

Health Science Pathway

Exercise Science and Sports Medicine (J6)

ODE Courses	Possible Sinclair Courses	CTAG courses for approved programs
<p>Health Science and Technology – – 1st course in the Career Field Subject Code: 072001 This first course in the career field provides students an overview of the opportunities available in the healthcare industry. Students will learn fundamental skills in effective and safe patient care that can be applied across a person's lifespan. They will also be introduced to exercise science and sports medicine, the field of biomedical research and the importance of managing health information.</p>	<p>ALH 1101 Introduction to Healthcare Delivery - 2 semester hours</p>	
<p>Exercise and Athletic Training – 1st course in the Pathway Subject Code: 072000 In this, first course students will apply procedures and techniques used in athletic training and in the care and rehabilitation of athletic injuries and therapeutic exercise. Topics include injury prevention, conditioning, and wound care techniques of the musculoskeletal system. Students will learn techniques in the analysis of mechanical factors related to human movement. In addition, current trends, technology, legal considerations, and the role of exercise science in relationship to other health fields will be emphasized.</p>		<p>ENS 1116 Introduction to Exercise Science & Health Promotion - 3 semester hours</p> <p>ENS 1118 Lifetime Physical Fitness & Wellness - 3 semester hours</p>
<p>Bio-Statistics in Exercise Science and Sports Medicine Subject Code: 072005 Students will use fundamental qualitative analysis to study the human body's responses to exercise. Topics include respiratory response to exercise, metabolism and energy production, body composition, healing rate of tissues, and cardiovascular conditioning. Students will</p>		

use therapeutic exercise and the application of modalities to restore or facilitate normal function or development. Developing and implementing exercise test protocols, and emergency procedures will be emphasized.		
Exercise Physiology and Biochemistry Subject Code: 072010 Students will learn to critically evaluate acute and chronic conditions associated to the human body's responses to exercise. Students will pre-screen individuals to identify the benefits and risks associated with physical activity. Students will coordinate exercise tests in order to measure body compositions, cardiorespiratory fitness, muscular strength/endurance, and flexibility. Emphasis is placed on developing conditioning programs that address pre-assessment needs, enhance mobility and build muscle strength		
Nutrition and Wellness Subject Code: 072015 Students will increase their knowledge of comprehensive health and wellness. Students will be able to identify the components of fitness and communicate the relationship between physical fitness, physical performance, injury prevention, and nutritional intake. Students will evaluate an individual's state of nutrition based upon the impact of personal choices and social, scientific, psychological and environmental influences. Further, students will calculate an individual's kilocalorie burn rate and recommend an ideal diet and physical fitness plan.		
Fitness Evaluation and Assessment Subject Code: 072020 Students will complete comprehensive fitness evaluations and develop individualized training programs. Students will administer lab and field tests of		

cardiovascular endurance, body composition, joint flexibility and muscular strength, power, and endurance. Emphasis is placed on assessing body composition, neuromuscular flexibility, agility, balance, coordination, and proprioception. Additionally, students will identify components of physical fitness and communicate how physical activity impact health and wellness.		
Athletic Injuries and Prevention Subject Code: 072025 Students will identify signs and symptoms of injury and apply emergency procedures and techniques used in the immediate care of athletic-related trauma. Students will learn clinical and field evaluative processes, injury prevention techniques, conditioning techniques, treatment, taping, bracing, and rehabilitation of musculoskeletal injuries and conditions. Students will design and implement conditioning programs, including nutritional considerations and ergogenic aids. Emphasis is placed on the synthesis of information gathered through injury history, observation, and manual muscle testing.		
Sports Exercise Psychology Subject Code: 072030 Students apply practical and theoretical information as it relates to psychology of sport. Students analyze the reciprocal relations among physical activity, exercise behavior, and biochemical and physiological adaptation. Topics include theories of behavior change, exercise psychology interventions, and the relationship between exercise and mental health. Further, students will identify psychosocial determinants and effects associated with adopting and maintaining an exercise program and develop strategies for promoting optimal performance in athletes.		

<p>Medical Terminology Subject Code: 072150 This course focuses on the applications of the rules for constructing and defining medical terms with an emphasis on building a working medical vocabulary. Topics include using the appropriate abbreviations and symbols for anatomical, physiological and pathological classifications and the associated medical specialties and procedures. Students will decipher medical terms by identifying and using word elements with an emphasis on derivation, meaning, and pronunciation. Further, students will interpret and translate medical records and documents</p>		<p>HIM 1101 Medical Terminology (TAG) -2 semester hours</p>
<p>Human Anatomy and Physiology Subject Code: 072040 In this course, students will demonstrate knowledge of body systems with emphasis on the interrelationships between structure and physical function. Students will analyze and evaluate how the body systems respond to physical activity, disease, and aging. Students will use data acquisition software to monitor abnormal physiology and body functions (e.g., muscle movement, reflex, respiratory, and voluntary actions). Further, students will analyze descriptive results of abnormal physiology and evaluate clinical consequences</p>		
<p>Medical and Dental Office Technology Subject Code: 072155 Students will apply fundamental principles of communication, leadership, technology and management as it applies to the medical office setting. Students will demonstrate documentation and record keeping procedures set forth by national accrediting organizations</p>		

Health Sciences Capstone

Subject Code: 072105 – **Does not count as one of the required four courses**

The capstone course provides opportunities for students to apply knowledge, attitudes and skills that were learned in Health Sciences program in a more comprehensive and authentic way. Capstones often include project/problem based learning opportunities that occur both in and away from school. Under supervision of the school and through community partnerships, students may combine classroom learning with work experience. This course can be delivered through a variety of delivery methods including cooperative education or apprenticeship.

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