



MASTER COURSE OUTLINE

Date: September 1, 2018

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COURSE TITLE

General Lab-Science

GENERAL COURSE INFORMATION

Dept.: HSC

Course Num: 020

(Formerly:)

CIP Code: 32.0240

Intent Code: 12

Program Code: N/A

Credits: 0.5-1

Total Contact Hrs Per Qtr.: 110

Lecture Hrs: 0

Lab Hrs: 110

Other Hrs:

Distribution Designation:

COURSE DESCRIPTION (as it will appear in the catalog)

This lab course provides basic instruction of physical, life and earth science skills necessary for high school graduation. High school completion credit only.

PREREQUISITES

Students must be enrolled in a Basic Skills class and have taken the CASAS pre-test

TEXTBOOK GUIDELINES

Resources and laboratory experiments as determined by the instructor

COURSE LEARNING OUTCOMES

Upon successful completion of the course, students should be able to demonstrate the following knowledge or skills:

- Use scientific method, inquiry and record keeping practices
- Safely perform and report results on 6 labs with a minimum of 2 in Life Science and 2 in Physical Science

INSTITUTIONAL OUTCOMES

None

COURSE CONTENT OUTLINE

- Nature of science and the scientific method
- Safely perform six scientific laboratory experiments using the scientific method (with a minimum of 2 in Life Science and 2 in Physical Science)
- Life Science suggested topics
 - Characteristics and Organization of Life
 - Reproduction, Genetics, DNA and Human Biology
 - Introduction to Evolutionary Theory and Natural Selection
 - Cells: Their Structures and Functions
 - Animal Structure and Function
 - Plant Structure and Function

- Physical Science suggested topics
 - General and Organic Chemistry
 - Classifying Chemical Reactions
 - Solutions and Mixtures
 - Atoms, Elements, Isotopes, Ions, and The Periodic Table

DEPARTMENTAL GUIDELINES

This course will satisfy one high school general lab science credit for HS21. Independent study may be approved by instructor on a topic related to physical, life or earth science.

College and Career Readiness Standards (CCRS) for BEdA Program: Instruction is aligned to the following CCR Standards:

C-E in Reading based on the CCRS Anchors:

- 1 (Read closely to determine what the text says explicitly and to make logical inferences from it),
- 4 (Interpret words and phrases as they are used in a text, including determining technical, connotative, and figurative meanings, and analyze how specific word choices shape meaning or tone),
- 7 (Integrate and evaluate content presented in diverse media and formats, including visually and quantitatively, as well as in words),
- 8 (Delineate and evaluate the argument and specific claims in a text, including the validity of the reasoning as well as the relevance and sufficiency of the evidence), and
- 10 (Read and comprehend complex literary and informational texts independently and proficiently).

C-E in Writing based on the CCRS Anchors:

- 1 (Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence),
- 2 (Write informative/explanatory texts to examine and convey complex ideas and information clearly and accurately through the effective selection, organization, and analysis of content),
- 3 (Write narratives to develop real or imagined experiences or events using effective technique, well-chosen details and well-structured event sequences),
- 4 (Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience),
- 5 (Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach),
- 6 (Use technology, including the Internet, to produce and publish writing and to interact and collaborate with others),
- 7 (Conduct short as well more sustained research projects based on focused questions, demonstrating understanding of the subject under investigation),
- 8 (Gather relevant information from multiple print and digital sources, assess the credibility and accuracy of each source, and integrate the information while avoiding plagiarism), and
- 9 (Draw evidence from literary or informational texts to support analysis, reflection, and research).

C-E in Math based on the CCRS Anchors:

- 1 (Make sense of problems and persevere in solving them)
- 2 (Reason abstractly and quantitatively)
- 3 (Construct viable arguments and critique the reasoning of others)
- 4 (Model with mathematics)
- 5 (Use appropriate tools strategically)
- 6 (Attend to precision)
- 7 (Look for and make use of structure)
- 8 (Look for and express regularity in repeated reasoning)

C-E in Speaking and Listening based on the CCRS Anchors:

- 1 (Prepare for and participate effectively in a range of conversations and collaborations with diverse partners, building on others' ideas and expressing their own clearly and persuasively),
- 2 (Integrate and evaluate information presented in diverse media and formats, including visually, quantitatively, and orally),
- 3 (Evaluate a speaker's point of view, reasoning, and use of evidence and rhetoric),

- 4 (Present information, findings, and supporting evidence such that listeners can follow the line of reasoning and organization, development, and style are appropriate to task, purpose, and audience),
- 5 (Make strategic use of digital media and visual displays of data to express information and enhance understanding of presentations), and
- 6 (Adapt speech to a variety of contexts and communicative tasks, demonstrating command of formal English when indicated or appropriate).

C-E in Language based on the CCRS Anchors:

- 3 (Apply knowledge of language to understand how language functions in different contexts, to make effective choices for meaning or style, and to comprehend more fully when reading or listening),
- 4 (Determine or clarify the meaning of unknown and multiple-meaning words and phrases by using context clues, analyzing meaningful word parts, and consulting general and specialized reference materials, as appropriate), and
- 6 (Acquire and use accurately a range of general academic and domain-specific words and phrases sufficient for reading, writing, speaking, and listening at the college and career readiness level. demonstrate independence in gathering vocabulary knowledge when encountering a word or phrase important to comprehension or expression).

DIVISION CHAIR APPROVAL

DATE