Health Science Syllabus 2018/19
(Sports Medicine II; Clinical Anatomy; Exercise Physiology)

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Course Objective: The course will be a continuation of Sports Medicine I. We will continue to study and evaluate several of the topics from last year by accessing our prior knowledge and be able to critically assess the concepts presented. However, a fundamental difference between last year and this year is that the student will delve into all aspects of clinical health. The foundation will be anatomy and physiology through lecture and lab with emphasis on clinical features as they relate to the topic. The goal is to prepare you, the student, for the rigors you will face in a college health science curriculum, and be able to navigate through it with command and understanding. The basis of this program will permit you to do that. This course will follow the spiral format introduced last year. Topics that were previously taught will be examined with more depth so that content mastery can occur. Moreover, new topics will be examined in lecture format as well as research and lab. The emphasis will be real world application.

Expectations:

The expectations will revolve around daily attendance, participation, conduct, behavior, attitude, appreciation, and informal as well as formal assessments. . If your goal is to learn what you can, prepare for your future, and have fun along the way then you will adhere to a daily routine that permits you to meet your objectives.

Rules: A continuation of Sports Medicine I

- Stay engaged with YOUR own learning and YOUR own PROGRESS
- Be fully AWARE of your environment (teachers, peers, and the physical environment)
- "Don't talk when others' are talking"
- Cell Phones...Give them up!
- Have high expectations of YOURSELF and APPRECIATION of those invested in you!
- Have FUN!

Grading Policy:
The grading policy will be a 10 point rubric each day based upon the above criteria. This will occur monday - weds each week. Thursday's will be separate course with English and you will be receiving a separate grade and credit. If you did not have a 75 or better in English last year then the English assignments will count as 10% of your sports medicine II grade.
Friday's we will generally have a brief formal assessment from the material learned during the week. The points earned will vary. While every day is mandated for attendance, Friday's are

particularly important to be present. If you are truly sick, then you can take make up first thing monday morning at 8 AM. You will be allowed one make up for the year.

Points will be totalled at end of each quarter and percentages will be calculated. Keep in mind your college transcript will be letter grade.

I.e. 500 total points for 1st quarter: Your point value was 400 points: Your numerical grade would be 80% and letter grade would be a "B-"

Attendance:

Attendance is a critical part of your grade.The best way to fully absorb the material is for you to be present. If you are not here it is harder to learn. If you are absent you will lose 10 points for the day. If you bring in an excuse from home you will be awarded 3 points back. If you bring in excuse and send me (or hand in) an abstract on medical article on topic we are discussing and it is complete you will be awarded 7 points. If you go over and above in class and meet the criteria listed with expectations you can earn all 10 points back. I will allow 1 day per quarter with no penalty assessed.

Format:

The format of Sports Medicine II (Introduction to Clinical Health and Medicine) will be as follows:

Lecture: There will be daily lecture so that you can learn by taking notes and listening. I am going old school with asking you to write down what is on the "whiteboard". Learning is enhanced when work is written out. If you are a slow note taker and I have both sides of board filled up when you enter class you can take a picture of notes and transcribe immediately. These notes will usually be done first thing from 8:05- 8:40. There should be sildence at this time.

Hands on/ Lab: There will be labs related to the course work. This will usually be hands on in some capacity.

Group work: There will be small group projects that you will share out with larger group. This will usually be based on research.

Independent work: There will be articles I will assign throughout the year that are clinically based. This will be independent. You will follow the format from last year. That is, you will hand in either at end of class or the beginning of next class.

Each of the above will be part of your daily 10 point criteria for the day.

Topics *

This course will involve multiple college courses that cover Health Science, Anatomy & Physiology, Sports Medicine, and Strength & Conditioning. . Therefore we will be discussing at

least two different topics on a weekly basis. I will try to move through the topics or units within 2-3 weeks on average. Some will be a bit longer while others will be shorter. Also, the units will discuss anatomy, physiology, health, disease (pathology), as well as assessment protocols for the Health Science Clinician and Rehabilitative plans. The students will explore differential diagnosis toward the latter part of the year. . The following is a brief outline. The order may vary during course of year but the goal is to get through each topic.

Topics will cover Anatomy & Physiology, ; Medicine; Physical Assessments; Health & Fitness; and Sports Medicine

Anatomy & Physiology Topics

- Biochemistry
- Cell Biology
- Cardiovascular Anatomy & Physiology including lungs
- Blood vessels
- Skeletal anatomy
- Muscular anatomy and function
- Brain & Nervous System
- 5 Senses
- Digestive system
- Connective Tissue
- Endocrine function
- Reproduction

Topics In Medicine, Health & Disease

- Pain management
    - Natural vs pharmacological
- Diabetes;
    - Type I, II, gestational
- Heart Disease
    - EKG's, arrhythmias, hypertension, cardiomyopathy, CAD,
- Musculoskeletal disorders & diseases
    - Sprains, strains, osteoporosis, arthritis, (RA, OA, PA, Spondylitis), Gout, muscular dystrophy, osteomalacia, dysplasias, etc..
- Neurological disorders
    - Stroke, dementia, MS, spinal cord, sensory & motor nerve dysfunction, TBI including concussions
- Digestive disorders
    - Conditions ranging from IBS, ulcers, GERDS, hiatal hernias, colitis, gallstones, diverticulitis, crohn's , cancer, etc,,
- ENT
    - Ear infections, sinus disorders, diseases of the eye, sleep apnea, etc,,,
- Disorders of the pituitary, thyroid, adrenals, ovaries, and testes
    - Gigantism, acromegaly, dwarfism, hashimoto's disease, addisons disease, etc.
- Common disorders of the skin and dermatology

- Obstetrics, gynecology, urology, and reproductive disorders

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Topics in Physical Assessments

- Intermediate Palpation of skeletal and muscular system
- Muscle testing Part II
- ROM part II
- Orthopedics I & II (upper & lower extremity as well as spine)
- Radiological interpretation (plain film, MRI, and CT scan)
- Concussion analysis including cranial nerve assessment
- Motor, sensory, and reflex assessment
- Blood pressure; bruits, heart sounds
- Heart rate, pulse volume, peripheral pulses
- Auscultation of lungs and digestive system
- Abdominal tap and ascites test
- Ophthalmoscope & otoscope

Rehabilitation protocols

- Phase I, II and III protocols
- Wrapping, taping -including AT tape and kinesio tape Part II
- Exercise rehab for the injured athlete
- Emergency response in sports medicine

Topics in Strength & Conditioning

- Biomechanics of Resistive Training
- Bioenergetics of exercise & Training
- Endocrine responses to Exercise
- Adaptations to aerobic and anaerobic exercise
- Age & Sex related differences and their implications to training
- Nutrition strategies for maximizing performance (review)
- Performance enhancing substances (review)
- Test selection for power, endurance, strength, agility, and balance (review)
- Exercise Techniques for free weights, machines, and alternative modes
- Program design for speed, agility, and aerobics
- Periodization
- Personal Training concepts

Overall Grade:

You will get 1 grade for Sports Medicine II based upon all of the Health Science topics listed above. However, for those enrolling in Early College Entrance (ECE) you will be receiving separate grades for Anatomy & Physiology and Health & Fitness.

Your GPA will be based on formal and informal assessments each week.

Other keys to success:

Stay on top and study a little bit every day. Keep your binders organized: I will look at them periodically throughout the year. Envision yourself as a healthcare professional in mind and conduct!