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Course Description: Application of the physiological principles of human movement as they relate to the response to exercise training, training for sport performance, sport nutrition, and ergogenic aids.

Course Objectives: Each student will be able to:
1. Define and describe the basic components of exercise physiology and biomechanics as related to training for sport
2. Incorporate proper nutrition for optimal physical and mental performance and overall good health into a training and conditioning program
3. Provide accurate information about drugs and supplements and advocate for drug-free sport participation
4. Design programs of training, conditioning, and recovery that properly utilize exercise physiology and biomechanical principles
5. Modify conditioning programs to help athletes return to full participation following injury

National Standards for Sport Coaches
This course meets the following Performance-Based Standards for Sports Coaches (NASPE, 2006):
Domain 3, Physical Conditioning: Standards 12, 13, 14, 15

Required Texts

Outline of Course Content:

The content of this course will cover 4 units. Each unit provides the students’ with theoretical and practical components directly related to training and conditioning principles for coaches.

UNIT 1: Physiological Aspects of Sport

Unit 1 provides the students with the fundamental physiological knowledge needed to design appropriate training and conditioning programs as sports coaches. The unit is subsequently divided into 4 topic areas:
- Muscular Fitness Principles
- Energy Systems & Fitness Principles
- Muscular Fitness Components, Assessment, and Training
- Energy System Components, Assessment, and Training

UNIT 2: Mechanical Aspects of Sport

Expert coaches have extensive domain specific knowledge and are able to successfully and appropriately identify and improve skill and tactical performance. The second unit of the class, mechanical aspect of sport will provide students with basic theoretical and biomechanical principles of sport. Though 2 topic area:
- Mechanical Analysis of Sport Skills
- Identifying and Correcting Errors in Sport Skills
Unit 3: Sport Nutrition, Supplements, and Performance Enhancing Drugs

Maximizing sports performance is multidimensional. One dimension that has increasingly become important for coaches to know and understand is the impact of nutrition, supplements and performance enhancing drugs. Through this unit the students will be introduced the pivotal information that all coaches regardless of sport need to understand through 3 central topics.

- Basic Nutrition Principles
- Nutrition and Hydration Before, During, and After Training/Competition
- Supplements and Performance Enhancing Drugs

Unit 4 Designing Training and Conditioning Programs

The final unit of the class will provide students with the theoretical and practical knowledge to design an implementable a sport specific strength and conditioning program. Students will first be provided and fundamental Overview of the principle of Strength and Conditioning, including Periodization of Training principles, avoiding overtraining and designing Conditioning programs for athletes Post-Injury.

Course Requirements and Method of Evaluation

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<tr>
<th></th>
<th>Percentage</th>
<th>Grade</th>
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<tbody>
<tr>
<td>Discussion Boards</td>
<td>20%</td>
<td>A = 100-90%</td>
</tr>
<tr>
<td>Unit Assignments</td>
<td>40%</td>
<td>B = 89-80%</td>
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<tr>
<td>Training and Conditioning Program</td>
<td>40%</td>
<td>C = 79-70%</td>
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</tbody>
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<pre><code>              |            | D = 69-60%  |
              |            | F = below 60% |
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Discussion Boards: Each student will be responsible for actively engaging in online discussions posted on the course website (Blackboard). Students will be required to respond to threads posted by both the instructor and other students enrolled in the course.

Unit Assignment: Each student will be required to demonstrate their understanding of the course content through unit specific questions posted on the course website (Blackboard). Each unit set will incorporate a variety of question formats to maximize the student ability to effectively demonstrate their understanding of the covered material.

Training and Conditioning Program: It is imperative that coaches effectively and appropriately apply scientific knowledge when designing training and conditioning programs for individual athletes and sports teams. Based on the course material, students will be asked to develop a training and conditioning program for either a present or fictional coaching situation.

Student Expectations/Course Policies:
Although we do our utmost to provide you with valuable knowledge and experiences, little can be gained unless you are making a concerted and noticeable effort to be a self-motivated, responsible, and active learner. In an effort to guide the goal of responsibility, motivation and participation, we offer the following as class operating guidelines:

1. Be here. Despite the fact that this course is delivered in a distance based environment, the class is largely interactive and participatory. It is expected that students will be regularly engaged in the website of the course.

2. Participate with effort. This asks that you are prepared and put forth a solid and consistent effort. This includes consistently engaging in discussion boards as well as producing graduate level work. Do what you have to do to be ready.

3. Take initiative for yourself. Most of your learning will be the result of your own initiative, not the prodding of instructors or rewards (or threats) of grades. You alone must be responsible for creating value for yourself in this course. How well you do will in a large part will be the result of how well you are able to carry on without direct supervision. Taking initiative means asking questions when material, concepts, or expectations are not clear. (It is OK not to know, but it not OK to continue not knowing.) It also means
doing reading and work outside of class. For this class, reading beyond the assignment is necessary to achieve markedly superior work.

4. **Help others.** The ultimate success and reward for each of you depends on your ability to help and support your classmates in their learning and in their attempts to be responsible for their own learning. This also includes creating a safe learning environment; that is, one in which the confidentiality of one another’s sharing is respected, where complaints are directed only to someone (and received only by someone) who can do something about the situation, and where differences of opinion and healthy debate are prized.

**UNC’s Policies** - UNC’s policies and recommendations for academic misconduct will be followed. For additional information, please see the Dean of Student’s website, Student Handbook link

http://www.unco.edu/dos/handbook/index.html

**Disability Support Services:** Any student requesting disability accommodation for this class must inform the instructor giving appropriate notice. Students are encouraged to contact Disability Support Services at (970) 351-2289 to certify documentation of disability and to ensure appropriate accommodations are implemented in a timely manner. (updated per DSS 8-24-09)

**Honor Code.** All members of the University of Northern Colorado community are entrusted with the responsibility to uphold and promote five fundamental values: Honesty, Trust, Respect, Fairness, and Responsibility. These core elements foster an atmosphere, inside and outside of the classroom, which serves as a foundation and guides the UNC community’s academic, professional, and personal growth. Endorsement of these core elements by students, faculty, staff, administration, and trustees strengthens the integrity and value of our academic climate.

**NOTES**

- You are responsible for all tasks and for being prepared for class activities
- The instructor reserves the right to penalize late work, and refuse to accept late work.
- UNC’s policies and recommendations for students’ rights and responsibilities will be followed.