PT 7220 Advanced Topics in Physical Therapy: Certified Strength and Conditioning Specialist (CSCS) Certification Workshop

Summer 2018
2 credits (2-0-0)

COURSE DESCRIPTION: This course will prepare student physical therapists to become Certified Strength and Conditioning Specialists. Students will extend their knowledge and competency in the topics of therapeutic exercise, exercise physiology, sports medicine, athletic performance, and health promotion. In addition, students will be able to select and implement valid and reliable measures to evaluate physical performance and training outcomes.

COURSE COORDINATOR: You-jou Hung, PT, MS, PhD, CSCS
Associate Professor
Office: AHHS 224N
325-942-2742
yhung@angelo.edu

OFFICE HOURS: By appointment

COURSE LOCATION: CHP143, CHP 202, Gym, Weight Room

MEETING HOURS: Mon – Fri: 8:30am -12:30pm and 1:30pm - 4:30pm

CLOCK HOURS: 32 lecture hours
15 laboratory hours

COURSE PREREQUISITES: Successful completion of previous DPT coursework

COURSE OBJECTIVES: At the end of this course, the students will have demonstrated mastery of the subject by being able to:

1. Demonstrate detailed knowledge of the structure and function of the musculoskeletal, neuromuscular, cardiovascular, respiratory, and endocrine systems (CAPTE Standard: 7A, 7C)

2. Describe energy sources available during exercise and discuss bioenergetics factors that limit exercise performance (CAPTE Standard: 7A)

3. Describe dietary recommendations for general health and disease prevention, and identify proper nutrient recommendations for various athletes (CAPTE Standard: 7A)

4. Compare anatomical and physiological adaptations between aerobic and anaerobic training programs (CAPTE Standard: 7A, 7C)

5. Interpret evidence-based research from exercise physiology and physical therapy publications to identify health impairment and enhance physical performance (CAPTE Standard: 7D9)

6. Select and administer tests appropriate to a client's age, sport, and health/fitness status: (CAPTE Standard: 7D19)
   a. Aerobic Capacity/Endurance
b. Anthropometric Characteristics
c. Balance
d. Motor Function
e. Muscle Performance (including Strength, Power, Endurance, and Length)

7. Design and implement an aerobic and/or anaerobic program appropriate to a client’s age, sport, and health/fitness status (CAPTE Standard: 7D27)

8. Collaborate with clients/patients, family members, nutritionists, physicians, and other professionals to provide a realistic goal and a safe and effective training program (CAPTE Standard: 7D23, 7D24)

TEACHING METHODS/PHILOSOPHY:

Lecture sessions will consist of traditional lectures supplemented by PowerPoint presentations, video presentations, handouts, discussion of case studies and current literature, and reading assignments. Blackboard will be used to post important announcements, grades, and reference materials.

Laboratory sessions will focus on the functional and clinical applications of the topics presented during lecture sessions. They will be imbedded within corresponding lectures. Depending on the topic, proper laboratory attire will be announced prior to the session.

TENTATIVE SCHEDULE: See attached.

REQUIRED TEXTS:


GRADING/EVALUATIVE PROCEDURES:

<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Written assignment</td>
<td>20%</td>
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<tr>
<td>Attendance</td>
<td>50%</td>
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<tr>
<td>Active Participation</td>
<td>30%</td>
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<td>Total</td>
<td>100%</td>
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The final course grade will be assigned based on the cumulative percentage of points earned throughout the course:

- 80-100 = Pass
- 79 or less = Fail

Mastery is the Pass grade.

Non-mastery (Fail grade) may require the student to repeat the course for credit and/or receive the grade of “Incomplete”. The student will be required to meet with the course instructor to set up a satisfactory schedule to complete the requirements of the course in a timely fashion.

The written assignment should include the following components of your current exercise regimen: need analysis, nutrition/supplement analysis, and program design (including mode, frequency, volume, and intensity).

Note: the exam for this course is the Certified Strength and Conditioning Specialist (CSCS) certification exam students take online after the course.

HONOR CODE STATEMENT
Our students believe that ASU students should maintain complete honesty and integrity in their academic pursuits. The Honor Code at ASU describes expected academic behavior of both faculty and students, and it consists of an agreement between the student and the academic community to foster academic integrity, to value student educational goals, and to maintain the positive academic reputation of ASU. Angelo State University expects all students and faculty to engage in all academic pursuits in a manner that is above reproach and to maintain complete honesty and integrity in the academic experiences both in and out of the classroom. ASU students and faculty will not participate or condone

- Plagiarism
- Cheating
- Fabrication of data
- Misrepresentation of information
- Misuse of library materials
- Misuse of technology
- Conspiring with others to commit these acts

ASU students are responsible for understanding the Honor Code as well as the individual academic requirements and stipulations for each course. This includes carefully reading the Angelo State University Student Handbook and reading the syllabus of each course. Students should ask for clarification of any ambiguous aspect of the syllabus.

To facilitate this code of ethical conduct, ASU has an Academic Integrity Committee, a committee composed of both students and faculty, which has the responsibility of reviewing cases of suspected academic dishonesty, which may be brought to it. The committee’s membership of students and faculty reinforces ASU’s commitment to academic integrity in and out of the classroom.

STUDENTS WITH DISABILITIES

University Statement on Disabilities

ASU is committed to the principle that no qualified individual with a disability shall, on the basis of disability, be excluded from participation in or be denied the benefits of the services, programs or activities of the university, or be subjected to discrimination by the university, as provided by the Americans with Disabilities Act of 1990 (ADA), the Americans with Disabilities Act Amendments Act of 2008 (ADAAA), and subsequent legislation.

Student Affairs is the designated campus department charged with the responsibility of reviewing and authorizing requests for reasonable accommodations based on a disability, and it is the student’s responsibility to initiate such a request by emailing ADA@angelo.edu, or by contacting:

Mrs. Dallas Swafford
Director of Student Disability Services
Office of Student Affairs
University Center, Suite 112
325-942-2047 Office
325-942-2211 FAX
Dallas.Swafford@angelo.edu

When a student states he or she could meet the program's technical standards with accommodation(s), the Office of Student Affairs will confirm that the stated condition qualifies as a disability under applicable laws. If the condition qualifies as a disability, the University will determine if it agrees that the student can meet the technical standards with reasonable accommodation; this includes a review of whether or not the accommodation requested is reasonable, taking into account whether or not the accommodation
would jeopardize clinician/patient safety or the educational process of the student or the institution, including all course work, clinical educational experiences and internships deemed essential to graduation. Students are required to read and sign the DPT program’s technical standards (DPT Program Student Handbook Appendix I) form and to update their responses on this form if their health status changes.

A student who requires accommodation to meet the technical standards must obtain verification by the Office of Student Affairs that proper reasonable accommodation is available for the student to meet the standard. The program will not provide accommodation without such written verification.

RELIGIOUS HOLY DAYS
Faculty will provide accommodations for student absences for observance of a religious holy day(s) (OP 10.19). Students should make every effort to inform a faculty member at the beginning of the semester regarding these absences.

ATTENDANCE/TARDINESS POLICY

Attendance and promptness to classes, meetings, and future work obligations are considered professional behaviors. As this department is preparing potential professionals in the area of physical therapy, it is part of our expectation that student presence and timeliness will be held in highest regard. Tardiness is a disruption to the instructor and fellow students. A student is considered tardy if he/she arrives for class after the instructor has begun class activities. Please see the following related to implications from excessive lateness or absences without a reasonable excuse:

a. First offense - verbal warning
b. Second offense - second verbal warning, initiation of Disciplinary Tracking Form
c. Third offense - 1% off final course grade
d. 1% off final course grade for each additional unexcused tardy or absence

Per the student handbook, 2 or more occurrences combined or mixed will result in the initiation of a Disciplinary Tracking Form.

If a student has an unexcused absence during integrations it may lead to the removal of that student from that clinical environment. It is the responsibility of the student to contact the clinical site and give notice if they are ill, or have transportation issues.

If the student is unable to attend class, it is the student’s responsibility to either call the PT office at 942-2545 or the office of the professor of the class directly. This notification should be made prior to commencement of said class.

Continued issues with tardiness/attendance across all courses will result in disciplinary probation and will be referred to the PT faculty for consideration of options, including program dismissal.

The PT faculty is not oblivious to doctor’s appointments and other potential hazards and emergencies in daily life. Simply taking responsibility to notify the office or the professor if issues arise is considered professional behavior. Please do not rely on a classmate or other form of notification, as these have proven unreliable in years past.

ATTENDANCE AT ALL SCHEDULED EXAMINATIONS IS MANDATORY. Any unexcused absence from an examination will automatically result in a score of ZERO for that examination. Any student absent from examinations due to illness or injury must have a written justification from their physician. Absence from an examination for any other reason must be excused before the time of the scheduled examination or brought about by a very serious circumstance. For excused absences only, make-up examinations must be taken no later than one week after the student returns to class. Extended absences must be approved by the Program Director of Physical Therapy.
**TENTATIVE SCHEDULE**

Daily assignment:

- Reading assignment indicated in course schedule. **A minimum of 3 hours** is required for the reading assignment in the evening.

- Take the quiz (study question) at the end of each chapter (correct answers on page 657)

<table>
<thead>
<tr>
<th>Date</th>
<th>Topics</th>
<th>Reading assignment</th>
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<tbody>
<tr>
<td>April 12</td>
<td>Pre-course meeting</td>
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<tr>
<td></td>
<td>1. Brief course introduction</td>
<td>PowerPoint presentation</td>
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<td>2. CSCS exam cost and content</td>
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<td>3. Prepare essential documents for the exam</td>
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<td>4. Register and schedule the exam</td>
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<tr>
<td>Pre-course</td>
<td>Pre-course reading assignment</td>
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<td></td>
<td><strong>Written assignment (self-assessment): need analysis, nutrition analysis, and current program design:</strong> 1 page (due on May 14)</td>
<td>Ch. 1, 2, 3, 4 (Haff)</td>
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<td>May 14</td>
<td>Morning (8:30am-12:30pm):</td>
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<tr>
<td>(Monday)</td>
<td>1. Course introduction</td>
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<td>2. Reading assignment discussion</td>
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<td>3. <strong>Preview quiz</strong></td>
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<td>4. <strong>Lab 1: warm-up, dynamic and static stretching exercises (CHP 202: 10:00-11:30am)</strong></td>
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<td></td>
<td>5. Structure and function of the muscular, neuromuscular, cardiovascular, and respiratory systems: CD 1-1 and 1-2 (1:44)</td>
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<td><strong>Afternoon (1:30pm-4:30pm)</strong></td>
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<td>1. <strong>Preview quiz: exercise techniques</strong></td>
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<td>2. Exercise technique overview: CD 7 (0:14)</td>
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<td>3. Bioenergetics of exercise and training: CD 2 (0:54)</td>
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<td>4. Exercise techniques for resistance training: disk 2-abdomen (0:05)</td>
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<td>5. <strong>Lab 2: warm-up, abdominal testing and exercises</strong> (CHP 202: 3:00-4:30pm)</td>
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<td>May 15</td>
<td>Morning (8:30am-12:30pm):</td>
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<td>(Tuesday)</td>
<td>1. Reading assignment discussion</td>
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<td>2. <strong>Review quiz: structure and function of the muscular, respiratory, and cardiovascular systems</strong></td>
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<td>3. <strong>Review quiz: bioenergetics of exercise and training</strong></td>
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<td>4. <strong>Review quiz: biomechanical principles</strong></td>
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<td>5. Exercise techniques for resistance training: disk 2-back (0:15)</td>
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<td>6. <strong>Lab 3: warm-up, aerobic capacity testing and back exercises</strong> (CHP gym, weight room: 10:00-11:30am)</td>
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<td><strong>Afternoon (1:30pm-4:30pm)</strong></td>
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<td>1. Responses and adaptations to training: CD 4 (0:44)</td>
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<td>2. Exercise techniques for resistance training: disk 2-chest (0:30)</td>
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<td>Ch. 9, 10, 11, 15, 16 (Haff)</td>
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<td>Date</td>
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| May 16    | Morning (8:30am-12:30pm): | 1. Reading assignment discussion  
2. Review quiz: responses and adaptations to training  
3. Review quiz: sports nutrition concepts and applied strategies  
4. Speed development and plyometric training CD 6 (0:52)  
5. Lab 5: warm-up, PNF stretching exercises (CHP 143)  
6. Measurement and evaluation: CD 5-1 and 5-2 (1:48) | Ch. 12, 13, 17, 18, 19 (Haff) |
|           | Afternoon (1:30pm-4:30pm): | 1. Lab 6: warm-up, measurement and evaluation (CHP gym 1:30-3pm)  
2. Resistance training exercise prescription: CD 9 (1:10)  
3. Plyometric lab self-study handout |                   |
| May 17    | Morning (8:30am-12:30pm): | 1. Reading assignment discussion  
2. Review quiz: measurement and evaluation  
3. Review quiz: resistance training exercise prescription  
4. Review quiz: speed development and plyometric training  
5. Exercise techniques for resistance training: disk 2-UE (0:45)  
6. Lab 7: warm-up, UE exercises and resistant program design (CHP weight room) | Ch. 8, 20, 21, 22, 23, 24 (Haff) |
|           | Afternoon (1:30pm-4:30pm): | 1. Exercise techniques for resistance training: disk 1-LE (1:00)  
2. Lab 8: warm-up, LE exercises (CHP weight room)  
3. Aerobic exercise and interval training prescription: CD 8 (1:09) |                   |
| May 18    | Morning (8:30am-12:30pm): | 1. Reading assignment discussion  
2. Review quiz: aerobic exercise and interval training prescription  
3. Exercise techniques for resistance training: disk 1-total body (0:20)  
4. Lab 9: warm-up, power exercise (CHP weight room 10:00-11:30am)  
5. Mini-simulation exam II, III (video portion) | CSCS practice exam by chapter: Ch. 1-24 |
|           | Afternoon (1:30pm-2:30pm): | 1. Exercise prescription discussion  
2. Lab 10: facility design (CHP weight room)  
3. Practice exam- video portion  
4. Course wrap up: Q & A | Complete mini-simulation exam I, II |
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<tr>
<th>Date</th>
<th>Activity</th>
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| May 19    | Review scientific foundation (Ch. 1-11) and testing and evaluation (Ch. 12-13) in the textbook  
|           | Re-take all quizzes at the end of each chapter  
|           | Re-take corresponding review quizzes  
|           | Retake and review mini-simulation I, II, III  |
| May 20    | Review exercise techniques (Ch. 14-16), program design (Ch. 17-22), and administration (Ch. 23-24) in the textbook  
|           | Re-take all quizzes at the end of each chapter  
|           | Re-take corresponding review quizzes  
|           | Take your practice exam  |
| May 21    | Review your weakest links. Focus more on testing and evaluation (Ch. 12-13) and program design (Ch. 17-22)  
|           | Review all quizzes at the end of each chapter  
|           | Review corresponding review quizzes  
|           | Review all simulation and practice exams  |
| May 22-27 | Take your certification exam (4 hours)  |