AP Research course, students further their skills acquired in the AP Seminar course by understanding research methods; employing ethical research practices; and accessing, analyzing, and synthesizing information as they address a research question. The course culminates in an academic thesis paper of approximately 5,000 words and a presentation, performance, or exhibition with an oral defense. Students who enroll in AP Research must sit for the exam.

Course Standards:

- Introduces and contextualizes a research question
- Synthesizes information and perspectives related to the research question
- Explains and rationalizes the research method
- Analyzes and interprets the evidence
- Illustrates a cogent argument that uses a clear line of reasoning based on evidence
- Discuss and reflect on evidence and present implications and consequences
- Manage research process to create an academic thesis and paper of 5000 words

- •
- •
- Present publicly the research Create and performance, or exhibition Orally defend the research and presentation ٠
- Choose an appropriate format or medium (e.g., multimedia presentation, performance, and exhibition). •



SOCIAL STUDIES

450712- AP Human Geography

Credit: 1 Grade Scale: AP Scale – 5.0 Prerequisite: Recommendation of guidance Grade(s): 9th grade elective or guidance recommendation

Description

Human Geography is the regional study of the world, after a brief study of physical features. Each region will be examined through the people, their cultures, climatic features, topographical features, agricultural products, natural resources, industrial products, and major trade centers. The purpose of the class is to introduce students to the systematic study of patterns and processes that shape human understanding, use, and alteration of the earth's surface. Course content includes map reading, interpreting charts and graphs, and acquiring a social studies vocabulary. This is an AP course and as such, students are required to take the AP exam.

Course Standards

Students will:

- Be introduced to different regions of the world
- Examine relationships between economic, political, social, historical, and cultural aspects of human activities
- Examine the patterns and processes that shape human understanding of landscape, use of landscape, and altering of the earth's landscape
- Employ spatial concepts and landscape analysis to examine social organization and environmental consequences
- Learn methods and use tools geographers use in their science and practice
- Develop a social studies vocabulary.

450837 - World History; Modern

Credit: 1 Grade Scale: Regular Scale -4.0

Description

A chronological survey of the Renaissance to present day World Civilization concentrating on Western Civilizations and laying basic foundations of Eastern Civilizations. Discussions include contributions and basic facts of each civilization with an understanding of social, institutional, and intellectual forces which have influenced mankind. Materials include library reading, films and other audio-visual aids, simulations, lectures and discussions. Some historical writings will be required.

Course standards

Students will:

- Develop an understanding of the principal themes in World History
- Develop the ability to analyze and synthesize historical patterns and express historical understanding in writing
- Develop an understanding of the foundations of current world cultures and conflicts
- Engage in spirited debates on the major historical questions
- Strengthen research skills using print and computer sources
- Acquire the understanding that historians can disagree on the interpretation of historical events
- Develop understanding of the philosophical, theological ideas which have influenced the world.

450876 - AP World History

Credit: 1 Grade Scale: AP Scale – 5.0 Prerequisites: Recommendation of counselor, English I teacher or AP Geography teacher Comment: Application and <u>summer work required</u>. Students must sit for the AP World History exam

Description

The purpose of the AP World History course is to develop greater understanding of the evolution of global processes and contacts, in interaction with different types of human societies. This understanding is advanced through a combination of selective factual knowledge and appropriate analytical skills. The course highlights the nature of changes in international frameworks and their causes and consequences, as well as comparisons among major societies. The course emphasizes a relevant factual knowledge deployed in a conjunction with leading interpretive issues and types of historical evidence. The course builds on an understanding of cultural, institutional, and technological precedents that, along with geography, set the human stage. Periodization, explicitly discussed, forms an organizing principle for dealing with change and continuity throughout the course.

Specific themes provide further organization to the course, along with the consistent attention to contacts among societies that form the core of the world history as a field of study.

AP World History highlights six overarching themes that should receive approximately equal attention throughout the course beginning with the Foundations section:

- Patterns and impacts of interaction among major societies: trade, war, diplomacy, and international organizations
- The relationship of change and continuity across the world history periods covered in this course
- Impact of technology and demography on people and the environment (population growth and decline, disease, manufacturing, migrations, agriculture, weaponry)
- Systems of social structure and gender structure (comparing major features within and among societies and assessing change)
- Cultural and intellectual developments and interactions among and within societies
- Changes in functions and structures of states and in attitudes toward states and political identities (political culture), including the emergence of the nation-state (types of political organization).

Course Standards

Students will:

- Develop an understanding of the principal themes in world history
- Be trained to analyze and interpret primary sources, including documentary material, maps, statistical tables, and pictorial and graphic evidence of historical events
- Learn to take notes from printed material, lectures, discussions, and visuals
- Critically read text assignments, supplemental text assignments, and primary source documents
- Write essay exams, analytical papers, and research papers
- Be able to express themselves with clarity and precision through analytical essays
- Correctly cite sources and credit the phrases and ideas of others
- Learn to access historical materials, their relevance to a given interpretive problem, their reliability, and their importance
- Experience a rigorous curriculum that will provide preparation for advanced college course.

450812 - US History

Credit: 1 Grade Scale: Regular Scale – 4.0 Prerequisites: English II and World Civilization teacher recommendation

Description

The eleventh grade American History course is a survey of our country's history from the period of Exploration to the present time. Emphasis is placed on political, diplomatic, economic, and social history; however, cultural developments are also stressed, with primary emphasis on modern history. The student is expected to acquire basic factual knowledge concerning the events and major personalities involved in the United States history. They should have some experience in historical research, analysis and interpretation. However, the primary objective of the course is to develop in the student an understanding of and appreciation for his/her country and its culture. All U.S. history classes will organize to address the Kentucky Core Content and Program of Studies. There is a state mandated end of course assessment for this class.

Course Standards

Students will:

- Develop an appreciation and understanding of the history as a social science discipline
- Study the history of the United States from Exploration to present day
- Learn to make responsible choices and decisions
- Learn to develop a tolerance and respect for all people, cultures, and ideas
- Learn to communicate with others to help resolve conflicts
- Examine the disciplines of geography, economics, government, civics, culture, and society throughout the class.

Credit: 1 Grade Scale: AP Scale – 5.0 Prerequisite: Recommendation from World Civilizations teacher. Comment: Summer work is required. Near the conclusion of the course, students must sit for the AP US History Exam. There is a state mandated course assessment given at the end of the year.

Description

The AP U.S. History course is designed to provide students with the analytic skills and factual knowledge necessary to deal critically with the problems and materials in U.S. history. The program prepares students for intermediate and advanced college courses by making demands upon them equivalent to those made by full-year introductory college courses. Students should learn to assess historical material- their relevance to a given interpretive problem, reliability, and importance- and to weigh the evidence and interpretations presented in historical scholarship. An AP U.S. History course should thus develop the skills necessary to arrive at conclusions on the basis of an informed judgment and to present reasons and evidence clearly and persuasively in essay format. Course Standards

Students will:

- Be exposed to the historical content of American History from Discovery to the Present
- Be trained to analyze and interpret primary sources, including documentary material, maps, statistical tables, and pictorial and graphic evidence of historical events.
- Learn to take notes from printed material, lectures, discussions, and visuals
- Critically read text assignments, supplemental text assignments, and primary source documents
- Write essay exams, analytical papers, and research papers.
- Be able to express themselves with clarity and precision through analytical essays
- Correctly cite sources and credit the phrases and ideas of others
- Learn to access historical materials, their relevance to a given interpretive problem, their reliability, and their importance
- Experience a rigorous curriculum that will prepare them for advanced college courses
- Increase their self-confidence, motivation, and academic orientation, particularly in area of U.S. History.

451004 - American Government

Credit: 1 Grade Scale: Regular Scale – 4.0 Required in grade 12

Description

This course will be a broad study of government- local, state, and federal. This will include a study of the structure of government, the operations of government, and the obligations and responsibilities of citizens toward that government. This course will also include emphasis on the legal system as it affects the individual in society. Attention will be given to other areas of the social studies, such as economics, sociology, psychology, culture, law, and other fields of study. The underlying theme of the course is a discussion of practical application and issues students may encounter in their lives.

Course Standards

Students will:

- Discover the tools, processes, methods, and techniques to think as an informed citizen while appreciating political science as a field of study
- Understand the democratic principles of justice, equality, responsibility and freedom and apply them to real life situations
- Accurately describe various forms of government and analyze issues that relate to the rights and responsibilities of citizens of democracy
- Learn to make responsible choices and decisions
- Understand how present events and future decisions help to shape government so that government meets the needs of the people
- Gain an understanding of the organization of United States government to allow for the protection of democratic principles
- Learn to develop a tolerance and respect for all people, cultures, and ideas
- Learn to communicate with others to help resolve conflicts
- Examine the disciplines of economics, civics, and society throughout the class.

451039- Law & Justice; We the People

Credit: 1 Grade Scale: Advanced Scale - 4.5

Comment: A limited number of class meetings outside of the school day will occasionally be required, as will participation in the state (and possibility national) competition. This course can be taken as an elective or can be

used to fulfill the government requirement for graduation. If used as a government requirement, additional class work may be necessary. Grade(s): 12

Description

This course is a broad study of the Constitution- using the nationally acclaimed "We the People" curriculum. It is vital that the student agrees to fulfill the commitment to the class. All students are required to participate in the state competition in February. Students are also responsible for current event assignments designed to enhance their competition skills. The class will focus on the general skills of research, writing, public speaking, team work, and analytical thinking. This course will be especially useful and interesting for those considering a future in law, politics, and government.

Course Standards

Students will:

- Discover the tools, processes, methods, and techniques to think as an informed citizen while appreciating political science as a field of study
- Understand the democratic principles of justice, equality, responsibility, and freedom and apply them to real life situations
- Accurately describe various forms of government and analyze issues that relate to the rights and responsibilities of citizens of a democracy
- Learn to make responsible choices and decisions
- Understand how present events and future decisions help shape the government so that government meets the needs of people
- Gain an understanding of the organization of the United States government to allow for the protection of democratic principles
- Learn to develop tolerance and respect for all people, cultures, and ideas
- Learn to communicate with others to help resolve conflicts
- Examine the disciplines of economics, civics, and society throughout the class
- Develop oral presentation skills to participate and communicate effectively in the state/national competition.

451030 - AP United States Government and Politics

Credit: 1 Grade Scale: AP Scale – 5.0

Prerequisites: Preferred recommendation from American History and English teachers.

Comment: Summer work may be required. Students must sit for the AP Government exam. Fulfills senior year Government requirement.

Grade: 12

Description

This course will give students an analytical perspective on government and politics in the United States. It includes both the study of general concepts used to interpret U.S. politics and the analysis of specific examples. The course requires familiarity with the various institutions, groups, beliefs, and ideas that constitute U.S. politics. While there is no single approach that an AP United States Government and Politics course must follow, students should become acquainted with the variety of theoretical perspectives and explanations for various behaviors and outcomes. The topics covered will parallel those explored in college courses. Topics of the class include: Constitutional Underpinnings of U.S. Government; Political Beliefs and Behaviors; Political Parties, Interest Groups, and Mass Media; Institutions of National Government; Public Policy; and Civil Rights and Civil Liberties.

Course Standards

Students will:

- Learn facts and concepts and understanding typical political processes
- Use specific information critically in order to evaluate general propositions about government and politics
- Analyze political relationships between people and institutions and between different institutions
- Interpret and utilize basic data relevant to government and politics in sustained written arguments.

459890 - Introduction to Logic & Philosophy

Credit: 1 Grade Scale: Regular Scale – 4.0 Prerequisites: Completion of English I and English II

Description

This course is an introductory level seminar addressing the thinking and questions that shape our world. Who am I? What is right? What do I know? What do I believe? How do I think? Students will be expected to both participate in and lead regular seminar discussions. Students will also complete a variety of assignments/projects that will ask them to connect the ideas from the course beyond the classroom.

Course Standards

Students Will:

- Complete various projects and read novels, plays, shorts stories, and non-fiction tests (essays, editorials, etc.) in order to better experience and understand the impact of philosophy
- Produce analytical and personal expressive writing
- Learn and develop skills associated with rhetoric, reasoning, logic, argument, composition, conflict, criticism, and others
- Participate and lead seminar discussions
- Identify and categorize logical and illogical arguments.

450605 - AP Macroeconomics

Credit: 1 Grade Scale: AP Scale – 5.0 Prerequisite: Completed Algebra II

Description

Study begins with fundamental economic concepts such as scarcity, opportunity cost, production possibilities, specialization, comparative advantage, demand, supply, and price determination. Major topics include measurement of economic performance, national income and price determination, fiscal and monetary policy, and international economics, and growth. Attendance and instructor meeting is required.

Course Standards

Students will:

- Explain how we measure GNP and GDP
- Identify the phases of the Business Cycle when given the appropriate economic data
- Describe Keynesian Equilibrium in words and diagrams
- Distinguish between a Contractionary and Expansionary Fiscal Policy
- Explain what determines the value of money
- Explain how Open Market Operations, the Discount Rate, and the Reserve Requirement are used to expand or contract the money supply
- Discuss the various problems and tradeoffs that policymakers face in the real world
- Describe the effects of Depreciating or Appreciating Currency Rates on a nation's imports and exports
- Describe how Exchange Rate Systems work and convert currency using current exchange rates
- When given necessary data, compute the costs of producing two commodities in two countries, determine which nation has the Comparative Advantage in the production of each commodity, calculate the trading ratio, and explain the gains to each nation and the world from Specialization and Trade.

450844 - AP European History

Credit: 1 (dual credit) Grade Scale: AP Scale – 5.0 Grade(s): 11, 12 Comment: Dual credit course with Thomas More College.

Description

The purpose of the AP European History course is to provide students with the analytic and factual knowledge necessary to deal critically with the problems and materials in European history since 1450 CE. Such knowledge helps students develop contextual understandings of the development of current institutions in present-day European societies. Emphasis on the social, economic, political, diplomatic, intellectual and cultural development of governments and societies. Moreover, students will continue to develop their ability to analyze historical evidence and interpretations. The program prepares students for intermediate and advanced college courses by making demands upon them equivalent to those made by full-year introductory college courses.

Course Standards

- Analyze European history through the lens of three major themes:
 - The development of intellectual and cultural institutions
 - The development of political and diplomatic institutions
 - The development of social and economic institutions
- Be exposed to the historical content of European history from 1450 to the Present

- Be trained to analyze and interpret primary sources, including documentary material, maps, statistical tables, and pictorial and graphic evidence of historical events
- Learn to take notes from printed material, lectures, discussions, and visuals
- Write essay exams, analytical papers and research papers
- Be able to express themselves with clarity and precision through analytical essays
- Correctly cite sources and credit the phrases and ideas of others
- Learn to access historical materials, their relevance to an interpretive problem, their reliability, and their importance
- Experience a rigorous curriculum that will provide preparation for advanced college courses.

459901 - Psychology

Credit: 1 Grade Scale: Regular Scale – 4.0 Prerequisite: None Grade(s): 10, 11, 12

Description

Psychology is designed to provide student with a broad overview of the major theories and topics in the study of human and animal behavior. Emphasis will be placed on an understanding of the basic principles in areas such as personality, learning, consciousness, memory, human development and mental dysfunction. The question of human behavior as a product of nature (genetics) or nurture (environment) is a continual theme in this course. Contemporary issues and research in the field of psychology will be integrated into the course throughout the year.

Course Standards

Students will:

- Gain an understanding of the basic concepts, principles, and processes of psychology
- Develop the ability to understand others and communicate effectively
- Strengthen and enhance reading skills and vocabulary
- Refine and strengthen organizational skills through maintaining a binder
- Develop an increased awareness of the importance of mental health and gain the knowledge to help friends, family, or themselves in seeking help and dealing with more common psychological challenges such as depression
- Further develop writing skills through journal assignments and book critiques, as well as through the use of written expression, to assess knowledge and to voice opinions.

459990 - Abnormal Psychology Advanced

Credit: 1 Grade Scale: Advanced Scale – 4.5 Prerequisite: Student must have passed Psychology or AP Psychology and have the recommendation of the psychology teacher.

Grade(s): 11, 12

Description

This year-long elective explores in greater detail one of the most popular and fascinating and popular topics in psychology- psychological disorders. This elective will focus on the main categories of mental dysfunction outlined by the *Diagnostic and Statistical Manual*. The specific conditions in these categories, such as depression obsessive-compulsive disorder and schizophrenia, will be studied. This will include a discussion of potential causes and symptoms as well as assessment and treatment of these disorders. A main objective of this course will be to destigmatize mental illness and help students gain an appreciation of the importance of their mental health.

Course Standards

- Gain a basic understanding of the main categories of psychological disorders as well as the symptoms and treatment of such conditions
- Develop an awareness of stereotypes and labeling of people to try to reduce the stigma and shame associated with mental illness
- Strengthen and enhance reading skills and vocabulary through projects based on six non-fiction books and one fiction novel
- Refine and strengthen organizational skills through maintaining a binder that will serve as main resource place of textbook
- Appreciate the history of mental illness and how the treatment of these conditions has evolved over time
- Develop an increased awareness of the importance of mental health and gain the knowledge to help friends, family, or themselves in seeking help and dealing with more common psychological challenges such as depression

• Further develop writing skills through journal assignments and book critiques, as well as through the use of written expression to assess knowledge and voice opinions.

459902 - AP Psychology

Credit: 1 Grade Scale: AP Scale – 5.0 Prerequisites: Advanced biology and recommendations from World Civilization and English teacher. Comment: Students must sit for the AP Psychology exam. Grade(s): 10, 11, 12

Description

Advanced Placement Psychology is a course for students who wish to complete studies in secondary school equivalent to an introductory college course in psychology. The course is a challenging and rigorous introduction to the systematic and scientific study of the behavior and mental processes of human beings and other animals. Within this study, students will be exposed to the psychological facts, principles, and phenomena associated with each of the major subfields of psychology. This will include learning about ethics and methods that psychologists. Use in their science and practice. The course will cover the topics and areas recommended by College Board. This class is an elective designed for the student who possesses the motivation and maturity level necessary to investigate the content material of the discipline.

Advanced Placement Psychology is offered to juniors or seniors who have demonstrated superior ability in language arts and biology as indicated by test scores and class performance. The student may be able to receive college credit for his/her work in psychology depending upon the AP exam score and the policy of the college of choice.

The aim of this course is to provide the student with a learning experience equivalent to that obtained in most college introductory psychology courses.

Course Standards

Student will:

- Gain an understanding of the methodological aspects of the discipline of psychology as well as the biopsychological, cognitive, developmental, and social-emotional processes of human behavior
- Demonstrate an acceptable degree of mastery of basic concepts, principles, and processes of psychology
- Improve in the ability to reason scientifically about behavior
- Develop the ability to understand others and communicate effectively
- Emerge from their first exposure to psychology with a rich appreciation of the nature of psychology that will allow them to recognize how the principles, processes, and professions of the discipline may play a role in their lives
- Strengthen vocabulary as well as reading and writing skills
- Be exposed to the knowledge necessary to perform competitively on the Advanced Placement Examination.

459813 - The Bible in U.S. History and Government

Credit: 1 Grade Scale: Regular Scale – 4.0 Course Description:

This elective social studies course, open to juniors and seniors, will be a broad study of the influence of the Bible and religion in U.S. history and government. The course will include a study of the role that the Bible and religion have played in our nation's history from colonial times until the present. Attention will be given to various interpretations of the Bible with regard to the founding documents, U.S. government, the role of religion in politics, the legal system, etc.

Course Standards

- Understand the role of the Bible with regard to U.S. history, law, politics, and government.
- Critically read both the Bible and various scholarly articles pertaining to religion in America.
- Read and discuss various interpretations of the Bible throughout U.S. history and in politics and government today.
- Write essays and papers about the influence of the Bible and religion on current political events, governmental issues, legal issues, etc.
- Discuss the role of religion in politics today.

• Examine the influence of the Bible on our nation's founding documents, including, but not limited to: The Declaration of Independence, Constitution, and the Bill of Rights (particularly the Establishment Clause of the First Amendment)

230171 - AP Research

Credit: 1 Grade Scale: AP Scale - 5.0

Grade(s): 11, 12

Prerequisites: Teacher recommendations, completion of AP Seminar with a passing grade. As well, students intending on taking this class must have a mentor by June 1 of the preceeding year or they will be removed from the class and given another elective.

Comment: This course will fulfill the capstone course requirement associated with the AP Capstone Diploma as well as the Major of Intensive Study designation.

Description

AP Research allows students to deeply explore an academic topic, problem, or issue of individual interest. Through this exploration, students design, plan, and conduct a yearlong mentored, research-based investigation to address a research question. In the AP Research course, students further their skills acquired in the AP Seminar course by understanding research methods; employing ethical research practices; and accessing, analyzing, and synthesizing information as they address a research question. The course culminates in an academic thesis paper of approximately 5,000 words and a presentation, performance, or exhibition with an oral defense. Students who enroll in AP Research must sit for the exam.

Course Standards:

- Introduces and contextualizes a research question
- Synthesizes information and perspectives related to the research question
- Explains and rationalizes the research method
- Analyzes and interprets the evidence
- Illustrates a cogent argument that uses a clear line of reasoning based on evidence
- Discuss and reflect on evidence and present implications and consequences
- Manage research process to create an academic thesis and paper of 5000 words
- Present publicly the research
- Create and performance, or exhibition
- Orally defend the research and presentation
- Choose an appropriate format or medium (e.g., multimedia presentation, performance, and exhibition).



BUSINESS PROGRAM

Career and Technical Education...your key to the future!

Students at Highlands have the opportunity to prepare for a career in business while earning a high school diploma. Business courses are designed to meet the needs of all students, offering skills for those who plan to seek immediate employment as well as for those who wish to continue their education. The business education program prepares students of all levels of ability for successful participation in our free enterprise democratic society.

Students who take Computer Applications classes will work toward **MOS Certification** and take the tests in one or more of these Microsoft areas. Having a MOS certification on your resume, college/scholarship applications and job applications is just one more way to show your expertise in the area of computer software.

BUSINESS EDUCATION CAREER PATHWAYS 2017-2018 ACCOUNTING CIP 52.0301.00

PATHWAY DESCRIPTION: This pathway generally prepares individuals to practice the profession of accounting and to perform related business functions. Includes instruction in accounting principles and theory, financial accounting, managerial accounting, cost accounting, budget control, tax accounting, legal aspects of accounting, auditing, reporting procedures, statement analysis, planning and consulting, business information systems, accounting research methods, professional standards and ethics, and applications to specific for-profit, public, and non-

BEST PRACTICE COURSES	EXAMPLE ILP- RELATED
	Account Manager
Choose (2-3) TWO - THREE CREDITS from the following:	Accountant
060112 Computer Tech I/II	Appraiser
060122 Accounting I	Auditor
• 070122 Accounting II Choose (1-2) ONE-TWO CREDITS from the following:	Bank Teller
	Bookkeeper
	Federal Agent
	Forensic
 060411 Business Management 060111 Introduction to Business 	Accountant
070743 Computer Tech III/IV	Investment Advisor
	Investment Banker
	Loan Officer
	Money Manager
	Mortgage
	Broker
	Statistician
BUSINESS EDUCATION CAREER PATHWAYS 2017-2018

ADMINISTRATIVE SUPPORT CIP 52.0401.00

PATHWAY DESCRIPTION: This pathway is designed to provide students an advanced level experience that will propel them in the 21st century business world as they serve in positions such as college interns, administrative assistants, graduate assistants, assistant managers, etc. Instruction includes areas of fundamental business procedures, human resource management, time management software, workstation management, travel planning, financial reporting, payroll, mail procedures, effective communication skills, and ethical decision making skills.

BEST PRACTICE COURSES	EXAMPLE ILP- RELATED
Choose (2-3) TWO-THREE CREDITS from the	Administrative
following:	Assistant
060112 Computer Tech I/II	Event Planner
060122 Accounting I	Health Care
070743 Computer Tech III/IV	Administrator
Choose (1.2) ONE TWO CREDITS from the following:	Health Records
Choose (1-2) OIVE-1 WO CREDITS from the jouowing.	Professional
060111 Introduction to Business	Specialist
	Legal Secretary
 060411 Business Management 080317 Business Economics for CTE Credit OB 	Management
450605 AP Macroeconomics	Consultant
	Medical Assistant
	Medical Secretary
	Office Manager
	Paralegal
	Proofreader
	Travel Agent
	Note: 170131 and 170141 exists in the Health Science Program of Study, 110110 in the Information Technology Program of Study

BUSINESS & MARKETING EDUCATION CAREER PATHWAYS 2017-2018

MANAGEMENT & ENTREPRENEURSHIP CIP 52.0701.00

EXAMPLE

ILP-

PATHWAY DESCRIPTION: This pathway generally prepares individuals to plan, organize, direct, and control the functions and processes of a firm or organization. Includes instruction in management theory, human resources management and behavior, accounting and other quantitative methods, purchasing and logistics, organization and production, marketing, and

BEST PRACTICE COURSES

	121
	RELATED
Choose (3) THREE CREDITS from the following:	Bed and Breakfast
 060111 Introduction to Business 	Proprietor
060411 Business Management	Entrepreneur
Choose (1) ONE CREDIT from the following:	Event Planner
	Hotel Manager
 060112 Computer Tech I/II 080317 Business Economics OB 450605 AP 	Hotel Manager
Macroeconomics	Insurance Agent
060122 Accounting I	Insurance Claims Adjuster
	Property Manager
	Property Manager
	Volunteer Manager
	Note: 080708 and 080707 exists in the Marketing Education Program of Study, 110110 exists in the Information Technology Program of Study

060111 – Business Principles and Applications

Credit: 1 Grade Scale: Regular Scale – 4.0 Prerequisite: None Grades(s): 9, 10

Description

This course establishes basic foundations for further study in business and marketing courses and provides essential information for making financial and economic decisions. Students learn about the fundamentals of the American free enterprise system and world economies; application of sound money management for personal and family finances; credit management; consumer rights and responsibilities; forms of business ownership; risk and insurance; and the importance of international trade.

Course Standards

Students will:

- Explain characteristics of the free enterprise system and economic growth, the law of supply and demand, role of automation and computers, the interdependence of people, and the importance of world trade
- Identify and analyze constitutional freedom, responsibilities and rights of U.S citizens, discuss business ethics and areas in which businesses are thought to have social responsibilities
- Differentiated capitalism, socialism and communism; and identify demographic, geographic, and psychographic trends in consumer market
- Compare sole proprietorship, partnership, corporation and cooperative: consumer's cooperative's cooperative
- Identify major types of financial institutions, define and explain terms relating to credit; explain what is involved major in financial security, insurance and retirement planning, saving and investing
- Research and analyze career opportunities in business and marketing and the relationship of education, employment and wages, identify and describe good job search techniques; and prepare the necessary job application tools
- Analyze and discuss the role of the consumer; and recognize consumer rights and responsibilities; distinguish consumer and industrial markets
- Identify and explain what in involved in budgeting and demonstrate budgeting and record keeping; and examine aspects of resource management, such as personal decision-making, and housing and automobile (including insurance)
- Identify and explain government and labor's role in business, including the role of labor unions and taxation
- Identify the nine functions of marketing and explain the economic value of marketing
- Utilize activities of the Future Business Leaders of America student organization as integral component of course content and leadership development
- Demonstrate employment and social skills relative to the career cluster
- Apply math and communication skills with technical content.

060112 - Computer Tech I MOS/Digital Literacy

Credit: 1 Grade Scale: Regular Scale – 4.0 Prerequisite: None Grades (s): 9, 10, 11, 12

Description

The course emphasizes skills that are essential for all student for both personal and business application used in word processing, spreadsheet, database, and presentation software using Microsoft Office 2013. The student applies techniques for proofreading, editing word division, capitalization, and punctuation for producing malleable copy of letter, memos, reports, tables, flyers with graphics, etc. Language art skills are emphasized. Students will also be introduced to the basics of computer literacy such as file maintenance, operating systems, etc. Internet projects are incorporated into the curriculum. Students will develop competency operating popular software programs currently used in the business world such as Microsoft Word, Power Point, Excel, and Access as they complete units of study in word processing, PowerPoint database, and spreadsheets. Students will work toward **MOS Certification** and take the tests in one or more of these Microsoft areas. Having a MOS certification on your resume, college/scholarship applications and job applications is just one more way to show your expertise in the area of computer software. University of Kentucky makes their Business students have MOS Certification.

- use a word processing program to create, save, print, modify, spell-check, and grammar-check a simple document
- use a word processing program to enhance the appearance of a simple document by using centered, right justification, boldface, underlined, and italicized text
- use a word processing program to change the default margins and line spacing
- use a word processing program to create a document with headers, footer, and footnotes
- use a presentation program with text body, graphics, and animation
- use an electronic spreadsheet to create, save, print, modify, and obtain graphs from a simple spreadsheet
- use an electronic spreadsheet to perform basic mathematical operations including, but not limited to, addition, subtraction, multiplication, and division
- use an electronic spreadsheet to calculate averages and percent's
- use an electronic spreadsheet program to enhance the appearance of a spreadsheet by changing fonts, foreground, and background colors; and centering text across columns
- use a database management program to create, maintain, and print reports from a simple relational database
- use a database management program to customize the user interface by creating and maintaining forms and reports
- use a database management program to query tables using basic query operations such as "and", "or", "not", etc.
- print in landscape and portrait orientations
- use the component of the operating system that helps the user manipulate files and folders to copy, move, rename, and delete files; and to create, copy, move, rename, and delete folders
- use a World Wide Web browser to navigate hypertext documents and to download files
- use Internet search engines and understand their advantages and disadvantages
- use an electronic mail program to send and receive electronic mail
- identify components of a computer
- discriminate between ethical and unethical uses of computers and information
- demonstrate a basic understanding of issues regarding software copyright, software licensing, and software copying
- demonstrate an awareness of computer viruses and basic understanding of ways to protect a computer from viruses
- demonstrate a basic understanding of the impact of computers on society
- use and understand basic computer terminology
- utilize activities of FBLA as an integral component of course content and leadership development.

070743 - Computer Tech II/Office Administration

Credit: ½ Credit A / ½ Credit B. Student must enroll in A&B Grade Scale: Regular Scale – 4.0 Prerequisites: Computer and Technology Applications I/II Grade(s): 10, 11, 12

Description

This course is designed to provide students an advanced-level experience with practical applications through hands-on instruction. Course content will include understanding of various hardware, software, web page design, operating systems, care/operations, administrative applications, and employability skills. The software includes advanced business applications using word processing, presentation, spreadsheets, database management, desktop publishing, and electronic communication. Leadership development will be provided through FBLA. Upon completion of this course, a student will be already have taken the core level tests for MOS Certification and/or the Administrative Support Skill Standard Assessment.

Course Standards

- Identify, describe, and use different types of electronic communications and apply business communications and netiquette skills to create, send, receive, and reply to electronic communication, including e-mail and telephone.
- Demonstrate employability and social skills relative to the career cluster (includes cell phone, Internet netiquette, introductions, and grammar).
- Compose and illustrate an oral report using appropriate visual aids (presentation software, etc).
- Demonstrate advance computer applications to create, edit, save, revise, and print word processing documents, spreadsheets and related charts, database files, reports, and presentations.
- Show advanced software integration skills to create new documents through the use of word processing, spreadsheets and related charts, database files, reports, and presentations.
- Demonstrate advanced skills to design, create, edit, save, and print desktop publishing documents which

include text, graphics, borders, shadings, watermarks, columns, and nameplates using principles of layout and design.

- Demonstrate advanced skills to utilize the mail merge feature of a software program.
- Demonstrate advanced skills to apply financial and database functions to spreadsheets including formulas, data tables, sorting, and queries.
- Demonstrate advanced skills using a spreadsheet program to create and work with templates, wizards, and multiple spreadsheets and workbooks.
- Demonstrate advanced skills using a database program to create enhanced reports.
- Demonstrate advanced skills using presentation software to include diagrams, color and graphic modifications, animation schemes, custom backgrounds, action buttons, hyperlinks, sound, video, and speaker notes.
- Demonstrate advanced skills using word processing, spreadsheet, database, and presentation software to complete workgroup collaboration to include inserting and reviewing comments.
- Research and analyze career opportunities, participate in a job interview, and develop an employment portfolio (letter of application, resume, and follow-up letter).
- Develop FBLA projects using a variety of software applications.
- Utilize activities of FBLA as an integral component of course content, leadership development, and service learning.
- Analyze various hardware, software, operating systems, and emerging technologies used by business and industry, such as speech recognition and personal digital assistants.
- Integrate math, science, reading and business communication skills within the technical content.
- Demonstrate work-based learning (shadowing, mentoring, and co-op, etc.).
- Review proofreaders' marks, spell check and thesaurus, reference materials, and grammar check.

111001 - Introduction to Informatics

Credit: 1 Grade Scale: Regular Scale – 4.0 Prerequisites: None Grade(s): 9, 10, 11, 12

Course Description:

This project based learning course engages students who are curious about informatics. In this course, students will learn how to use a design process to create systems that acquire, store and communicate data for a variety of career fields. Students will work collaboratively in teams to design systems, solve problems, think critically, be creative and communicate with each other and business partners. Students will participate in real world experiences such as designing an inventory system for a retail store, comparing stores in a company to project future sales, track customer buying habits and more. Students will engage in leadership skill sets encompassing their student organization responsibilities.

Students will:

- Use the technical design process to design, build and test prototypes
- Use terminology of the field
- Use data and informatics tools to make decisions and solve problems
- Apply project management principles
- Use appropriate and effective research skills
- Demonstrate proficiency in word processing, spreadsheets/databases, and presentation software
- Communicate information, including descriptive statistics, to various stakeholder groups

060411 - Business Management A& B

Credit: ½ Credit A / ½ Credit B. Student must enroll in A&B Grade Scale: Regular Scale – 4.0 Prerequisite: None

Grade(s): 10, 11, 12

Description

This course emphasizes the skills needed for managing a business that involves the selection and supervision of employees including efficient use of time, personnel, facilities, and financial resources. Students will explore forms of business ownership; typical business organizational structure; product or service promotion in business; effective communications; human relations skills required in dealing with employees; and effective management strategies used in personnel, finance, production, marketing, and information processing. This class corresponds with the school-operated Student Bookstore.

Course Standards

Students will:

• List the forms of business ownership that is typical for a business organizational structure and the many

activities, problems, and decision involved in successfully operating a business.

- Analyze the products or services and promoting of school-based business.
- Explore the communication skills required in dealing with employees and customers.
- Describe the purpose and benefit for creating a business plan.
- Understand the facts, procedures, principles, and concepts needed to become effective members of profit making organizations.
- Discuss how global issues and international trade has and will affect management types, styles, and trends.
- Explain the importance of various business management skills (e.g. time management, handling positive & negative stressors in the business environment, and opportunities for employee's professional growth.
- Utilize SWOT (Strengths, Weaknesses, Opportunities, and Threats) analysis when analyzing case studies and develop a business plans.
- Research and analyze career opportunities in management and demonstrate leadership characteristics.
- Participate in work-based learning (mentoring, shadowing, co-op, etc.) and service learning.

080317 - Business Economics A& B

Credit: ½ Credit A / ½ Credit B. Student must enroll in A&B Grade Scale: Regular Scale – 4.0 Prerequisite: None Grade(s): 10, 11, 12

Description

This course is designed to be a comprehensive study of economics which meets the economics requirement for graduation. It provides an in-depth study of how people produce, distribute, and consume goods and services. Economic terminology, theory, and a comparison of economic systems and policies are integral to the course. Simulations and/or actual work situations may be used to provide practical experience with various economic conditions. We will also provide a basic foundation for further study in sports marketing. Students study they development of products and then explore what occurs in the marketplace by studying purchasing, pricing, and distribution functions.

Course Standards

- Explain how laws & government mandates have been adopted to maintain competition in the US & in the global marketplace.
- Demonstrate an understanding of the cause/effect of business cycles and how monetary and fiscal policy can be used to regulate these problems.
- Compare & contrast a market economy, command economy, mixed economy and traditional economy based on their abilities to achieve social goals such as freedom, equity, & growth in the modern world.
- Analyze the changing relationships among business, labor, and govt. and how each has affected production, distribution, and consumption.
- Utilize decision-making models to make economic choices and determine the opportunity cost of those choices.
- Utilize activities of FBLA and/or DECA as an integral component of course content and leadership development.
- Explain how, in a free enterprise system, individuals attempt to maximize their profits based on their role in the economy.
- Understand why people from other nations have come to the United States because of economic opportunities.
- Develop a marketing plan for a new or existing business or product line
- Develop an understanding of career opportunities in the sports and entertainment industry.

Description

The purpose of the AP course in macroeconomics is to give students a thorough understanding of the principles of economics that apply to an economic system as a whole.

The course places particular emphasis on the study of national income and price-level determination, and also develops students' familiarity with economic performance measures, the financial sector, stabilization policies, economic growth, and international economics. Attendance and instructor meeting is required.

Course Standards

Students will:

- Analyze the basic economic concepts, such as marginal analysis and opportunity costs.
- Investigate the measurement of economic performance, national income and price level determination.
- Show the relationship between unemployment, business cycles and inflation rates.
- Learn about the effects of the financial sector both in fiscal and public policy.
- Compare monetary policies shortcomings and several stabilization policies.
- Explain how to raise economic growth and productivity.
- Evaluate an open economy, international trade and finance.
- Provide critical evaluation of determinants of economic progress and economic decisions made by policy makers.
- Generate and explain charts and graphs to describe economic concepts.
- Interpret and analyze charts, graphs and data to describe economic concepts.
- Experience a rigorous curriculum that will provide preparation for advanced college courses.
- Learn to take notes from printed material, lectures, discussions, and visuals
- Be able to express themselves, verbal and written, with clarity and precision through analytical and research essays
- Correctly cite sources and credit the phrases and ideas of others.

071097- Cooperative Work Program (1 Period / 1 Credit) Grade Scale: Regular Scale - 4.0

Prerequisites: Computer and Technology Application I/II and one other business course Elective in Grade 12

Description

This is a cooperative work experience program for senior business education students. The co-op job is related to the student's career major and, therefore, provides experience in a specific area of interest. The student receives class instruction in the morning and works in the afternoon. The program coordinator trains students for and arranges job interviews. The employer pays students an hourly wage, and students also receive credit for the work experience. One of the morning classes must be Workplace Communications that counts as English IV. Employers complete quarterly evaluations of the student's progress on the job.

Course Standards

Students will:

- Prepare a resume and over letter
- Apply principles of proper interview techniques
- Develop a work site experience related to a Career Major choice
- Discuss quarterly evaluations with the job supervisor and the Co-Op Coordinator
- Develop marketable skills through-on-the-job experience
- Develop individualized job skills related to the specific work site placement.

060122 - Accounting and Finance Foundations

Credit: 1 Grade Scale: Regular Scale – 4.0 Prerequisites: None Grade(s): 10, 11, 12

Description

College Accounting uses an integrated approach to teach accounting. Students first learn how businesses plan for and evaluate their operating, financing, and investing decisions and how accounting systems gather and provide data to internal and external decisions makers. This year-long course covers all the learning objectives of a traditional college level financial accounting course, plus those from a managerial accounting course. Topics include an introduction to accounting, accounting information systems, time value of money, and accounting for merchandising firms, sales and receivables, fixed assets, debt and equity. Other topics include statement of cash flows, financial ratios, cost-volume profit analysis and variance analysis. Students will have the opportunity to take a skills test at the end of the year to earn college credit through Western Kentucky University.

Course standards

Students will:

- Explain how and why the conceptual framework of accounting and generally accepted accounting principles provide guidance and structure for preparing financial statements.
- Describe the information provided in each financial statement and how the statements articulate with each other.
- Identify business ownership structures.
- Explain the role of management and the auditor in preparing and issuing an annual report.
- Identify and explain the classifications within assets, liabilities, and equity.
- Define and calculate the current ratio, debt-equity ratio, return on sales, and return on equity.
- Identify and explain the three phases of the management cycle and the four business processes.
- Explain and calculate the operating cycle (accounts receivable turnover and inventory turnover)
- Explain how internal control procedures are used to safeguard assets.
- Prepare bank reconciliation.
- Describe the purpose of journals and ledgers and their relationship.
- Analyze and describe how business transactions impact the accounting equation.
- Apply the double-entry system of accounting to record business transactions and prepare a trial balance.
- Explain the need for adjusting entries and record adjusting entries.
- Prepare the financial statements for the different types of business operations and ownership structures.
- Explain the purposes of the closing process and record closing entries.
- Describe the differences between the periodic and perpetual inventory systems and record transactions.
- Describe the difference between the gross price method and the net price method and record transactions.
- Determine cash paid for inventory and operating expenses.
- Identify and describe the cost flow assumptions for inventory and explain the impact on the balance sheet and income statement.
- Calculate cost of goods sold and ending inventory using LIFO and FIFO inventory costing methods.
- Explain how inventory for a manufacturing business differs from inventory for a merchandising business.
- Explain how an activity-based costing system operates, including the identification of activity cost pools, and the selection of cost drivers and explain the flow of costs through the manufacturing accounts used in product costing.
- Compute a predetermined overhead rate, and explain its use in job-order costing.
- Determine whether manufacturing overhead is over/under-applied.
- Prepare journal entries to record the costs of direct material, direct labor, and manufacturing overhead in a job-order costing system.
- Prepare a schedule of cost of goods manufactured, a schedule of cost of goods sold, and an income statement for a manufacturer.
- Complete the steps in the accounting cycle and prepare financial statements.
- Calculate payroll taxes.
- Determine the present value and future value cash flows
- Use net present value concepts to make investment decisions.
- Explain the purpose and methods of cost allocation.
- Calculate and record depreciation, depletion and amortization and explain the impact on the financial statements.
- Record the sale and disposal of fixed assets and the impact on the financial statements.
- Compare and contrast debt and equity financing.
- Define and calculate TIE (Times-interest-earned ratio)
- Compare and contrast a periodic payment note payable, a lump-sum note payable, and a periodic and lump-sum note payable.
- Calculate the carrying value, interest expense and cash payment for note.
- Record transactions for notes payable: issuance and interest expense.
- Record transactions for bonds issued at face value, a premium and a discount.
- Record interest expense for bonds issued at face value, a premium and a discount using the straight-line method and effective-interest method.
- Identify and describe the different classes of stock and explain the rights afforded each class of stock and record transactions.
- Describe the difference between cash dividends, stock dividends and stock splits, and the impact on the financial statements.
- Utilize activities of FBLA as an integral component of course content and leadership development.
- Demonstrate employability and social skills relative to the career cluster.
- Apply math and communication skills within the technical content.

070125 – Advanced Accounting

Credit: 1 Grade Scale: Regular Scale – 4.0 Prerequisite: Accounting I Grade(s): 11, 12

Description

The accounting principles taught in this course include an in-depth study of accounting principles, procedures, and techniques used in keeping financial records for sole proprietorships, partnerships, and corporations. There is an emphasis on automated accounting. Topics include a more analytical approach to accounting. Leadership development will be provided through FBLA. Students will complete Quickbooks certification.

Course Standards

Students will:

- Research career opportunities and certifications in the accounting field.
- Demonstrate the ability to journalize transactions, post from journals, prepare worksheets and financial statements, and post adjusting and closing entries.
- Demonstrate the ability to journalize transactions and prepare financial statements for partnerships, corporations, and departmental transactions.
- Apply various accounting principles using automated accounting software and/or accounting simulations.
- Illustrate journal entries for payroll, petty cash, uncollectible accounts, plant assets, depreciation, and notes payable and accounts receivable.
- explain and demonstrate different inventory methods, budgeting systems, the use of vouchers and
- Analyze advanced business transactions and financial statements.
- Demonstrate employability and social skills relative to the career cluster.
- Apply math, communication, and accounting skills in preparing and analyzing a corporation's financial position through ratio analysis, breakeven, productivity, cost- benefit analysis, and time value of money.
- Participate in a work-based learning experience (shadowing, mentoring, and/or co-op, etc.).
- Utilize activities of FBLA as an integral component of course content and leadership development.

Contemporary Issues – Personal Finance, Adult Wellness, and Fitness for Life

Two Semester Course: 060170 – Financial Literacy (0.5 credit) & 340219 – Lifetime Fitness (0.5 credit)

Credit: 1 Grade Scale: Regular Scale – 4.0 Prerequisite: None Grade: 12

Personal Finance Description:

Understanding and managing personal finances are keys to one's future financial success. This course will present essential knowledge and skills to make informed decisions about real world financial issues. The course content is designed to help the learner make wise spending, saving, and credit decisions and to make effective use of income personal financial success.

Literacy principles taught in this course include managing a Checking Account, Payroll Taxes, budgeting, Credit, Taxes, Employee Benefits, and Insurance. Decision-making, problem solving, goal setting and using technology are integrated throughout the content.

P.E. Description:

The general focus of Contemporary Issues revolves around the decision-making process and knowledge required to achieve an overall healthy lifestyle. A knowledge base will be established covering heart disease, sexually transmitted diseases, common cancers, nutrition, mental illnesses, and addictions. This will be achieved through class/group discussion, group projects, guest speakers, and variety of teaching methods engaging all styles of learning.

Modern-day issues include drug/alcohol, peer pressure situations, abstinence, teen pregnancy, and S.T.D.'s/AIDS,

Adult Wellness Description:

Being prepared for life after high school is the focus of the adult wellness portion of the class. The course will prepare students for future relationships and focus current issues facing young adults. Basic nutrition and meal preparation skills will be taught through lab experiences and hands on projects.

Relationship topics include communication, working with colleagues, developing friendships and families, dating and engagement & marriage. Nutrition topics include basic nutrition and wellness, food and menu planning, and basic food preparation

Course Standards

Students will:

- Be able to evaluate and compare different depository institutions and the products/accounts they offer
- Understand and be able to demonstrate how to open, maintain and reconcile a checking account
- Evaluate the differences between debit and credit cards
- Understand various forms for credit and how to use them wisely
- Understand how to build good credit
- Understand how to read a credit report
- Understand terms and concepts related to budgeting.
- Understand the difference between simple and compounding interest
- Demonstrate skills that promote individual well-being and healthy relationships
- Demonstrate knowledge and skills they need to remain physically healthy, while accepting responsibility for their well-being.
- Develop strategies for becoming and remaining mentally and emotionally healthy
- Develop skills necessary to evaluate and use services available in the community
- Examine how personal good choice affects nutrition, personal wellness and maintaining a healthy weight
- Examine a meal for nutrient content
- Propose a balanced meal plan using the Choose My Plate Guide
- Determine the correct cooking methods and prepare recipes for eggs, milk, cheese, fruits, vegetables, grain products and pies
- Determine the correct cooking methods and prepare recipes for meat, poultry, vegetables, breads
- Examine communication styles and their effects on relationships
- Examine individual and family roles in the economic system
- Examine processes for building and maintaining interpersonal relationship

110102– Help Desk Operations

Credit: Earn up 3 credits Grade Scale: Regular Scale – 4.0 Prerequisites: Knowledge of computers and completed application Grade(s): 10-12 - Limited to 2 per period

Description

Students will receive "on-the-job-training" as it relates to responsibility, policy, procedure and troubleshooting skills. Addressing these is the student's primary role. Students will utilize Apple's ATLAS program to cover the "Service Fundamentals" during the first semester and "Mac Hardware and Software" during the second semester. Upon completion of these modules students will have the opportunity to take the Apple Certified Macintosh Technician (ACMT) exam.

Course Standards

Students will:

- Define the role of help desk and customer service in an organization.
- Evaluate help desk technology, tools, and techniques.
- Identify common support problems, including software tools and features.
- Identify service technology trends.
- Demonstrate professional and effective communication skills.
- Demonstrate team building strategies
- Develop technical training materials, and other user documentation to support help desk operations.
- Demonstrate a methodical approach to problem-solving process.
- Apply conflict resolution techniques and skills in customer support.
- Exhibit positive professionalism with customers and technical writing skills.
- Demonstrate personal, system, and stress management by way of using self-help tools.
- Use support performance and reporting tools, call management software, problem resolution software, asset and change management tools, and notification tools for support in additional level two and level three support tools.

909020 - Business Office Assistant

Credit: 1 Grade Scale: Regular Scale – 4.0

Prerequisites: Grade 12 and completion of application and interview

Comment: Students are encouraged to join Future Educators of America (FEA) if they are assigned to a classroom.

Description

Students participating in this program are selected by the supervisor following an application process including a written application, teacher recommendation, and personal interview. Students may request placement in the principal's office, assistant principal's office, guidance office, or resource center. Following placement, Business Office Assistants will meet with the program supervisor for training in general office procedures as well as specific duties to be performed in each office.

Standards

Students will:

- Practice proper telephone etiquette
- Complete telephone message forms properly
- Greet office visitors courteously
- Maintain an appropriate office attitude
- Observe confidentiality rules
- Exhibit integrity and honesty

Perform specific tasks as required by individual offices.



ENGINEERING & TECHNOLOGY EDUCATION CAREER MAJORS

ENGINEERING & TECHNOLOGY EDUCATION CAREER PATHWAYS 2017-2018

INDUSTRIAL/MECHANICAL ENGINEERING CIP 15.0613.00

PATHWAY DESCRIPTION: This pathway prepares individuals to apply mathematical and scientific principles to the design, development and operational evaluation of physical systems used in manufacturing and end-product systems including, but not limited to, fluid power, robotics, automation, rapid prototyping and machine control. Industrial/Mechanical Engineering is one of the broadest engineering disciplines. Industrial/Mechanical engineers design, develop, build, and test mechanical and thermal sensors and devices, including tools, engines, and machines

BEST PRACTICE CORE	EXAMPLE ILP-RELATED CAREER TITLES
Foundational Skills Necessary for Career-Ready Measure: (KOSSA/Industry Certification)	Engineering Technology Instructor
 <i>Complete (2) TWO CREDITS from the following:</i> i 210221 Fundamentals of Engineering Design (CAD I) i 210222 Engineering Design (CAD II) <i>Choose 1-2 CREDITS from the following:</i> i 210239 Robotics Design Essentials & Systems i 210107 Foundation of Engineering & Technology <i>Choose ONE CREDIT from the following:</i> i 210110 Engineering & Engineering Technology Design (Architecture) i 210220 Engineering & Technology Con OR 	Production Woodworker Manufacturing Manager Manufacturing Worker Industrial Engineer Electronics Assembler Industrial Engineer Industrial Technician Quality Controller
210330 Engineering & Technology Co-Op <u>OR</u> 210331 Engineering & Technology Internship	Quality Controller

ENGINEERING & TECHNOLOGY EDUCATION

The Technology Education Department provides boys and girls with awareness, exploration, and skill development relative to the modern workplace. It also gives the practical application and development of academic skills taught in other disciplines. All courses are sequential and most require no prerequisites. Students are expected to pay for all materials and supplies used by them during their course work.

210107 – Foundations of Engineering & Technology A& B

Credit: ¹/₂ Credit A / ¹/₂ Credit B. Student must enroll in A & B Grade Scale: Regular Scale – 4.0 Prerequisite: None Grade(s): 9-10

Description: This course provides the "foundation" for students to understand and apply technological and engineering 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. 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 and Engineering. Participation in Kentucky Technology Student Association will greatly enhance instruction. Hands on and problem based learning course.

Students will:

- Apply the design process involving problem identification, conceptualization, and research, refinement of preliminary ideas, design analysis, development and implementation, detailed documentation of final design, optimization and final presentation.
- Develop and demonstrate strategies and work habits that lead to success.
- Apply technological concepts (such as simple machines, circuits, sketching, fluid systems, etc.) to solve technical problems.
- Define and describe the nature of technology.
- Demonstrate an understanding of the dynamic nature of technology, analyze and interpret historical events, conditions, trends and issues to develop perspective on the impacts of technology on people, society, culture, and the environment.
- Demonstrate an awareness of current and emerging issues (e.g., ethical, social, legal, environmental, political, and privacy) related to technology.
- Explore technological concepts and processes in the contexts of Energy and Power, Information and Communication, Transportation, Manufacturing, Construction, Medical, Agriculture and Bio-Related Technologies.
- Identify opportunities, characteristics, and preparation requirements for occupations in current and emerging technology.
- Demonstrate an understanding of technological systems and the interrelationship between the resource/input, process, output, and feedback elements of these systems.
- Develop competencies in the safe, efficient, and effective use of tools, machines, materials, and processes.
- Communicate design solutions through formal and informal presentations.
- Demonstrate team, social, and employability skills relative to career

210221 - Fundamentals of Engineering Design (CAD I) A& B (NKU Dual Credit)

Credit: ½ Credit A / ½ Credit B. Student must enroll in A & B Grade Scale: Regular Scale – 4.0 Prerequisite: None Grade(s): 10, 11, 12

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. Instruction should be enhanced through participation in Kentucky Technology Student Association challenges. Hands on and problem based learning course.

- Recognize how the History of Design (including artistic periods, styles, and form and function) influences product development.
- Perform basic computer aided drafting functions and develop knowledge and skills in the use of various software programs.

- Research information about professional engineering-related organizations.
- Apply the design process involving problem identification, conceptualization, research, refinement of preliminary ideas, design analysis, development and implementation, detailed documentation of final design, optimization and final presentation.
- Use principles and elements of design including portfolio development containing various written work, drawings, models, and other documentation.
- Perform sketching and visualization using proper techniques and tools to produce pictorial, annotated sketches, multi-view or orthographic drawings using proper and accurate measurements.
- Apply geometric relationships of forms and shapes, lines, various polygons, geometric constraints, Cartesian coordinate system, and origin planes.
- Perform modeling using conceptual, graphical, physical, mathematical, and computer generated techniques, including 3-dimensional software.
- Conduct model analysis and verification.
- Create model documentation including working drawings, dimensioning, and annotations.
- Develop product presentations using proper communication techniques and appropriate presentation aids.
- Develop personal and professional leadership skills through participation in KY TSA.
- Apply concepts from Kentucky Core Concepts in the context of technology education.

210222 - Engineering Design (CAD II) A& B (UC Dual Credit)

Credit: (2-hour dual credit option through University of Cincinnati) ½ Credit A / ½ Credit B. Student must enroll in A & B Grade Scale: Regular Scale – 4.0

Prerequisite: Fundamentals of Engineering Design I (CAD I) Grades 11-12

Description: A project and research based Computer Aided Drafting and Design 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, biomedical, robotics, hydraulics, electricity/electronics, communications, construction systems, alternative energy and computer aided design and problem solving. Instruction should be enhanced through participation in Kentucky Technology Student Association challenges. Hands on and problem based learning course.

Students will:

- Recognize how the History of Design (including artistic periods, styles, and form and function) influences product development.
- Research information about professional engineering-related organizations.
- Develop and demonstrate competencies with pictorial drawings, threads and fasteners, gears and cams, and pipe drafting.
- Apply the design process involving problem identification, conceptualization, research, refinement of preliminary ideas, design analysis, development and implementation, detailed documentation of final design, optimization and final presentation.
- Apply geometric relationships of forms and shapes, lines, various polygons, geometric constraints, Cartesian coordinate system, and origin planes.
- Perform modeling using conceptual, graphical, physical, mathematical, and computer generated techniques, including 3-dimensional software.
- Develop knowledge and understanding of basic electric, welding and industrial process and symbols.
- Develop knowledge and understanding of concepts of CAD architecture, construction techniques,
- structural systems, hydraulics and pneumatics systems.
 Conduct model analysis and verification.
- Create model documentation including working drawings, dimensioning, and annotations.
- Develop product presentations using proper communication techniques and appropriate presentation aids.
- Perform modeling using conceptual graphical, physical, mathematical, and computer generated techniques, including 3-dimensional software.
- Develop personal and professional leadership skills through participation in KY TSA.
- Apply concepts from Kentucky Core Concepts in the context of technology education.

210110 - Architecture Engineering & Engineering Design A & B

Credit: $\frac{1}{2}$ Credit A / $\frac{1}{2}$ Credit B. Student must enroll in A & B Grade Scale: Regular Scale – 4.0 Grade(s): 10, 11, 12

Prerequisite: None

Description: This pathway prepares students to apply engineering principles and technical skills in support of architects, engineers and planners engaged in designing and developing buildings, urban complexes, and related systems. Includes instruction in design testing procedures, building site analysis, model building and computer graphics, structural systems testing, analysis of prototype mechanical and interior systems, report preparation, basic construction and structural design, architectural rendering, computer-aided drafting (CAD), layout and designs, architectural blueprint interpretation, building materials, and basic structural wiring diagramming

Students will;

- Apply the design process involving problem identification, conceptualization, and research, refinement of preliminary ideas, design analysis, development and implementation, detailed documentation of final design, optimization and final presentation.
- Perform basic computer aided drafting functions and develop knowledge and skills in the use of various software programs.
- Create project planning documentation including site information and development options.
- Conduct site planning including grading, public ingress/egress, utilities, landscaping, water supply, and wastewater management.
- Develop architecture plans reflecting various architectural styles that include floor plans, elevations, sections and details, schedules, HVAC, plumbing, and electrical systems, as well as communication and protection systems.
- Define and evaluate structural engineering components including foundations, columns, beams, and roof systems.
- Develop presentations of potential construction projects.
- Use principles and elements of design including portfolio development containing various written work, drawings, models, and other documentation.
- Perform sketching and visualization using proper techniques and tools to produce pictorial, annotated sketches, multi-view or orthographic drawings using proper and accurate measurements.
- Perform modeling using conceptual, graphical, physical, mathematical, and computer generated techniques, including 3-dimensional software.
- Conduct model analysis and verification.
- Create model documentation including working drawings, dimensioning, and annotations.
- Develop product presentations using proper communication techniques and appropriate presentation aids

210239 – Robotics Design Essentials and Systems A& B

Credit: ½ Credit A / ½ Credit B. Student must enroll in A & B Grade Scale: Regular Scale – 4.0 Grade(s): 10, 11, 12 Prerequisite: None

Description: 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. Participation in Kentucky Technology Student Association will greatly enhance instruction. Hands on and problem based learning course.

- Apply the design process involving problem identification, conceptualization, and research, refinement of preliminary ideas, design analysis, development and implementation, detailed documentation of final design, optimization and final presentation.
- Correlate elements of artificial intelligence to their functions in robotics.
- Describe the various classification schemes of sensors applicable to robotics.
- Explain how electronic devices are used in the operation of a robotic assembly.
- Demonstrate an understanding of various technologies used in the design of robotic assemblies.
- Demonstrate an understanding of advanced mathematics and physics associated with the design of a robotic assembly.
- Create a program to control a robotic mechanism.
- Describe the operation and use of various forms of electrical motors in robotic assemblies.
- Demonstrate an understanding of basic 3D modeling concepts as it relates to robotics.
- Analyze and apply data and measurements to solve problems and interpret documents.
- Design, build, program, and configure a robot to perform predefined tasks.

- Formulate scientifically investigable questions, construct investigations, collect and evaluate data, and develop scientific recommendations based on findings.
- Describe the approaches, challenges, and problem-solving methodologies involved with integrating artificial intelligence into robotic systems.
- Describe the role of specialized sensors in the design and operation of robotic systems.
- Describe the use of specialized electronic applications used in robotic systems.
- Demonstrate an understanding of the impact of robotics on the manufacturing process.
- Create a program to control a robotic system.
- Demonstrate an understanding of technologies for communication with and among robotic systems.



FAMILY AND CONSUMER SCIENCE CAREER PATHWAYS

EARLY CHILDHOOD EDUCATION	CULINARY & FOOD SERVICES	CONSUMER & FAMILY MANAGEMENT	FASHION & INTERIOR DESIGN
Recommended Courses Need 3	Recommended Courses Need 3	Recommended Courses Need 3	Recommended Courses Need 3
 Child Development & Parenting/Early Lifespan Development Child Development Services I Child Development Services II 	 Food and Nutrition Culinary Arts I Culinary Arts II 	 Life Skills/FACS Essentials Food and Nutrition Contemporary Issues 	 Life Skills/FACS Essentials Fashion & Interior Design I Fashion & Interior Design II Fashion & Interior Design III
Elective Course(s)	Elective Course(s)	Elective Course(s)	Elective Course(s)
Life Skills/FACS Essentials	Life Skills/FACS Essentials	Parenting & Child Development/Early Lifespan Development	
Co-Op: Early Childhood			Internship: Fashion &
Education			Interior Design
Internship – EC Education			

Three Credits must come from the recommended courses. To complete a career major, students must earn four career-related credits with the major and 3 Math, 2 Science, 4 English, and 3 Social Studies credits.

FAMILY AND CONSUMER SCIENCES

Family and Consumer Sciences Education is the only educational program that addresses the total concept of family life. The purpose of Family & Consumer Sciences Education is to empower individuals and families throughout the lifespan to manage the challenges of living and working in a diverse, global society. The unique focus is families, work, and their interrelationships. The curriculum is aligned to the knowledge and skills identified within the National Standards for Family and Consumer Sciences Education.

Kentucky FCS Education provides students the opportunity to:

- •Explore and prepare for careers in many of today's high-demand occupations
- •Engage in hands-on, contextual learning that incorporates core academic concepts
- •Acquire valuable and essential leadership and life skills

•Demonstrate the ability to effectively collaborate, communicate and think critically and creatively to problem-solve real world issues

•Engage in entrepreneurial activities and work-based learning experiences that provide hands on application

*Earn industry certifications and career readiness through KOSSA assessment

200113 - FACS Essentials

Credit: 1 Grade Scale: Regular Scale – 4.0 Prerequisite: None Grade(s): 9, 10

Description

Life Skills/FACS Essentials is an exciting class that introduces students to Family and Consumer Science topics. This class contains many hands on activities. Units include personal development, housing and interiors, consumer economics, clothing and fashion design, food and nutrition, and child development. Students will participate in sewing and food labs and will help run an in-school preschool program at the end of the school year.

Course Standards

Students will:

- Analyze the practical problems faced by families to balance the demands of work and family
- Predict the results of accomplishing or failing to accomplish the development tasks of adolescence
- Identify some positive and negative influences of peers on adolescent behaviors
- Summarize ways of reducing or preventing teen pregnancy
- Identify factors that promote optimum growth and development of children
- Practice coordinating clothing and accessories
- Plan a budget
- Analyze the results of good/poor study habits
- Develop personal short-term and long-term goals
- Identify physical, psychological, social, and health influences on food choices
- Analyze the causes and consequences of eating disorders
- Evaluate a meal for major nutrients
- Plan menus for a day using basic food groups
- Prepare a simple meal and practice dining etiquette
- Analyze careers in Family and Consumer Sciences
- Analyze financial, social, physical, and emotional costs of parenthood
- Evaluate the consequences of high-risk behaviors
- Develop a plan to improve social skills
- Identify appropriate apparel maintenance
- Compare consumer products
- Utilize FCCLA as an integral component of course content and leadership development
- Apply math, science, and communication skills within technical content
- Demonstrate employability and social relevant to the career cluster.

Contemporary Issues – Personal Finance, Adult Wellness, and Fitness for Life

Two Semester Course: 060170 – Financial Literacy (0.5 credit) & 340219 – Lifetime Fitness (0.5 credit)

Credit: 1 Grade Scale: Regular Scale – 4.0 Prerequisite: None Grade: 12

Personal Finance Description:

Understanding and managing personal finances are keys to one's future financial success. This course will present essential knowledge and skills to make informed decisions about real world financial issues. The course content is designed to help the learner make wise spending, saving, and credit decisions and to make effective use of income personal financial success.

Literacy principles taught in this course include managing a Checking Account, Payroll Taxes, budgeting, Credit, Taxes, Employee Benefits, and Insurance. Decision-making, problem solving, goal setting and using technology are integrated throughout the content.

P.E. Description:

The general focus of Contemporary Issues revolves around the decision-making process and knowledge required to achieve an overall healthy lifestyle. A knowledge base will be established covering heart disease, sexually transmitted diseases, common cancers, nutrition, mental illnesses, and addictions. This will be achieved through class/group discussion, group projects, guest speakers, and variety of teaching methods engaging all styles of learning.

Modern-day issues include drug/alcohol, peer pressure situations, abstinence, teen pregnancy, and STD/AIDS.

Adult Wellness Description:

Being prepared for life after high school is the focus of the adult wellness portion of the class. The course will prepare students for future relationships and focus current issues facing young adults. Basic nutrition and meal preparation skills will be taught through lab experiences and hands on projects.

Relationship topics include communication, working with colleagues, developing friendships and families, dating and engagement & marriage. Nutrition topics include basic nutrition and wellness, food and menu planning, and basic food preparation

Course Standards

- Be able to evaluate and compare different depository institutions and the products/accounts they offer
- Understand and be able to demonstrate how to open, maintain and reconcile a checking account
- Evaluate the differences between debit and credit cards
- Understand various forms for credit and how to use them wisely
- Understand how to build good credit
- Understand how to read a credit report
- Understand terms and concepts related to budgeting.
- Understand the difference between simple and compounding interest
- Demonstrate skills that promote individual well-being and healthy relationships
- Demonstrate knowledge and skills they need to remain physically healthy, while accepting responsibility for their well-being.
- Develop strategies for becoming and remaining mentally and emotionally healthy
- Develop skills necessary to evaluate and use services available in the community
- Examine how personal good choice affects nutrition, personal wellness and maintaining a healthy weight
- Examine a meal for nutrient content
- Propose a balanced meal plan using the ChooseMyPlate Guide
- Determine the correct cooking methods and prepare recipes for eggs, milk, cheese, fruits, vegetables, grain products and pies
- Determine the correct cooking methods and prepare recipes for meat, poultry, vegetables, breads
- Examine communication styles and their effects on relationships
- Examine individual and family roles in the economic system
- Examine processes for building and maintaining interpersonal relationships

200223 - Early Lifespan Development/Parenting and Child Development

Credit: 1 Grade Scale: Regular Scale – 4.0 Prerequisite: None Grade(s): 10, 11, 12

Description

Parenting and Child Development addresses the practical problems involved in raising and working with children. Some of the units include parenting styles, parenting roles and responsibilities, conception and pregnancy, development of infants, toddlers and preschoolers. Students will participate in an in-school preschool program at the end of the school year. This course is a prerequisite for Child Development Services and is recommended for any student who is planning to be a parent and/or have a career in Child Care or Education.

Course Standards

Students will:

- Explain the types of growth and development
- Recognize the effects of heredity and environment on human growth and development
- Describe the stages of human growth and development
- Identify factors that promote optimum growth and development in the infancy, toddler, preschool, and school age stages, including physical growth, social and emotional development, and intellectual development
- Recommend effective guidance techniques for dealing with misbehavior
- Organize play activities for the preschool child
- Propose a plan to meet the needs of the exceptional child
- Compile information about careers in child/human development
- Examine factors to be considered in assessing readiness of parenthood
- Identify causes and solutions for infertility
- Recognize that many heredity chromosomal effects can be predicted and prevented by genetic counseling
- Discuss family planning
- Identify the early stages of pregnancy and tests for confirming pregnancy
- Identify the aspects of adequate prenatal care
- Compare fetal development during each trimester
- Describe the birth process
- Describe the physical characteristics of a newborn
- Recognize the stages of infant development
- Utilize activities of the FCCLA student organization as an integral component of course content and leadership development
- Apply math, science and communication skills within technical content
- Demonstrate employability and social skills relevant to the career cluster.

200261 - Child Development Services I 200262 - Child Development Services II

Credit: 1 Grade Scale: Regular Scale – 4.0

Prerequisites: Parenting/Child Development/Early Lifespan Development or teacher recommendation.

Grade (s): 11, 12

Comment: Dual credit may be offered with Gateway Career and Technical College. Students will be in the classroom several days per week, and will participate in a work experience program in a day care or preschool facility on alternate days.

Description

This course provides training for entry-level positions in day care centers, preschools, and kindergarten. Students will study careers, child development and guidance practices, the importance of play in group setting, and develop skills and lessons for preschool management. This class is designed for students who want to work with children as a future career- teacher, day care, nursing, etc.

Course Standards

- Describe the types of programs for a group care of children
- Identify the competencies of early childhood workers
- Outline observation and participation techniques used when working with young children

- Determine career opportunities in child care
- Analyze the principles of child development
- Examine the physical, cognitive, emotional and social development of children
- Outline general safety precautions for children in group care.
- Analyze and demonstrate a daily schedule for various age groups in a group setting
- Organize art, music, language arts, math and science activities for young children
- Demonstrate skills in caring for young children in a variety of work sites.

200201 - Early Childhood Education Internship

Credit: 1period/1 credit – 2 periods/2 credits Grade Scale: Regular Scale – 4.0 Prerequisite: Child Development Services I or II (currently enrolled) Grade: 12

Description

This is a cooperative work experience program for senior Child Development Services students. The co-op job is related to the placement in Child Development Services and the student's career pathway. The program coordinator trains students for and arranges placement in the early child care setting.

Course Standards

Students will:

- Prepare a resume and cover letter
- Apply principles of proper interview techniques
- Develop a work site experience
- Discuss quarterly evaluations with the job supervisor and the program coordinator
- Develop marketable skills through on-the-job experience
- Develop individualized job skills related to early childhood education

200821 - Fashion and Interior Design I

Credit: 1 Grade Scale: Regular Scale – 4.0 Grade(s): 10, 11, 12 Comments: This course fulfills the Humanities requirement.

Description

This course provides opportunities for students to explore career competencies in the fashion and interior design industry. Students will examine the impact of history, culture, and the environment on current and future trends in the fashion and interior design industries. Students will evaluate elements and principles of design as well as construct fashion and interior design projects that demonstrate comprehension. This course may serve as a supplemental course to student's pursuing a career in Fashion Merchandising or Interior Design. Students will construct at least 4 sewing projects and are responsible for the materials and supplies.

Course Standards

- Explain personal and societal influences on clothing choice.
- Summarize the relationship of clothing/housing and environments to
- behavior.
- Describe the evolution of fashion from early civilizations to the
- 20th century.
- Explain how the fashion industry operates.
- Explain the role of fashion designers in the apparel industry.
- Predict factors that affect fashion and interior design trends.
- Identify elements and principles of design in fashion and interior
- design.
- Classify fibers, yarns and fabrics.
- Compare and contrast performance characteristics of fibers, yarns and fabrics.
- Compare and contrast natural and synthetic fibers.
- Comprehend and follow product care labels.
- Select appropriate fabric care products.
- Describe how the family life cycle influences housings needs.
- Identify the impact of technology on housing choices.
- Identify housing and furniture styles from various periods.
- Differentiate types of floor and wall coverings, window treatments and furniture.

- Draw furniture arrangements for the social, private and service zones of a home.
- Design floor plans and visual presentations.
- Apply measuring skills to create scale drawings and to determine body measurements.
- Demonstrate basic sewing machine procedures.
- Practice safety procedures for operating and caring for industry-related equipment.
- Evaluate and perform construction techniques for a variety of projects.
- Select, design and construct items for self.

200825 - Fashion and Interior Design II A& B

Credit: ½ Credit A / ½ Credit B. Student must enroll in A & B Grade Scale: Regular Scale – 4.0 Grade(s): 11, 12

Prerequisites: Fashion and Interior Design I

Description

This course provides opportunities for students to develop career competencies in the fashion and/or interior design industry. Practical problems include advanced textile construction techniques, and/or the creation of floor plans using technological resources. Students will create a design portfolio in their chosen area of study. Entrepreneurial opportunities will be explored through coop or internships. Leadership development will be provided through the Family, Career and Community Leaders of America (FCCLA). Students will also run the student-based enterprise, Bluebird Embroidery.

Course Standards

Students will:

- Identify factors which affect the appropriateness of apparel selection
- Recognize influences on apparel choices such as advertising media
- Illustrate ways apparel can be used for artistic expression
- Identify and apply the Elements and Principles of Design to apparel and interiors
- Perform more advanced sewing machine procedures
- Perform advanced clothing alterations and repairs
- Investigate careers in textile and apparel
- Create a fashion portfolio for various elements and principles of design and for different types of "clients"
- Practice a job interview for a textile and apparel occupation
- Research the roles and functions of individuals engaged in interiors and furnishings industry
- Assess the impact of interiors and furnishings industry on the local and state economy
- Demonstrate measuring, estimating ordering, purchasing and pricing skills for interior furnishings and products
- Create floor plans and design boards for various projects
- Critique a design plan that addresses client needs, goals, and resources
- Gain work experience in the interiors and furnishings industry beginning with shadowing
- Utilize activities of the Family, Career and Community Leaders of America (FCCLA) student organization as an integral component of course content and leadership development
- Apply math, science, and communication skills within technical content
- Demonstrate employability and social skills relevant to the career cluster.

200826 - Fashion and Interior Design III

Credit: 1 Grade Scale: Regular Scale – 4.0 Prerequisite: Fashion and Interior Design II Grade(s): 12

Description

Fashion and Interior Design III is a course designed specifically for fashion and interior design students to focus on specific career competencies in the fashion and interior design industry and practice advanced textile construction and techniques. An emphasis on floor and space planning using advanced technology will be the focus in the interior design portion. Sketching, fashion merchandising and pattern development will be addressed in the fashion design portion. The course is designed for students who are very motivated and can work at an independent level. A strong work ethic is essential. Students will complete a fashion design or interior design portfolio. Students will also run the student-based enterprise, Bluebird Embroidery.

Course Standards Students will:

• Recognize and evaluate the influences on apparel choices, such as advertising media

- Illustrate ways apparel can be used for artistic expression
- Identify and apply the Elements and Principles of Design to apparel and interiors
- Perform advanced sewing machine procedures
- Perform advanced clothing alterations and repairs
- Research the skills, training and entrepreneurial opportunities relating to careers in textiles/fashion and/or housing/interiors
- Evaluate product information and care of textiles, furnishings, technology and equipment
- Select, design and construct items for others, including special populations
- Demonstrate estimating, ordering and pricing skills
- Interpret terminology for reading and drawing blueprints and/or patterns
- Create, present and critique design plans that address client needs
- Gain work experience in the fashion and/or interiors industry
- Utilize activities of the Family, Career and Community Leaders of America student organization as an integral component of course content and leadership development
- Apply math, science and communication skills within technical content
- Demonstrate employability and social skills relevant to the career cluster.

200801 - Fashion and Interior Design Internship A& B

Credit: ½ Credit A / ½ Credit B. Student must enroll in A & B Grade Scale: Regular Scale – 4.0 Prerequisite: Fashion II or III (currently enrolled) Grade: 12

Description

This is a cooperative work experience program for senior Fashion and Interior Design III students. The co-op job is related to the student's career pathway and could include Bluebird Embroidery, Highlands school based business, or could be a placement in a fashion or interior design firm in the area. The program coordinator trains students for and arranges placement in the chosen placement

Course Standards

Students will:

- Prepare a resume and cover letter
- Apply principles of proper interview techniques
- Develop a work site experience
- Discuss quarterly evaluations with the job supervisor and the program coordinator
- Develop marketable skills through on-the-job experience
- Develop individualized job skills related to fashion and interior design

200831 – Special Topics in Fashion and Interior Design: Costuming

Credit: 1 Grade Scale: Regular Scale – 4.0 Prerequisite: None Grade (s): 11,12

Description

Costuming is an interdisciplinary course for students who have a basic understanding of the principles of theatrical design or a basic understanding of clothing construction and who want a more intensive study of costume design and the psychology of clothing. Students will develop designs that emerge through a process of character analysis. Period research, design, and rendering skills are practiced. Instruction in basic costume construction, including drafting and draping will be explored. Students will assist with costumes for theatrical productions in all schools in the district.

- Select appropriate costumes for district performances
- Sketch, design and create costumes
- Explore the history of costumes
- Design for clients
- Perform basic sewing machine procedures
- Perform basic clothing alterations and repairs
- Perform basic clothing construction skills
- Identify and apply the elements and principles of design
- Create, present and critique design plans that address client needs
 - Illustrate ways apparel can be used for artistic expression

- Create a costume portfolio of designs and renderings
- Gain work experience in the area of costume design

200441 - Foods and Nutrition

Credit: 1 Grade Scale: Regular Scale – 4.0 Prerequisite: None Grade (s): 10, 11, 12

Description

This course focuses on core competencies required in selecting, planning, and preparing a variety of food products. Students will analyze factors that influence nutrition and wellness while concentrating on safe food preparation, cooking techniques, and planning menu items in a lab setting.

Course Standards

Students will:

- Manage a safe, effective and productive lab while utilizing teamwork
- Recognize the value of following a shopping plan for food
- Calculate the difference in cost among semi-prepared, fully prepared and home prepared foods
- Determine the correct cooking methods and prepare recipes for eggs, milk, cheese, fruits, vegetables, grain products and pies
- Determine the correct cooking methods and prepare recipes for meat, poultry, vegetables, breads, and regional American foods
- Demonstrate proper safety, sanitation and storage techniques in handling food
- Categorize careers in nutrition/ food service
- Evaluate consumer products and services and make effective consumer decisions
- Examine how personal good choice affects nutrition, personal wellness and maintaining a healthy weight
- Examine a meal for nutrient content
- Propose a balanced meal plan using the ChooseMyPlate Guide
- Recognize the value of following a shopping plan for food
- Calculate the difference in cost among semi-prepared, fully prepared and home prepared foods
- Utilize activities of FCCLA students' organization as an integral component of course content and leadership development
- Apply math, science, and communication skills within technical content
- Demonstrate employability and social skills relevant to the career cluster.

200411 - Culinary I

Credit: 1 Grade Scale: Regular Scale – 4.0 Prerequisite: Food and Nutrition Grade(s): 11, 12

Description

This advanced foods course allows students to increase competencies in a variety of food preparation techniques. Emphasis will be placed on food presentation, garnishing, menu planning and the skills necessary to prepare for a career in the culinary arts. Students will have the opportunity to receive industry certification in ServSafe Essentials, and will participate in a student-run catering business. Leadership development will be provided through the Family, Career and Community Leaders of America.

Course Standards

- Evaluate consumer products and services and make effective consumer decisions
- Assess the impact of the hospitality industry on local and state economies
- Research roles of individuals engaged in culinary services
- Assess employment opportunities and preparation requirements
- Demonstrate personal and interpersonal skills that enhance working relationships
- Demonstrate knowledge of quality customer service
- Demonstrate knowledge of cost analysis and its relationship to profit
- Practice food presentation techniques
- Utilize activities of the FCCLA student organizations
- Apply math, science and communication skills within technical content

- Demonstrate strategies and skills in planning and scheduling specialized event activities
- Apply sanitation procedures for a clean and safe environment
- Analyze and revise employability portfolio.
- Analyze roles of employees in the front/back of the house operations

200412 - Culinary II

Credit: 1 Grade Scale: Regular Scale – 4.0 Prerequisite: Culinary I Grade: 12

Description

In Culinary II, students resume progress in pursuing competencies in food production and services. More in-depth information is provided and higher levels of skills are taught, such as garnishing, food presentation and menu planning. Students will also participate in a student-based enterprise, Bluebird Cuisine.

Course Standards

Students will:

- Research the roles and functions of food production and food service careers.
- Demonstrate personal and interpersonal skills that enhance working relationships.
- Practice culinary skills through work based learning opportunities.
- Demonstrate knowledge of quality customer service.
- Outline steps in establishing an entrepreneurial business such as catering.
- Demonstrate knowledge of cost analysis and its relationship to profit.
- Demonstrate use of equipment, tools and supplies required by the industry.
- Demonstrate knowledge of factors that contribute to food borne illnesses.
- Practice food service safety and sanitation procedures.
- Prepare quantities of food and evaluate cooking and baking applications.
- Practice inventory procedures including first in/first out concept, date markings and specific record keeping.
- Plan, prepare and serve a variety of meals and special events
- Maintain tools and equipment following safety procedures and OSHA requirements
- Apply math, science and communication skills within technical content.
- Demonstrate employability and social skills relevant to the career cluster.
- Utilize activities of the Family, Career and Community Leaders of America student organization as an integral component of course content and leadership development.

200499 –Special Topics in Culinary Arts/Lab Assistant

Credit: 1 Grade Scale: Regular Scale - 4.0

Prerequisite: Culinary Arts, Fashion and Interior Design or Child Development Services, application, interview and approval of FCS Department interest in culinary, fashion or early childhood education field

Grade(s): Elective in Grade 12

Limit: One student per teacher per day

Description

Student will set up labs and demonstrations and assist in lab classes. Under the direction of the classroom teacher, student will gain experience in the culinary, fashion or early childhood education while gaining organizational skills. This program is limited to students with culinary, fashion or early childhood education experience who plan to go into one of these fields.

Course Standards

- Provide assistance in setting up and organizing food labs, sewing labs or preschool
- Use critical thinking skills to solve problems
- Develop and practice skills that will be used in the workplace
- Research and develop a plan of action for career readiness
- Practice ServSafe standards in culinary lab settings and Early Child Care standards during preschool.



VOCATIONAL PROGRAMS KENTUCKY TECH PREP

In 1997, Highlands High School received a 5-year grant from the State Department of Education for the purpose of designing and implementing the *Kentucky Tech Prep Program*. Tech Prep is a program of study that consists of a sequence of courses and requirements that identifies both academic and technical courses that lead to a specific associate degree/bachelor's degree or certificate in a technical field at the post-secondary level.

Tech Prep is a combined secondary and post-secondary course of study that will provide competencies in science, communications, technology, and math through academic and vocational subjects. Students are encouraged to explore a number of career options by showing them the future of technology. They are guided into taking appropriate electives toward their future career goals.

Students may take tests at the post-secondary level to qualify for college credit if specific high school courses have been taken in business, family and consumer sciences, or technology. Contact a teacher in one of these departments to obtain more detailed information about this course of study.

Students at Highlands have the valuable opportunity to enroll as part-time students at Northern Kentucky area vocational schools. Students so enrolled will be able to earn a diploma from Highlands. Three credits per year may be earned at the vocational centers for transfer to Highlands High School. The student must qualify for the particular vocational area in which he/she is interested. A conference with the Highlands counselor and recommendation of the administration, as well as written parental permission, are required before a student can be admitted to the program. A student must be sixteen years of age to enter this program and must have completed their sophomore year.

CAMPBELL COUNTY AREA TECHNOLOGY CENTER

909 Camel Crossing, Alexandria, KY 41001 Phone: 635-4101 Website: www.campbell.k12.ky.us

COURSES OFFERED

Health Sciences I

Courses include: Principals of Health Sciences, Body Structures and Functions, Medical Term I. Emergency Procedures, Health and Wellness (Human Growth and Development) Credit (s): 3 Grade Scale: Regular Scale – 4.0

Health Sciences II

Courses include: Medicaid Nurse Aid, Nurse Assistant Skills I, Medical Math, Health Sciences Microbiology/Infection Control Credit (s): 3 Grade Scale: Regular Scale – 4.0

In Health Sciences, you will explore the many different types of careers available in the health care field. You will have experiences in medical, physical therapy, pharmacy, respiratory therapy, x-ray technology, nursing and other health careers. In addition to your classroom training, you will participate in clinical experiences with health care workers.

Health Sciences I topics include Medical Terminology, Emergency Procedures, Health Science, Health Care Skills I, Anatomy & Physiology.

Health Sciences II topics include Industrial Safety, Health & Wellness, Microbiology, Intro to Computers, Total Quality Management, Medical Math.

Electrical Technology I

Courses include: National Electrical Code, Circuits I, Electrical Construction I, Electrical Construction II

Credit (s): 3 Grade Scale: Regular Scale -e4.0

Electrical Technology II

Courses include: Basic Troubleshooting, Renewable Energy Systems, Circuits II, Special Problems I – Electrical Tech

Credit (s): 3 Grade Scale: Regular Scale – 4.0

In your first year of Electrical Technology, you will study electrical principles, tools, residential wiring, safety, electrical motors, and alternating current. During the second year of your studies, you will learn advanced electrical principles, residential construction methods, motor controls, programmable logic controllers, and safety. Electrical Technology I topics include Direct Circuits, Electrical Construction II, Technical Algebra, National Electrical Code, Total Quality Workplace Principles.

Electrical Technology II topics include Alternating Current, Electrical Construction II, Circuit Math, Intro to Computers, Transformers.

Auto Collision Repair I

Courses include: Intro to Body Repair, Non-Structural Damage Repair I, Paint and Refinishing I, Non-Structural Damage Repair II Credit (s): 3 Grade Scale: Regular Scale – 4.0

Auto Collision Repair II

Courses include: Paint and Refinishing II, Paint and Refinishing III, Non-Structural Damage Repair III, Special Projects I – Collision Repair Credit (s): 3 Grade Scale: Regular Scale – 4.0

In Collision Repair, you will learn how to repair wrecked or damaged automobiles. You will weld; repair dents; analyze and repair structural and nonstructural damage; do painting and refinishing; and repair plastic, fiberglass, and flexible automobile parts. You will replace and align automotive parts such as doors, hoods, and fenders.

Auto Body Repair I topics include intro to Auto Body, Workplace Principles, Non-structural Repair I, Painting & Refinishing with Lab.

Auto Body Repair II topics include Non-Structural Damage II, Painting & Refinishing with Lab, Special Projects I.

Automotive Technology I

Courses include: Auto Maintenance and Lt Repair Sct A, Auto Maintenance and Lt Repair Sct B, Auto Maintenance and Lt Repair Sct C, Auto Maintenance and Lt Repair Sct D Credit (s): 3 Grade Scale: Regular Scale – 4.0

Automotive Technology II

Courses include: Auto Special Problems I, Auto Special Problems II, Auto Special Problems IV, Auto Special Problems IV

Credit (s): 3 Grade Scale: Regular Scale – 4.0

In Automotive Technology, you will learn how to maintain and repair cars, trucks, and other gasoline powered vehicles. You will receive instruction in engines, fuel, on-board computers, transmissions, steering, suspension, and brakes. You will develop trouble-shooting, repair, and preventative maintenance skills.

Automotive Technology I topics include Brake Systems Lab, Suspension and Steering with Lab, Basic Automotive Electric with Lab, Climate Control with Lab.

Automotive Technology II topics include Electrical Systems with Lab, Basic Fuel and Ignition with Lab, Computer Control with Lab, and Emissions Control with Lab.

Masonry I

Courses include: Intro to Masonry, Intermediate Masonry, Industrial Safety, Basic Blueprint Reading, Residential Maintenance Masonry Credit (s): 3 Grade Scale: Regular Scale - 4.0

Masonry II

Courses include: Concrete Finishing, Anchors and Reinforcement, Advanced Masonry, Internship Masonry

Credit (s): 3 Grade Scale: Regular Scale - 4.0

In Masonry, you will learn how to lay brick, tile, stone, and concrete block. You will apply mortar; pour and finish concrete surfaces; and cut brick, tile, stone, and block for proper fit. You will mix and measure, read blue prints, erect scaffolding, and learn safe practices. You will practice constructing footings, foundations, partitions, walls, and chimneys.

Masonry I topics include Intro to Masonry, Construction Prints, Workplace Principles, Intermediate Masonry.

Masonry II topics include Advanced Masonry, Fundamentals Math, Industrial Safety, Special Problems II, Floor & Steps.

Carpentry I

Courses include: Intro to Construction, Floor and Wall Framing, Ceiling and Roof Framing, Exterior and Interior Finish

Credit (s): 3 Grade Scale: Regular Scale – 4.0

Carpentry II

Courses include: Construction Forms, Site Layout and Foundations, Construction Prints, Industrial Safety, Internship Carpentry

Credit (s): 3 Grade Scale: Regular Scale - 4.0

In Carpentry you will learn how to build houses and other buildings. Instruction will include the care and use of hand and power tools, equipment, and materials; frame construction; cutting, shaping, and fastening a variety of building materials to exact specifications; drafting; blueprint reading; applied math; and materials estimating.

Carpentry I topics include Intro to Construction with Lab, Floor & Wall Framing with Lab, Basic Blueprint Reading, Ceiling and Roof Framing with Lab, Fundamentals of Math.

Carpentry II topics include Construction Forms with Lab, Site Layout & Foundations, Industrial Safety, Blueprint Reading, Exterior & Interior Finish with Lab.

Welding I

Courses include: Shielded Metal Arc Welding, Cutting Processes, Shielded Metal Arc Welding Groove Welds, Shielded Metal Arc Welding Pipe Lab A Credit (s): 3 Grade Scale: Regular Scale – 4.0

Welding II

Courses include: Gas Metal Arc Welding, Blueprint Reading for Welding, Gas Metal Arc Welding Groove Lab, Special Problems for Welding Credit (s): 3 Grade Scale: Regular Scale – 4.0

In Welding, you will learn how to make and repair metal products by joining pieces of metal together to form a permanent bond. You will have classroom training and shop practice in blueprint reading, MIG AND TIG welding, and safety. You will also learn about metals and the types of welds that can be made.

Welding I topics include Industrial Safety, Basic Welding, Oxy-Fuel Systems with Lab, Cutting Processes with Lab, and Blue Print Reading with Lab.

Welding II topics include Gas Metal Arc with Lab, Shielded Metal Arc with Lab, Gas Tungsten Arc, and Welding Certification with Lab.

Information Technology I

Courses include: Computer Literacy, Computer Hardware and Software Maintenance, Intro to Networking Concepts, Security Fundamentals

Credit (s): 3 Grade Scale: Regular Scale - 4.0

Maintenance of the personal computer with emphasis on installation, upgrading, and configuration of the operating system. Memory management, boot sequences, printing subsystem, application software, and networking are also covered. Troubleshooting is a main focal point including viruses. This course will help prepare students to take standard industry certification tests.

Introduction to the maintenance of computer workstation hardware, including setup of workstation for network and Internet access. Internal addressing, architecture, interrupts, complete PC construction and basic troubleshooting will be focal points.

Information Technology II

Courses include: Network Fundamentals/Cisco I, Routing Protocols and Concepts/Cisco II, LAN Switching and Wireless/Scal. Net/Cisco III, Accessing the WAN/Con Network/Cisco IV Credit (s): 3 Grade Scale: Regular Scale – 4.0

This is a four course series that prepares students for the Cisco Certified Network Associate exam. This course is designed to provide students the skills necessary to understand and apply basic networking concepts. Topics covered include the OSI model, TCP/IP, Cabling media, Cabling standards, and Local Area Network (LAN) design, Router elements, protocols, Cisco IOS, Configuring Routers, troubleshooting router problems, LAN switching, Virtual Local Area Networks (VLAN's), Advanced network design concepts, Advanced router configuration, Advanced network management projects, Wide Area Networks (WAN) design, WAN connectivity protocols such as PPP, ISDN, and Frame Relay and Advanced network management projects.

Campbell County Area Technical Center Highlands Credits & Articulation of Core Credits

Health Sciences		
Year 1		Credits
Principles of Health Sciences	Q1	0.5
Body Structures and Functions	Q2	1.0
Medical Term 1	Q3	0.5
Emergency Procedures	Q3	0.5
Health & Wellness (Human Growth & Development)	Q4	0.5
TOTAL CREDITS	3.0	
	, ,	5.0
Year 2		5.0
Year 2 Medicaid Nurse Aid	Q1	0.5
Year 2 Medicaid Nurse Aid Nurse Assistant Skills 1	Q1 Q2	0.5
Year 2 Medicaid Nurse Aid Nurse Assistant Skills 1 Medical Math	Q1 Q2 Q3	0.5 0.5 1.0
Year 2 Medicaid Nurse Aid Nurse Assistant Skills 1 Medical Math Health Sciences Microbiology/Infection Control	Q1 Q2 Q3 Q4	0.5 0.5 1.0 1.0

Electrical Technology			
Year 1	Credits		
National Electrical Code	Q1	1.0	
Circuits I	Q2	1.0	
ElectricalConstructionI	Q3	0.5	
ElectricalConstructionII	Q4	0.5	
TOTAL CREDITS	3	3.0	
Year 2			
Basic Troubleshooting	Q1	1.0	
Renewable Energy Systems	Q2	1.0	
Circuits II	Q3	0.5	
Special Problems I Elect Tech	Q4	0.5	
TOTAL CREDITS	3	.0	

Campbell County Area Technical Center Highlands Credits & Articulation of Core Credits

AutoBody Repair		
Year 1	Credi	ts
Intro to Body Repair	Q1	0.5
Non-Structural Damage Repair I	Q2	1.0
Paint & Refinishing I	Q3	0.5
Non-Structural Damage Repair II	Q3	1.0
TOTAL CREDITS	3.0	
Year 2	Cred	its
Paint & Refinishing II	Q1	0.5
Paint & Refinishing III	Q2	0.5
Non-Structural Damage Repair III	Q3	1.0
Special Projects I Collision Repair	Q4	1.0
TOTAL CREDITS	3	.0

Automotive Technology		
Year 1	Credits	
Auto Maintenance & Lt Repair Sct A	Q1	0.5
Auto Maintenance & Lt Repair Sct B	Q2	0.5
Auto Maintenance & Lt Repair Sct C	Q3	1.0
Auto Maintenance & Lt Repair Sct D	Q4	1.0
TOTAL CREDITS	3.0	
Year 2	Cred	its
Auto Special Problems I	Ql	0.5
Auto Special Problems II	Q2	0.5
Auto Special Problems III	Q3	1.0
Auto Special Problems IV	Q4	1.0
TOTAL CREDITS	3	.0

Campbell County Area Technical Center Highlands Credits & Articulation of Core Credits

Masonry		
Year 1	Credi	its
IntrotoMasonry	Q1	0.5
Intermediate Masonry	Q2	0.5
Industrial Safety	Q3	0.5
Basic Blueprint Reading	Q3	0.5
Residential Maintenance Masonry	Q4	1.0
TOTAL CREDITS	3	.0
Year 2	Cred	lits
Concrete Finishing	Q1	0.5
Anchors & Reinforcement	Q2	0.5
Advanced Masonry	Q3	1.0
Internship Masonry	Q4	1.0
TOTAL CREDITS	3	.0

Carpentry			
Year 1	Credi	ts	
Intro to Construction	Q1	1.0	
Floor and Wall Framing	Q2	0.5	
Ceiling and Roof Framing	Q3	0.5	
Exterior & Interior Finish	Q4	1.0	
TOTAL CREDITS	3.	3.0	
Year 2	Cred	its	
	0100		
Construction Forms	Q1	0.5	
Construction Forms Site Layout & Foundations	Q1 Q2	0.5 0.5	
Construction Forms Site Layout & Foundations Construction Prints	Q1 Q2 Q3	0.5 0.5 0.5	
Construction Forms Site Layout & Foundations Construction Prints Industrial Safety	Q1 Q2 Q3 Q3	0.5 0.5 0.5 0.5	
Construction Forms Site Layout & Foundations Construction Prints Industrial Safety Internship Carpentry	Q1 Q2 Q3 Q3 Q4	0.5 0.5 0.5 0.5 1.0	
Campbell County Area Technical Center Highlands Credits & Articulation of Core Credits

Welding		
Year 1	Credits	
Shielded Metal Arc Welding	Q1	1.0
CuttingProcesses	Q2	0.5
Shielded Metal Arc Welding Groove Welds	Q3	1.0
Shielded Metal Arc Welding Pipe Lab A	Q4	0.5
TOTAL CREDITS	3.0	
Year 2	Credits	
GasMetalArcWelding	Q1	1.0
Blueprint Reading for Welding	Q2	0.5
GasMetalArcWeldingGrooveLab	Q3	0.5
SpecialProblemsforWelding	Q4	1.0
TOTAL CREDITS	3.0	

Information Technology		
Year 1	Credits	
Computer Literacy	Q1	1.0
Computer Hardware & Software Maintenance	Q2	1.0
Intro to Networking Concepts	Q3	0.5
Security Fundamentals	Q4	0.5
TOTAL CREDITS	3.0	
Year 2	Credits	
Network Fundamentals/Cisco 1	Q1	0.5
Routing Protocols & Concepts/Cisco 2	Q2	0.5
LAN Switching & Wireless/Scal.Net/Cisco 3	Q3	1.0
Accessing the WAN/Con Network/Cisco 4	Q4	1.0
TOTAL CREDITS	3.0	

Campbell County Area Technical Center

Highlands Credits & Articulation of Core Credits

Automotive Collision Repair	
First Year	3 elective credits
Second Year	2 elective credits & 1 science credit
Automotive Technology	
First Year	2 elective credits & 1 science credit
Second Year	2 elective credits & 1 math credit
Carpentry	
First Year	3 elective credits
Second Year	2 elective credits & 1 math credit
Electrical Technology	
First Year	2 elective credits & 1 science credit
Second Year	2 elective credits & 1 math credit
Health Sciences	
First Year	2 elective credits & 1 science credit
Second Year	2 elective credits & 1 math credit
Information Technology	
First Year	3 elective credits
Second Year	2 elective credits & 1 math credit
Masonry	
First Year	3 elective credits
Second Year	2 elective credits & 1 math credit
Welding	
First Year	2 elective credits & 1 science credit
Second Year	2 elective credits & 1 math credit





WORLD LANGUAGE

"The state of Kentucky has mandated the following requirement beginning with the graduating class of 2004: Two units of world language study in the same language must be completed for all students pursuing college entrance in the state of Kentucky. Students not fulfilling this requirement will be deemed "deficient" in the world language area and must make up the study in college." It is assumed that the classes they take to make up the deficiency will not count toward their college credits for graduation. It is the opinion of the World Language department that taking the world language as a high school course gives the student the opportunity to better absorb the complexities of the language.

The world language program is designed to accommodate a wide range of students. The program enhances career opportunities, provides a field of interest which will contribute to his/her adult life, and increase his/her awareness of the world. Knowledge of a world language is useful in special fields of interest such as literature, music, art, and the sciences. Increased opportunity to travel for business and personal reasons make the knowledge of a world language a practical and enjoyable skill to have. Furthermore, many students will discover more about their cultural heritage through world language study. For the college-bound student, the program fulfills college preparatory requirements and offers a solid background in the language which he/she can continue to develop during his/her college years. Any student at Highlands High School who can be motivated to study a world language for any of the above reasons will be readily accepted into the program.

Students are strongly encouraged to continue their world language study into the third and fourth years since more selective colleges are now recommending three or four units in one language. Frequently, colleges will award undergraduate credit for language courses beyond the second level. If a student has only one unit of credit, this unit is applicable toward high school graduation but will not meet the requirement of the college preparatory curriculum. In order to receive a Commonwealth Diploma, a student must complete a sequence of courses which terminate with the completion of an advanced placement course.

160508 - German I

Credit: 1 Grade Scale: Regular Scale - 4.0

Description

Students will explore the German language and culture in this course. While the main focus will be the language and culture of the people of Germany, students will compare the language and culture of other German-speaking countries to their own. Students will be exposed to the cultural products, perspectives and practices through songs, blogs, websites, emails, postcards, letters, advertisements, tables, videos, podcasts, etc. Students completing German I will be able to perform at the novice-low to novice-mid proficiency level as outlined by ACTFL.

Course Standards

Students will:

- Understand and use familiar everyday expressions and very basic phrases
- Introduce him/herself and others and can ask and answer questions about personal details such as where he/she lives, people he/she knows and things he/she has
- Interact in a simple way provided the other person talks slowly and clearly and is prepared to help
- Understand sentences and frequently used expressions related to areas of most immediate relevance (e.g. very basic personal and family information, shopping, local geography, employment).
- Communicate in simple and routine tasks requiring a simple and direct exchange of information on familiar and routine matters
- Describe in simple terms aspects of his/her background, immediate environment and matters in areas of immediate need.

160509 - German II

Credit: 1 Grade Scale: Regular Scale – 4.0 Prerequisite: German I

Description

This course is a continuation of first-year work with emphasis on further development of the basic skills. Speaking and listening continue to be primary objectives, but reading and writing are also stressed. Students continue to expand their understanding of German products, perspectives and practices related to the cultures of the German-speaking countries. Students completing German II will be able to perform at the novice-high to intermediate-low proficiency level as outlined by ACTFL.

Course Standards

Students will:

- Understand the main idea and some details on familiar topics expressed in sentences, short conversations, presentations and messages.
- Understand the main idea and some details in texts that contain familiar vocabulary.
- Begin and carry on a conversation on a limited number of familiar topics. Learners can ask and answer simple questions and exchange information in familiar situations using phrases and a series of sentences
- Provide information on familiar topics using a series of sentences with some details
- Write on familiar topics and experiences using a series of sentences with some details.

160510 - German III Advanced

Credit: 1 Grade Scale: Advanced Scale – 4.5 Prerequisite: German II

Description

In this course students continue the development of speaking, listening comprehension, reading, and writing skills. The lessons are conducted primarily in German. Emphasis is on more complex language structures and vocabulary development. This is an advanced class and students receive advanced credit. An increasing number of colleges and universities are requiring three or more years of study of a world language. This course is designed to complement Pre AP curriculum. Students completing German III will be able to perform at the intermediate-mid proficiency level as outlined by ACTFL.

Course Standards

Students will:

- Understand the main idea and many details on familiar topics in a series of connected sentences, conversations, presentations and messages
- Understand the main idea and many details in texts that contain familiar vocabulary and some details in texts that contain unfamiliar vocabulary
- State their views and carry on conversations on a variety of familiar topics and in uncomplicated situations.
- Describe experiences, events and plans, give opinions, narrate a story and make a simple factual presentation using connected sentences with many details
- Write communications, descriptions and explanations on familiar topics using connected sentences with many details.

160511 - German IV Advanced

Credit: 1 Grade Scale: Advanced Scale – 4.5 Prerequisite: German III

Description

German IV is recommended for those who would like to continue learning German for advanced credit. This is an ideal course for juniors who would like to take the AP Exam in their senior year or for seniors who wish to prepare for the required language proficiency exam, which is given prior to entering college or university level of study. In a global community and work world of coming decades, proficiency in a world language like German is not going to be optional. Students completing German IV will be able to perform at the intermediate-mid to intermediate-high proficiency level as outlined by ACTFL.

Course Standards

Students will:

- Understand the main points and most details in conversations, presentations and messages on familiar topics. Learners can understand the main idea and some details on unfamiliar topics
- Understand the main idea and most details in texts on familiar topics. Learners can understand the main idea and many details in texts that contain unfamiliar vocabulary
- State and support many of my views and take an active part in discussions. Learners can handle some complicated situations on familiar topics
- Present information on familiar topics with clarity and detail. Learners present viewpoints on issues and support their opinions
- Write communications, narratives, descriptions or explanations on familiar topics using connected, detailed paragraphs.

160512 - German V Advanced

Credit: 1 Grade Scale: Advanced Scale – 4.5 Prerequisites: German IV or AP German

Description

German V is recommended for students who began their study of language in the 8th grade and desire to continue study in the same language in grades 9 through 12. Many colleges and universities demand higher AP scores, and this course allows a student more time to improve the skills tested on the AP German Language Exam or a proficiency exam. Fifthyear students are more capable of testing out of the world language requirement at the college or university of their choice after completing five years of the same language. Students completing German V will be able to perform at the intermediate-high to advanced-low proficiency level as outlined by ACTFL.

Course Standards

Students will:

- Engage in conversation, provide and obtain information, express feelings and emotions, and exchange opinions
- Understand and interpret spoken and written language on a variety of topics
- Demonstrate an understanding of the relationship between the practices of the cultures studied
- Present information, concepts, and ideas to an audience of listeners or readers on a variety of topics
- Reinforce and further their knowledge of the other disciplines through German
- Acquire information and recognize the distinctive viewpoints that are only available through German and the German-speaking world
- Use German both within and beyond the school setting
- Show evidence of becoming life-long learners by using German for personal enjoyment and enrichment.

160530 - AP German Language and Culture

Credit: 1 Grade Scale: AP Scale - 5.0

Prerequisites: Open to students entering the fourth or fifth-year level of World language study. Comments: Students must sit for the AP German Language exam.

Description

The AP German Language course has been designed to prepare students for the AP exam. Curriculum focuses on the three communication modes: interpersonal, presentational and interpretive. This course is equivalent to the learning experience in a third-year college course in German language. Students completing AP German Language and Culture will be able to perform at the intermediate-high to advanced-low proficiency level as outlined by ACTFL.

Course Standards

Students will:

- Understand some extended speech on unfamiliar topics delivered through a variety of media
- Usually understand viewpoints and attitudes expressed in literary and nonliterary texts
- Communicate with a fair amount of fluency and spontaneity on familiar topics, even in complicated situations. Learners can link ideas in extended discussions. Learners can participate actively in most informal and a few formal conversations.
- Deliver a clear, organized presentation appropriate to my audience on a variety of topics
- Express ideas on a variety of topics in clear, organized texts. Learners can adjust writing for some audiences.

161108 - Spanish I

Credit: 1 Grade Scale: Regular Scale – 4.0

Description

This course emphasizes fundamental grammar, high-frequency vocabulary and pronunciation applied actively in speaking, reading, writing and listening comprehension. At the end of Spanish I students should be able to perform at novice low to novice mid proficiency level as outlined by ACTFL. Hispanic culture is an integral part of the course.

Course Standards

Students will:

- Learn expressions to enable them to carry on everyday conversations
- Learn thematic vocabulary that covers daily situations
- Study geography of Hispanic countries
- Converse using correct pronunciation, accentuation and intonation
- Write basic sentences in Spanish in the present
- Read beginning-level material
- Comprehend and express simple sentences in Spanish
- Appreciate Hispanic cultures of the world, while recognizing similarities and differences.

161109 - Spanish II

Credit: 1 Grade Scale: Regular Scale - 4.0

Description

This course is a continuation of first-year work with emphasis on further development of the basic skills of speaking, reading, writing and listening. Students continue to expand their understanding of Hispanic culture, geography and history. Student should be able to demonstrate a novice high proficiency.

Course Standards

Students will:

- Learn more complex vocabulary to facilitate communication about the culture and life of Spanish speakers
- Learn to read Spanish independently for understanding. They will also listen for understanding
- Learn to understand and express ideas in conversations of a greater length, especially interpersonal communication.

161110 - Spanish III

Credit: 1 Grade Scale: Advanced Scale – 4.5 Prerequisites: Spanish II and teacher recommendation

Course Description

In this course students continue the development of speaking, listening comprehension, reading and writing skills. The class is conducted primarily in Spanish. Emphasis is on advanced language structure and vocabulary development is stressed. Students continue to expand their understanding of Hispanic culture. This is an advanced class and receives advanced credit. Students should be able to perform at the intermediate mid-proficiency level as outlined by ACTFL

Course Standards

Students will:

- Learn to read Spanish independently for comprehension
- Learn to write compositions using a more advanced abstract vocabulary
- Learn to express and comprehend ideas orally at a high level
- Learn to read and discuss in Spanish a variety of cultural topics dealing with the Hispanic society
- Learn to use the proper usage of a Spanish-English, English-Spanish dictionary
- Learn to develop an appreciation for Hispanic arts throughout the world, including visual, music and dance
- Learn to use all tenses not previously taught in Spanish II.

161112 - Spanish IV Advanced

Credit: 1 Grade Scale: Advanced Scale – 4.5 Prerequisites: Spanish III and teacher recommendation Comment: Summer work is required.

Description

Spanish IV continues development in the basic language skills: listening comprehension, speaking, reading and writing. Students study the culture, customs, and traditions of the people whose language is being studied. The emphasis in reading is on not only literature but also contemporary articles from magazines, newspapers and journals.

Course Standards

Students will:

- Review all basic grammar rules
- Write formal essays
- Write interpersonal communications
- Listen to authentic language and understand authentic language
- Write informal pieces such as notes, e-mails, memos, etc.

161112 - Spanish V Advanced

Credit: 1 Grade Scale: Advanced Scale – 4.5 Prerequisites: Spanish IV and teacher recommendation Comment: Summer work is required.

Description

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

Course Standards

Students will:

- Review all basic grammar rules
- Write formal essays
- Write informal pieces such as notes, e-mails, memos, etc.

161130 - AP Spanish Language and Culture

Credit: 1 Grade Scale: AP Scale – 5.0

Prerequisites: Open to students entering the fourth or fifth level of world language study or graduating seniors entering the third year level. Student <u>must</u> have recommendation of the world language teacher and meet the criteria established by the world language department.

Comment: Students must sit for the AP Spanish language exam.

Description

The AP Spanish language course is designed to prepare the students for the AP language exam. This course is equivalent to a college Spanish language course at the 3rd year. Curriculum focuses on the three communication modes: interpretional and interpretive. Students completing this course will be able to perform at intermediate high to advanced low proficiency as outlined by ACTFL.

Course Standards

Students will:

- Comprehend authentic formal and informal spoken Spanish
- Have the acquisition of vocabulary and a grasp of structure to allow the easy, accurate reading of newspaper and magazine articles, as well as modern literature in Spanish
- Compose formal essays and oral presentations, based on written and aural sources
- Compose informal writing such as e-mail, notes, memos, etc.
- Express ideas orally with accuracy and fluency
- Participate in conversations in Spanish.

SPECIAL EDUCATION SERVICES

Highlands High School provides specially designed instruction and related services to implement the Individual Educational Program of each youth with a disability. A variety of program options are used to deliver services in accordance with an IEP, such as collaboration, consultation, resource class, or vocational liaison.

320103 - Pathways to Careers

Credit: 1 Grade Scale: Regular Scale - 4.0

Description

Pathways to Careers is a program which provides a continuum of career education experiences. It begins with an exploration of self and a broad range of work opportunities. It develops job seeking and keeping skills and focuses on

orientation and exploration in careers. Incorporated in the Pathways to Careers curriculum are basic concepts of human relation skills, life skills, and opportunities for work exploration.

Course Standards based on grade level and individual transition needs

Students will:

- Learn how to assess their strengths and weaknesses ٠
- **Explore** interests
- Develop social skills .
- Develop communication skills
- Explore different career options
- Develop skills to be active participants in their post-secondary decisions .
- Develop transition skills via Employment Specialist and a range of inventories
- Improve effective use of interpersonal skills
- Develop team membership skills
- Develop an awareness of the rights/responsibilities of self and others Participate in work exploration experiences
- Keep a detailed log of at work experiences
- Develop healthy fitness and nutrition practices to ensure optimal vocational consistency ٠
- Explore strategies for healthy fiscal choices

904010 - Learning Strategies

Credit: 1 Grade Scale: Regular Scale - 4.0

Comment: May be repeated for up to four credits according to IEP.

Description

The Learning Strategies classes are designed for students who have identified educational disabilities. The class is designed to develop individual skills necessary for students to attain success in a 21st Century learning environment. Students will participate in activities that are focused on helping them meet individual goals as determined by the Admission and Release Committee. Students will also complete Measures of Academic Progress (MAP) testing to determine skill levels. Based on benchmarks, students will participate in lessons and programs designed to enhance existing strengths and develop additional skills necessary for success. The class also provides the opportunity for students to participate in remediation activities that address challenging coursework. The program is fluid and changes to adapt to the needs of the students in regards to 21st Century Learning Skills.

Course Standards

Students will:

- Develop reading comprehension and basic reading skills
- Develop written expression and basic writing skills
- Develop problem solving and basic computational skills
- Develop organizational skills •
- Develop test-taking strategies •
- Develop self-advočacy skills
- Develop time management skills .
- Develop study skills and habits
- Develop transition skills

906010 - Peer Tutoring (Student Mentoring)

Credit: 1 Grade Scale: Regular Scale – 4.0 Grade(s): 11, 12

Description

Peer mentors are students who act as mentors for students who have identified educational disabilities. The peer mentors go into the regular and/or special classrooms and works with the special education teacher to assist students with such things as:

- Note taking .
- Completion of assignments •
- Classroom activities .
- Facilitation of content comprehension and application
- Role modeling and assistance with best practices in making choices and practical decision making

Course Standards

Students will:

- Assist the student(s) to whom he or she is assigned
- Maintain regular àftendance
- Complete reflections on mentoring experience

HIGH SCHOOL FACULTY

AGARD, PAT (Mathematics) B.A. (Mathematics) University of Virginia, M.A. (Secondary Mathematics Education) Virginia Tech, Rank I (Secondary Mathematics Education) Virginia Tech ANDERSON, KATHARINE (String Orchestra Director) B.M. (Music Performance) Manhattan School of Music M.M. (Music) Yale University, Certification in Music Education, Xavier University

AUCH, TIMOTHY (Science) B.A. (Geology) Wittenberg, M.S. (Geology) East Carolina University

BARTON, MARLEE (Family and Consumer Science) B.S. (Family and Consumer Sciences Education) Western Kentucky University

BECKER, JEAN (Science) B.S. (Biology) Northern Kentucky University, M. Ed. (Secondary Education) Northern Kentucky University

BEITING, SUSANNAH (Special Education) B.A. State University of New York, M. Ed. (Education) Northern Kentucky University

BLANKENSHIP, KATHRYN (Science) B.S. (Education) Miami University, B.A. (Chemistry) Miami University, M.S. (Chemistry) Miami University

BOIMANN-HENNIES, MEGAN (Social Studies) B.A. (History and Political Science) Thomas More College, M.A. (History) University of Cincinnati, M.Ed. (Education) Thomas More College

BOOTH, KELLY (Social Studies) B.A. (History) University of Kentucky, M.A. (Secondary Education) University of Kentucky

BRADFORD, BILL (Education) B.A. (Spanish Language and Literature) Transylvania University, M. Ed. (K-12 Education) Georgetown College, M. Ed. (Instructional Leadership) Eastern Kentucky University, Ed. D. (Educational Leadership) Northern Kentucky University [2018]

BRUBAKER, BETH (English) B.S.E. (Integrated Language Arts Education) Kent State University, M. Ed, Xavier University (Educational Administration and Leadership)

BURGESS, JASON (Theatre) B.A. (Theatre and Social/Political Science) Wilmington College, M.A. (Education) Thomas More College

BURNETT, RACHEL (World Language-Spanish) B.B.A. (Marketing) University of Kentucky M.A. (Teaching) Northern Kentucky University

BURNS, KENNON (Health & Physical Education) B.A. (Physical Education) Miami University M.A. (Educational Administration) Xavier, Health Certification Northern Kentucky University

CARELOCK, KATIE (Math) B.A. (Middle School Mathematics and Science) Wingate University, Additional Certification (Secondary Mathematics Teaching) National Board Certification: Mathematics. M.A. (Educational Technology) Central Michigan University

CARTER, ELISE (Business) B.B.A. (Marketing and Product Information and Supply Management) University of Cincinnati, M.B.A. (Business) University of Phoenix, M.A.T. (Secondary Education) Northern Kentucky University

CHESER, KAREN (Education) B.A. (Public Relations, Speech Communication) Western KY Kentucky, B.A. (Education) Northern KY University, M.A. (Education) Northern Kentucky University, Rank I (Instructional Leadership) University of KY, Ed.D. (Executive Leadership and Business Informatics) Northern KY University

CLASGENS, MELISSA (Mathematics) B.A. (Mathematics and English Education) Morehead State University, M.A. (Education-Instructional Leadership) Northern Kentucky University

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DONNELLY, KRISTINE (Art) B.F.A. (Art), B.A. (Art History) Indiana University, M.F.A. (Art), M.A. (Art Education) University of Cincinnati

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DUNCAN, LORI (Music) B.M.M.E. (Music) University of Kentucky, M.A. (Gifted & Talented Education) Northern Kentucky University, Rank I (Instructional Leadership) Northern Kentucky University

ECKERLE, ANDREW (Art) B.F.A. (Studio Art) University of Louisville, M.A.T. University of Louisville, M.F.A. University of Cincinnati (Studio Art)

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GATENS, LEE (Mathematics) B.B.A (Economics) Kent State University, M.Ed. (5-12 Mathematics) Iowa State University, Rank 1 (Educational Specialist), Northern Kentucky University

GAY, JASON (Librarian/Media Specialist) B.A. (Russian and Eastern European Studies) University of Kentucky, M.A. (Teaching) Northern Kentucky University, Rank 1 (Library Science) Eastern Kentucky University

GINTONIO, ANGELINA (English) B.A. (English) University of Kentucky, M.A.T. (Secondary English Education) - Northern Kentucky University, Rank 1 (National Board Certification)

GRILLOT, KIMBERLY (Social Studies, English) B.A. (History with Honors) University of Cincinnati, B.F.A. (Radio/Television) University of Cincinnati, B.S. (Secondary Education) University of Cincinnati, M.A. (Informatics - Communication) Northern Kentucky University

HAFFEY, EMILY (World Language - Spanish) B.A. (Sports Management) Xavier University, M.A. (Teaching) Northern Kentucky University

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HEINEKE, NICK (Mathematics) B.S. (Mathematics/Secondary Education) Northern Kentucky University, M.A. (Education-Teacher as a Leader) Northern Kentucky University

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HENSON, SHANNON (English) B.A. (English Education) University of Kentucky, M.A. (English Education) University of Kentucky, Rank I (National Board Certification)

HILS, MIKE (Social Studies) B.A. (Political Science) Northern Kentucky University, M.A. (Education) Northern Kentucky University

HOFFSTEDDER, SHELLY (Special Education) B.A. University of Kentucky, Moderate and Severe Disabilities (MSD-K-12), M.A. Northern Kentucky University, Learning Behavior Disorders (LBD)

JOHNSON, JODY (Technology) B.S. (Industrial Technology Education) Murray State University; M.S. (Industrial Technology Education) Murray State University; M.A. (Education) Georgetown College

KAMPSCHMIDT, KEVIN (Mathematics) B.S. (Mathematics, Secondary Education) University of Cincinnati, M.A. (Secondary Education) University of Cincinnati

KEARNS, NINA (Social Studies) B.A. (Sociology/Minor Psychology) Wittenberg University, M.A. (Education) Northern Kentucky University

LISTERMAN, KEVIN (Science) B.S. (Biology) Northern Kentucky University, M. Ed. (Education) Northern Kentucky University

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MCCORMACK, MEGAN (English) BS.Ed (Integrated Language Arts Education), Ohio State University

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MEADOWS, KRISTA (World Language - Spanish) B.A. (English/Spanish) Georgetown College, M.A. (Education) Northern Kentucky University, Rank I (Secondary Education) Northern Kentucky University

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NASH, JENNIFER (English) B.A. (Secondary English Education) Thomas More College, M.A. (Secondary Education) Northern Kentucky University

NIEDERT, CHAD (Math) B.S. (Mathematics) Xavier University, M.A. (Mathematics Education) Western Kentucky University, Ed. S. (Instructional Leadership and School Administration) Bellarmine University

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Notes