

Health Science Education

Class Syllabus

Instructor: Shannon Titus

Course Description:

Health Science Education is an introductory course designed to prepare students to pursue careers in the fields of biotechnology research, therapeutics, health informatics, diagnostics, and support services. Upon completion of this course, a proficient student will be able to identify careers in these fields, compare and contrast the features of healthcare systems, explain the legal and ethical ramifications of the healthcare setting, and begin to perform foundational healthcare skills. This course will serve as a strong foundation for all of the Health Science programs of study.

Course Goals and Standards:

Career Planning

1) Synthesize information found in news media, professional journals, and trade magazines to create a report and/or presentation on the historical evolution of healthcare in the United States. Use a timeline or other graphic to illustrate major developments beginning with the first medical school through today.

2) Prepare a paper or electronic career profile for at least one occupation in each of the five health science career areas (biotechnology research, therapeutic services, support services, health informatics, and diagnostic services), to be included in the student's health science portfolio. Draw on print and online sources, such as government occupational profiles, and/or interviews with health care professionals to capture at minimum the following:

- a. Job description
- b. Roles and responsibilities
- c. Essential knowledge and skills needed for the career
- d. Programs or paths of study available to reach occupational goals, beginning with high school and proceeding through postsecondary
- e. Required personality traits for the career
- f. Licensure and credentialing requirements
- g. Non-educational job requirements such as physical fitness tests, minimum age, and psychological evaluations
- h. Photographs or digital prints of each career (refer to HOSA Medical Photography guidelines)

3) Drawing evidence from occupational profiles, industry journals, and textbooks, summarize the professional traits (such as leadership, ethical responsibility, and time management) required of healthcare professionals in the twenty-first century.

Healthcare Systems

4) Identify the types and defining features of healthcare systems in the United States. Compare and contrast these systems with those of other countries that have a high efficiency score in healthcare as rated by agencies such as the World Health Organization. Create a report and/or presentation on these comparisons.

5) Compare and contrast the average cost for a procedure such as childbirth, CT scan, and/or heart catheterization in the United States versus the average costs in Canada, Mexico, France, Japan, and/or other countries that have high efficiency scores in healthcare.

Translate the information into a table, chart, graph, or other visual representation. Cite specific textual evidence to support the analysis.

6) Differentiate among the methods of payment for healthcare in the United States. Include private and state or federal insurance, health savings accounts, managed care, Veteran's Health Administration, Military Health System/TRICARE, and long-term care.

7) Investigate current innovations in healthcare. Develop pro and con arguments based on information found in news media, professional journals, and trade magazines on how innovations have influenced the healthcare system. Support arguments with evidence presented in oral, visual, or written format.

Body Function and Structure

8) Outline basic concepts of normal structure and function of all body systems, and explain how homeostasis is maintained.

9) Describe how Maslow's Hierarchy of Needs can affect the physical, social, psychological, and behavioral status of a person. Use technology to produce a visual or digital chart or table to explain the information obtained from published or digital text.

10) Generate an informational brochure that explains to community members the biophysical, mental/cognitive, social, and emotional development of patients at various stages of the life cycle: infancy, toddler, school age, adolescence, and adulthood (young, middle, and older).

Cite textual evidence to support explanations.

11) Distinguish between the medical definitions of health and wellness, identifying preventive measures and behaviors that promote each. Discuss contemporary controversies to wellness theories, such as but not limited to the debates surrounding electronic medical records, the use of performance-enhancing supplements for athletes, and alternative diets.

Infection Control/Medical Microbiology

12) Define chain of infection and provide strategies of how to break each part of the chain to prevent infection. Conduct a short research project on the effects of practices of sanitation and disinfection on health and wellness, examining the implications for public health.

Synthesize findings in a written, oral, or digital presentation, citing evidence from the investigation.

13) Understand the principles of and successfully perform the following skills to prevent or curtail the spread of pathogenic and non-pathogenic organisms:

- a. Hand washing
- b. Gloving

Foundational Healthcare Skills

14) Understand principles of and successfully perform skills related to Emergency Medicine, incorporating rubrics from the American Heart Association or American Red Cross for the following:

- a. Basic First Aid care of bleeding and wounds
- b. Basic First Aid care for burns
- c. Basic First aid for bone and joint injuries

15) Understand principles of and successfully perform skills related to Medical Assisting Skills, incorporating rubrics from textbooks or clinical standards of practice for the following:

- a. Temperature, pulse, respiration and blood pressure assessment
- b. Screening for vision problems

16) Understand principles of and successfully perform skills related to Physical Therapy Skills, incorporating rubrics from textbooks or clinical standards of practice for the following:

- a. Ambulation with crutches or cane
- b. Administering cold applications

Tulahoma HOSA Graduation Stole Minimum Requirements:

The following are minimum requirements a student must complete to apply and purchase a graduation stole.

- Enroll in and pass all 4 Health Science related courses prior to graduation.
 - Health Science Education.
 - Medical Therapeutics
 - Anatomy & Physiology
 - Clinical Internship
- Be an active HOSA member in good standing for at least 3 school years at THS.
 - Must have signed up for HOSA and paid for dues each year.
- Participate in at least 3 HOSA volunteer activities/fundraising events/community service projects per school year.
- Participate in at least one HOSA Competition per school year at THS.
- Attend 70% of monthly meetings.
 - We host 1 meeting on the first Wednesday of every month therefore, 70% of meeting attendance with 10 months in a school year calculates an attendance of at least 7 meetings per school year.
- Submit the stole application and payment at the same time.

Classroom Grades:

Projects 30% Test 40% Daily 30% (quizzes, homework, notebook grades
current event articles, weekly vocabulary quizzes, etc.).