Course Title
Kin 505 Activities, Injuries Disease in the Larger Society
On-Line offering
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Course Description.
Sports and exercise are a part of American society and are used as entertainment, leisure activity as well as a means to better health. Unfortunately while we partake in these activities few individuals are aware of the risks they are exposing themselves to. In addition as more women engage in sports and exercise medical science is realizing that many conditions and injuries are gender specific. It is well known that women athletes deal with reproductive, orthopedic and nutritional issues that differ greatly from men. Also we know that individual with varying diseases benefit greatly from exercise. This course will join, musculoskeletal anatomy, injuries, gender and special populations together to explain how an individual can enjoy activities safely. In addition this course will address the interpretation of current medical literature and how to utilize new information

Course Pre-requisites
None.

Course Text
Undecided at this time.

Time and Room - This course is taught on line with recorded lectures.

Course Requirements
- Students will be expected view the lectures.
- Student will take the 4 on-line exams
- Students will submit a brief (3-5 page) essay describing a personal example of where injuries have impacted them.

Course Objectives
At the conclusion of this course the student will be able to:
o Know and understand the scope and breadth of the topic of sports injury. This includes common definitions of sport injuries and the type, severity, and epidemiology of these injuries.

o Understand the scientific basis to injury mechanism and epidemiology including how rehabilitation protocols are established and validated through research.

o Understand the anatomy of the covered areas. This includes bony, muscular and ligamentous anatomy.

o Understand the physiology of the body as it relates to the course. This will include respiratory physiology for asthma, endocrine function for diabetes and neurological function for the epileptic individual.

o Understand the immune system as it relates to the individual with HIV or AIDS.

o Describe activity injury risk factors and know how to implement strategies to prevent injury and modify these common risk factors.

o Know and understand selected factors associated with activity; specifically eating disorders and nutrition, focusing on hydration.

o Know and understand the inflammatory reaction of tissues to trauma.

o Understand the connection between the inflammatory process and recommended procedures for treating inflammation. This includes the ability to implement basic injury treatment and techniques.

o Know and understand the type, recognition, and management of common sports injuries to the:
  - Head, neck, and face
  - Thoracic through coccygeal spine
  - Shoulder region
  - Arm, wrist, and hand
  - Thorax and abdomen
  - Hip and pelvis
  - Thigh and knee
  - Lower leg, ankle, and foot

o Know and understand the implications of sports participation by individuals suffering from asthma, diabetes, epilepsy.

o Know and understand the special medical concerns faced by females participating in sports activity.

Evaluation procedure
Grading:
Four on-line exams 80%
Essay on disease or gender 10%
Summary from medical literature 10%

Grade Scale
93 -100 = A
87 - 89.99 = B+
83 - 86.99 = B
77 - 79.99 = C+
73 - 76.99 = C
67 - 69.99 = D+
63 - 66.99 = D
60 - 62.99 = D-

Week 1
Musculoskeletal Skeletal System
Skeletal System
Functions of skeletal system
Anatomy of bone
Naming of bones of axial and appendicular skeleton
Structural and functional classification of joints
Types of movement
Muscular System
Overview of muscular system
Origin, insertion and action
Sliding Filament Model
Neuromuscular junction
Physiology of muscle contraction
Muscle metabolism (ATP)

Week 1
Tissue Injury and Healing
Injury Mechanisms
Anatomical Properties of Soft Tissue
Soft Tissue Classifications
Soft Tissue Injuries
Soft Tissue Healing
Tendons Ligaments, Aponeurosis and Muscle
Bone Injuries
Bone Fracture Healing
Classification of Skeletal Injuries’

Week 2
Foot, Ankle and Lower Leg
General Anatomy
Joints of the Ankle
Movements of the Foot and Ankle
Ligaments
Muscles of the Lower Leg and Foot
Injury Mechanism, Signs and Symptoms, Prevention
Injuries Covered
Turf Toe
Ingrown Toenail
Metatarsalgia
Bunion
Retrocalcaneal Bursitis
Contusions
Shin Bruise
Acute Anterior Compartment
Ankle Sprains – Lateral - Medial
Achilles Tendon Strain
Achilles Tendon Rupture
Plantar Fasciitis
Jones Fracture

Week 2

**Knee**

General Anatomy
- Joints of the Knee
- Movements of the Knee
- Ligaments
- Muscles of the Knee
- Injury Mechanism, Signs and Symptoms, Prevention

Injuries Covered
- Bursitis
- MCL Sprain
- LCL Sprain
- ACL Sprain
- PCL Sprain
- Meniscus Tear
- Chondromalacia Patella
- Patellar Dislocation
- Extensor Rupture
- Iliotibial Band Syndrome
- Osteochondritis Desiccans
- Osteochondral Fracture

Week 2

**Hip, and Pelvis**

General Anatomy
- Joints of Hip and Pelvis
- Movements of the Hip and pelvis
- Ligaments
- Muscles of the Hip and pelvis
- Injury Mechanism, Signs and Symptoms, Prevention

Injuries Covered
- Quad Contusion
- Myositis Ossificans
- Hamstring Strain
- Quad Strain
Snapping Hip
Hip Pointer
Trochanteric Bursitis
Adductor Strain
Hip Fractures

Week 3

**Thorax and Spine**

General Anatomy
- Vertebrae and Rib Cage
- Movements of the Thorax
- Functions of respiratory system
  - Anatomy of respiratory tract
  - Mechanics and regulation of breathing
- Muscles of the Thorax
- Injury Mechanism, Signs and Symptoms, Prevention

Injuries Covered
- Cervical Sprain
- Cervical Fracture
- Cervical Dislocation
- Cervical Strain
- Brachial Plexus Sprain
- Lumbar Sprain
- Lumbar Strain
- Sciatica
- Herniated Disk
- Spondyloysis

Week 3

**Shoulder**

General Anatomy
- Joints of the Shoulder
- Movements of the Shoulder
- Muscles of the Shoulder
- Injury Mechanism, Signs and Symptoms, Prevention

Injuries Covered
- S-C Sprain
- A-C Sprain
- G-H sprain
- G-H Dislocation – Anterior
- G-H Dislocation - Posterior
- Rotator Cuff Impingement
- Subacromial Bursitis
- Bicipital Tendinitis

Week 3

**Elbow Forearm Wrist and hand**

General Anatomy
- Joints of the Elbow, Forearm, Wrist and Hand
- Movements of the Elbow, Forearm Wrist and Hand
Muscles of the Elbow and Forearm Wrist and hand
Injury Mechanism, Signs and Symptoms, Prevention

Injuries Covered
Olecranon Bursitis
Dislocation
Medial Epicondylitis
Lateral Epicondylitis
Osteochondritis Dissecans
Collateral Ligament Sprains
Wrist Strain
Gamekeepers thumb
Phalangeal Dislocations
Jersey Finger
Mallet Finger
Ganglion
Carpal Tunnel Syndrome

Week 4

Head
General Anatomy
Skull - major bones
  Cranial Bones
  Facial Bones
  Foramen Magnum

Brain
  Nerve cell anatomy
  Brain anatomy and hemispheres
  Spinal cord anatomy, reflex arc
  PNS (autonomic and somatic)
  Sensory motor nerve functions
  Sensory organs
  Functions of nervous system

Injuries Covered
  Epidural Hematoma
  Subdural hematoma
  Concussion

Post Concussion Syndrome

Week 4

Epilepsy and Sports Participation
  Physiology of Seizures
  Types of Seizures
  Sports Concerns
    Athlete’s safety
    Activities and Medication

Different Activities
  High-risk activities
  Low Risk Activities
  Water sports
Week 4

The Asthmatic Athlete

Defining Asthma
Risk Factors for Development of Asthma
Contributing factors
Causes of Asthma
Asthma Classification
Signs of Asthma
Evaluating Asthma

Physical Examination
Types of Asthma
Extrinsic Asthma
Intrinsic Asthma
Exercise-induced asthma
Effect of medications on Activity
Guidelines for Safe Activity

Week 5

The Diabetic Athlete

Overview of the Endocrine System
Endocrine System
Functions of endocrine system

Overview of the Physiology of Diabetes
Types of Diabetes
Type 1 Diabetes Mellitus
Type 2 Diabetes Mellitus
Complication associated with Diabetes
  Circulatory Complications
  Nerve Complications
  Hypoglycemia
  Insulin Shock
  Diabetic Coma
  Nutritional Recommendations.
Guidelines for Safe Activity

Week 5

The Female Athlete

The Female Triad
  Menstrual Dysfunction
  Disordered Eating
  Decreased Bone Mineral Density
Anterior Cruciate Injuries
  Female Orthopedic overview
  Differences from male
- Training for prevention
Technical Requirements
Minimum Technical Requirements
To take part in an online course at UNH, you must be able to connect to Blackboard and access your course documents. UNH recommends that the computer you use meet the “Recommended for Current Purchases” requirements on the IT supported products Web site. Although you may be able to participate in a course online if you don’t use a computer meeting these minimum specifications, you will have a better chance of success if you do.

To participate in a Blackboard course, you will also need:

• Access the Internet using a supported Web browser. You can find a list of “Certified” browsers online.
• Some courses may also require additional plug-ins.

To check your browser and plug-ins for compatibility with Blackboard:

• Log into Blackboard
• Click on the MyUNH RESOURCES tab under the My UNH logo
• Scroll down to the Browser Checker module.
• Click on TEST BROWSER and follow the on-screen instructions.

UNH IT maintains a comprehensive list of Supported Hardware.

If your course uses Tegrity:

In addition to the minimum requirements above, you will need to be able to install Silverlight 3, a plug-in that is available for Intel-based Mac, and PCs running Windows. You will also need speakers or headphones to listen to lecture. For more information on Silverlight 3, and to install it go to http://www.microsoft.com/silverlight/resources/install.aspx

If your course is using Tegrity and you are using a Mac, please pay special attention to the information provided for Mac users. You will need an Intel-based Mac in order to view Tegrity lectures. If you do not know if you are using an Intel-based Mac, you can find out by following these steps:

• Click on the Apple Menu and choose “About this Mac.”
• If you see G3, G4, or G5 on the line that says processor, your Mac is not Intel-based.
• If you see the word Intel anywhere on the processor line, your Mac is Intel-based. You can also visit the Apple Technical Specs Web Site for more information. If you are unsure whether your Mac is Intel-based, please contact the UNH Help Desk at (603) 862-4242 or via the Web at http://it.unh.edu. If your course uses iLinc:

You will need to meet minimum requirements specified on the iLinc Web site. To test your computer to find out if you are properly prepared to use iLinc, go to http://demo.ilinc.com/systest

Support

If you have problems using Blackboard, installing Silverlight, or using Tegrity, call (603) 862-4242 Monday through Friday between 8:00 am to 4:30 pm, or send your question to https://remedy.unh.edu/bb/support.shtml.

You can find online documentation for Blackboard, Tegrity, and other IDC-supported services on the IDC FIRST Web site. Just scroll down and click on a link for the help you need.