GCCC Anatomy and Physiology [9103]

Process for New Course Offering - All Schools

This form is to be completed for a course that has never been approved by the Curriculum Council.

STEP ONE: Requesting professional (teacher/counselor) completes the written request.	
STEP TWO: Requesting professional takes request to Department Chair for consideration/additional information. The Department Chair presents the course to members of the department.	**Recommended / Not Recommended** 10/7 *Department Chair / Date* *Date of Department Mtg.*
STEP THREE: Request is sent to the Head Principal for consideration.	**Recommended / Not Recommended** 10-7-24 *Head Principal Signature / Date*
STEP FOUR: Counselors complete Skyward Course Information on the written request form.	**Skyward Course Information Completed** *Department Chair*
STEP FIVE: Request is brought to the Curriculum Council for a final decision by the Department Chair and/or the requesting professional. Presence is expected at the Curriculum Council meeting to answer any questions.*	**Recommended / Not Recommended**** 11-12-24 *Curriculum Council Chair Signature / Date*
STEP SIX: Final determination, before submission to the BOE, is determined by the Assistant/Deputy Superintendent overseeing the Office of Curriculum & Instruction.	**Recommended / Not Recommended** 11-12-24 *Asst. Deputy Superintendent Signature / Date*
STEP SEVEN: Request is presented to BOE for approval	**Approved / Not Approved**
STEP EIGHT: If approved by BOE, Request is sent to technology: A Zendesk is written by Chair of the Curriculum Council & paper copies are delivered by administrative assistant.	*Date Zendesk Submitted* *Date Forms Delivered*
STEP NINE: GCHS Registrar/Counselors are notified of completed changes by Technology. Forms are returned to the Office of Curriculum & Instruction.	**Date Changes Complete** ☐**Forms Returned to Office of Curriculum & Instruction**

****Course Not Approved (Notes from Curriculum Council):**

Request for New Course Offering - All Schools

BELOW TO BE COMPLETED BY REQUESTING PROFESSIONAL/DEPARTMENT CHAIR

Professional Submitting Request: E Hamm DeHaan

Department of Submission: 10/4/24 Counseling

Date Completed by Professional:

Building Submitting Request: GCHS

Date Submitted to Department Chair: 10/4/24

Course Name: GCCC Anatomy and Physiology

* take 9113 from skyward and update

SKYWARD INFORMATION:
Short description of course (15 characters)
prints on transcripts
GCCC Anat & Phy

Long description of course (30 characters)
GCCC Anatomy and Physiology

Kansas Course Code (KCCMS): 03054 - update in curriculum and crse master

Please attach the following:

☐ Standards/Course Objectives

☐ Syllabus

☐ Description of Course

80% of standards for the course should be addressed in order for approval. Please attach any other pertinent documents you think the Council may wish to evaluate to approve the course.

Does any additional curriculum need to be purchased for additional credit to be offered? ☐ YES* ☐ NO

**If yes, please attach information regarding curriculum to be purchased that includes cost.*

***If approved by building principal, Council will assume that cost of new curriculum is not a concern.*

Does this course have the potential or need for a supplemental salary?

☐ YES* ☐ NO

**If yes, please attach an explanation of the supplemental including cost and hours.*

List any pre-requisite courses:

None

BIO 210 is this class

Indicate the following:

☐ Required Course ☐ Elective Course

☐ Either (depends on grad reqs)

BELOW TO BE COMPLETED BY COUNSELOR

Course Length:

☐ 1 quarter ☐ 1 semester ☐ 2 semesters

Credit to be Earned: 0.5

Is this a dual credit course? YES / NO

Is this a GCCC course? YES / NO

Number of USD 457 Credits: 0.5 (3 GCCC credit hours = 0.5 credit at USD 457)

NOTES:

take 9113 from Skyward and update name; KS Crse code be sure it is indexed

NO semester indication; can occur either semester

GPA Set: ☐normal ☑indexed **Skyward Filter:** ☐LA ☐OC ☐FA ☐MA ☐SS ☐PE ☐SCI ☐CO ☑GE ☐FL ☐STEM	***TECHNOLOGY ON BACK**
BELOW TO BE COMPLETED BY TECHNOLOGY	
☐KCCMS Mapping Confirmed ☐Skyward Updates including any Course Code Assigned —> _____ ☐Grad Requirements & Filtering Confirmed ☐GCHS Registrar/Counseling Department Notified of Completion ☐Forms Returned to Office of Curriculum & Instruction	

ALL FORMS MUST BE RETURNED TO THE OFFICE OF CURRICULUM AND INSTRUCTION.

State Course Codes

High School

Subject Area 03: Life and Physical Sciences (secondary)

Biology

03051 - Biology

Biology courses are designed to provide information regarding the fundamental concepts of life and life processes. These courses include (but are not restricted to) such topics as cell structure and function, general plant and animal physiology, genetics, and taxonomy.

03052 - Biology—Advanced Studies

Usually taken after a comprehensive initial study of biology, Biology—Advanced Studies courses cover biological systems in more detail. Topics that may be explored include cell organization, function, and reproduction; energy transformation; human anatomy and physiology; and the evolution and adaptation of organisms.

03053 - Anatomy and Physiology

Anatomy and Physiology is a 1-credit course that is the study of the function, structure, and interrelationships of the various systems of the human body. To understand the structural and functional systems of the human body, students will learn about terminology, body plan and organization, histology, the integumentary system, the skeletal system, the muscular system, the nervous system, special senses, the endocrine system, the cardiovascular system, lymphatic system, immunity, the respiratory system, the digestive system, metabolism, the urinary system, and the reproductive system. Special attention should be given to health careers, related technical skills, and technology associated with these professions.

03054 - Anatomy

Anatomy courses present an in-depth study of the human body and biological system. Students study such topics as anatomical terminology, cells, and tissues and typically explore functional systems such as skeletal, muscular, circulatory, respiratory, digestive, reproductive, and nervous systems.

03055 - Physiology

Physiology courses examine all major systems, tissues, and muscle groups in the human body to help students understand how these systems interact and their role in maintaining homeostasis. These courses may also cover such topics as cell structure and function, metabolism, and the human life cycle.

Outlook

syllabi for curriculum guide

From Dawn Tucker <dawn.tucker@gcccks.edu>
Date Tue 9/24/2024 7:59 AM
To Hamlin DeLoach, Emily <ehamlin@gckschools.com>

5 attachments (3 MB)
BIOL-210.pdf; BIOL-211.pdf; HELR 103.pdf; HELR 160.pdf; MATH 111 Master Syllabus.pdf;

Hi Emily,

Here are some syllabi about courses that we thought might benefit some of your students for dual credit. Some you may already have. Students could enroll with us using our online instructors or possibly coming to campus for a class. If ever there was staff at GCHS who could be qualified to teach, we would love for them to teach face to face on your campus.

Let me know if you need anything else from me or have questions.

Thanks!!

DAWN TUCKER
Dual Credit Coordinator
Office | 620-276-0441
dawn.tucker@gcccks.edu

GARDEN CITY
COMMUNITY COLLEGE
801 Campus Drive • Garden City, KS • 67846 • www.gcccks.edu

GCCC will be the premier educational nexus of progress providing world class learning in a dynamic environment.
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GARDEN CITY COMMUNITY COLLEGE

BIOL 210 Anatomy and Physiology 5 credits

COURSE INFORMATION

Course Number-Section: BIOL 210-01
Final Exam: Click here to enter text.
Start/End Date: Click here to enter text.

INSTRUCTOR INFORMATION

Instructor: Click here to enter text.
Phone:
Email:
Office Location: Click here to enter text.

CONTACTING INSTRUCTOR

EMAIL RESPONSE TIME

COURSE DESCRIPTION

DESCRIPTION: : This course is an elementary study of the functions and structure of the human body, including general principles of the mechanisms of nutrition. This course which is designed for education majors and general education students, but is not recommended for students in health-related fields. Three hours lecture/four hours laboratory per week. (Fall/Spring)

PREREQUISITES: None

GCCC'S ESSENTIAL SKILLS OUTCOMES

Students will develop skills in written communication, oral communication, and critical thinking while advancing their knowledge in cultural diversity and social responsibility as part of their educational experiences at the college. These outcomes align with the college's commitment to engaging students in the collection, analysis, and communication of information.

TEXTBOOK INFORMATION

Visual Anatomy Physiology Lab manual, 2ed, by Sarikasn, provided in lab

STUDENT LEARNER OUTCOMES

Students will be able to

Anatomy & Physiology

1. Body Plan & Organization

Upon completion of this section the student will be able to demonstrate measurable understanding of descriptive anatomical and directional terminology including the following topics.

- anatomical position

- body planes, sections

- body cavities & regions

- directional terms

- basic terminology

- levels of organization

- survey of body systems

2. Homeostasis

Upon completion of this section the student will be able to demonstrate measurable understanding of the basic concept of homeostasis and how homeostatic mechanisms apply to body systems including the following topics.

- general types of homeostatic mechanisms

- examples of homeostatic mechanisms

- application of homeostatic mechanisms

- predictions related to homeostatic imbalance, including disease states & disorders

3. Chemistry & Cell Biology Review

Upon completion of this section the student will be able to demonstrate measurable understanding of basic chemistry and cellular structures and function, including the following topics.

- atoms & molecules

- chemical bonding

- inorganic compounds/solutions (including the concept of pH)

- organic compounds

- energy transfer using ATP

- intracellular organization of nucleus and cytoplasm

- membrane structure & function

- mechanisms for movement of materials across cellular membranes

- organelles

- protein synthesis

- cellular respiration (introduction)

- somatic cell division (mitosis & cytokinesis)

- reproductive cell division

– application of homeostatic mechanisms

- predictions related to homeostatic imbalance, including disease states and disorders

4. Histology

Upon completion of this section the student will be able to demonstrate measurable understanding of the basic tissues of the body, their location and functions, including the following topics.

- overview of histology & tissue types

- microscopic anatomy, location, & functional roles of epithelial, connective, muscular and nervous tissues

- membranes (mucous, serous, cutaneous & synovial) - glands (exocrine & endocrine) - tissue injury & repair

5. Integumentary System

Upon completion of this section the student will be able to demonstrate measurable understanding of major gross and microscopic anatomical components of the integumentary system and describe the functions of the system, including the following topics.

- general functions of the skin & the subcutaneous layer

- gross & microscopic anatomy of the skin

- roles of the specific tissue layers of the skin & subcutaneous layer

- anatomy & functional roles of accessory structures

- application of homeostatic mechanisms

- predictions related to homeostatic imbalance, including disease states & disorders

6. Skeletal System

Upon completion of this section the student will be able to demonstrate measurable understanding of major gross and microscopic anatomical components of the skeletal system and explain their functional roles in osteogenesis, repair, and body movement, including the following topics.

- general functions of bone & the skeletal system

- structural components – microscopic anatomy

- structural components – gross anatomy

- physiology of embryonic bone formation (ossification, osteogenesis)

- physiology of bone growth, repair & remodeling

- organization of the skeletal system - gross anatomy of bones

- classification, structure & function of joints (articulations)

- application of homeostatic mechanisms

- predictions related to homeostatic imbalance, including disease states & disorders

7. Muscular System

Upon completion of this section the student will be able to demonstrate measurable understanding of major gross and microscopic anatomical components of the muscular system and explain their functional roles in body movement, maintenance of posture, and heat production, including the following topics.

- general functions of muscle tissue

- identification, general location, & comparative characteristics of skeletal, smooth, & cardiac muscle tissue

- detailed gross & microscopic anatomy of skeletal muscle

- physiology of skeletal muscle contraction

- skeletal muscle metabolism

- principles & types of whole muscle contraction - nomenclature of skeletal muscles

- location & function of skeletal muscles

- group actions of skeletal muscles

- lever systems

- application of homeostatic mechanisms

- predictions related to homeostatic imbalance, including disease states & disorders

8. Nervous System

Upon completion of this section the student will be able to demonstrate measurable understanding of the major gross and microscopic anatomical components of the nervous system and explain their functional roles in communication, control, and integration, including the following topics.

- general functions of the nervous system

- organization of the nervous system from both anatomical & functional perspectives

- gross & microscopic anatomy of the nerve tissue

- neurophysiology, including mechanism of resting membrane potential, production of action potentials, & impulse transmission

- neurotransmitters& their roles in synaptic transmission

- sensory receptors & their roles

- division, origin, & function of component parts of the brain

- protective roles of the cranial bones, meninges, & cerebrospinal fluid

- structure & function of cranial nerves

- anatomy of the spinal cord & spinal nerves

- reflexes & their roles in nervous system function

- physiology of sensory & motor pathways in the brain & spinal cord

- functions of the autonomic nervous system

- comparison of somatic & autonomic nervous systems

- application of homeostatic mechanisms

- predictions related to homeostatic imbalance, including disease states & disorders

9. Special Senses

-Upon completion of this section the student will be able to demonstrate measurable understanding of the major gross and microscopic anatomical components of the eye and ear and explain their functional roles in vision, hearing and equilibrium.

-Students should also be able to identify and locate the receptors responsible for olfaction and gustation and briefly describe the physiology of smell and taste, including the following topics.

- gross & microscopic anatomy of the eye & ear

- roles of specific tissues of the eye in vision

- roles of specific tissues of the ear in hearing & equilibrium

- olfactory receptors & their role in smell

- gustatory receptors & their role in taste

- general gross & microscopic anatomy of hearing & accessory structures of the ear

- roles of specific tissues of the ear in hearing

- roles of the accessory structures

- role of the ear in equilibrium

- application of homeostatic mechanisms

- predictions related to homeostatic imbalance, including disease states & disorders

10. Endocrine System

Upon completion of this section the student will be able to demonstrate measurable understanding of the major gross and microscopic anatomical components of the endocrine system and explain the functional roles of their respective hormones in communication, control, and integration, including the following topics.

- general functions of the endocrine system

- chemical classification of hormones & mechanism of hormone actions at receptors

- control of hormone secretion

- control by the hypothalamus& pituitary gland

- identity, source, secretory control, & functional roles of the major hormones produced by the body

- local hormones (paracrines & autocrines) & growth factors

- hormonal response to stress

- application of homeostatic mechanisms

- predictions related to homeostatic imbalance, including disease states & disorders

Note: Since the endocrine system plays a key role in the regulation and integration of body organ systems, detailed aspects of endocrine system function may be emphasized throughout the course.

11. Cardiovascular System

Upon completion of this section the student will be able to demonstrate measurable understanding of the major gross and microscopic anatomical components of the cardiovascular system and explain their functional roles in transport and hemodynamics, including the following topics. Topics include:

- general functions of the cardiovascular system

- general functions of the cardiovascular system

- composition of blood plasma - identity, microscopic anatomy, numbers, formation, & functional roles of the formed elements of the blood

- hemostasis, including coagulation of the blood

- ABO & Rh blood grouping

- gross & microscopic anatomy of the heart, including the conduction system

- physiology of cardiac muscle contraction - blood flow through the heart

- conduction system of the heart & the electrocardiogram

- cardiac cycle

- regulation of cardiac output, stroke volume & heart rate

- anatomy & functional roles of the different types of blood vessels

- pattern of blood circulation throughout the body, including systemic, pulmonary, coronary, hepatic portal, & fetal circulations

- blood pressure & its functional interrelationships with cardiac output, peripheral resistance, & hemodynamics

- application of homeostatic mechanisms

- predictions related to homeostatic imbalance, including disease states & disorders

12. Lymphatic System & Immunity

Upon completion of this section the student will be able to demonstrate measurable understanding of the major gross and microscopic anatomical components of the lymphatic system and explain their functional roles in fluid dynamics and immunity, including the following topics.

- general functions of the lymphatic system

- general functions of the lymphatic system

- lymph & lymphatic vessels

- lymphatic cells, tissues, & organs

- introduction to innate (nonspecific) defenses & adaptive (specific) defenses

- innate (nonspecific) defenses

- overview of adaptive (specific) defenses

- antigens & antigen processing

- lymphocytes & their role in adaptive immunity

- antibodies & their role in adaptive immunity

- applied immunology

- application of homeostatic mechanisms

- predictions related to homeostatic imbalance, including disease states & disorders

13. Respiratory System

Upon completion of this section the student will be able to demonstrate measurable understanding of the major gross and microscopic anatomical components of the respiratory system and explain their functional roles in breathing/ventilation and in the processes of external and internal respiration, including the following topics.

- general functions of the respiratory system

- gross & microscopic anatomy of the respiratory tract & related organs

- mechanisms of pulmonary ventilation - pulmonary air volumes & capacities

- mechanisms of gas exchange in lungs & tissues

- mechanisms of gas transport in the blood

- control of pulmonary ventilation

- application of homeostatic mechanisms

- predictions related to homeostatic imbalance, including disease states & Disorders

14. Digestive System

Upon completion of this section the student will be able to demonstrate measurable understanding of the major gross and microscopic anatomical components of the digestive system and explain their functional roles in digestion, absorption, excretion and elimination, including the following topics.

- general functions of the digestive system

- gross & microscopic anatomy of the alimentary canal

- gross & microscopic anatomy of the accessory glands & organs

- peritoneum & mesenteries

- motility in the alimentary canal

- mechanical & chemical processes of digestion

- processes of absorption

- hormonal & neural regulation of digestive processes

- application of homeostatic mechanisms

- predictions related to homeostatic imbalance, including disease states & disorders

15. Metabolism

Upon completion of this section the student will be able to demonstrate measurable understanding of the functional relationship among cellular, tissue and organ level metabolism, the role nutrition plays in metabolism, and the mechanisms by which metabolic rate is regulated in the body, including the following topics.

- nutrition

- introduction to metabolism

- cellular respiration & the catabolism & anabolism of carbohydrates, lipids, & proteins

- metabolic roles of body organs

- energy balance & thermoregulation

- application of homeostatic mechanisms

- predictions related to homeostatic imbalance, including disease states & disorders

16. Urinary System

Upon completion of this section the student will be able to demonstrate measurable understanding of the major gross and microscopic anatomical components of the urinary system and explain their functional roles, including the following topics.

- general functions of the urinary system

- gross & microscopic anatomy of the urinary tract, including detailed histology of the nephron

- functional processes of urine formation, including filtration, reabsorption, secretion, & excretion

- factors regulating & altering urine volume & composition, including the renin-angiotensin system and the roles of aldosterone& antidiuretic hormone

- endocrine activities of the kidneys, such as vitamin D activation & secretion of erythropoietin

- innervation & control of the urinary bladder

17. Fluid/Electrolyte& Acid/Base Balance

Upon completion of this section the student will be able to demonstrate measurable understanding of the physiology of the homeostatic mechanisms that control fluid/electrolyte and acid/base balance, including the following topics.

- regulation of water intake & output

- description of the major fluid compartments, including intracellular, extracellular, intravascular, & interstitial

- volume & chemical composition of major compartment fluids

- movements between the major fluid compartments, causal forces, volumes, & electrolyte balance

- buffer systems & their roles in acid/base balance

- role of the respiratory system in acid/base balance

- role of the urinary system in acid/base balance

18. Reproductive Systems

Upon completion of this section the student will be able to demonstrate measurable understanding of the major gross and microscopic anatomical components of the reproductive system and explain their functional roles in reproduction and inheritance, including the following topics.

- general functions of the male & female reproductive systems

- gross & microscopic anatomy of the male & female reproductive systems

- gametogenesis

- specific roles of the female reproductive organs

- specific roles of the female reproductive organs

- regulation of reproductive functions

- conception, pregnancy, & embryological & fetal development

- parturition & labor

- mammary gland anatomy & physiology

If your course is KBOR Articulated, you must have the following policy after your SLOs. If not, you may delete this policy from your syllabus. Delete this instruction line regardless.

KRSN Course 2020

The learning outcomes and competencies detailed in this course outline or syllabus meet or exceed the learning outcomes and competencies specified by the Kansas Core Outcomes Groups project for this course as approved by the Kansas Board of Regents

COURSE TYPE

State Course Codes

High School

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