



MASTER COURSE OUTLINE

Date: September 1, 2018

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COURSE TITLE

Non-Lab Science

GENERAL COURSE INFORMATION

Dept.: OPD

Course Num: 021

(Formerly:)

CIP Code: 32.0205

Intent Code: 12

Program Code: N/A

Credits: 0.5-1.0

Total Contact Hrs Per Qtr.: 55

Lecture Hrs: 55

Lab Hrs: 0

Other Hrs:

Distribution Designation:

COURSE DESCRIPTION (as it will appear in the catalog)

This non-lab course provides basic instruction in physical, life and earth science, necessary for high school graduation.

High school completion credit only

PREREQUISITES

Students must be registered in an Open Doors course

TEXTBOOK GUIDELINES

Instructional materials 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:

- Demonstrate an understanding of life science including structure and function of living organisms, processes within cells, ecosystems, stability of populations, and the mechanisms of evolution.
- Demonstrate an understanding of physical science including force and motion, newton's laws, matter, chemical reactions, and transformation and conservation of energy,
- Demonstrate an understanding of earth science including evolution of the universe, earth systems, and evolution of the earth

INSTITUTIONAL OUTCOMES

None

COURSE CONTENT OUTLINE

- Life Science (two of the following topics)
 - Characteristics and Organization of Life
 - Genetics, DNA and Human Biology
 - Introduction to Evolutionary Theory and Natural Selection
 - Ecosystems
 - Cells: Their Structures and Functions

- Physical Science (two of the following topics)
 - General and Organic Chemistry
 - Classifying Chemical Reactions
 - Solutions and Mixtures
 - Energy
 - Newton's laws of force and motion
 - Atoms, Elements, Isotopes, Ions, and The Periodic Table
- Earth Science (two of the following topics)
 - Environmental Science and Natural Resources including Renewable Energy
 - Water Cycle and Water Necessity for Life
 - Basic Geology and Geological Forces
 - Plant Earth and the Earth Building Processes
 - Weather, Clouds, Atmosphere, Heat and Thermal Energy
 - Evolution of the earth and/or the universe

DEPARTMENTAL GUIDELINES

This course will satisfy one high school general science (non-lab) credit for HS21. WAC 180-51-061
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:

D-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),
- 2 (Determine central ideas or themes of a text and analyze their development; summarize the key supporting details and ideas),
- 3 (Analyze how and why individuals, events, and ideas develop and interact over the course of a text),
- 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),
- 5 (Analyze the structure of texts, including how specific sentences, paragraphs, and larger portions of the text [e.g., a section, chapter, scene, or stanza] relate to each other and the whole),
- 6 (Assess how point of view or purpose shapes the content and style of a text),
- 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),
- 9 (Analyze how two or more texts address similar themes or topics in order to build knowledge or to compare the approaches the authors take, and
- 10 (Read and comprehend complex literary and informational texts independently and proficiently).

D-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).

D-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)

D-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).

D-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