

SAN DIEGO COMMUNITY COLLEGE DISTRICT
CONTINUING EDUCATION
COURSE OUTLINE

SECTION 1

SUBJECT AREA AND COURSE NUMBER

HSEP 406

COURSE TITLE

HSEP FOR SCIENCE

TYPE COURSE

NON-FEE

BASIC SKILLS

CATALOG COURSE DESCRIPTION

High school equivalency preparation (HSEP) for Science is offered as an alternative instructional approach to the High School Diploma Program; and is designed to prepare students to pass a high school equivalency examination in science. (FT)

LECTURE/LABORATORY HOURS

90

ADVISORY

HSEP FOR READING 1

RECOMMENDED SKILL LEVEL

Grade level equivalent in reading of 8.0 or above

INSTITUTIONAL STUDENT LEARNING OUTCOMES

1. Social Responsibility
SDCE students demonstrate interpersonal skills by learning and working cooperatively in a diverse environment.
2. Effective Communication
SDCE students demonstrate effective communication skills.

INSTITUTIONAL STUDENT LEARNING OUTCOMES (CONTINUED)

3. Critical Thinking
SDCE students critically process information, make decisions, and solve problems independently or cooperatively.
4. Personal and Professional Development
SDCE students pursue short-term and life-long learning goals, mastering necessary skills and using resource management and self-advocacy skills to cope with changing situations in their lives.

COURSE GOALS

1. Develop the comprehension, application, analysis, and synthesis levels of cognition
2. Gain an understanding of the major concepts within the following areas: life science, physical science, and earth science
3. Gain an understanding of concepts and processes in science and science as inquiry
4. Gain proficiency in reading and analyzing visual aids such as graphs, charts, time lines, maps, and diagrams
5. Gain the knowledge and skills needed to pass an HSE exam in science.

COURSE OBJECTIVES

1. Understand organisms, their environments, and their life cycles
2. Recognize the interdependence of organisms
3. Recognize the relationships between structure and function in living systems
4. Human body systems including the role of DNA, chromosomes, and specialized cells
5. Recognize physical properties such as volume, mass, color, and temperature
6. Recognize concepts relating to the position and motion of objects
7. Understand principles of light, heat, electricity, and magnetism
8. Understand the principles of matter and atomic structure
9. Understand the principles of chemical reactions
10. Recognize the properties of earth materials and the usefulness of some earth materials to humans

COURSE CONTENT AND SCOPE

1. Cognitive Levels
 - 1.1. Comprehension, application, analysis, and evaluation
2. Life science
 - 2.1. The cell
 - 2.2. Human body systems
 - 2.3. The molecular basis of heredity
 - 2.4. Biological evolution

COURSE CONTENT AND SCOPE

- 2.5. The interdependence of organisms
- 2.6. Matter, energy, and organization of living systems
- 2.7. The behavior of organisms
- 3. Physical science
 - 3.1. Structure of atoms
 - 3.2. Structure and properties of matter
 - 3.3. Chemical reactions
 - 3.4. Motions and forces
 - 3.5. Conservation of energy and the increase in disorder
 - 3.6. Interactions of energy and matter
- 4. Earth Science
 - 4.1. Energy in the earth system
 - 4.2. Earth's structure
 - 4.3. Geochemical cycles
 - 4.4. The origin and evolution of the earth system
- 5. Concepts and Processes In Science
 - 5.1. Systems, order, and organization
 - 5.2. Evidence, models, and explanation
 - 5.3. Constancy, change, and measurement
 - 5.4. Evolution and equilibrium
 - 5.5. Form and function
- 6. Science As Inquiry
 - 6.1. Abilities necessary to do scientific inquiry
 - 6.2. Scientific inquiry
 - 6.2.1. Observation
 - 6.2.2. Hypothesis
 - 6.2.3. Experimentation
 - 6.2.4. Conclusion
 - 6.2.5. Iteration; versions; synthesis

APPROPRIATE READINGS

Reading assignments may include, but are not limited to, assigned readings, textbooks, articles, and online resources regarding high school equivalencies. An example of an assignment is reading an experiment and determining the dependent and independent variables.

WRITING ASSIGNMENTS

Writing assignments may include, but are not limited to, critical note-taking as well as appropriate written practice and written analysis of a scientific text and diagrams.

OUTSIDE ASSIGNMENTS

Outside assignments may include, but are not limited to, studying classroom topics, practicing test items, and using supplemental materials such as web based sites as appropriate.

APPROPRIATE ASSIGNMENTS THAT DEMONSTRATE CRITICAL THINKING

Assignments which demonstrate critical thinking may include, but are not limited to, practicing critical thinking skills (analysis, synthesis, evaluation) to succeed on tests. An example of an appropriate assignment would be analyzing an experiment through the lens of scientific inquiry and inferring a logical conclusion.

EVALUATION

1. Pre-and post-tests
2. Informal evaluation based upon observation
3. Official HSE practice tests (current version) proctored by the course instructor, or designee; or documented proof of a passing score obtained on an official HSE exam.

Upon successful completion of the course a Certificate of Course Completion will be issued. Upon successful completion of all courses included in the program a Certificate of Program Completion will be issued.

METHOD OF INSTRUCTION

Lectures are supplemented with individualized instruction, class discussion, small group work and a variety of practice, including online materials, and field trips.

This course, or sections of the course, may be offered through distance education.

TEXT AND SUPPLIES

Official Guide to the HiSet® Exam, Educational Testing Service, McGraw-Hill
Education, current edition
Contemporary GED series, McGraw Hill, current edition
GED Skills Books, Steck-Vaughn, current edition
GED 21st Century, Steck-Vaughn, current edition

PREPARED BY Natalie Lindenberg DATE _____

Instructors must meet all requirements stated in Policy 3100 (Student Rights, Responsibilities and Administrative Due Process), and the Attendance Policy set forth in the Continuing Education Catalog.

REFERENCES:

San Diego Community College District Policy 3100
California Community Colleges, Title 5, Section 55002
Continuing Education Catalog