



FLOYD COUNTY BOARD OF EDUCATION
Anna Whitaker Shepherd, Superintendent
442 KY RT 550
Eastern, KY 41622
Telephone (606) 886-2354 Fax (606) 886-4550
www.floyd.kyschools.us

Linda C. Gearheart, Board Chair - District 1
William Newsome, Jr., Vice-Chair - District 3
Dr. Chandra Varia, Member - District 2
Keith Smallwood, Member - District 4
Steve Stone, Member - District 5

Consent Agenda Item (Action Item): Approve the Health Science course Body Structures and Functions as a life science credit toward graduation requirements.

Applicable State or Regulations:

Board Policy 08:1131, 08:113, 08.11; KRS 158.6451, 704 KAR 003:303
BOE approval of graduation requirements

Fiscal/Budgetary Impact:

No financial issues to the budget

History/Background:

Students who are in a Health Science field take Body Structures and Functions as a course. These students are taking this courses as a part of their pathway and learning about life science standards. In the documents provided you can see the Body Structures and Functions courses covers as much life science standards as an Anatomy course. An anatomy course can count toward a life science graduation requirement course. We are showing the crosswalk of the KAS life science standards with the CTE Body Structures and Functions standards and how they cover the same standards as the Anatomy course. After reviewing this crosswalk, we would like you to consider approving the Body Structures and Functions courses as an approved life science credit toward graduation. Also, in the KY Graduation Requirements the students are required to have three science credits: two credits incorporating lab based scientific investigation plus one credit aligned to the students ILP. This Body Structures and Functions courses is directly aligned to a Health Science students' ILP.

Recommended Action:

Approve the course Body Structures and Functions as a Life Science Credit toward graduation.

Contact Person(s):

Christina Crase, Principal

Principal

Director

Superintendent

Date:

9/12/22

KAS/CTE Standards for Body Structures and Functions Crosswalk

Students who demonstrate understanding can:		Course Coverage	Body Structures and Functions
HS-LS1-1.	Construct an explanation based on evidence for how the structure of DNA determines the structure of proteins, which carry out the essential functions of life through systems of specialized cells.	Biology, AP Biology, Anatomy	CTE Standards 1, 4, 5, 7 (Nervous System-neurons and specialized cells)
HS-LS1-2.	Develop and use a model to illustrate the hierarchical organization of interacting systems that provide specific functions within multicellular organisms.	Biology, AP Biology, Anatomy	CTE Standard 2, 3 (Hierarchical body organization)
HS-LS1-3.	Plan and conduct an investigation to provide evidence that feedback mechanisms maintain homeostasis.	Biology, AP Biology, Anatomy	CTE Standard 2 (Homeostasis and Feedback Mechanisms)
HS-LS1-5.	Use a model to illustrate how photosynthesis transforms light energy into stored chemical energy.	Biology and AP Biology	
HS-LS1-6.	Construct and revise an explanation based on evidence for how carbon, hydrogen, and oxygen from sugar molecules may combine with other elements to form amino acids and/or other large carbon-based molecules.	Biology, AP Biology, Anatomy	CTE Standard 4, 5, 7 (Specifically Endocrine System and sugars/hormones)
HS-LS1-7.	Use a model to illustrate that cellular respiration is a chemical process whereby the bonds of food molecules and oxygen molecules are broken and the bonds in new compounds are formed, resulting in a net transfer of energy.	Biology, AP Biology, Anatomy	CTE Standard 4, 5, 7 (Specifically Gastrointestinal)
HS-LS2-3.	Construct and revise an explanation based on evidence for the cycling of matter and flow of energy in aerobic and anaerobic conditions.	Biology, AP Biology, Anatomy	CTE Standard 4, 5, 7 (Specifically Respiratory System and Function, Wound Care)
HS-LS2-4.	Use mathematical representations to support claims for the cycling of matter and flow of energy among organisms in an ecosystem.	Biology and AP Biology	
HS-LS2-5.	Develop a model to illustrate the role of photosynthesis and cellular respiration in the cycling of carbon among the biosphere, atmosphere, hydrosphere, and geosphere.	Biology and AP Biology	
HS-LS2-1.	Use mathematical and/or computational representations to support explanations of factors that affect carrying capacity of ecosystems at different scales.	Biology and AP Biology	
HS-LS2-2.	Use mathematical representations to support and revise explanations based on evidence about factors affecting biodiversity and populations in ecosystems of different scales.	Biology and AP Biology	

HS-LS2-6.	Evaluate claims, evidence, and reasoning that the complex interactions in ecosystems maintain relatively consistent numbers and types of organisms in stable conditions, but changing conditions may result in a new ecosystem.	Biology and AP Biology	
HS-LS2-7.	Design, evaluate, and refine a solution for reducing the impacts of human activities on the environment and biodiversity.*	Biology, AP Biology, Anatomy	CTE Standard 4, 5, 6, 7 (Specially Intefumentary System and Skin Cancer)
HS-LS2-8.	Evaluate evidence for the role of group behavior on individual and species' chances to survive and reproduce.	Biology and AP Biology	
HS-LS4-6.	Create or revise a simulation to test a solution to mitigate adverse impacts of human activity on biodiversity.*	Biology and AP Biology	
HS-LS1-4.	Use a model to illustrate the role of cellular division (mitosis) and differentiation in producing and maintaining complex organisms.	Biology, AP Biology, Anatomy	CTE 5,6,7 Across all body systems (cancer integration).
HS-LS3-1.	Ask questions to clarify relationships about the role of DNA and chromosomes in coding the instructions for characteristic traits passed from parents to offspring.	Biology, AP Biology, Anatomy	CTE Standard 4, 5, 7 (Specially Reproductive System)
HS-LS3-2.	Make and defend a claim based on evidence that inheritable genetic variations may result from (1) new genetic combinations through meiosis, (2) viable errors occurring during replication, and/or (3) mutations caused by environmental factors.	Biology, AP Biology, Anatomy	CTE Standard 4, 5, 7 (Specially Reproductive, Circulatory)
HS-LS3-3.	Apply concepts of statistics and probability to explain the variation and distribution of expressed traits in a population.	Biology and AP Biology	
HS-LS4-1.	Communicate scientific information that common ancestry and biological evolution are supported by multiple lines of empirical evidence.	Biology and AP Biology	
HS-LS4-2.	Construct an explanation based on evidence that the process of evolution primarily results from four factors: (1) the potential for a species to increase in number, (2) the heritable genetic variation of individuals in a species due to mutation and sexual reproduction, (3) competition for limited resources, and (4) the proliferation of those organisms that are better able to survive and reproduce in the environment.	Biology and AP Biology	
HS-LS4-3.	Apply concepts of statistics and probability to support explanations that organisms with an advantageous heritable trait tend to increase in proportion to organisms lacking this trait.	Biology and AP Biology	
HS-LS4-4.	Construct an explanation based on evidence for how natural selection leads to adaptation of populations.	Biology and AP Biology	
HS-LS4-5.	Evaluate the evidence supporting claims that changes in environmental conditions may result in (1) increases in the number of individuals of some species, (2) the emergence of new species over time, and (3) the extinction of other species.	Biology and AP Biology	

LITERACY IN SCIENCE
In Body Structures Standard 8, there will be great emphasis on students reading and responding to scientific literature. Specific goals include:
Students will improve critical reading skills in order to respond, construct explanations, and design solutions to scientific literature or technical data. Students should be able to construct clear explanations of central ideas, conclusions, comparisons, or trends.
Students will communicate scientific or technical information from literature about phenomena, cycles, or scientific processes using appropriate scientific language (terminology and descriptions).
Students will produce valid and reliable claims/arguments based on evidence and data presented in scientific literature. Claims should be complete, reasonable, and based on evidence and data delivered via text.

NUMERACY IN SCIENCE
In Body Structures Standard 8, there will be great emphasis on students completing mathematical practices from KAS.
MP.1. Make sense of problems and persevere in solving them.
MP.2. Reason abstractly and quantitatively.
MP.3. Construct viable arguments and critique the reasoning of others.
MP.4. Model with mathematics
MP.5. Use appropriate tools strategically.
MP.6. Attend to precision.
MP.7. Look for and make use of structure.
MP.8. Look for and express regularity in repeated reasoning.

Alternative Credit Options

In addition to regular classroom-based instruction, students may earn credit by attending course(s) away from their high school of attendance to obtain certain courses required for graduation and/or to take advantage of postsecondary class/credit opportunities verified by the institution, the high school of attendance, and the District.

The District shall recognize only those online courses that meet the international standards for online teachers, courses, and programs that have been adopted by the Kentucky Department of Education.

Online courses may be subject to review by the Superintendent/designee for conformance with Kentucky Academic Standards and District graduation requirements.

DUAL-CREDIT SCHOLARSHIP PROGRAM

The District may offer the opportunity for students to earn dual-credits through the Kentucky Dual-Credit Scholarship Program and follows the guidelines outlined in the "*Kentucky Council on Postsecondary Education and Kentucky Department of Education Dual Credit Policy for Kentucky Public and Participating Postsecondary Institutions and Secondary Schools*," located on the Kentucky Department of Education website.

REFERENCES:

[KRS 158.622](#)

[KRS 164.786](#)

[013 KAR 002:020](#)

RELATED POLICIES:

08.1121; 08.113

Adopted/Amended: 7/24/2017

Order #: 19245

Graduation Requirements

In support of student development goals set out in KRS 158.6451 and the Kentucky Academic Standards, students must complete a minimum of twenty-two (22) credits, including demonstrated performance-based competency in technology, and all other state and local requirements in order to graduate from high school in the District.

CIVICS EXAM REQUIREMENT

Students wishing to receive a regular diploma must pass a civics test made up of one hundred (100) questions selected from the civics test administered to persons seeking to become naturalized citizens and prepared or approved by the Board. A minimum score of sixty percent (60%) is required to pass the test and students may take the test as many times as needed to pass. Students that have passed a similar test within the previous five (5) years shall be exempt from this civics test. This shall be subject to the requirements and accommodations of a student's individualized education program (IEP) or a Section 504 Plan.⁵

INDIVIDUAL LEARNING PLAN (ILP)

Students shall complete an Individual Learning Plan (ILP) that focuses on career exploration and related postsecondary education and training needs.

ADDITIONAL REQUIREMENTS OF THE BOARD

In addition to the content requirements established by the Kentucky Academic Standards, and the credits required by the minimum requirements for high school graduation in 704 KAR 003:305, the Board may impose other requirements for graduation from high school. However, the Board shall not adopt any graduation requirements that include achieving a minimum score on a statewide assessment.

Graduation Requirements**FOR STUDENTS ENTERING GRADE NINE (9) ON OR AFTER THE FIRST DAY OF THE 2019-2020 ACADEMIC YEAR**

Credits shall include content standards as provided by the Kentucky Academic Standards established in 704 KAR 003:303 and 704 KAR Chapter 8. The required credits and demonstrated competencies shall include the following minimum requirements:

English/Language Arts	Four (4) Credits total (English I and II plus two (2) credits aligned to the student's ILP)
Social Studies	Three (3) Credits total – (Two (2) plus one (1) credit aligned to the student's ILP)
Mathematics	Four (4) Credits total (Algebra I and Geometry plus two (2) credits aligned to the student's ILP)
Science	Three (3) Credits total – (Two (2) credits incorporating lab-based scientific investigation experiences plus one (1) credit aligned to the student's ILP)
Health	One-half (1/2) Credit
P.E.	One-half (1/2) Credit
Visual and Performing Arts	One (1) Credit or a standards-based specialized arts course based on the student's ILP
Academic and Career Interest Standards-based Learning Experiences	Six (6) Credits total (Two (2) plus four (4) standards-based credits in an academic or career interest based on the student's ILP)
Technology	Demonstrated performance-based competency

Graduation Requirements**FOR STUDENTS ENTERING GRADE NINE (9) ON OR AFTER THE FIRST DAY OF THE 2020-2021 ACADEMIC YEAR**

Credits shall include content standards as provided by the Kentucky Academic Standards established in [704 KAR 003:303](#) and 704 KAR Chapter 8. The required credits and demonstrated competencies shall include the following minimum requirements:

English/Language Arts	Four (4) Credits total (English I and II plus two (2) credits aligned to the student's ILP)
Social Studies	Three (3) Credits total – (Two (2) plus one (1) credit aligned to the student's ILP)
Mathematics	Four (4) Credits total (Algebra I and Geometry plus two (2) credits aligned to the student's ILP)
Science	Three (3) Credits total – (Two (2) credits incorporating lab-based scientific investigation experiences plus one (1) credit aligned to the student's ILP)
Health	One-half (1/2) Credit
P.E.	One-half (1/2) Credit
Visual and Performing Arts	One (1) Credit or a standards-based specialized arts course based on the student's ILP
Academic and Career Interest Standards-based Learning Experiences	Six (6) Credits total (Two (2) plus four (4) standards-based credits in an academic or career interest based on the student's ILP)
Technology	Demonstrated performance-based competency
Financial Literacy	One (1) or more courses or programs that meet the financial literacy requirements pursuant to KRS 158.1411 .

Graduation Requirements**PERFORMANCE-BASED CREDITS**

In addition to Carnegie units, students may earn credit toward high school graduation through the District's standards-based, performance-based credit system that complies with requirements of Kentucky Administrative Regulation. Procedures for the developing and amending the system shall address the following:

1. Conditions under which high school credit will be granted under the system that allow students to demonstrate proficiency and earn credit for learning acquired outside the normal classroom setting, outside of school, or in prior learning;

Performance-based credit may be earned while the student is still "in school," but the instructional setting will look different from a traditional "seat time" environment.

2. Performance descriptors and their linkages to State content standards and academic standards;

At the high school level, performance descriptors and evaluation procedures shall be established to determine if the content and performance standards have been met.

3. Assessments and the extent to which state-mandated assessments will be used;
4. An objective grading and reporting process; and
5. Criteria to promote and support school and community learning experiences, such as internships and cooperative learning, in support of a student's ILP. Such experiences shall be supervised by qualified instructors and aligned with State and District content and performance standards.

The high school student handbook shall include complete details concerning specific graduation requirements.

In keeping with statutory requirements, the District shall accept for credit toward graduation and completion of high school course requirements an advanced placement or a high school equivalent course taken by a student in grades 5, 6, 7, or 8 if that student attains performance levels expected of high school students in the District as determined by achieving a score of "3" or higher on a College Board Advanced Placement examination or a grade of "B" or better in a high school equivalent.²

SENIOR RECORD REVIEW

By the end of the first semester, each senior's record shall be reviewed to determine eligibility for graduation. Written notification of ineligibility for graduation shall be provided by the Principal to both the student and parent.

TRANSITIONAL CLASS REQUIREMENTS

All students that have not met the Council for Post-Secondary Education's college readiness requirements in math based on the ACT scores during their junior year or by other approved assessments, will be required to take transitional math courses, as determined by the placement assessments, during their senior year.

Graduation Requirements

OTHER PROVISIONS

The Board may grant different diplomas to those students who complete credits above the minimum number as established by the Kentucky Board of Education. In addition, the Board may award a diploma to a student posthumously indicating graduation with the class with which the student was expected to graduate.

The Board, Superintendent, Principal, or teacher may award special recognition to students.

Consistent with the District's graduation practices for all students, an alternative high school diploma shall be awarded to students with disabilities in compliance with applicable legal requirements. In addition, former students may submit to the Superintendent a request that the District provide them with an alternative high school diploma to replace the certificate of attainment they received at time of graduation from the District.³

A student who is at least seventeen (17) years of age and who is a state agency child, as defined in KRS 158.135, shall be eligible to seek attainment of a High School Equivalency Diploma.

The Board may substitute an integrated, applied, interdisciplinary, occupational, technical, or higher-level course for a required course if the alternative course provides rigorous content.

EARLY GRADUATION CERTIFICATE

Students who meet all applicable legal requirements shall be eligible for early graduation in relation to receipt of a graduation diploma and 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 ILP to support their efforts.

To graduate early and earn an Early Graduation Certificate, a student shall successfully complete the requirements for early high school graduation as established in administrative regulation by the Kentucky Board of Education.

A student who has indicated an intent to graduate early may participate in the student's state administration of the college readiness exam prior to the junior year, if needed. Students who meet all applicable legal requirements shall be awarded a diploma and an Early Graduation Certificate.

GRADUATION CEREMONIES

Students shall have completed the necessary requirements to earn a diploma before they may participate in the graduation exercises.

The Superintendent or the Principal, with the written approval of the Superintendent, may deny any senior the privilege of participating in any or all of the graduation activities if the senior's conduct is such that it will discredit the graduating class or school.

Graduation exercises at individual secondary schools shall be held no earlier than the evening of the last day of school in the school term.

Graduation Requirements**TRANSCRIPTS**

Each graduating senior is entitled to three (3) free copies of his/her transcript.

DIPLOMAS FOR VETERANS

In keeping with statute and regulation, the Board shall award an authentic high school diploma to an honorably discharged veteran who did not complete high school prior to being inducted into the United States Armed Forces during World War II, the Korean conflict, or the Vietnam War.¹

REFERENCES:

¹[KRS 40.010](#); [KRS 158.140](#); [704 KAR 007:140](#)

²[KRS 158.622](#)

³[KRS 156.160](#); 20 U.S.C. § 1414

⁴[KRS 158.142](#); [704 KAR 003:305](#)

⁵[KRS 158.141](#)

[KRS 156.027](#); [KRS 158.135](#)

[KRS 158.141](#); [KRS 158.143](#); [KRS 158.183](#); [KRS 158.281](#)

[KRS 158.302](#); [KRS 158.645](#); [KRS 158.6451](#)

[KRS 158.860](#)

[013 KAR 002:020](#); [702 KAR 007:125](#); [703 KAR 004:060](#)

[704 KAR 003:303](#); [704 KAR 003:306](#); [704 KAR 007:090](#); 704 KAR Chapter 8

[OAG 78-348](#); [OAG 82-386](#)

[Kentucky Academic Standards](#)

RELATED POLICIES:

08.1131; 08.14; 08.22; 08.222; 08.4

09.126 (re requirements/exceptions for students from military families)

RELATED PROCEDURE:

09.12 AP.25

Adopted/Amended: 7/25/2022

Order #: 20091

Course of Study**DEVELOPMENT**

The Superintendent shall develop and disseminate to the schools a course of study for primary school through twelfth grade that will include minimum statutory and regulatory requirements¹ and additional requirements as specified by the Board.

ASSESSMENT OF STUDENT WORK / NONDISCRIMINATION

Consistent with District policies addressing assessment of student progress and grading as well as council and school policies relating to the determination of curriculum and assignments, instructional staff are expected to issue grades or assessments of student assignments, including in the classroom, based on responsiveness to the assigned task(s), accuracy, and quality of work, utilizing sound pedagogical judgment and providing modifications for students with disabilities as required by law, free from discrimination or penalty based on constitutionally protected expressions of religious or political views in otherwise responsive student submissions.

IMPLEMENTATION

Each teacher shall implement the course of study prescribed for the assigned grade and subject area.²

SBDM SCHOOLS

In schools operating under SBDM, the Superintendent shall determine which curriculum, textbooks, instructional materials, and student support services shall be provided in the school after consulting with the Board, the Principal, and the school council.

SYLLABUS

Teachers at all levels (preschool through adult education) shall develop a syllabus for each course, grade/level or subject (single and/or interdisciplinary area) they teach to communicate to students and parents the following information:

1. Prerequisites for the course
2. Topics to be covered
3. Order of material to be covered
4. Resources to be used
5. Planned testing points
6. Performance standards and expectations

Each year teachers shall distribute a current syllabus to their students and the students' parents/guardians as directed by the Superintendent/designee.

The Principal/designee shall make pertinent student achievement data available to each teacher and, in keeping with policies set by the council, monitor the process of reviewing and updating syllabi in response to such data.

Course of Study**COURSE COMPLETION**

Credit shall be awarded following successful of high school courses and final grades will be calculated as follows:

1. 1st nine weeks – 25%
2. 2nd nine weeks – 25%
3. 3rd nine weeks – 25%
4. 4th nine weeks – 25%

REFERENCES:

¹[704 KAR 003:303](#)

²[KRS 161.170](#)

[KRS 156.160](#); [KRS 158.100](#); [KRS 158.183](#)

[KRS 158.645](#); [KRS 158.6451](#)

[KRS 160.345](#)

[702 KAR 007:125](#)

[704 KAR 003:305](#)

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